

**THIS FOLDER WAS CHECKED BY  
ARUP ON**

**21.3.03**

**The checking process was to ensure that 3 identical  
sets of each Volume of the Operating and  
Maintenance Manuals existed**

**5-7 CARLTON GARDENS  
LONDON SW1**

**OPERATING & MAINTENANCE  
INSTRUCTIONS  
for the  
BMS**

**VOLUME 2  
2.2 – Section G**

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Commissioning Management Ltd  
5, St Peters Court  
Colchester  
Essex  
CO1 1WD*

*Tel : 01206 761911  
Fax : 01206 761932*

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4. Merlin Gerin
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6. Entrlec
7. Danfoss
8. Belimo
9. Siemens Landis & Staefa
10. Titan
11. Sontay
12. Slaney
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14. Trend
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16. Doorway

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3. Panel MCC7/1
4. Panel MCP/1
5. Panel MCP/2
6. Panel MCP/3
7. Panel MCP/4
8. SCP/LG//E
9. SCP/G/N
10. SCP/1/E
11. SCP/2/E
12. SCP/3/E
13. SCP/4/E
14. SCP/5/E
15. SCP/LG/W
16. SCP/G/S
17. SCP/1/W
18. SCP/2/W
19. SCP/3/W
20. SCP/4/W
21. SCP/5/W

## CROSS REFERENCE INDEX

ITEM	GENERAL OPERATING INSTRUCTIONS	GENERAL MAINTENANCE INSTRUCTIONS	SPECIFIC SUPPLIER LITERATURE
AHU01 (East Office Ventilation) - System 1	D.1.2	E.2.8 / E.2.9	N/A
AHU02 (West Office Ventilation) - System 2	D.1.3	E.2.8 / E.2.9	N/A
AHU03 (Office Core Lobby & Toilet Ventilation) - System 3	D.1.4	E.2.8 / E.2.9	N/A
Basement Staffroom, Mailroom & Lift Motor Room Ventilation System 4	D.1.5	E.2.8 / E.2.9	N/A
Basement WCs and Refuse Room Extract Fans - System 5	D.1.6	E.2.8 / E.2.9	N/A
Car Park Ventilation & Smoke Fans - System 6	D.1.7	E.2.8 / E.2.9	N/A
BMS/Security Room Ventilation - System 7	D.1.8	E.2.8 / E.2.9	N/A
Basement Plant West Extract - System 8	D.1.9	E.2.8 / E.2.9	N/A
Basement Plant East Extract - System 9	D.1.10	E.2.8 / E.2.9	N/A
Residential Staircase Pressurisation Fans - System 10	D.1.11	E.2.8 / E.2.9	N/A
Office Staircase Pressurisation Fans - System 11	D.1.12	E.2.8 / E.2.9	N/A
Fire Fighting Staircase Pressurisation Fans - System 12	D.1.13	E.2.8 / E.2.9	N/A
Workshop Ventilation - System 13	D.1.14	E.2.8 / E.2.9	N/A
Boiler Room Combustion Air - System 14	D.1.15	E.2.8 / E.2.9	N/A
East Office Pressurisation Relief Fans - System 20	D.1.16	E.2.8 / E.2.9	N/A
West Office Pressurisation Relief Fans - System 21	D.1.17	E.2.8 / E.2.9	N/A
Lower Ground Floor (East) Controls - System 30	D.1.18	E.2.8 / E.2.9	N/A
Ground Floor (North) Controls - System 31	D.1.19	E.2.8 / E.2.9	N/A
First Floor (East) Controls - System 32	D.1.20	E.2.8 / E.2.9	N/A
Second Floor (East) Controls - System 33	D.1.21	E.2.8 / E.2.9	N/A
Third Floor (East) Controls - System 34	D.1.22	E.2.8 / E.2.9	N/A
Fourth Floor (East) Controls - System 35	D.1.23	E.2.8 / E.2.9	N/A
Fifth Floor (East) Controls - System 36	D.1.24	E.2.8 / E.2.9	N/A
Lower Ground Floor (West) Controls - System 37	D.1.25	E.2.8 / E.2.9	N/A
Ground Floor (South) Controls - System 38	D.1.26	E.2.8 / E.2.9	N/A
First Floor (West) Controls - System 39	D.1.27	E.2.8 / E.2.9	N/A

Second Floor (West) Controls - System 40	D.1.28	E.2.8 / E.2.9	N/A
Third Floor (West) Controls - System 41	D.1.29	E.2.8 / E.2.9	N/A
Fourth Floor (West) Controls - System 42	D.1.30	E.2.8 / E.2.9	N/A
Fifth Floor (West) Controls - System 43	D.1.31	E.2.8 / E.2.9	N/A
Primary Boiler Plant - System 100	D.1.32	E.2.8 / E.2.9	N/A
FCU Secondary LTHW Circuit - System 101	D.1.33	E.2.8 / E.2.9	N/A
AHU Secondary LTHW Circuit - System 102	D.1.34	E.2.8 / E.2.9	N/A
DHWS Calorifier LTHW Circuit - System 103	D.1.35	E.2.8 / E.2.9	N/A
Radiator & Landlord's LTHW Circuit - System 104	D.1.36	E.2.8 / E.2.9	N/A
Primary Chilled Water Plant - System 200	D.1.37	E.2.8 / E.2.9	N/A
FCU Secondary CHW Circuit - System 201	D.1.38	E.2.8 / E.2.9	N/A
AHU Secondary CHW Circuit - System 202	D.1.39	E.2.8 / E.2.9	N/A
Residential Controls - Systems 300 to 305	D.1.40	E.2.8 / E.2.9	N/A
Public Health Monitoring - System 400	D.1.41	E.2.8 / E.2.9	N/A
Electrical Monitoring - System 500	D.1.42	E.2.8 / E.2.9	N/A
Fire Operation - System 999	D.1.43	E.2.8 / E.2.9	N/A

G

**G                    RECORD DRAWINGS**

**G.1                RECORD DRAWINGS SCHEDULE**

DRAWING No.	ISSUE	CONTROL PANEL	DESCRIPTION
S98057-00		MCCB/1	Index Sheet
S98057-01		MCCB/1	Panel Internal Wiring Schematic
S98057-02		MCCB/1	Panel Internal Wiring Schematic
S98057-03		MCCB/1	Panel Internal Wiring Schematic
S98057-04		MCCB/1	Panel Internal Wiring Schematic
S98057-05		MCCB/1	Panel Internal Wiring Schematic
S98057-06		MCCB/1	Panel Internal Wiring Schematic
S98057-07		MCCB/1	Panel Internal Wiring Schematic
S98057-08		MCCB/1	Panel Internal Wiring Schematic
S98057-09		MCCB/1	Panel Internal Wiring Schematic
S98057-10		MCCB/1	Panel Internal Wiring Schematic
S98057-11		MCCB/1	Panel Internal Wiring Schematic
S98057-12		MCCB/1	Panel Internal Wiring Schematic
S98057-13		MCCB/1	Panel Internal Wiring Schematic
S98057-14		MCCB/1	Panel Internal Wiring Schematic
S98057-15		MCCB/1	Panel Internal Wiring Schematic
S98057-16		MCCB/1	Panel Internal Wiring Schematic
S98057-17		MCCB/1	Panel Internal Wiring Schematic
S98057-18		MCCB/1	Panel Internal Wiring Schematic
S98057-19		MCCB/1	Panel Internal Wiring Schematic
S98057-20		MCCB/1	Panel Internal Wiring Schematic
S98057-20A		MCCB/1	Panel Internal Wiring Schematic
S98057-21		MCCB/1	Panel Internal Equipment Layout
S98057-22		MCCB/1	Panel External Layout
S98057-23		MCCB/1	Panel Label Details
S98057-24		MCCB/1	Panel Label Details
S98057-24A		MCCB/1	Panel Label Details
S98057-30		MCCB/2	Index Sheet
S98057-31		MCCB/2	Panel Internal Wiring Schematic
S98057-31A		MCCB/2	Panel Internal Wiring Schematic
S98057-32		MCCB/2	Panel Internal Wiring Schematic

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S98057-33		MCCB/2	Panel Internal Wiring Schematic
S98057-34		MCCB/2	Panel Internal Wiring Schematic
S98057-35		MCCB/2	Panel Internal Wiring Schematic
S98057-36		MCCB/2	Panel Internal Wiring Schematic
S98057-37		MCCB/2	Panel Internal Wiring Schematic
S98057-38		MCCB/2	Panel Internal Wiring Schematic
S98057-39		MCCB/2	Panel Internal Wiring Schematic
S98057-42		MCCB/2	Panel Internal Wiring Schematic
<del>S98057-43</del>		<del>MCCB/2</del>	<del>Panel Internal Wiring Schematic</del>
<del>S98057-44</del>		<del>MCCB/2</del>	<del>Panel Internal Wiring Schematic</del>
S98057-45		MCCB/2	Panel internal Layout
S98057-46		MCCB/2	Panel General Arrangement
S98057-47		MCCB/2	Panel Label Details
S98057-48		MCCB/2	Panel Label Details
S98057-50		MCP2	Index Sheet
S98057-51		MCP2	Panel Internal Wiring Schematic
S98057-52		MCP2	Panel Internal Wiring Schematic
S98057-53		MCP2	Panel Internal Wiring Schematic
S98057-54		MCP2	Panel Internal Wiring Schematic
S98057-55		MCP2	Panel Internal Wiring Schematic
S98057-56		MCP2	Panel Internal Wiring Schematic
S98057-57		MCP2	Panel Internal Wiring Schematic
S98057-58		MCP2	Panel Internal Wiring Schematic
S98057-59		MCP2	Panel Internal Wiring Schematic
S98057-61		MCP2	Panel Label Details
S98057-62		MCP2	Panel Label Details
S98057-63		MCP2	Panel General Arrangement
S98057-63A		MCP2	Panel Internal Layout
S98057-70		MCP1	Index Sheet
S98057-71		MCP1	Panel Internal Wiring Schematic
S98057-72		MCP1	Panel Internal Wiring Schematic
S98057-73		MCP1	Panel Internal Wiring Schematic
S98057-74		MCP1	Panel Internal Wiring Schematic
S98057-75		MCP1	Panel Internal Wiring Schematic
S98057-76		MCP1	Panel Internal Wiring Schematic

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S98057-77		MCP1	Panel Internal Wiring Schematic
S98057-80		MCP1	Panel Label Details
S98057-81		MCP1	Panel Label Details
S98057-82		MCP1	Panel General Arrangement
S98057-83		MCP1	Panel Internal Layout
S98057-90		MCP3	Index Sheet
S98057-91		MCP3	Panel Internal Wiring Schematic
S98057-92		MCP3	Panel Internal Wiring Schematic
S98057-93		MCP3	Panel Internal Wiring Schematic
S98057-94		MCP3	Panel Internal Wiring Schematic
S98057-95		MCP3	Panel Internal Wiring Schematic
S98057-96		MCP3	Panel Internal Wiring Schematic
S98057-97		MCP3	Panel Internal Wiring Schematic
S98057-98		MCP3	Panel Internal Wiring Schematic
S98057-98A		MCP3	Panel Internal Wiring Schematic
S98057-99		MCP3	Panel Label Details
S98057-100		MCP3	Panel Label Details
S98057-101		MCP3	Panel General Arrangement
S98057-102		MCP3	Panel Internal Layout
S98057-110		MCC7/1	Index Sheet
S98057-111		MCC7/1	Panel Internal Wiring Schematic
S98057-112		MCC7/1	Panel Internal Wiring Schematic
S98057-113		MCC7/1	Panel Internal Wiring Schematic
S98057-114		MCC7/1	Panel Internal Wiring Schematic
S98057-115		MCC7/1	Panel Internal Wiring Schematic
S98057-117		MCC7/1	Panel Internal Wiring Schematic
S98057-118		MCC7/1	Panel Internal Wiring Schematic
S98057-112		MCC7/1	Panel General Arrangement/Internal Layout
S98057-112		MCC7/1	Panel Label Details
S98057-120		SCP/LG/E	Index Sheet
S98057-121		SCP/LG/E	Panel Internal Wiring Schematic
S98057-122		SCP/LG/E	Panel Internal Wiring Schematic
S98057-124		SCP/LG/E	Panel General Arrangement/Label Details

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S98057-125		SCP/LG/W	Index Sheet
S98057-126		SCP/LG/W	Panel Internal Wiring Schematic
S98057-127		SCP/LG/W	Panel Internal Wiring Schematic
S98057-129		SCP/LG/W	Panel General Arrangement/Label Details
S98057-130		SCP/G/N	Index Sheet
S98057-131		SCP/G/N	Panel Internal Wiring Schematic
S98057-132		SCP/G/N	Panel Internal Wiring Schematic
S98057-134		SCP/G/N	Panel General Arrangement/Label Details
S98057-135		SCP/G/S	Index Sheet
S98057-136		SCP/G/S	Panel Internal Wiring Schematic
S98057-137		SCP/G/S	Panel Internal Wiring Schematic
S98057-138		SCP/G/S	Panel Internal Wiring Schematic
S98057-139		SCP/G/S	Panel General Arrangement/Label Details
S98057-140		SCP/1/E	Index Sheet
S98057-141		SCP/1/E	Panel Internal Wiring Schematic
S98057-142		SCP/1/E	Panel Internal Wiring Schematic
S98057-144		SCP/1/E	Panel General Arrangement/Label Details
S98057-145		SCP/1/W	Index Sheet
S98057-146		SCP/1/W	Panel Internal Wiring Schematic
S98057-147		SCP/1/W	Panel Internal Wiring Schematic
S98057-149		SCP/1/W	Panel General Arrangement/Label Details
S98057-150		SCP/2/E	Index Sheet
S98057-151		SCP/2/E	Panel Internal Wiring Schematic
S98057-152		SCP/2/E	Panel Internal Wiring Schematic
S98057-154		SCP/2/E	Panel General Arrangement/Label Details
S98057-155		SCP/2/W	Index Sheet
S98057-156		SCP/2/W	Panel Internal Wiring Schematic
S98057-157		SCP/2/W	Panel Internal Wiring Schematic
S98057-159		SCP/2/W	Panel General Arrangement/Label Details

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S98057-160		SCP/3/E	Index Sheet
S98057-161		SCP/3/E	Panel Internal Wiring Schematic
S98057-162		SCP/3/E	Panel Internal Wiring Schematic
S98057-164		SCP/3/E	Panel General Arrangement/Label Details
S98057-165		SCP/3/W	Index Sheet
S98057-166		SCP/3/W	Panel Internal Wiring Schematic
S98057-167		SCP/3/W	Panel Internal Wiring Schematic
S98057-169		SCP/3/W	Panel General Arrangement/Label Details
S98057-170		SCP/4/E	Index Sheet
S98057-171		SCP/4/E	Panel Internal Wiring Schematic
S98057-172		SCP/4/E	Panel Internal Wiring Schematic
S98057-174		SCP/4/E	Panel General Arrangement/Label Details
S98057-175		SCP/4/W	Index Sheet
S98057-176		SCP/4/W	Panel Internal Wiring Schematic
S98057-177		SCP/4/W	Panel Internal Wiring Schematic
S98057-179		SCP/4/W	Panel General Arrangement/Label Details
S98057-180		SCP/5/E	Index Sheet
S98057-181		SCP/5/E	Panel Internal Wiring Schematic
S98057-182		SCP/5/E	Panel Internal Wiring Schematic
S98057-184		SCP/5/E	Panel General Arrangement/Label Details
S98057-185		SCP/5/W	Index Sheet
S98057-186		SCP/5/W	Panel Internal Wiring Schematic
S98057-187		SCP/5/W	Panel Internal Wiring Schematic
S98057-189		SCP/5/W	Panel General Arrangement/Label Details
S98057-200		MCP4	Index Sheet
S98057-201		MCP4	Panel Internal Wiring Schematic
S98057-202		MCP4	Panel Internal Wiring Schematic
S98057-203		MCP4	Panel Internal Wiring Schematic
S98057-204		MCP4	Panel Internal Wiring Schematic
S98057-205		MCP4	Panel Internal Wiring Schematic
S98057-206		MCP4	Panel Internal Wiring Schematic

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S98057-207		MCP4	Panel Internal Wiring Schematic
S98057-208		MCP4	Panel Internal Wiring Schematic
S98057-209		MCP4	Panel Internal Wiring Schematic
S98057-211		MCP4	Panel Internal Layout
S98057-212		MCP4	Panel Label Details
S98057-213		MCP4	Panel Label Details
S98057-214		MCP4	Panel General Arrangement
S98057-220			FCU Controller Wiring Schematic
S98057-230		Residential	Index Sheet
S98057-231		Residential	Panel Internal Wiring Schematic
S98057-232		Residential	Panel Internal Wiring Schematic
S98057-233		Residential	Panel Internal Wiring Schematic
S98057-234		Residential	Panel Internal Wiring Schematic
S98057-235		Residential	Panel General Arrangement/Label Details
S98057-240		HWS Heaters	Panel Internal Wiring Schematic
S98057-241		HWS Heaters	Panel General Arrangement/Label Details
S98057-NW			BEMS Network Wiring Schematic

REF.JHW/S98057I2/jhw

13 February 2000

Benchmark  
Wool House Garden  
Carlton Gardens  
St. James's  
London  
SW1 5AD

For the attention of Mr. B. O'Leary

Dear Sirs,

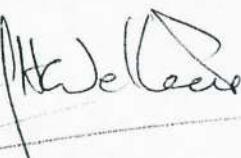
**RE: 5-7 Carlton Gardens**

As requested by Mr. M. Barford, of Mace Ltd, please find attached one copy of the network schematic, drawing no. S98057-FCUNW-01 for the Seachange Fan Coil Unit Controls for the above project.

A schedule of the Fan Coil Unit Numbers relating to the Seachange Address Nos. is enclosed.

Also enclosed is a copy of the individual Fan Coil Unit wiring diagram, drawing no. S98057-220, together with Seachange data Sheets for the Fan Coil Unit Controllers, Zone Controllers, Power Supplies, and Actuator Controllers.

Yours faithfully,  
**For and on behalf of Synchronised Systems**

  
**J. H. Wetherell**

Technical Director

c.c. Mr. M. Barford – Mace Limited

ISSUE A  
Filed with Record  
Drawings which  
follow



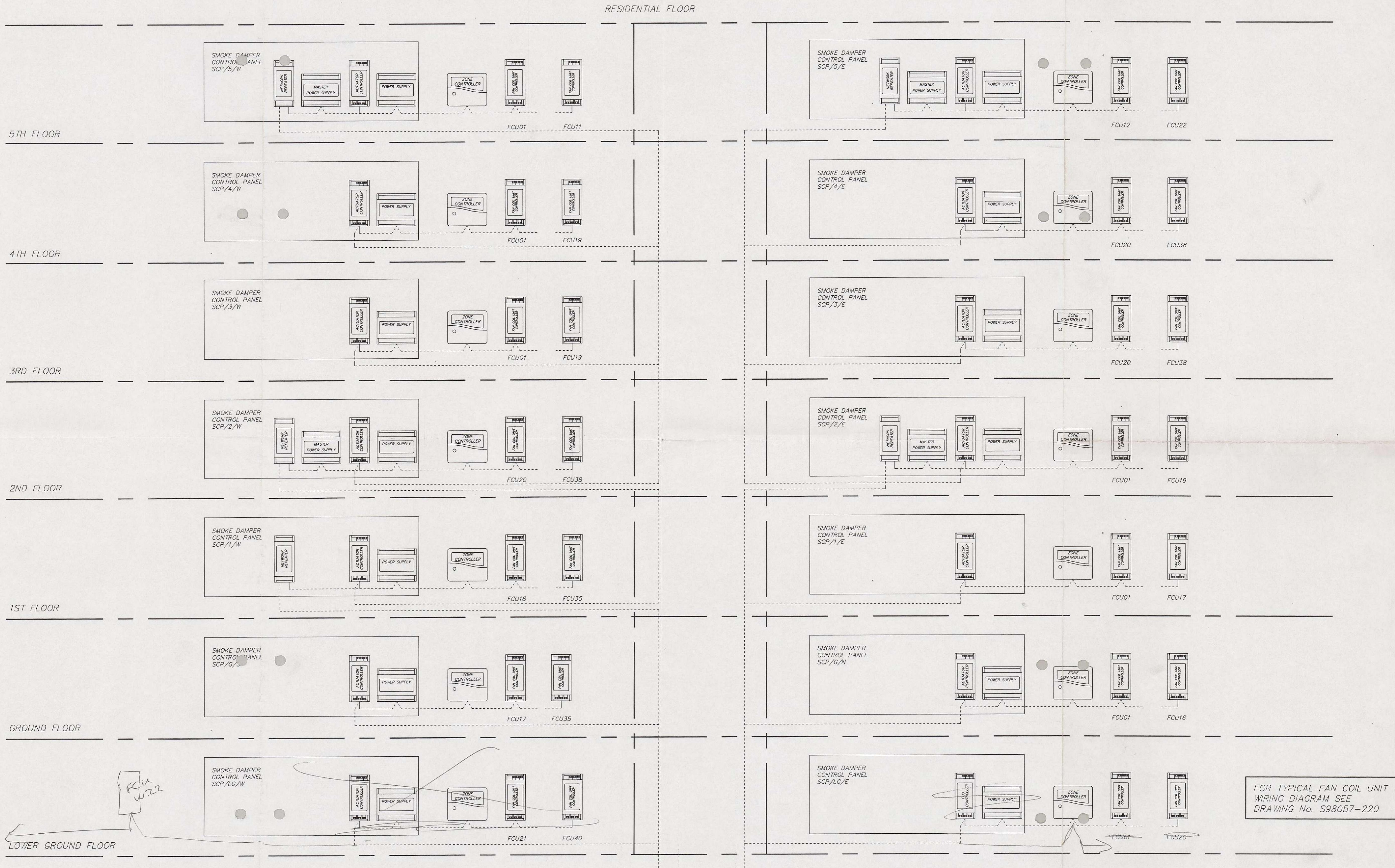
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S98057-FCUNW-01



P.S. IN WEST RISER TRUNK

ISS	DATE	DETAIL	SIG	ISS	DATE	DETAIL	SIG	DRAWN	DATE	
							MJW	01/02/00		
							CHECKED	DATE		
							ENGINEER	SCALE		

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CLIENT  
BENCHMARK GROUP PLCPROJECT  
5-7 CARLTON GARDENSDRG No.  
S98057-FCUNW-01ISSUE  
0

FAN COIL UNIT  
NETWORK CONNECTION  
DIAGRAM

HORTON ROAD, COLNBROOK, SLOUGH, BERKSHIRE  
TEL: 01753 738000  
FAX: 01753 771001

*Building Services Operating and Maintenance Instructions*  
*5-7 Carlton Gardens, London SW1*

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G.2

**RECORD DRAWINGS**

TO BE INSERTED WHEN FULLY UPDATED AFTER COMMISSIONING  
COMPLETION.

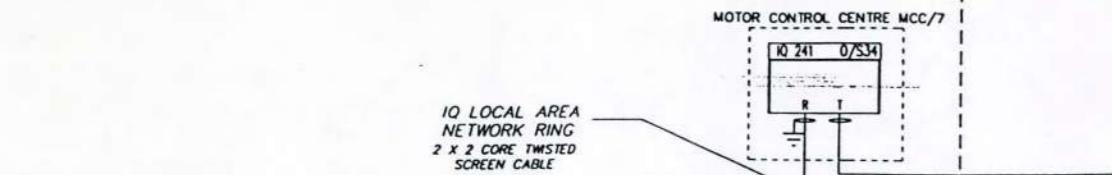
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FOR SCHEMATIC USE ONLY

DRG No. S98057-NW

CORE X RISER

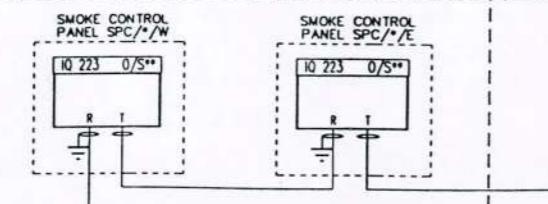
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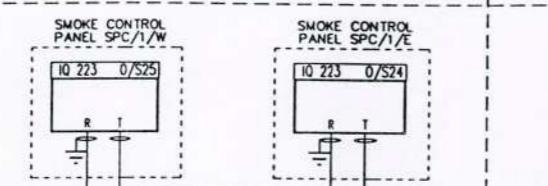
SEVENTH FLOOR

SIXTH FLOOR

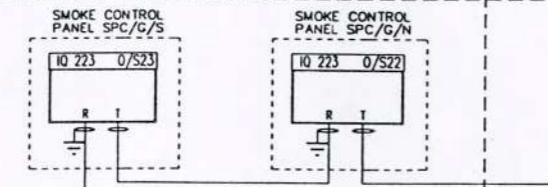
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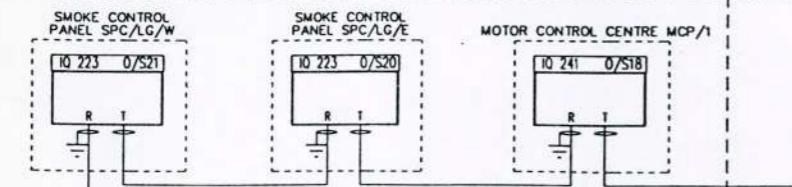
CALL FOR SECOND  
TO FIFTH FLOORS



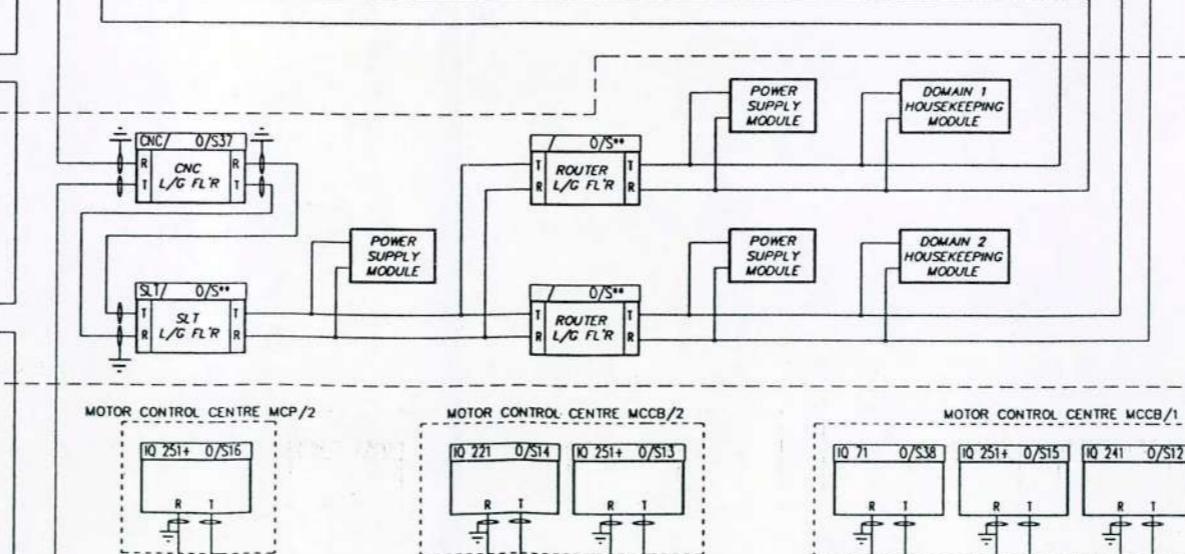
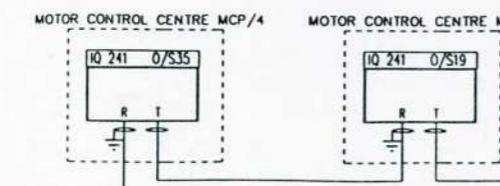
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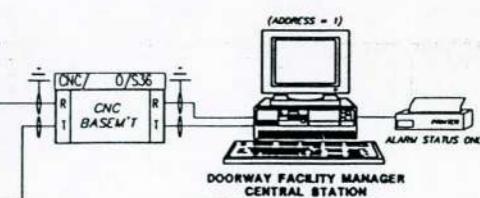
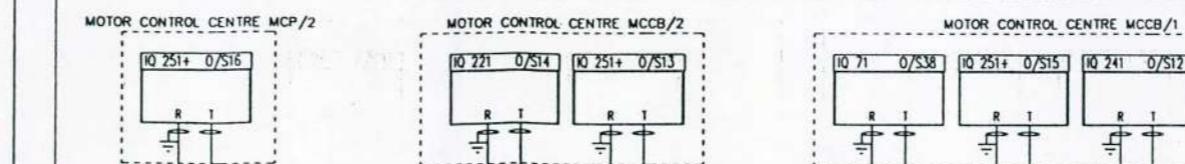
GROUND FLOOR



LOWER GROUND FLOOR



BASEMENT LEVEL



NOTES:

ISS

DATE

DETAIL

SIG

DRAWN

DSO

DATE

23-09-98

CHECKED

AS

DATE

03/11/98

ENGINEER

DSO

SCALE

TITLE

BEMS COMMUNICATIONS NETWORK  
SCHEMATIC LAYOUT

**SYNCHRONISED  
SYSTEMS**

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BENCHMARK GROUP LTD

PROJECT

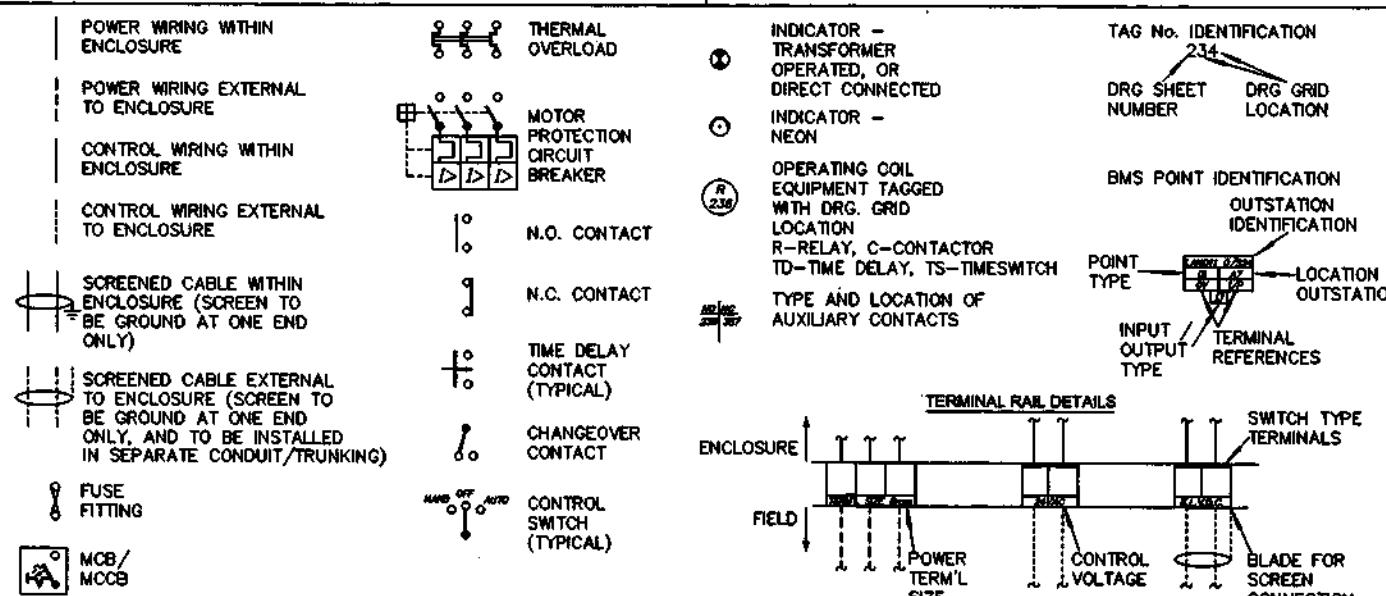
5 - 7 CARLTON GARDENS

DRG No.

S98057-NW

ISSUE B

WIRING NOTES	EQUIPMENT NOTES	DRAWING No.	ISSUE	DESCRIPTION	DRG No. 057-00
1. MINIMUM POWER WIRING 2.5mm	1. ALL STARTERS TO BE OF TELEMECANIQUE MANUFACTURE	S98057-01	B	MAIN ISOLATORS	
2. MINIMUM CONTROL WIRING 1.0mm	2. MAIN SUPPLY ISOLATORS TO BE OF SOCOMEC/TELEMECANIQUE MANUFACTURE	S98057-02	B	BMS & CONDENSATION HEATERS	
3. POWER CABLES TO BE FITTED WITH CORD END TERMINALS, OR LUGS, DEPENDING ON SIZE, AND TYPE OF CONNECTION.	3. FUSE SWITCHES TO BE OF SOCOMEC MANUFACTURE	S98057-03	C	PRIMARY HEATING PUMPS	
4. CONTROL CABLES TO BE FITTED WITH CORD END TERMINALS, PIN, OR FORK, CONFIGURATION, DEPENDING ON TYPE OF CONNECTION.	4. MCB'S, AND MCCB'S TO BE OF MERLIN GERIN, OR SIEMENS MANUFACTURE.	S98057-04	C	BOILERS 1 & 2	
5. ALL CABLES TO 16mm TO BE COLOUR CODED AS FOLLOWS:- 400 VOLTS L1.L2.L3. - RED, YELLOW, BLUE 230 VOLTS NEUTRAL - BLACK LOW VOLTAGE A.C. - BROWN EXTRA LOW VOLTAGE D.C. - GREY 115 VOLTS A.C. - ORANGE	5. ALL OUTGOING TERMINALS TO BE OF ENTRELEC MANUFACTURE.	S98057-05	C	HEATING PRESSURISATION UNIT	
6. ALL CABLES ABOVE 16mm TO BE BLACK WITH ENDS HEAT SHRINK COLOUR CODED PHASE IDENTIFICATION.	6. ALL PILOT LIGHTS TO BE OF TRANILAMP MANUFACTURE.	S98057-06	B	GAS DETECTION UNIT	
7. ALL CONTROL CABLES TO BE IDENTIFIED AT EACH END BY THE USE OF COLOUR CODED FERRULES. THE NUMBERS ARE SHOWN THUS ON THE DIAGRAM - '105'	7. SELECTOR SWITCHES TO BE OF TELEMECANIQUE MANUFACTURE.	S98057-07	C	GAS SOLENOID VALVE	
8. FINAL CABLE No. '1384'	8. CONTROL RELAYS TO BE FINDER 55.34.	S98057-08	C	FCU SECONDARY HEATING PUMPS	
9. WHEN A CABLE CONNECTS TO AN OUTGOING TERMINAL THE CABLE IDENTIFICATION NUMBER IS THE SAME AS THE TERMINAL NUMBER.	9. TIME DELAY RELAYS TO BE FINDER 85.34.	S98057-09	C	AHU SECONDARY HEATING PUMPS	
10. FINAL TERMINAL No. POWER/230VAC - 1 TO 159 FINAL TERMINAL No. ELVDC/24VAC - 300 TO 634	10. WHERE HRC FUSE CARRIERS ARE INDICATED ON THE SCHEMATIC DIAGRAM THE CARRIERS ARE TO BE OF GEC MANUFACTURE.	S98057-10	C	DHWS HEATING PUMPS	
		S98057-11	C	RADIATOR & LANDLORD'S PUMPS	
		S98057-12	C	CHILLED WATER PUMPS	
		S98057-13	C	PRIMARY CONDENSER WATER PUMPS	
		S98057-14	B	C.W. PRESSURISATION UNIT	
		S98057-15	C	CONDENSER PRESSURISATION UNIT	
		S98057-16	C	FCU SECONDARY CHILLED WATER PUMPS	
		S98057-17	C	AHU SECONDARY CHILLED WATER PUMPS	
		S98057-18	A	BMS POINTS	
		S98057-19	A	BMS POINTS	
		S98057-20	B	BMS POINTS	
		S98057-20A	O	UNDERFLOOR HEATING PUMPS	
		S98057-21	B	INTERNAL EQUIPMENT LAYOUT	
		S98057-22	C	EXTERNAL LAYOUT	



IR	DATE	RETRIEVAL
A	02/09/98	DAP COMMENTS
B	22/10/98	DRAWHOLES 03, 04, 05, 07, 08, 09, 10, 11, 12, 13, 14, 15, 16, 17, 22 23&24 REVISED
C	03/11/98	DRG 01, 02, 03, 04, 05, 06, 07, 08, 09, 10 11, 12, 13, 14, 15, 16, 17, 20&21A REVISED
D	11/11/98	DRG 01, 02, 03, 04, 05, 06, 07, 08, 09, 10 11, 12, 13, 14, 15, 16, 17, 20&21A REVISED

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-10-

BENCHMARK GROUP PLC

DRAWING INDEX  
EQUIPMENT SCHEDULE/NOTE  
FOR  
MCCB/1



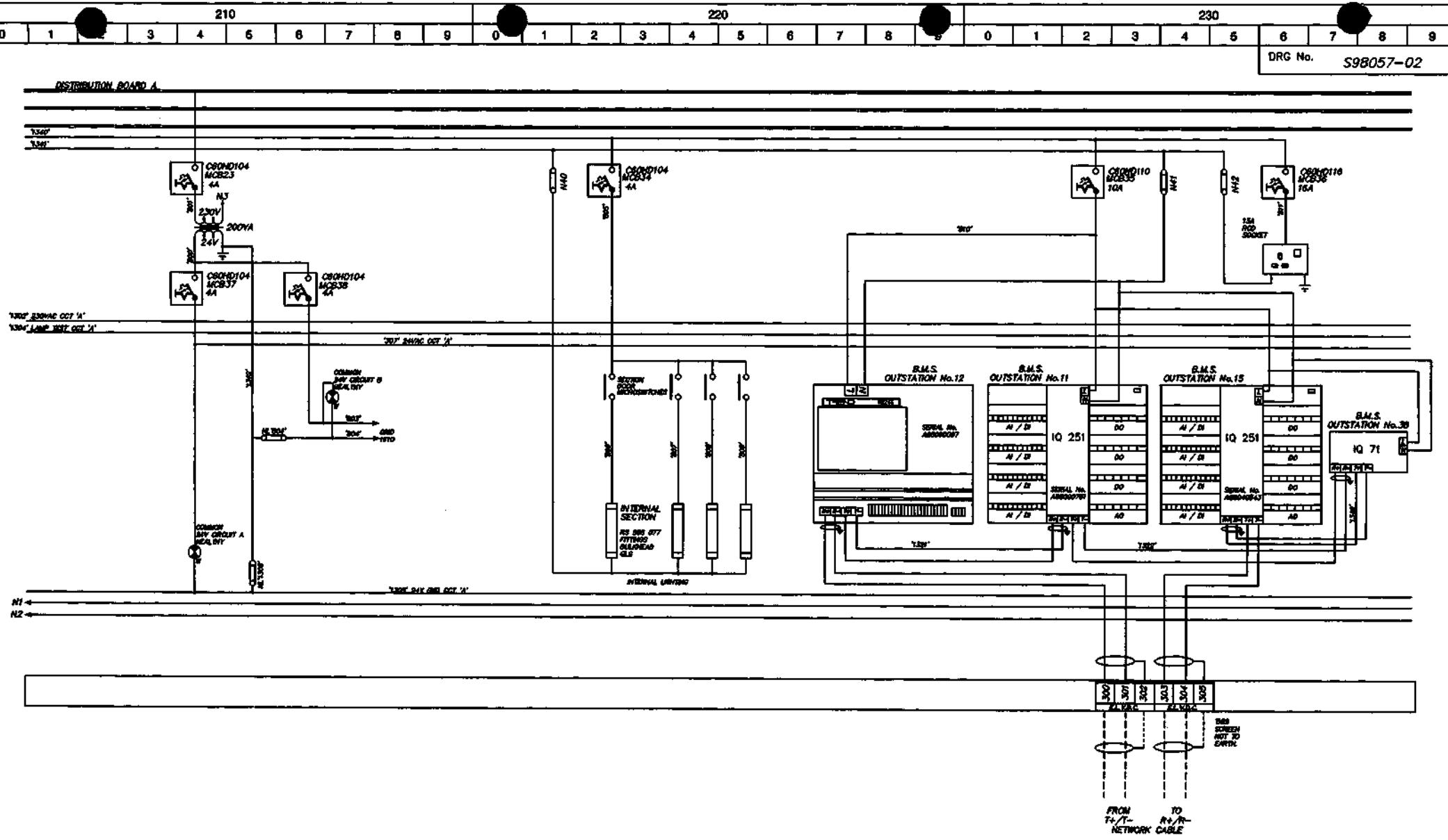
HORTON ROAD, COLNBROOK, SLOUGH, BERKSHIRE  
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FAX: 01753 771001

SAB057-00

ISSUE 8





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	A	03/08/98	DAP COMMENTS	DO	03/08/98	DATE		
	B	03/11/98	AS FITTED	DO	03/08/98	DATE		
					DSO	DATE		
CLIENT			PROJECT			DRG No.	ISSUE	
BENCHMARK GROUP PLC			5-7 CARLTON GARDENS			S08057-02		

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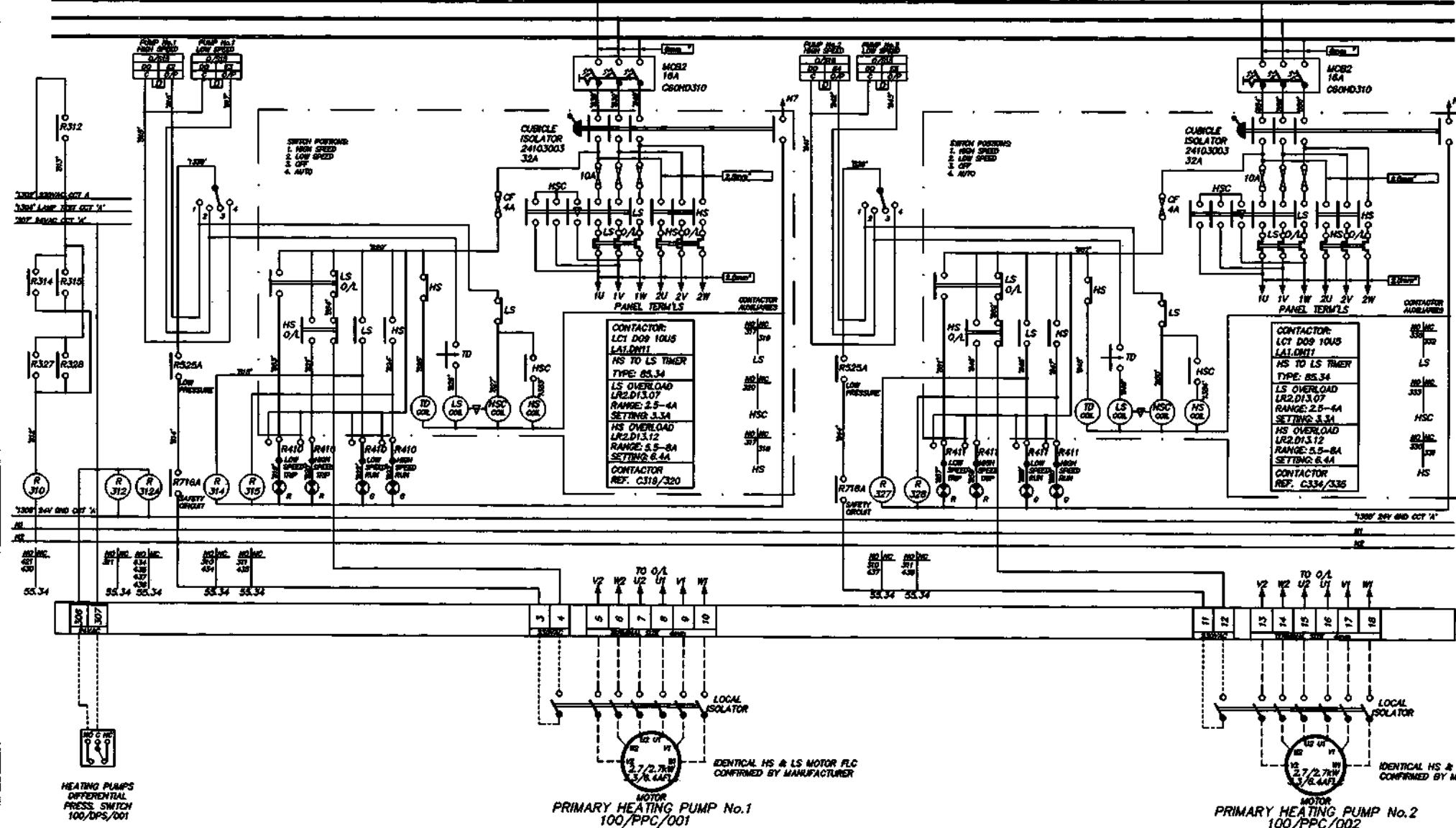
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DRG No. S98057-03

## DISTRIBUTION BOARD A



HEATING PUMPS  
DIFFERENTIAL  
PRESS. SWITCH  
100/DPS/001

PRIMARY HEATING PUMP No.1  
100/PPC/001

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PRIMARY HEATING PUMP No.2  
100/PPC/002

IDENTICAL HS & LS MOTOR FLC  
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PROJECT 5-7 CARLTON GARDENS

DRG No. S98057-03

ISSUE C

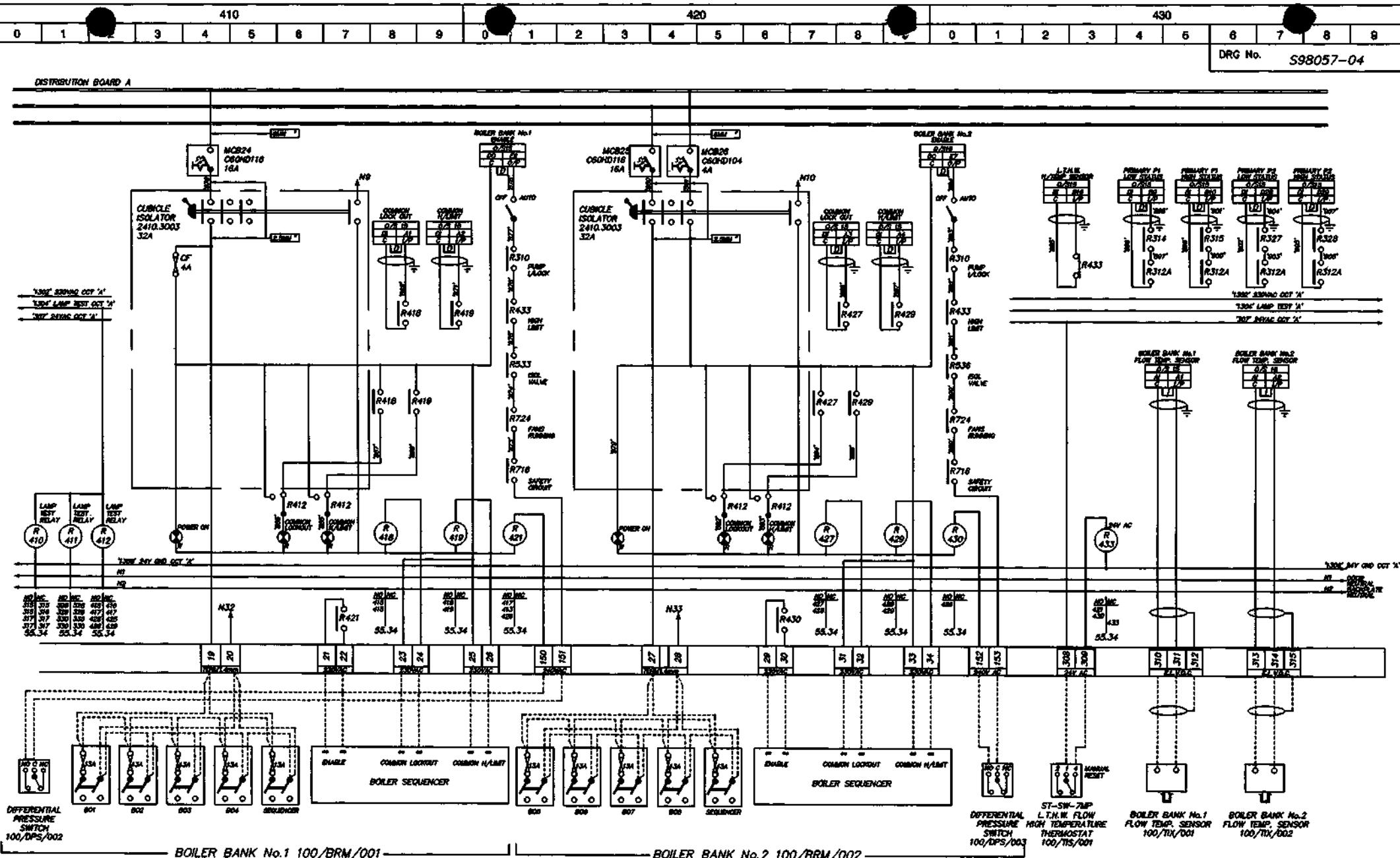
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B	03/11/98	DO	AS FITTED	DO	03/11/98	DRW
C	14/04/99	DO	SITE MODIFICATION	DSO	14/04/99	DRW

TITLE

SCHEMATIC WIRING DIAGRAM  
AND EXTERNAL FIELD WIRING FOR  
MOTOR CONTROL PANEL  
MCCB/1  
(SHEET 3 OF 20)

SYNCHRONISED  
SYSTEMS

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DATE	DETAIL	BY	DRIVEN	BASE
09/98	GAP COMMENTS	DO	DRIVEN	BASE
10/98	MODIFIED AS PER MEETING AT OCE ARUP OFFICES 15/10/98	J-WW	DRIVEN	BASE
11/98	AS FITTED	DO	DSQ	

**SCHEMATIC WIRING DIAGRAM  
AND EXTERNAL FIELD WIRING FOR  
MOTOR CONTROL PANEL  
MCCB/1  
(SHEET 4 OF 20)**

**SYNCHRONISED  
SYSTEMS**

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**ISSUE**

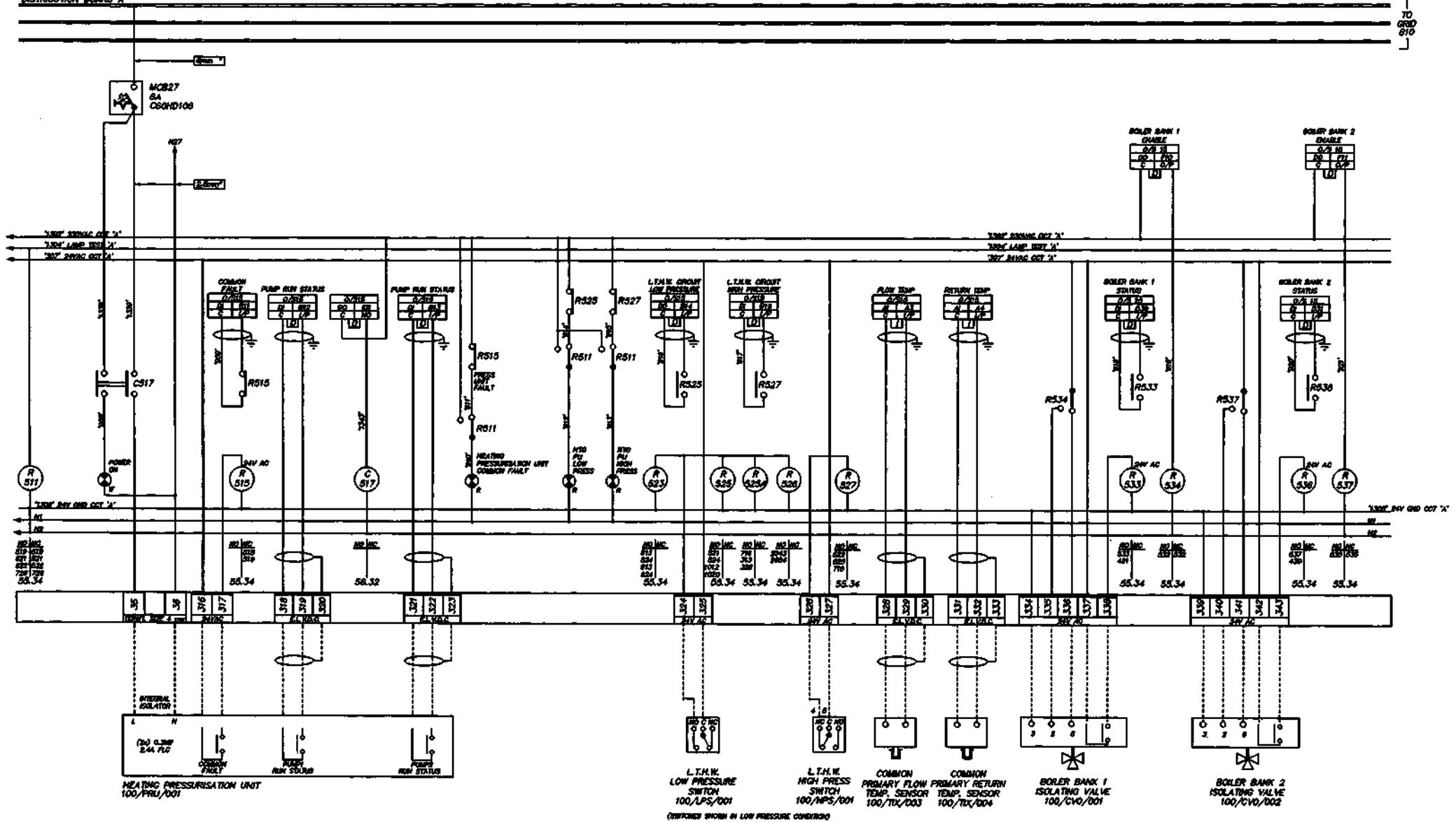
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DRG No. S98057-05

DISTRIBUTION BOARD A

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HEATING PRESSURISATION UNIT  
100/PRU/001

DETERMINED BY THE LOW PRESSURE CONDITION

CLIENT

BENCHMARK GROUP PLC

PROJECT

5 - 7 CARLTON GARDENS

DRG No.

S98057-05

ISSUE

C

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TITLE  
**SCHEMATIC WIRING DIAGRAM  
AND EXTERNAL FIELD WIRING FOR  
MOTOR CONTROL PANEL  
MCCB/1  
(SHEET 5 OF 20)**

**SYNCHRONISED  
SYSTEMS**

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RE	DATE	REMARKS	RE	DRG NO.	DATE
A	03/09/98	O&P COMMENTS	DO	000003	18/08/98
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C	03/11/98	AS FITTED	DO	000005	

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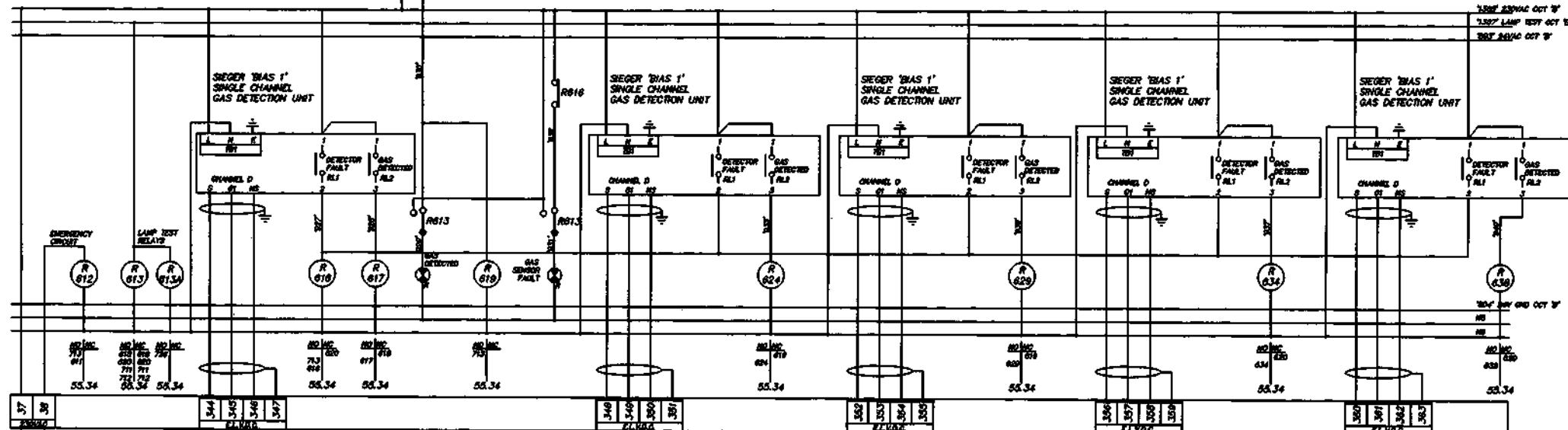
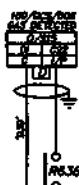
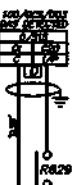
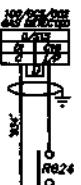
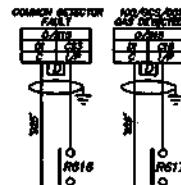
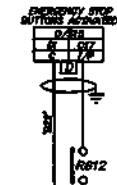
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DRG No. S98057-06

## DISTRIBUTION BOARD 8

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PUSHBUTTONS  
(KEY RELEASE TYPE)

	DATE	REVISION	ISSUE	DRAWN BY	REVIEWED BY	APPROVED BY	TITLE
A	03/08/98	OAP COMMENTS	DO	MAS	18/8/98		SCHEMATIC WIRING DIAGRAM AND EXTERNAL FIELD WIRING FOR MOTOR CONTROL PANEL MCB/1 (SHEET 6 OF 20)
B	03/11/98	AS FITTED	DO	DRAWN DSD	REVIEWED DSD	APPROVED DSD	

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BENCHMARK GROUP PLC

PROJECT

5-7 CARLTON GARDENS

SYNCHRONISED  
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FAX: 01753 771001

DRG No. S98057-06

ISSUE B

710

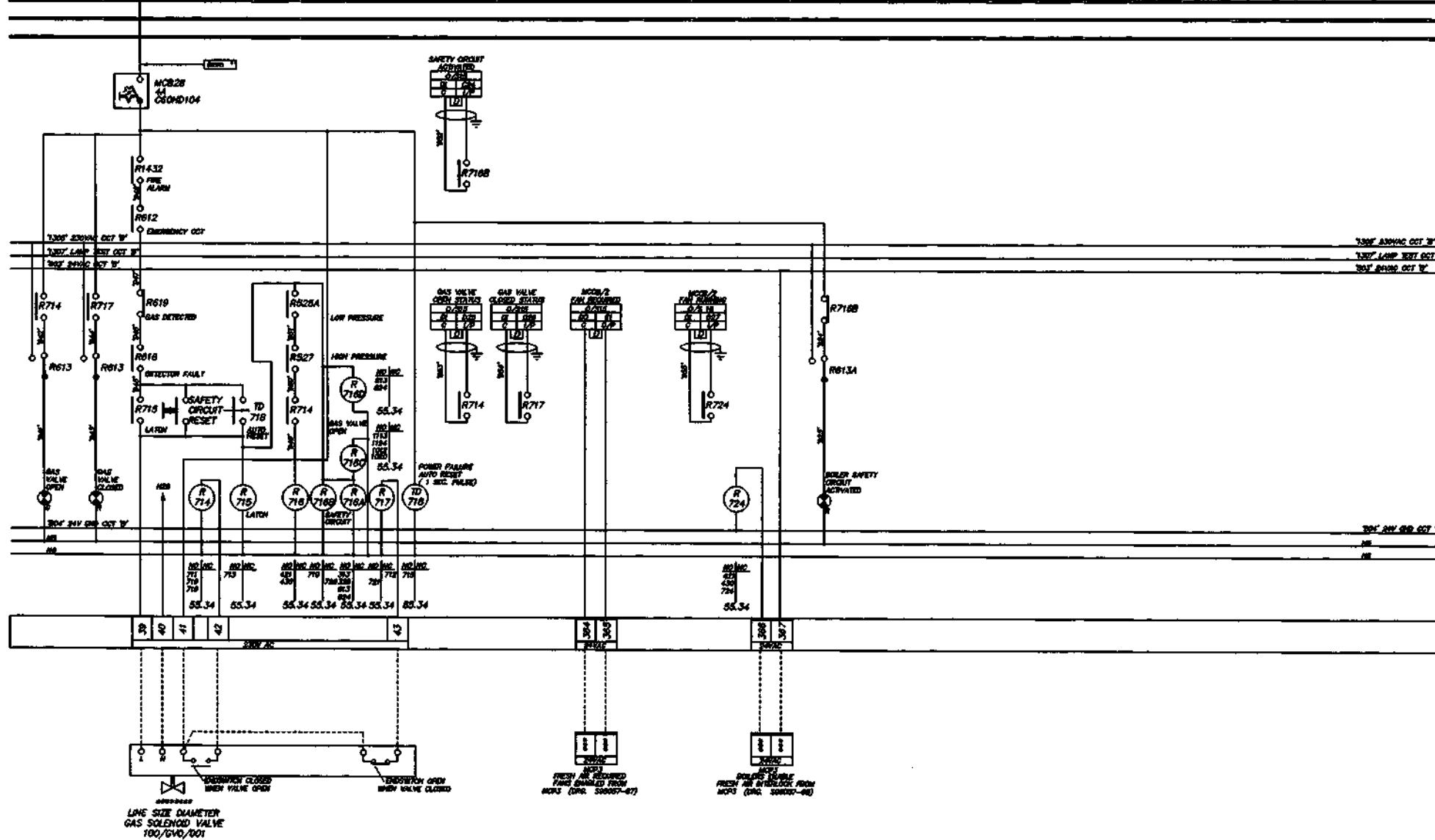
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ORG No. S98056-07

DISTRIBUTION BOARD



DATE	DETAIL	BY	REASON	MAS	DATE
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18/10/98	MODIFIED AS PER MEETING AT ONE ARUP OFFICES 15/10/98	JW	CHANGED	None	
03/11/98	AS FITTED	DO	DO		

1

SCHEMATIC WIRING DIAGRAM  
AND EXTERNAL FIELD WIRING FOR  
MOTOR CONTROL PANEL  
MCCB/1  
(SHEET 7 OF 20)

*SYNCHRONISED  
SYSTEMS*

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TEL: 01753 738000 FAX: 01753 771001

BRASILIANA DE SUD-AMÉRICA

PROJECT

5-7 CARLTON GARDEN

DBG No.

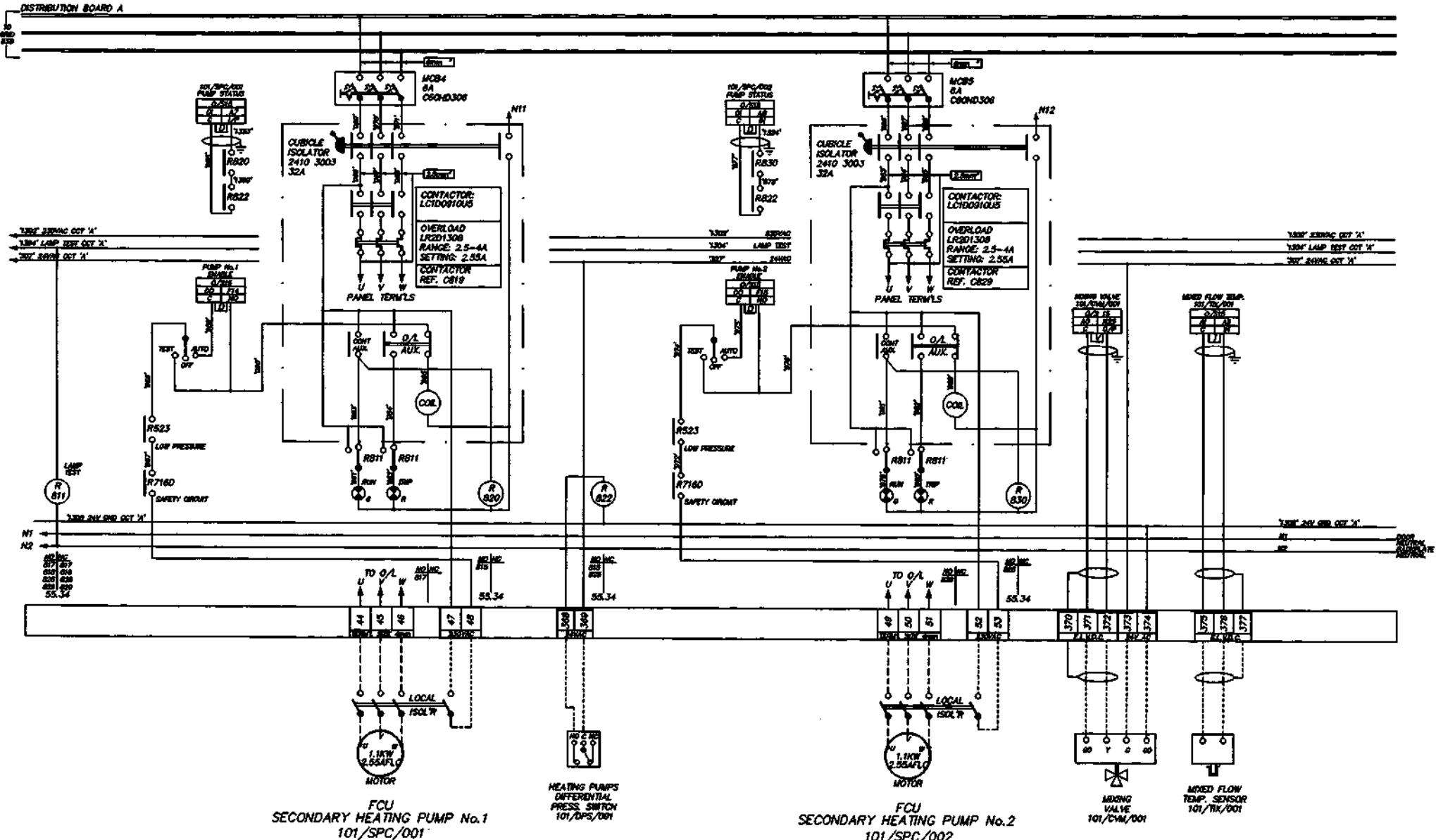
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DRG No. S98057-08



CR	DATE	DETAIL
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B	16/10/98	MODIFIED AS PER MEETING AT ONE ARUP OFFICES 15/10/98
C	03/11/98	AS FITTED

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JW	SPICER	BAKE	
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SCHEMATIC WIRING DIAGRAM  
AND EXTERNAL FIELD WIRING FOR  
MOTOR CONTROL PANEL  
MCCB/1  
(SHEET 8 OF 20)

**SYNCHRONISED  
SYSTEMS**

This section is the outcome of a joint study carried out by the World Health Organization

-10-

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PROJECT

第二部分

**ORG No.**

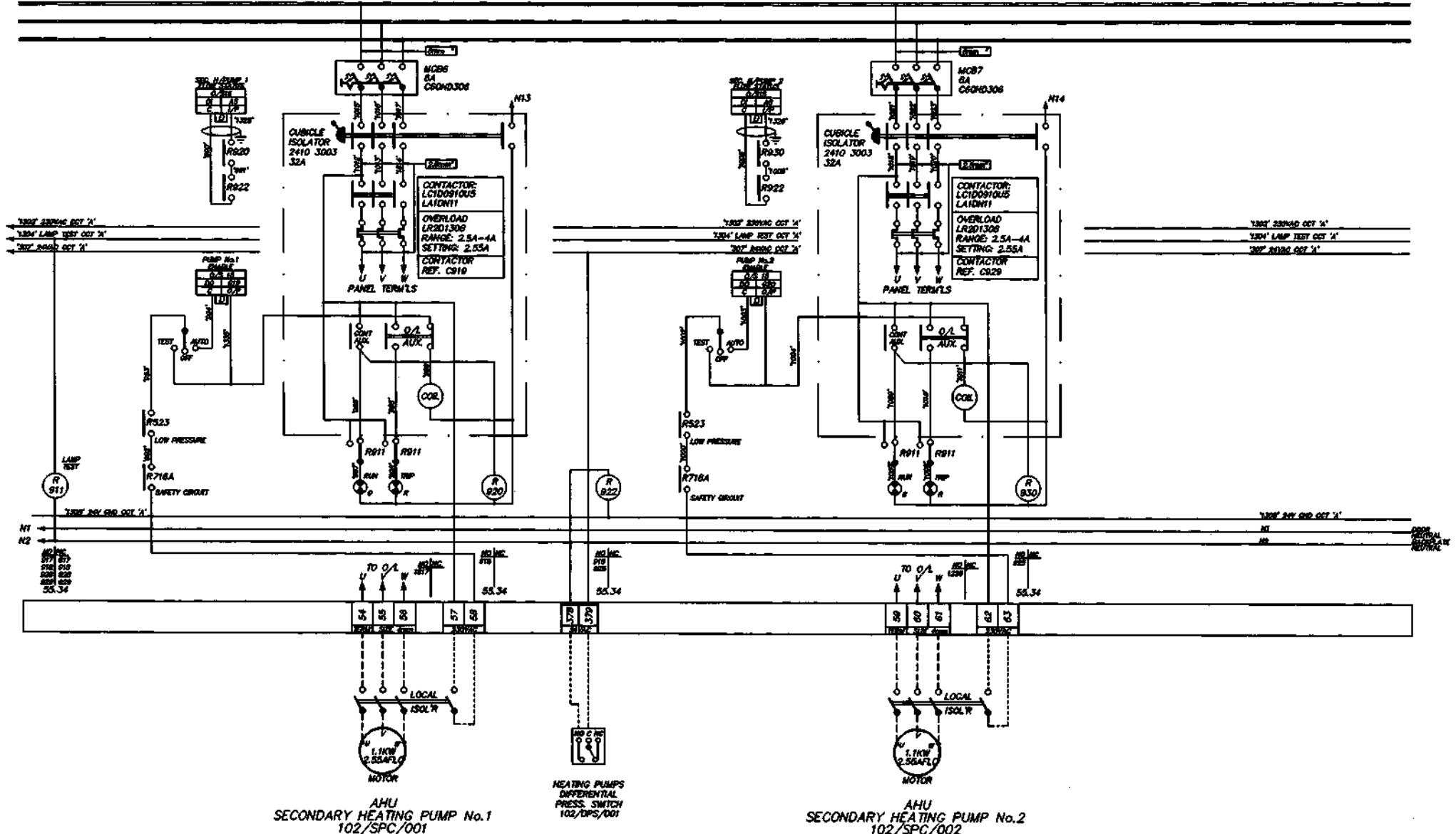
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DRG No. S98057-09

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BENCHMARK GROUP PLC

PROJECT

5-7 CARLTON GARDENS

DRG No.

S98057-09

ISSUE

C

SYNCHRONISED  
SYSTEMS  
SCHEMATIC WIRING DIAGRAM  
AND EXTERNAL FIELD WIRING FOR  
MOTOR CONTROL PANEL  
MCCB/1  
(SHEET 9 OF 20)

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TEL: 01753 738000  
FAX: 01753 771001

IN DATE

03/08/98

OAP COMMENTS

IN DATE

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REMOVED

IN DATE

18/8/98

DATE

B 10/10/98  
MODIFIED AS PER MEETING AT  
OCE ARUP OFFICES 15/10/98

JHW

CHANGED

C 03/11/98  
AS FITTED

DO

DATE

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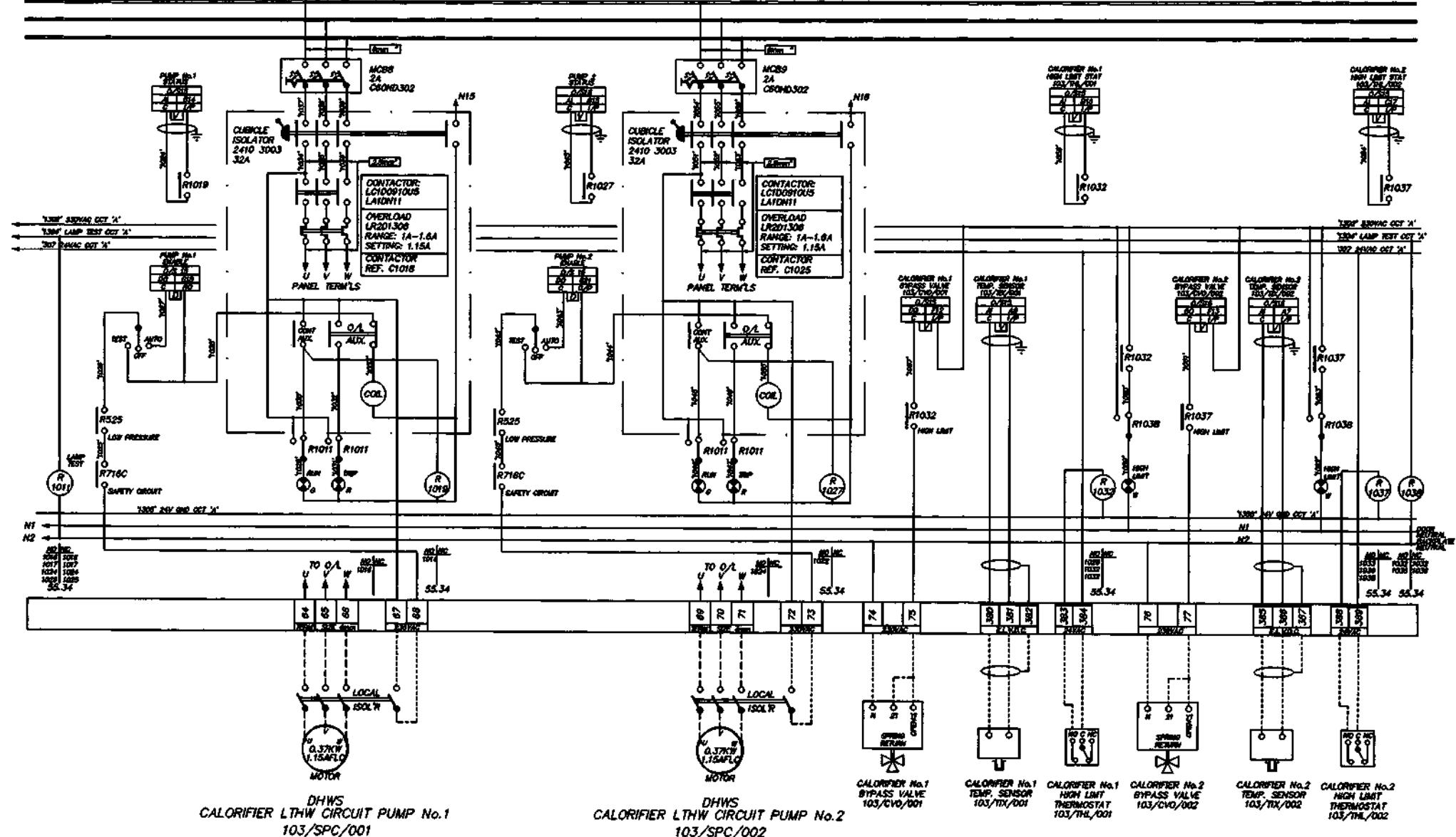
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DRG No. S98057-10

## DISTRIBUTION BOARD A



DHWS  
CALORIFIER LTHW CIRCUIT PUMP No.1  
103/SPC/001

DHWS  
CALORIFIER LTHW CIRCUIT PUMP No.2  
103/SPC/002

TITLE  
SCHEMATIC WIRING DIAGRAM  
AND EXTERNAL FIELD WIRING FOR  
MOTOR CONTROL PANEL  
MCCB/1  
(SHEET 10 OF 20)

SYNCHRONISED  
SYSTEMS

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FAX: 01753 771001

1110

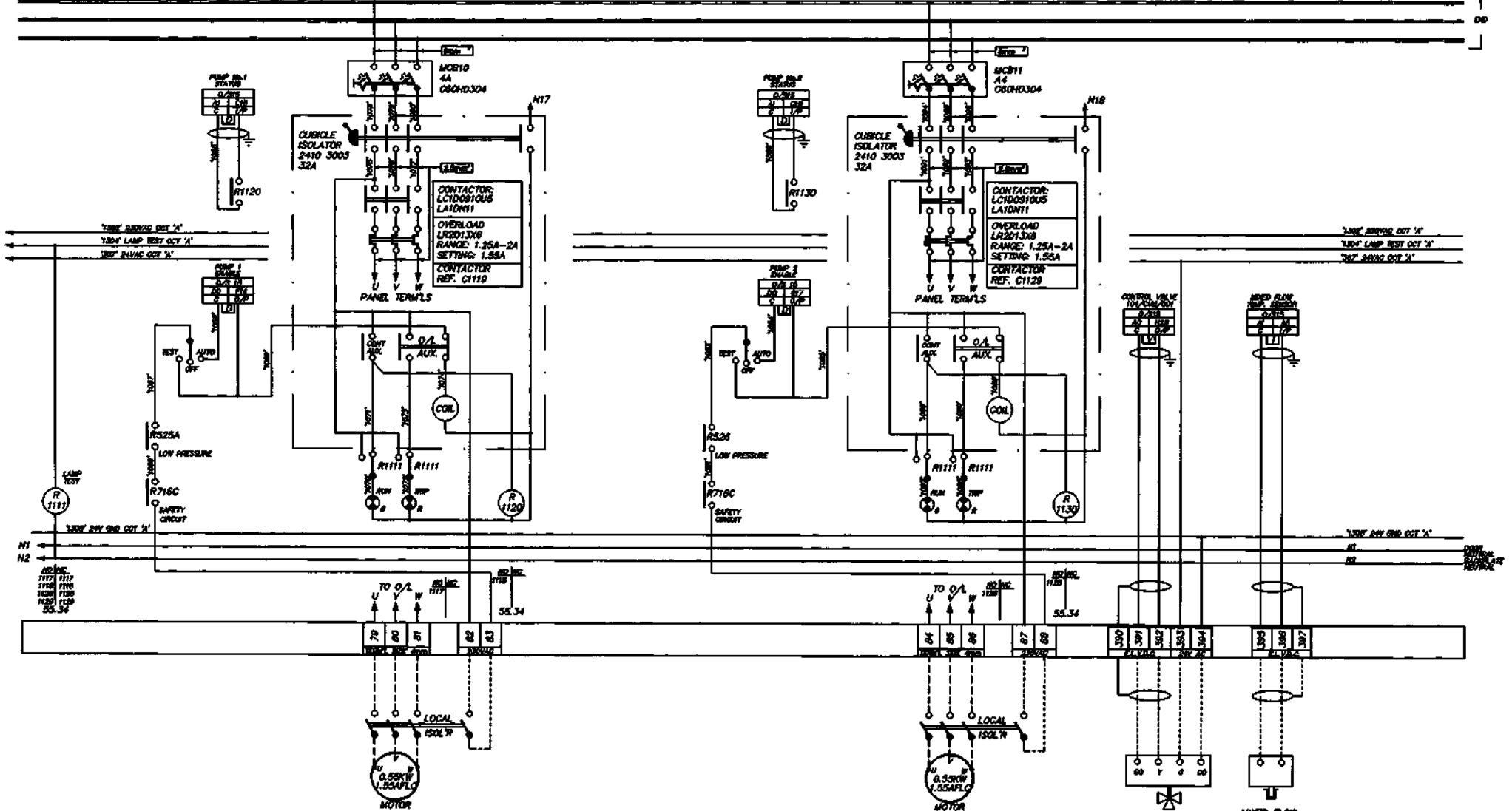
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113

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DRG No. S98057-11

DISTRIBUTION BOARD



RADIATOR & LANDLORDS LTD  
CIRCUIT PUMP No.1  
104/SPC/001

RADIATOR & LANDLORDS LTD  
CIRCUIT PUMP No.2  
104/SPC/002

MIXED FLOW  
TEMP. SENSOR  
104/TDX/001

ITEM	DATE	DETAIL
A	03/09/98	GAP COMMENTS
B	18/10/98	MODIFIED AS PER MEETING AT ONE ARUP OFFICES 15/10/98
C	03/11/98	AS FITTED

**SCHEMATIC WIRING DIAGRAM  
AND EXTERNAL FIELD WIRING FOR  
MOTOR CONTROL PANEL  
MCBE/1  
(SHEET 11 OF 20)**

**SYNCHRONISED  
SYSTEMS**

HORTON ROAD, COLNBROOK, SLOUGH, BERKSHIRE  
TEL: 01753 738000 FAX: 01753 771001

1210

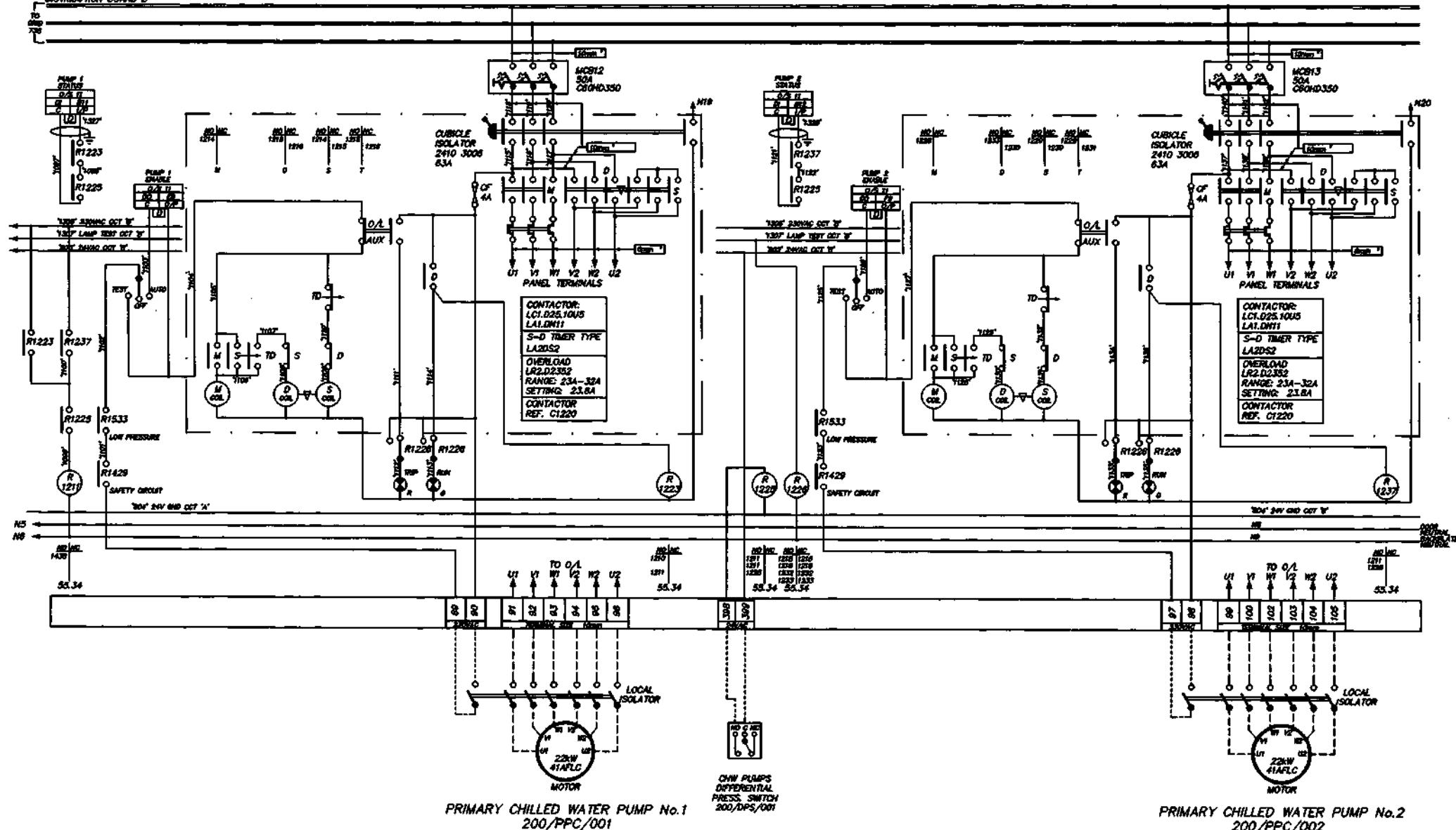
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DRG No. S98057-12

## DISTRIBUTION BOARD B

PRIMARY CHILLED WATER PUMP No.1  
200/PPC/001PRIMARY CHILLED WATER PUMP No.2  
200/PPC/002

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CLIENT

BENCHMARK GROUP PLC

PROJECT

5-7 CARLTON GARDENS

DRG No.

S98057-12

ISSUE

SYNCHRONISED SYSTEMS

HORTON ROAD, COLNBROOK, SLOUGH, BERKSHIRE  
TEL: 01753 738000 FAX: 01753 771001

IN	OUT	ITEM	IN	OUT	ITEM
A	03/09/98	OAP COMMENTS	DO	MAIN	16/8/98
B	18/10/98	MODIFIED AS PER MEETING AT OVE ARUP OFFICES 15/10/98	JHF	MAIN	
C	03/11/98	AS FITTED	DPW	MAIN	

**TITLE**  
**SCHEMATIC WIRING DIAGRAM  
AND EXTERNAL FIELD WIRING FOR  
MOTOR CONTROL PANEL  
MCCB/1  
(SHEET 12 OF 20)**

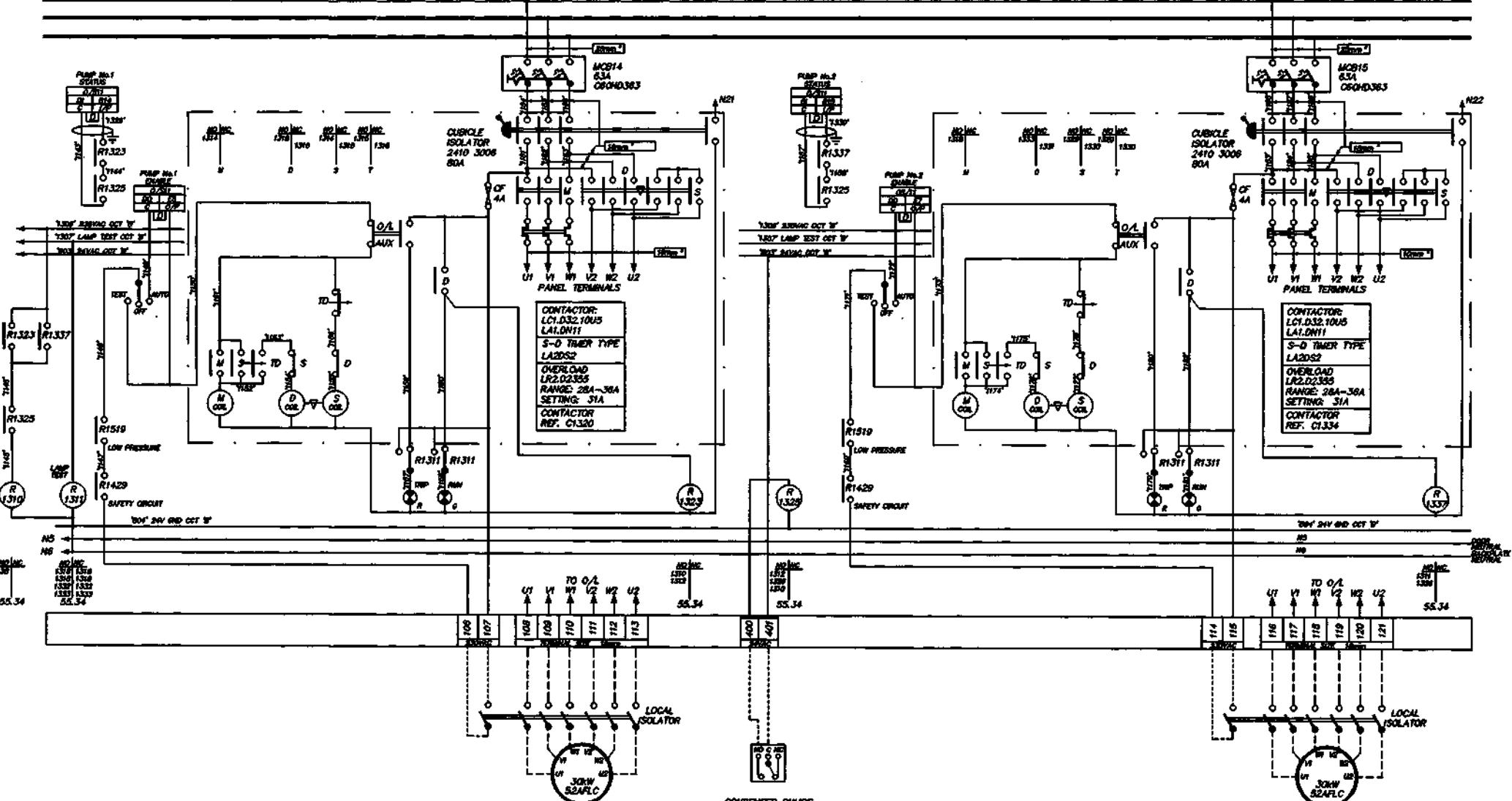
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DRG No. S98057-13

DISTRIBUTION 80480 8



PRIMARY CONDENSER WATER PUMP No.  
200/PPC/003

PRIMARY CONDENSER WATER PUMP No.2  
200/PPC/004

BB	DATE	REVAL	SD	DRIVER MA
A	03/09/98	CAP COMMENTS	DO	GRIED
B	10/10/98	MODIFIED AS PER MEETING AT ONE ARUB OFFICES 15/10/98	JNW	DRIVER
C	03/11/98	AS FITTED	DO	DPM

**SCHEMATIC WIRING DIAGRAM  
AND EXTERNAL FIELD WIRING FOR  
MOTOR CONTROL PANEL  
MCCB/1  
(SHEET 13 OF 20)**



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BENCHMARK GROUP PLC

PROJECT

5-7 CARLTON GARDENS

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BBC News

598057-13

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1410

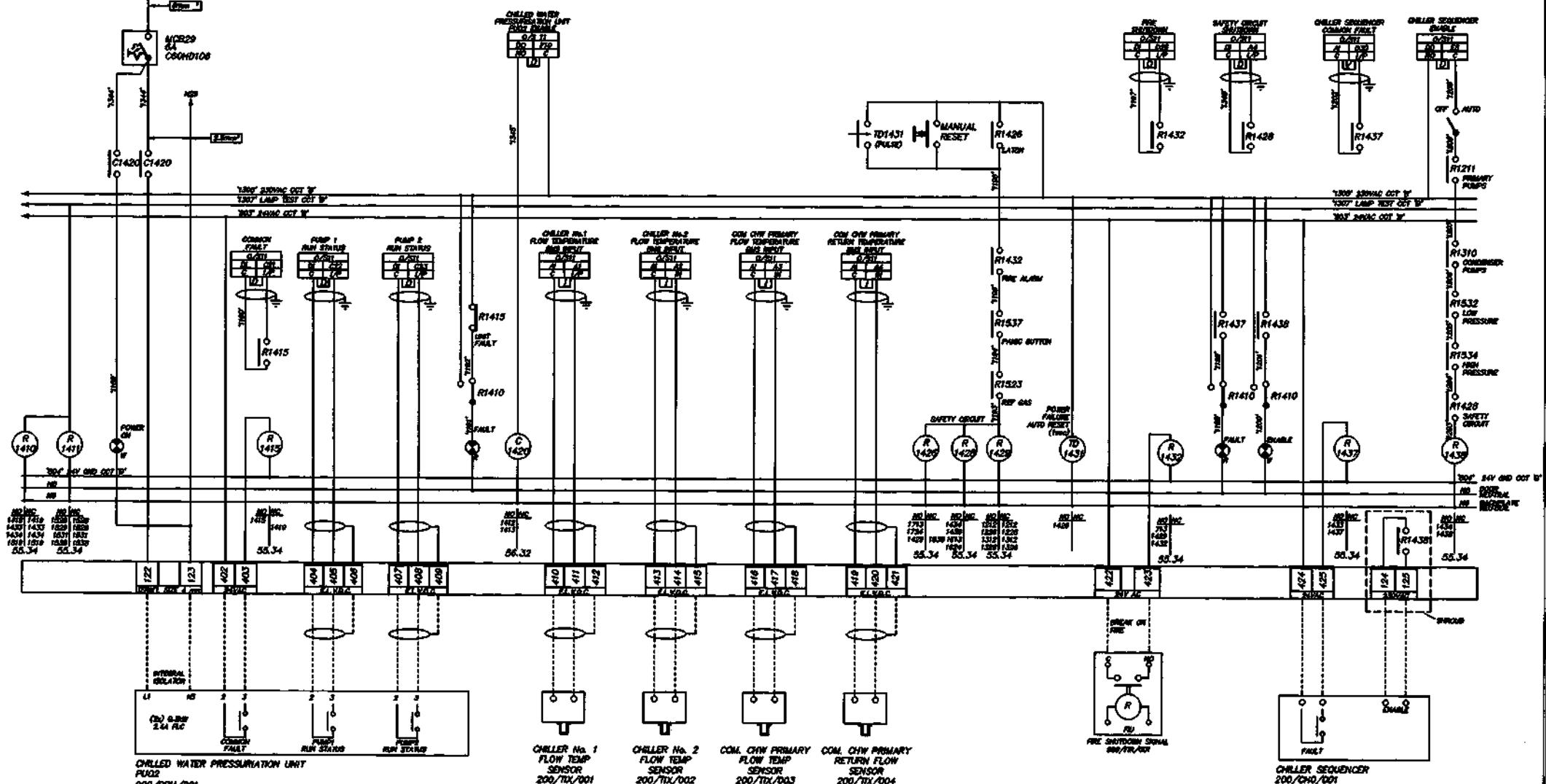
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DRG No. S98057-14

## DISTRIBUTION BOARD B



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CLIENT BENCHMARK GROUP PLC PROJECT 5-7 CARLTON GARDENS DRG No. S98057-14 ISSUE B

REV	DATE	REVISION	REV	DATE	REVISION	TITLE
A	03/09/98	O&P COMMENTS	DO	18/03/98	AS FURNISHED	SCHEMATIC WIRING DIAGRAM AND EXTERNAL FIELD WIRING FOR MOTOR CONTROL PANEL MCCB/1 (SHEET 14 OF 20)
B	03/11/98	AS FITTED	DO			
			DPW			

SYNCHRONISED  
SYSTEMS

HORTON ROAD, COLNBROOK, SLough, BERKSHIRE  
TEL: 01753 738000  
FAX: 01753 771001

1510

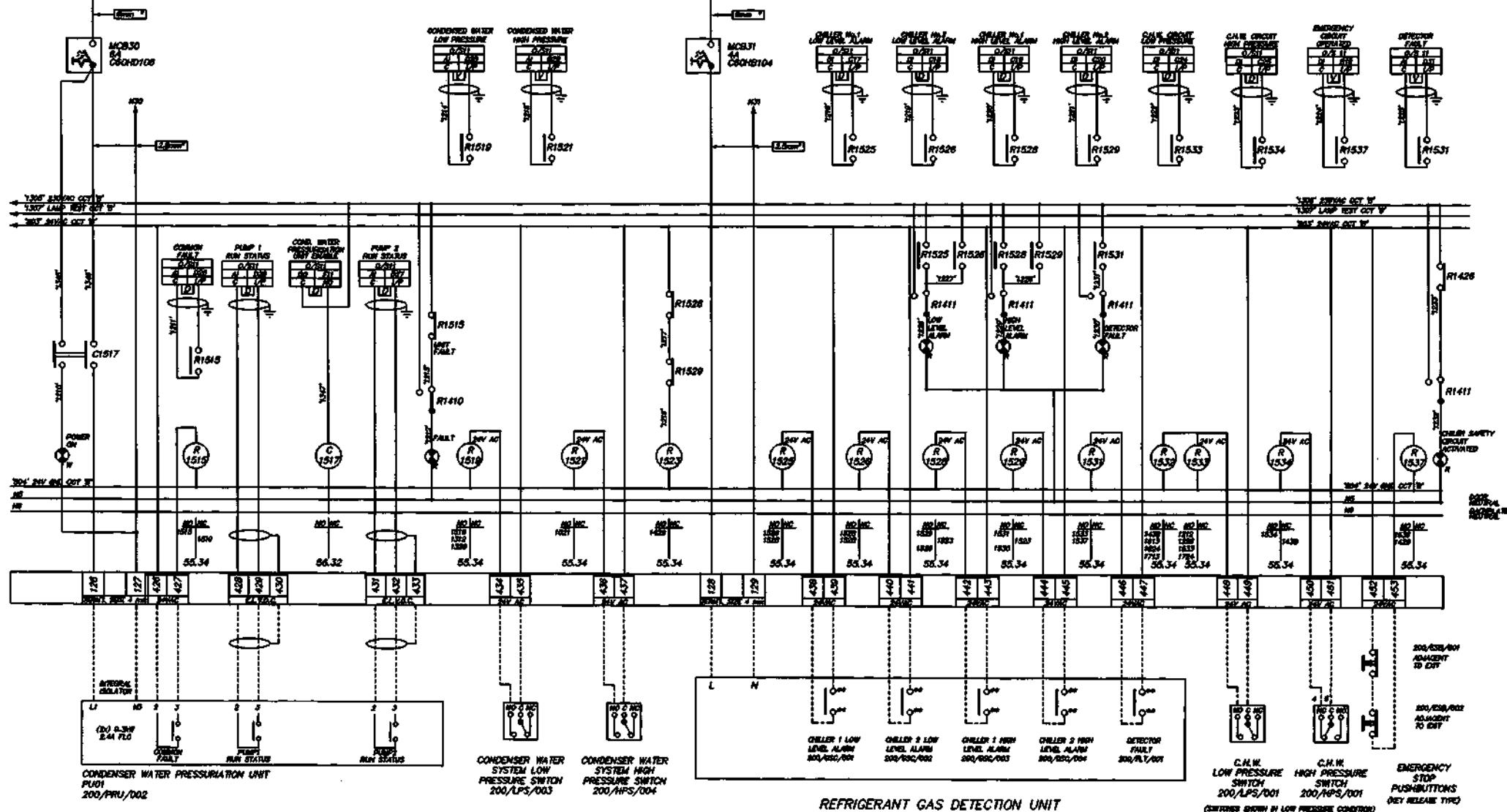
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DRG No. S98057-15

DISTRIBUTION BOARD B



	DATE	
	03/09/98	
	18/10/98	MONDAY ONE
	03/11/98	

**REML**  
**OAP COMMENTS**  
**ED AS PER MEETING AT  
URUP OFFICES 15/10/98**  
**AS FITTED**

<u>ED</u>	CROWN MAS	DATE <u>15/1</u>
<u>DO</u>	CHIEF CROWN	DATE
<u>JRW</u>	WANNER	DATE
<u>DO</u>	<u>DPW</u>	

TITLE

**SCHEMATIC WIRING DIAGRAM  
AND EXTERNAL FIELD WIRING FOR  
MOTOR CONTROL PANEL  
MCCB/1**



HORTON ROAD, COLN BROOK, SLOUGH, BERKSHIRE  
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4 IDENT

PROJECT

[View all posts by \[Author Name\]](#) [View all posts in \[Category Name\]](#)

CBC 114

— 1 —

ISSUE

1610

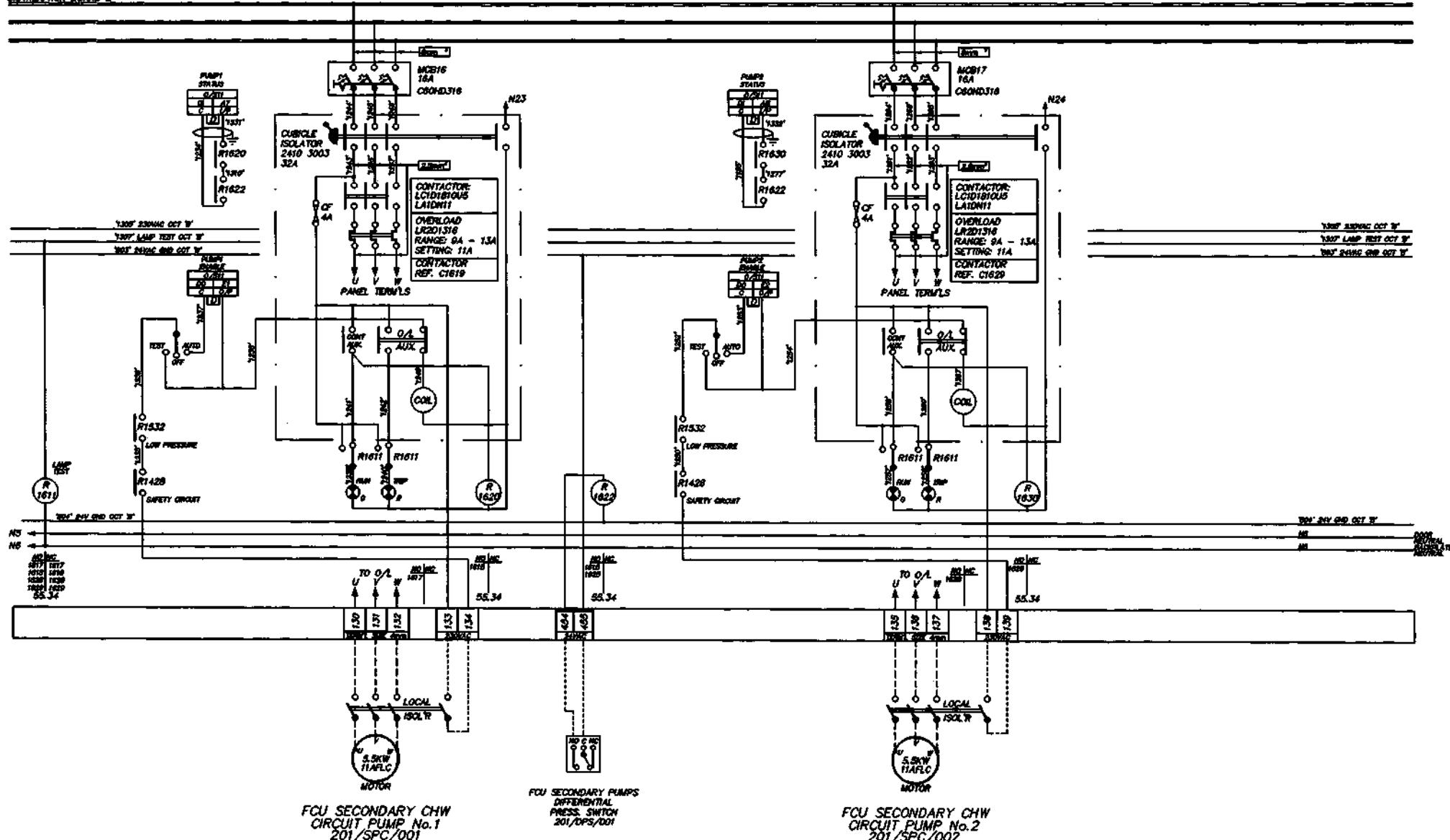
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DRG No. S98057-16

## DISTRIBUTION BOARD B



DATE

NAME

REV.

COMMENTS

MODIFIED AS PER MEETING AT OVE ARUP OFFICES 15/10/98

AS FTTED

DATE

NAME

REV.

MCCB

18/8/98

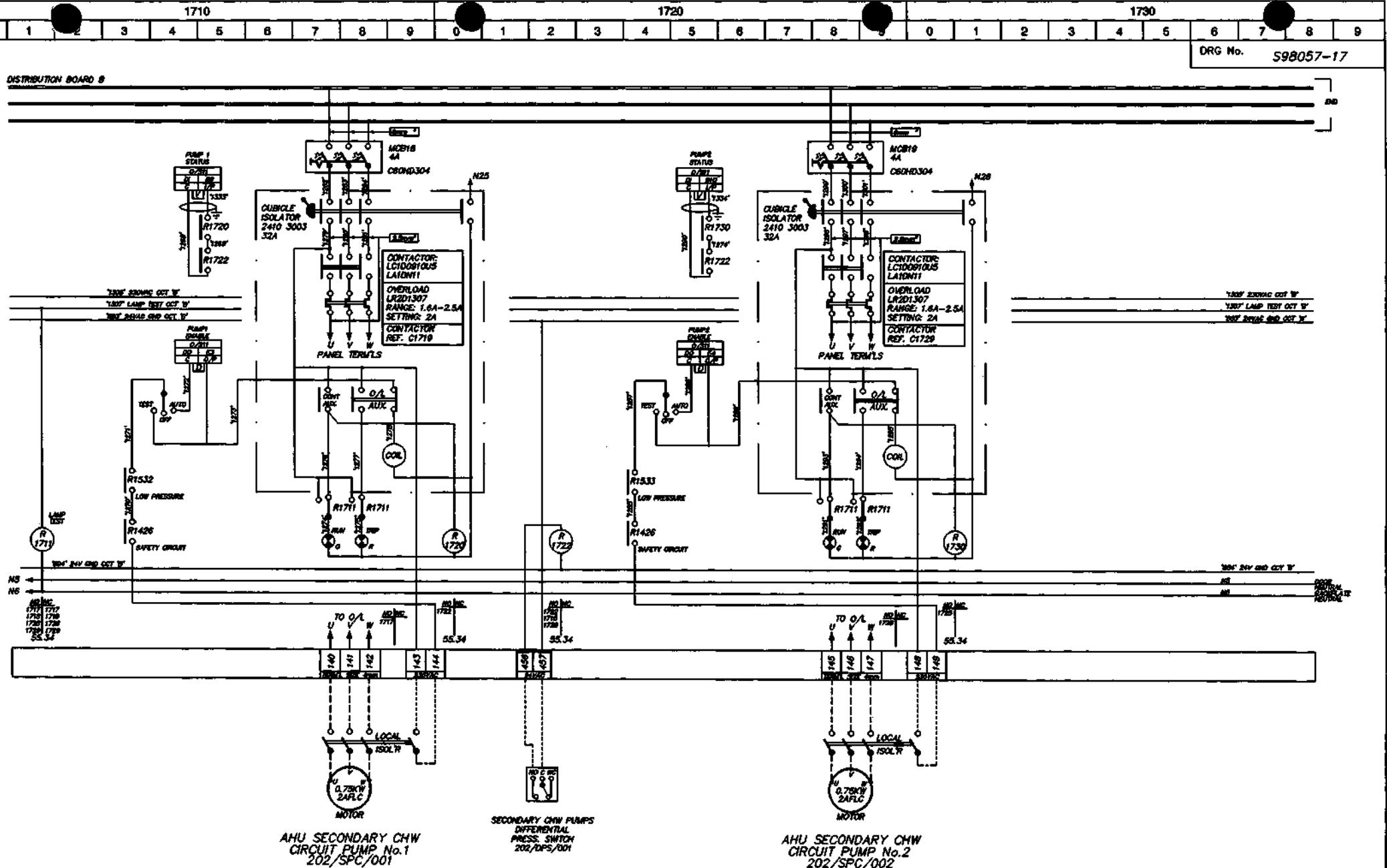
DPW

TITLE

SCHEMATIC WIRING DIAGRAM  
AND EXTERNAL FIELD WIRING FOR  
MOTOR CONTROL PANEL  
MCCB/1  
(SHEET 16 OF 20)

**SYNCHRONISED  
SYSTEMS**

HORTON ROAD, COLNBROOK, SLOUGH, BERKSHIRE  
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FAX: 01753 771001



IN	OUT	DETAIL	IN	OUT	DATE
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A	03/09/98	OAP COMMENTS	DO	OPENED	18/8/98
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B	18/10/98	ACCEPTED AS PER MEETING AT ONE ARUP OFFICES 15/10/98	S/W	CLOSED	DATE
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C	03/11/98	AS FITTED	DO	OPENED	DATE
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**SCHEMATIC WIRING DIAGRAM AND EXTERNAL FIELD WIRING FOR MOTOR CONTROL PANEL MCCB/1 (SHEET 17 OF 20)**



MORTON ROAD, COLNBROOK, SLOUGH, BERKSHIRE  
TEL: 01753 738000  
FAX: 01753 771001

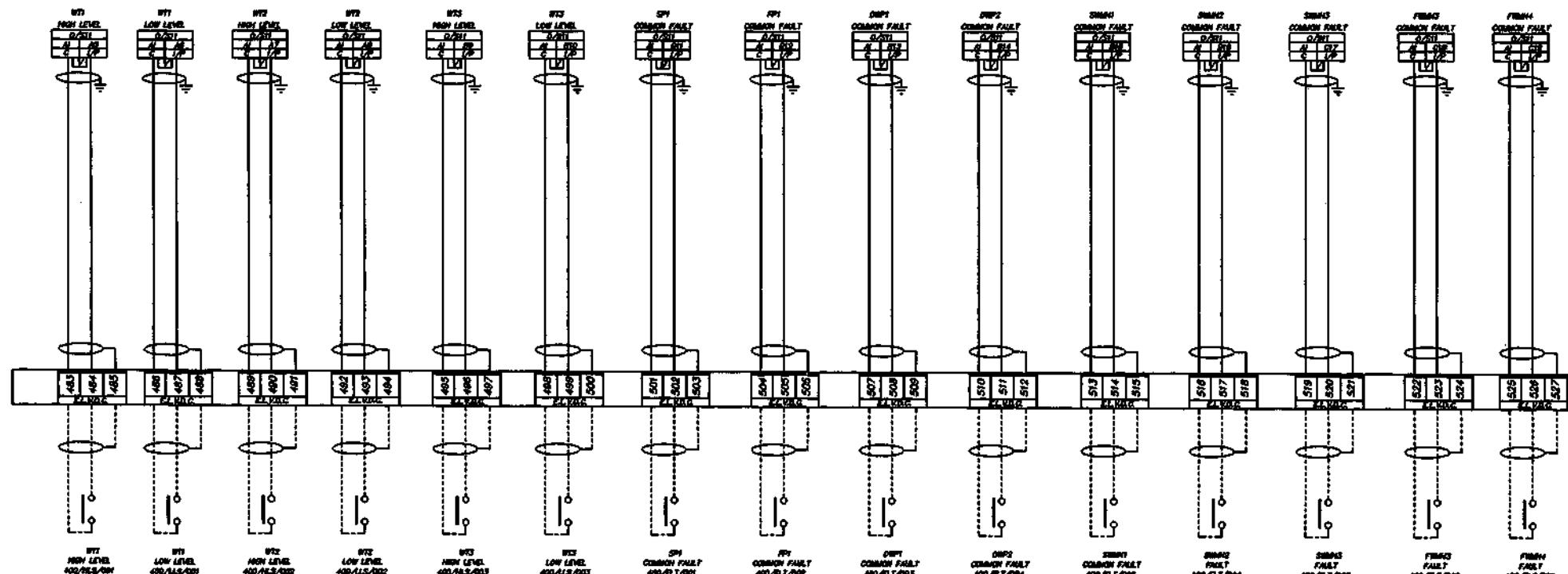
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DRG No. S98057-18



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DRAWN BY: DATE: 03/09/98

O&amp;P COMMENTS:

DO ORDERED

DATE:

DRAWN BY: DPW

DATE:

SCHEMATIC WIRING DIAGRAM  
AND EXTERNAL FIELD WIRING FOR  
MCCB/1  
(SHEET 18 OF 20)

HORTON ROAD, COLNBROOK, SLOUGH, BERKSHIRE  
TEL: 01753 738000  
FAX: 01753 771001



CLIENT

BENCHMARK GROUP PLC

PROJECT

5-7 CARLTON GARDENS

DRG No.

S98057-18

ISSUE A

1910

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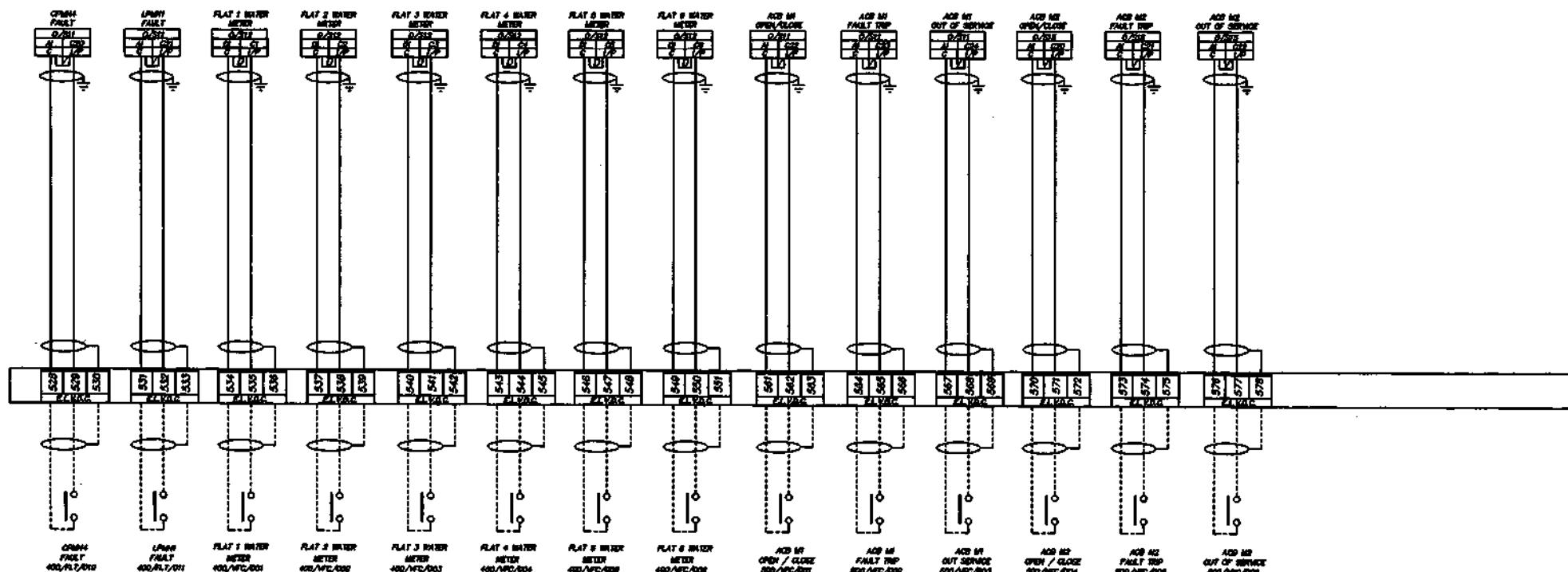
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DRG No. S98057-19



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DATE ISSUED: 03/08/98

DRAWN BY: DO

CHECKED BY: DAW

APPROVED BY: DAW

DESIGNED BY: DPW

REVIEWED BY: DPW

CLIENT

BENCHMARK GROUP PLC

PROJECT

CARLTON GARDENS

SYNCHRONISED  
SYSTEMSHORTON ROAD, COLNBROOK, SLOUGH, BERKSHIRE  
TEL: 01753 738000  
FAX: 01753 771001SCHEMATIC WIRING DIAGRAM  
AND EXTERNAL FIELD WIRING FOR  
MCCB/1  
(SHEET 19 OF 20)

DRG No. S98057-19

ISSUE A

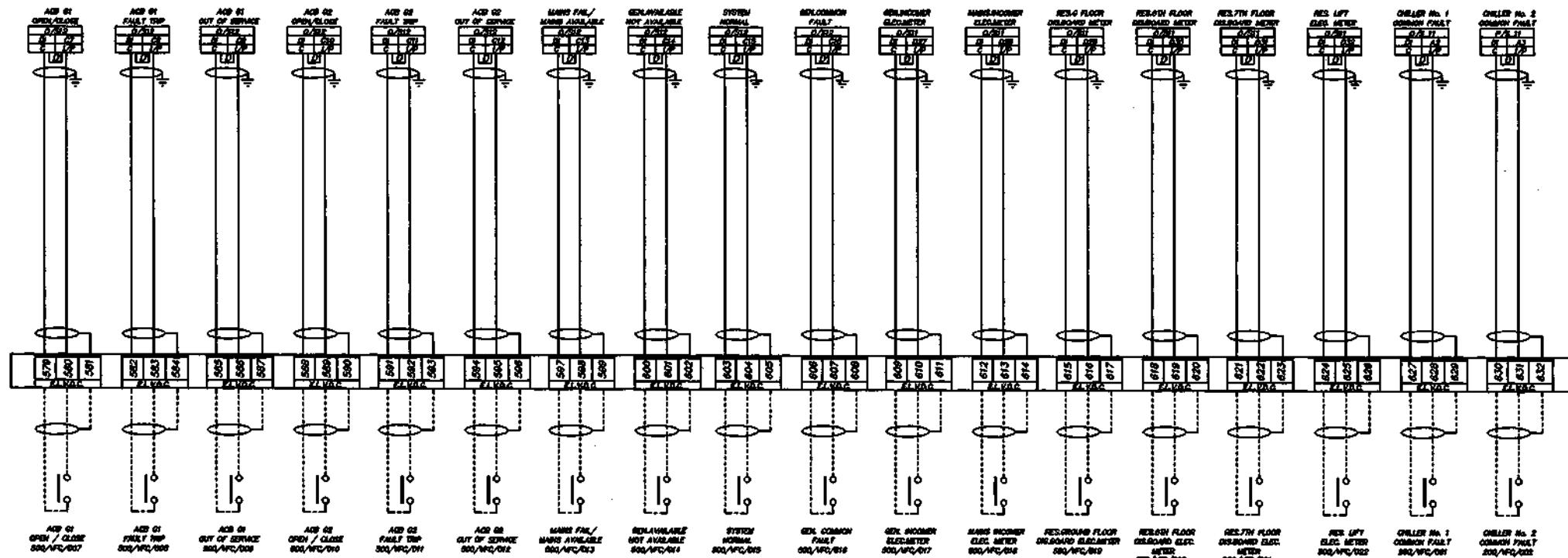
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0 1 2 3 4 5 6 7 8 9 0 1 2 3 4 5 6 7 8 9 0 1 2 3 4 5 6 7 8 9

DRG No. S98057-20



NO	DATE	DETAIL
A	03/09/96	OAP COMMENTS
B	03/11/96	AS FITTED

卷之三

CLIENT

BENCHMARK GROUP PLC

Page 5 of 5

5-7 CARLTON GARDENS

**SYNCHRONISED  
SYSTEMS**

HORTON ROAD, COLNBROOK, SLOUGH, BUCKINGHAMSHIRE  
TEL: 01753 738000 FAX: 01753 771001

FAX: 01763 771001

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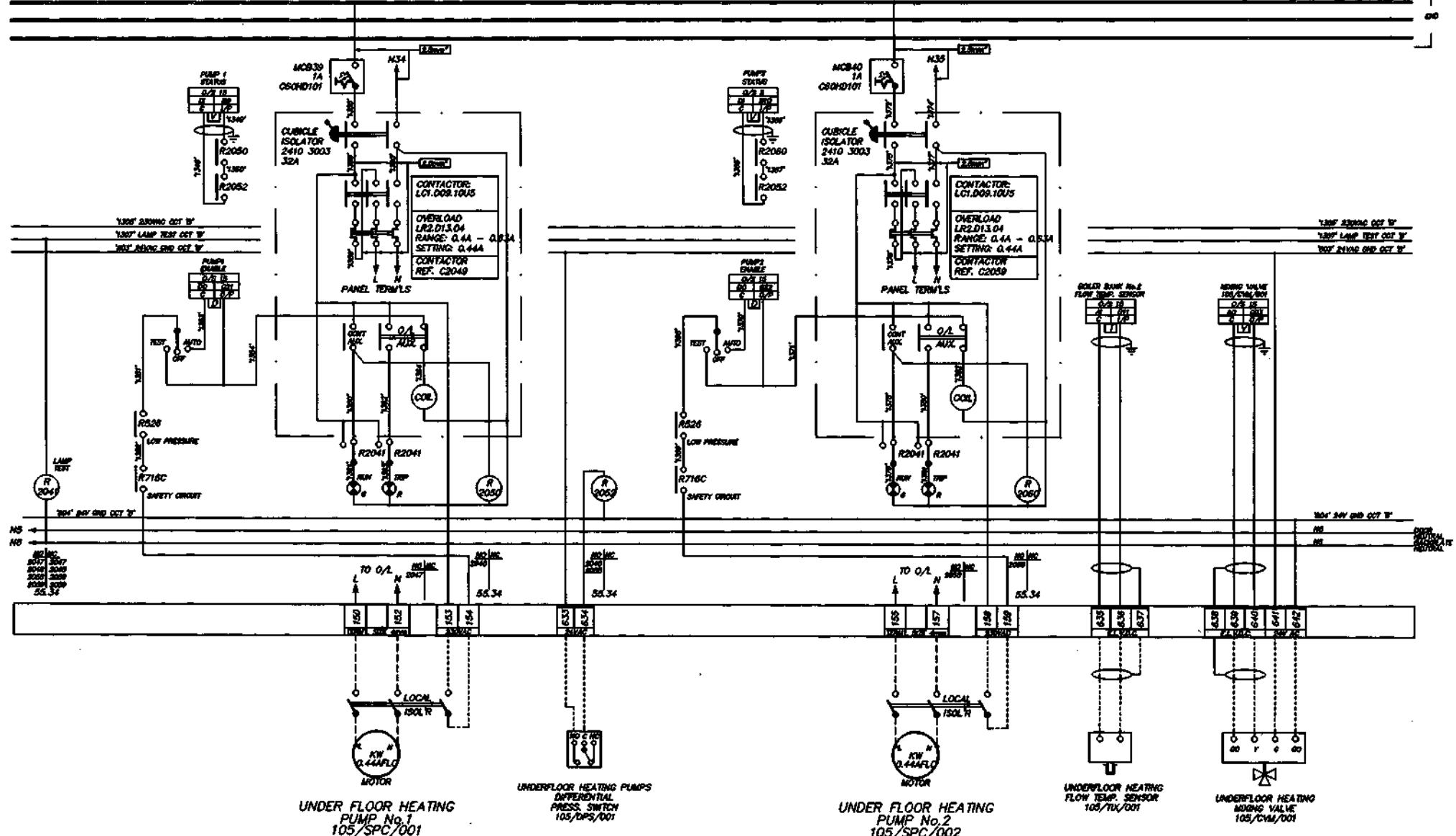
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DRG No. S98057-20A

## DISTRIBUTION BOARD B



Wk

Date

Rev

Title

DSO

Date

DSO

Date

DSO

Title

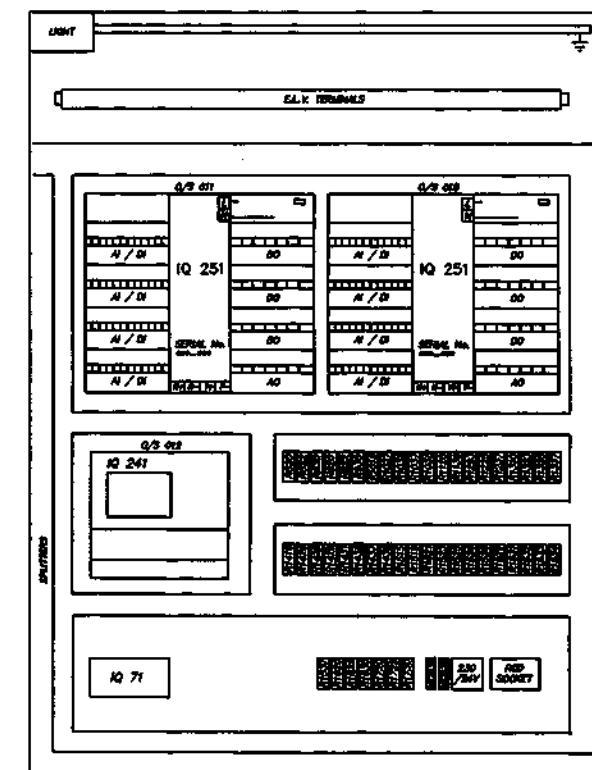
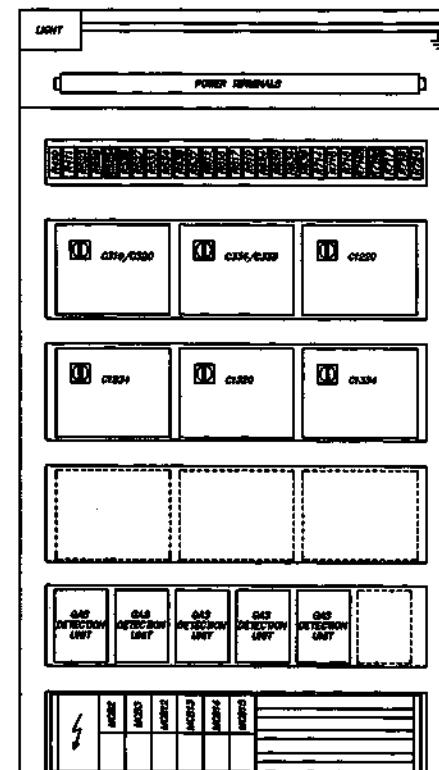
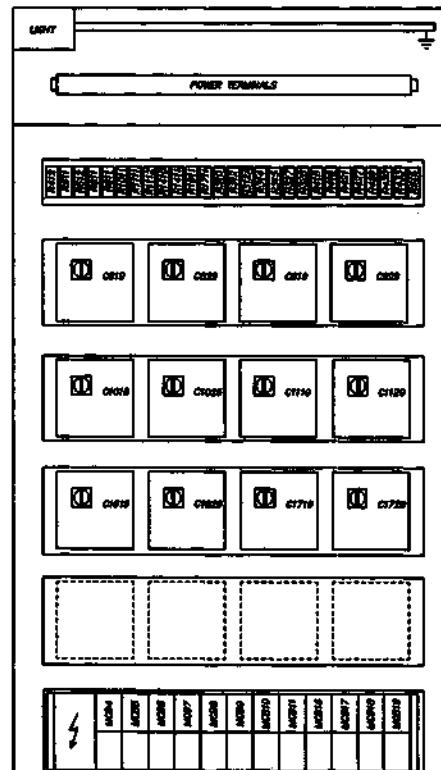
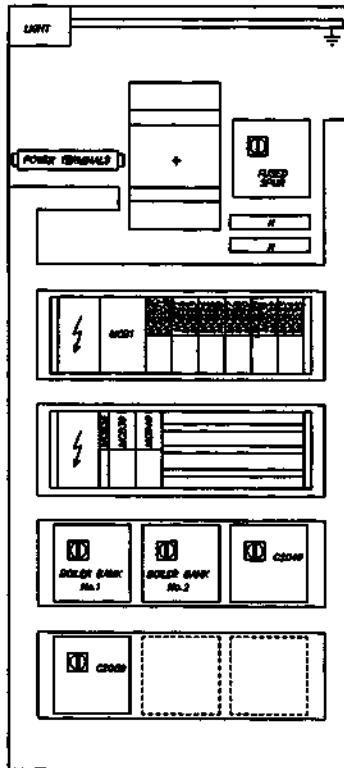
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DRG No. S98057-21



INTERNAL EQUIPMENT LAYOUT

ID	DATE	DETAIL	DO
A	03/09/98	OAP COMMENTS	DO
B	03/11/98	UNDERFLOOR HEATING PUMPS ADDED	DO

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BENCHMARK GROUP PLC

PROJECT

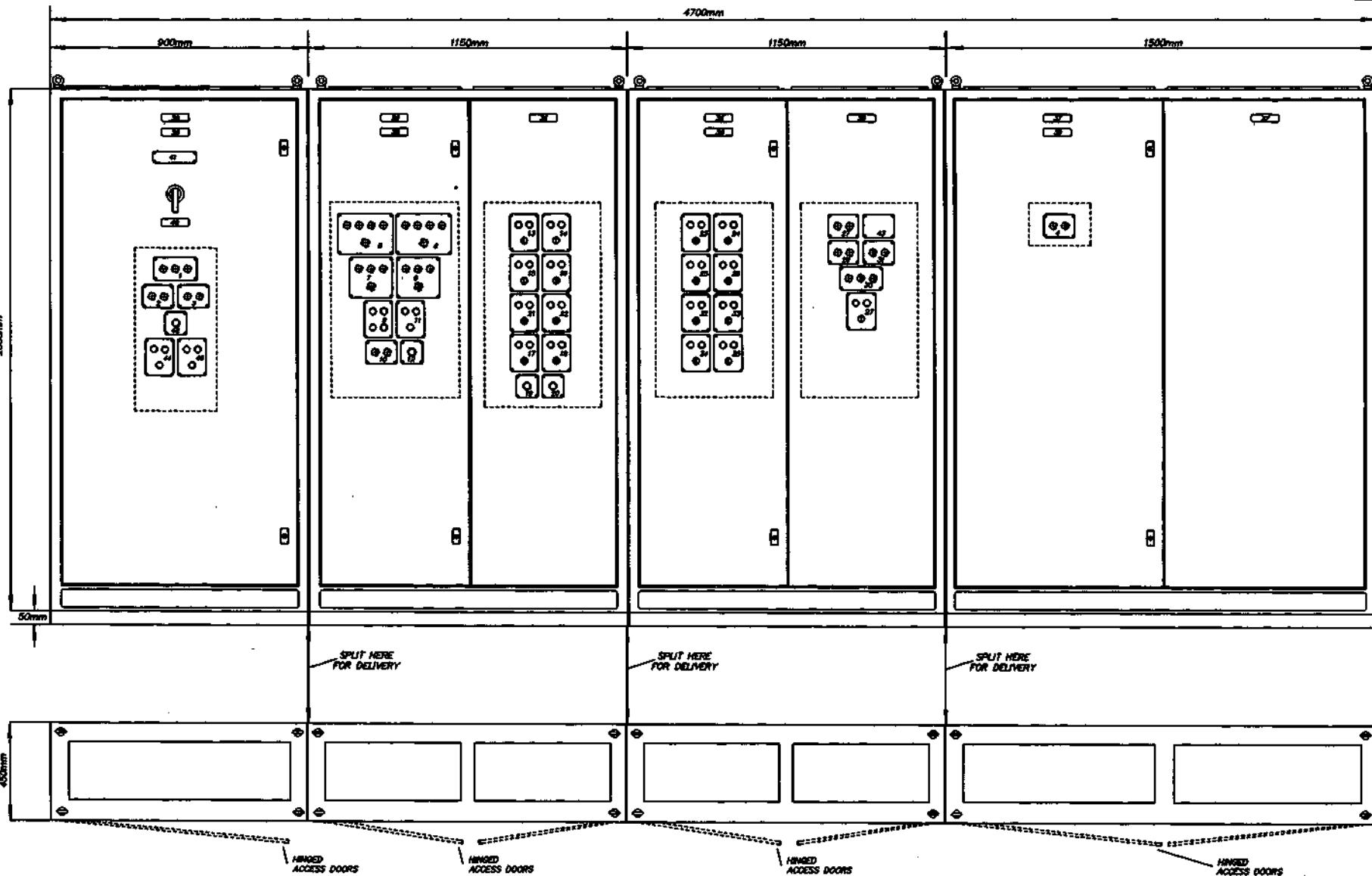
5-7 CARLTON GARDENS

SYNCHRONISED  
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FAX: 01753 771001

DRG No. S98057-21 ISSUE B

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DRG No. S98057-22



NOTES

- MATERIAL:  
DOORS/FRAME = 2.0mm MILD STEEL  
EQUIPMENT PLATE = 2.0mm MILD STEEL
- FINISH:  
DOORS : BS3810-112 (ANTIC SCALE)  
FRAMEWORK : BS3810-113 (DEEP SCALE)  
EQUIPMENT PLATES: WHITE SEMI-GLOSS  
PLUNGE: BLACK GLOSS
- DOOR STAYS ADDED TO PREVENT OPENING MORE THAN 90 DEGREES
- CONCEALED Hinges
- ADDRESS PROTECTION RATING - IP54

REF	DATE	REVISION	ED	OWNER	DATE
A	03/09/98	OAP COMMENTS	00	DSO	28.07.98
B	18/10/98	MODIFIED AS PER MEETING AT ONE ARUP OFFICES 15/10/98	JW		
C	28/10/98	LABELS 27, AND 43 MODIFIED	JW	DSO	
D	03/11/98	UNDERFLR HTG PUMPS ADDED LABELS 44&45	00		

TITLE  
GENERAL ARRANGEMENT DETAILS  
FOR MOTOR CONTROL PANEL  
MCCB/1

SYNCHRONISED SYSTEMS

HORTON ROAD, COLNBROOK, SLOUGH, BERKSHIRE  
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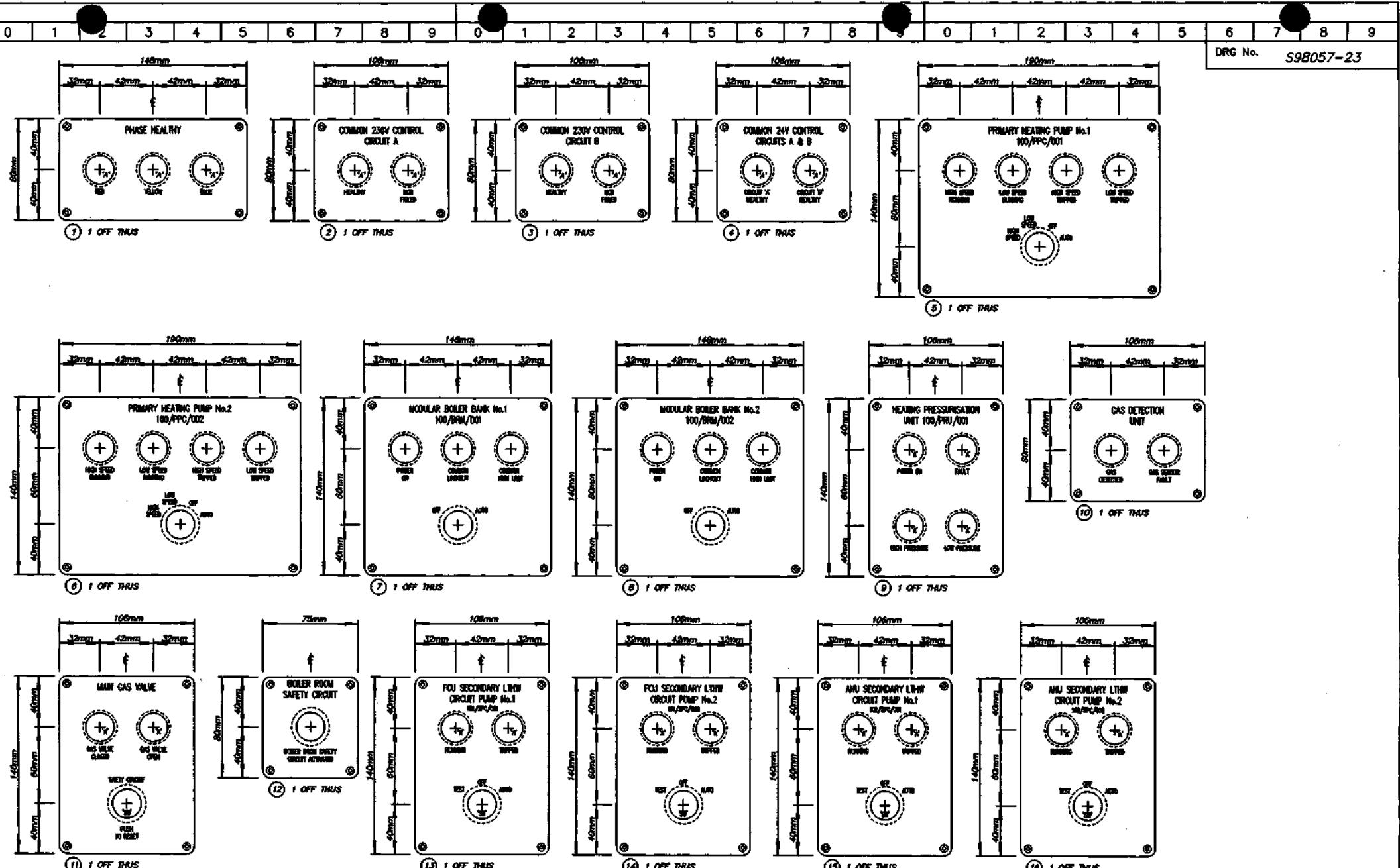
BENCHMARK GROUP PLC

PROJECT

5 - 7 CARLTON GARDENS

DRG No. S98057-22

ISSUE D



NOTES:  
 1. LABELS TO BE WHITE-BLACK-WHITE TRAFFOLYTE UNLESS OTHERWISE STATED  
 2. LABELS TO HAVE 8mm. RADIUS CORNERS, AND 3mm. COUNTERSUNK FIXING HOLES.  
 3. MAIN TITLES TO BE APPROX. 3mm. HIGH, AND SUB-TITLES APPROX. 3mm. HIGH.  
 4. CUTOUT DETAILS: 'A' HOLES - 22.5mm DIA. (26.5mm BEZEL), SW HOLES - 22.5mm DIA. (30mm BEZEL).

	DATE	ITEM		OWNER	DATE	ITEM
A	03/09/98	OAP COMMENTS	DO	MAS	7/7/98	TITLE
B	19/10/98	LABELS 15 & 16 REVISED	PUB	REMOVED	DATE	LABEL DETAILS
C	18/10/98	MODIFIED AS PER MEETING AT ONE ARUP OFFICES 15/10/98	JHW	DSD	DATE	FOR MOTOR CONTROL PANEL MCCB/1 (SHEET 1 OF 3)

SYNCHRONISED SYSTEMS

HORTON ROAD, COLNBROOK, SLOUGH, BERKSHIRE  
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FAX: 01753 771001

**NOTES:**

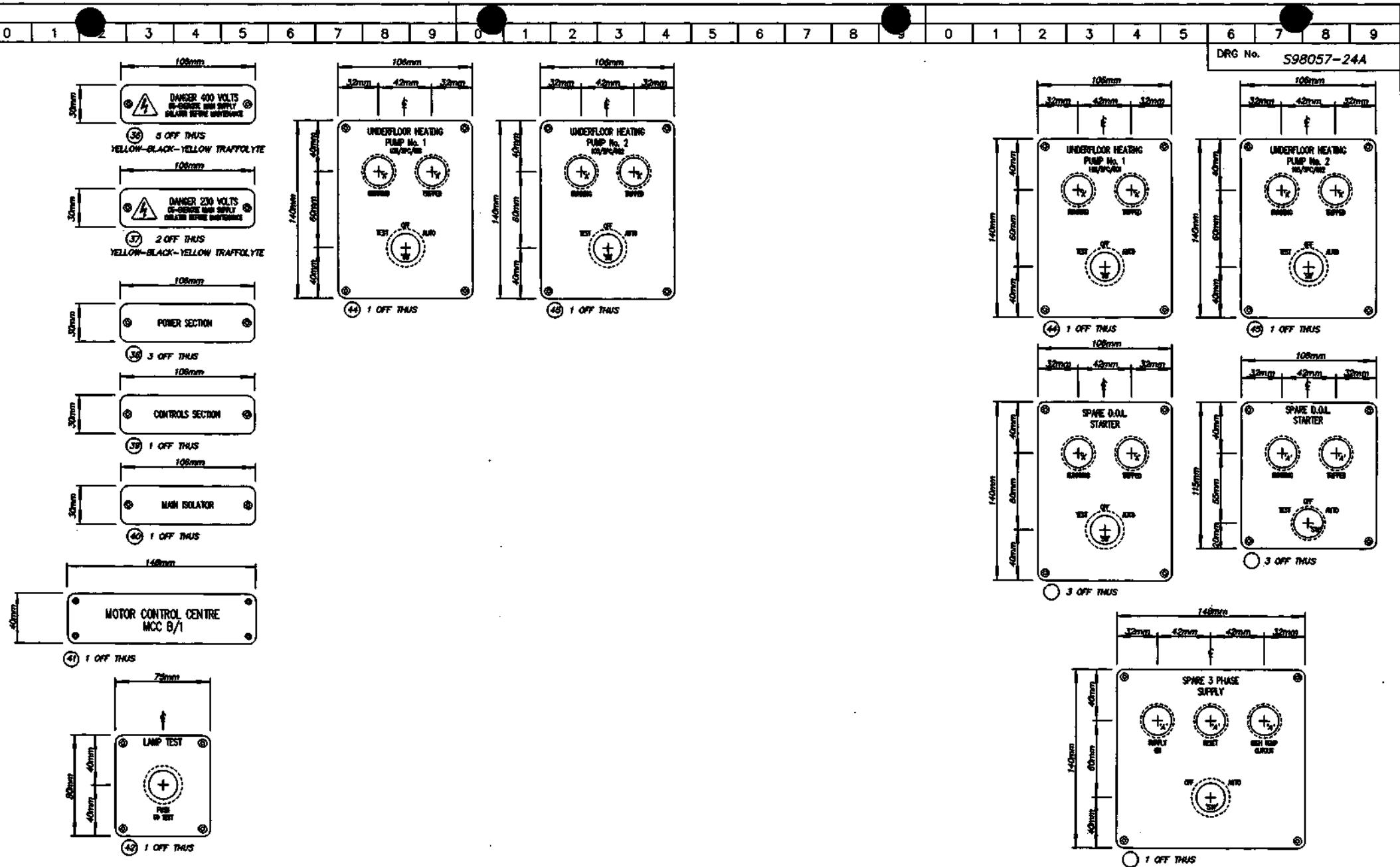
1. **LABELS TO BE WHITE-BLACK-WHITE TRAPOLYTE UNLESS OTHERWISE STATED**
2. **LABELS HAVE 6mm. RADUS CORNERS, AND JMM. COUNTERSUNK FIXED HOLES.**
3. **MAIN TITLES TO BE APPROX. 5mm. HIGH, AND SUB-TITLES APPROX. 3mm. HIGH**
4. **CUTOUT DETAILS: 'A' HOLES - 22.5mm DIA. (26.5mm BEZEL), 'SW' HOLES - 22.5mm DIA. (30mm BEZEL)**

NO	DATE	DETAIL	BY	DRIVER	MAS	DATE
A	03/09/98	OAP COMMENTS	DO	DRIVER	MAS	7/7/
B	18/10/98	MODIFIED AS PER MEETING AT ONE ARUP OFFICES 15/10/98	JWV	DRIVER	MAS	DATE
C	26/10/98	LABEL 27 MODIFIED, LABEL 43 ADDED	JWV	DRIVER	MAS	DATE

LABEL DETAILS  
FOR MOTOR CONTROL PANEL  
MCCB/1  
(SHEET 2 OF 3)



HORTON ROAD, COLNBROOK, SLOUGH, BERKSHIRE  
TEL: 01753 738000 FAX: 01753 771001



NOTES:  
 1. LABELS TO BE WHITE-BLACK-WHITE TRAFFOLYTE UNLESS OTHERWISE STATED.  
 2. LABELS TO HAVE 8mm. RADIUS CORNERS AND 3mm. COUNTERSUNK PULLING HOLES.  
 3. MAIN TITLES TO BE APPROX. 3mm. HIGH, AND SUB-TITLES APPROX. 3mm. HIGH.  
 4. CUTOUT DETAILS: 'A' HOLES - 22.5mm DIA. (20.5mm BEZEL)  
 'SW' HOLES - 22.5mm DIA. (30mm BEZEL)

ID	DATE	DETAIL	DO
A	03/11/98	UNDERFLOOR HEATING PUMPS ADDED	DO
			CHANGED
			DO NOT
			DO

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BENCHMARK GROUP PLC

TITLE  
LABEL DETAILS  
FOR MOTOR CONTROL PANEL  
MCCB/1  
(SHEET 3 OF 3)

PROJECT  
5-7 CARLTON GARDENS

DRG No. S98057-24A  
ISSUE A

SYNCHRONISED  
SYSTEMS

HORTON ROAD, COLNBROOK, SLOUGH, BERKSHIRE  
TEL: 01753 738000  
FAX: 01753 771001

**WIRING NOTES**

- MINIMUM POWER WIRING 2.5mm
- MINIMUM CONTROL WIRING 1.0mm
- POWER CABLES TO BE FITTED WITH CORD END TERMINALS, OR LUGS, DEPENDING ON SIZE, AND TYPE OF CONNECTION.
- CONTROL CABLES TO BE FITTED WITH CORD END TERMINALS, PIN, OR FORK, CONFIGURATION, DEPENDING ON TYPE OF CONNECTION.
- ALL CABLES TO 16mm TO BE COLOUR CODED AS FOLLOWS:-  
400 VOLTS L1,L2,L3. - RED, YELLOW, BLUE  
230 VOLTS NEUTRAL - BLACK  
LOW VOLTAGE A.C. - BROWN  
EXTRA LOW VOLTAGE D.C. - GREY  
115 VOLTS A.C. - ORANGE
- ALL CABLES ABOVE 16mm TO BE BLACK WITH ENDS HEAT SHRINK COLOUR CODED PHASE IDENTIFICATION.
- ALL CONTROL CABLES TO BE IDENTIFIED AT EACH END BY THE USE OF COLOUR CODED FERRULES. THE NUMBERS ARE SHOWN THUS ON THE DIAGRAM - '105'
- FINAL CABLE No. '840'
- WHEN A CABLE CONNECTS TO AN OUTGOING TERMINAL THE CABLE IDENTIFICATION NUMBER IS THE SAME AS THE TERMINAL NUMBER.
- FINAL TERMINAL No. POWER/230VAC - 1 TO 24  
FINAL TERMINAL No. ELVDC/24VAC - 200 TO 441

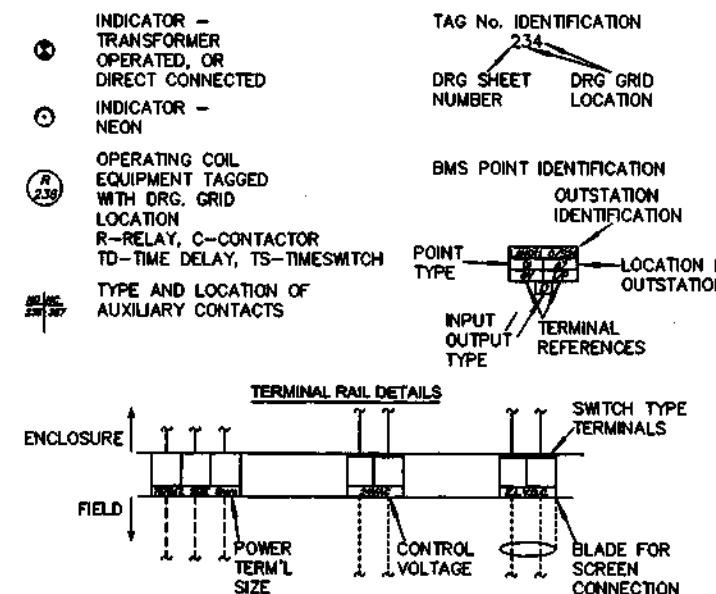
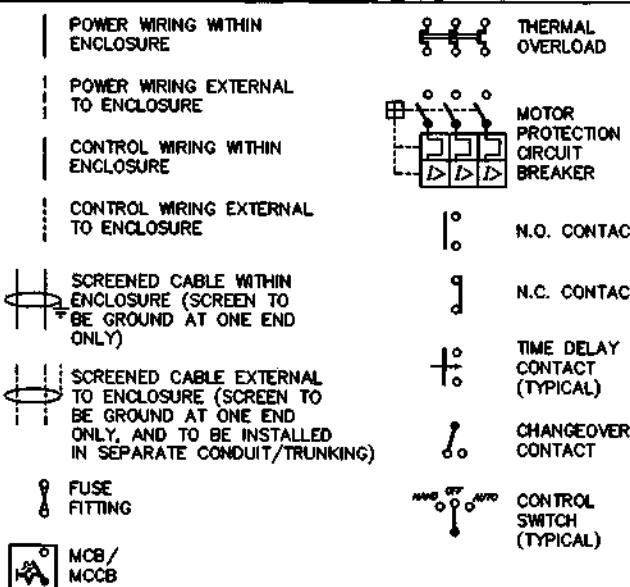
**EQUIPMENT NOTES**

- ALL STARTERS TO BE OF TELEMECANIQUE MANUFACTURE
- MAIN SUPPLY ISOLATORS TO BE OF SOCOME/C/TELEMECANIQUE MANUFACTURE
- FUSE SWITCHES TO BE OF SOCOME/C MANUFACTURE
- MCB'S, AND MCCB'S TO BE OF MERLIN GERIN, OR SIEMENS MANUFACTURE.
- FUSES TO BE OF GEC MANUFACTURE
- ALL OUTGOING TERMINALS TO BE OF ENTRELEC MANUFACTURE.
- ALL PILOT LIGHTS TO BE OF TRANILAMP MANUFACTURE.
- SELECTOR SWITCHES TO BE OF TELEMECANIQUE MANUFACTURE.
- CONTROL RELAYS TO BE FINDER 55.34.
- TIME DELAY RELAYS TO BE FINDER 85.34.
- WHERE HRC FUSE CARRIERS ARE INDICATED ON THE SCHEMATIC DIAGRAM THE CARRIERS ARE TO BE OF GEC MANUFACTURE.

DRAWING No.	ISSUE	DESCRIPTION
S98057-31	A	MAIN & STANDBY ISOLATORS
S98057-31A	B	CONTROL CIRCUITS
S98057-32	D	AHU01 SUPPLY AND EXTRACT FANS
S98057-33	B	AHU01 CONTROLS
S98057-34	C	AHU01 CONTROLS AND FUTURE HUMIDIFIER
S98057-35	D	AHU02 SUPPLY AND EXTRACT FANS
S98057-36	B	AHU02 CONTROLS
S98057-37	C	AHU02 CONTROLS AND FUTURE HUMIDIFIER
S98057-38	B	BMS/SECURITY ROOM SUPPLY FAN & HTR BATTERY
S98057-39	D	WORKSHOP VENTILATION SUPPLY FAN
S98057-40		SPARE
S98057-41		SPARE
S98057-42	C	BMS OUTSTATION 13/14 & /INTRL LIGHTING
S98057-45	B	INTERNAL LAYOUT
S98057-46	C	GENERAL ARRANGEMENT
S98057-47	C	LABEL DETAILS
S98057-48	A	LABEL DETAILS

**FIELD WIRING NOTES**

- NETWORK CABLE TO BE BELDEN 9501/9502
- SENSOR CABLE TO BE BELDEN 9501



DRAWING INDEX  
EQUIPMENT SCHEDULE/NOTES  
FOR MOTOR CONTROL PANEL  
MCCB/2

**SYNCHRONISED SYSTEMS**

HORTON ROAD, COLNBROOK, SLOUGH, BERKSHIRE  
TEL: 01753 738000 FAX: 01753 771001

	DATE	DETA	DRG	SPC	DATE	TITLE
E	18/08/90	INVERTER RUN/FAIL CONTACTS CHANGED TO 24VAC	DSO		7/7/90	
B	22/10/90	DRAWINGS 32, 34, 35, 37, 38, 42, 43, 45 & 47 REVISED.	P/H			
C	05/11/90	DRAWINGS 31A, 32, 33, 34, 35, 36, 37, 38, 39, 40, 41, 42, 44 AND 47 REVISED.	DSO			
D	14/04/90	SITE MODIFICATION	DO			

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CLIENT

BENCHMARK GROUP PLC

PROJECT

5-7 CARLTON GARDENS

DRG No.

S98057-30

ISSUE

E

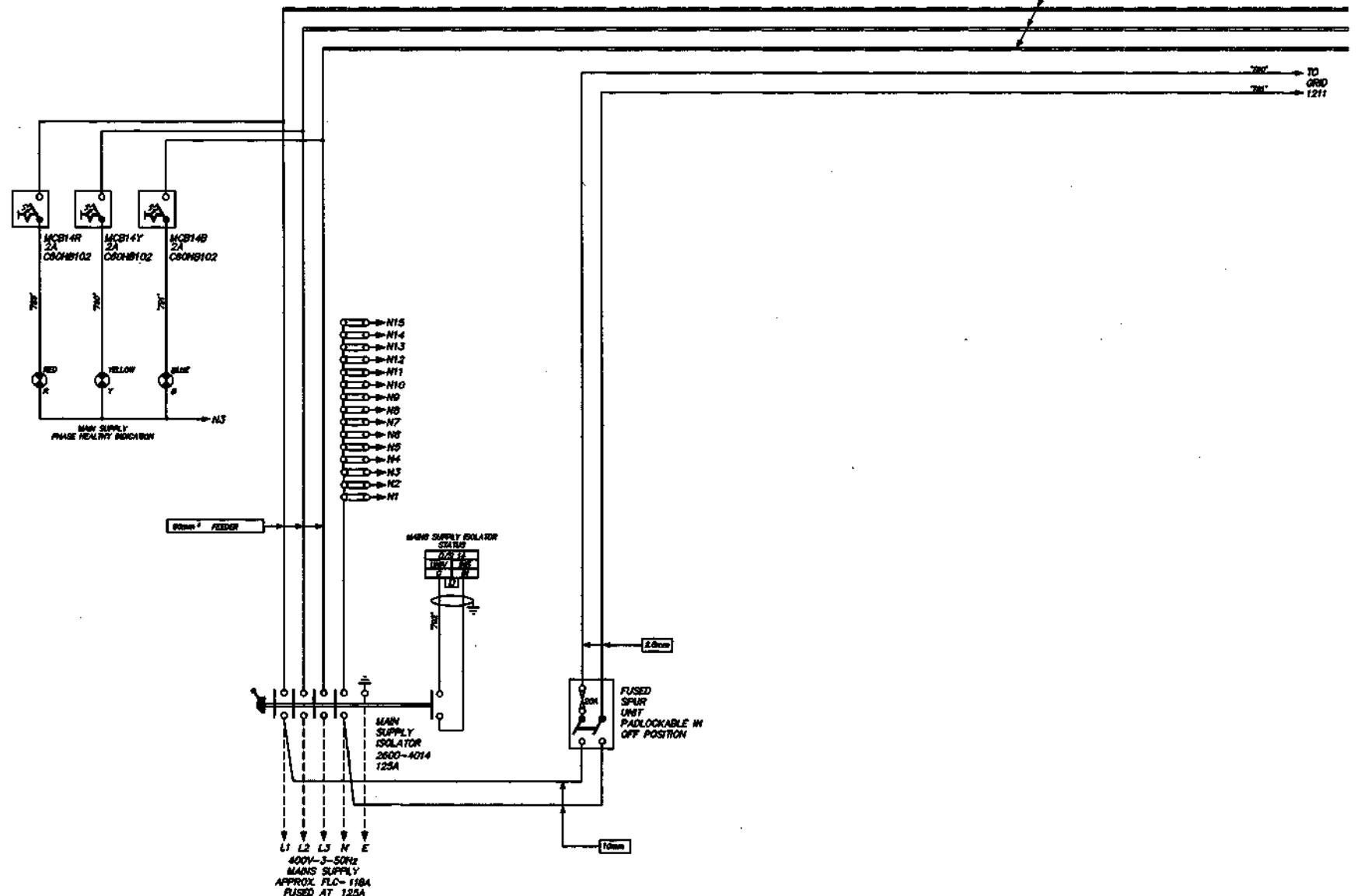
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110

120

130

DRG No. S98057-31

20 x 5mm CABLE  
200A CAPACITY  
20m / 1 SECOND700' TO  
000  
700' 1211

IN

DRAW

TITLE

DRAFT



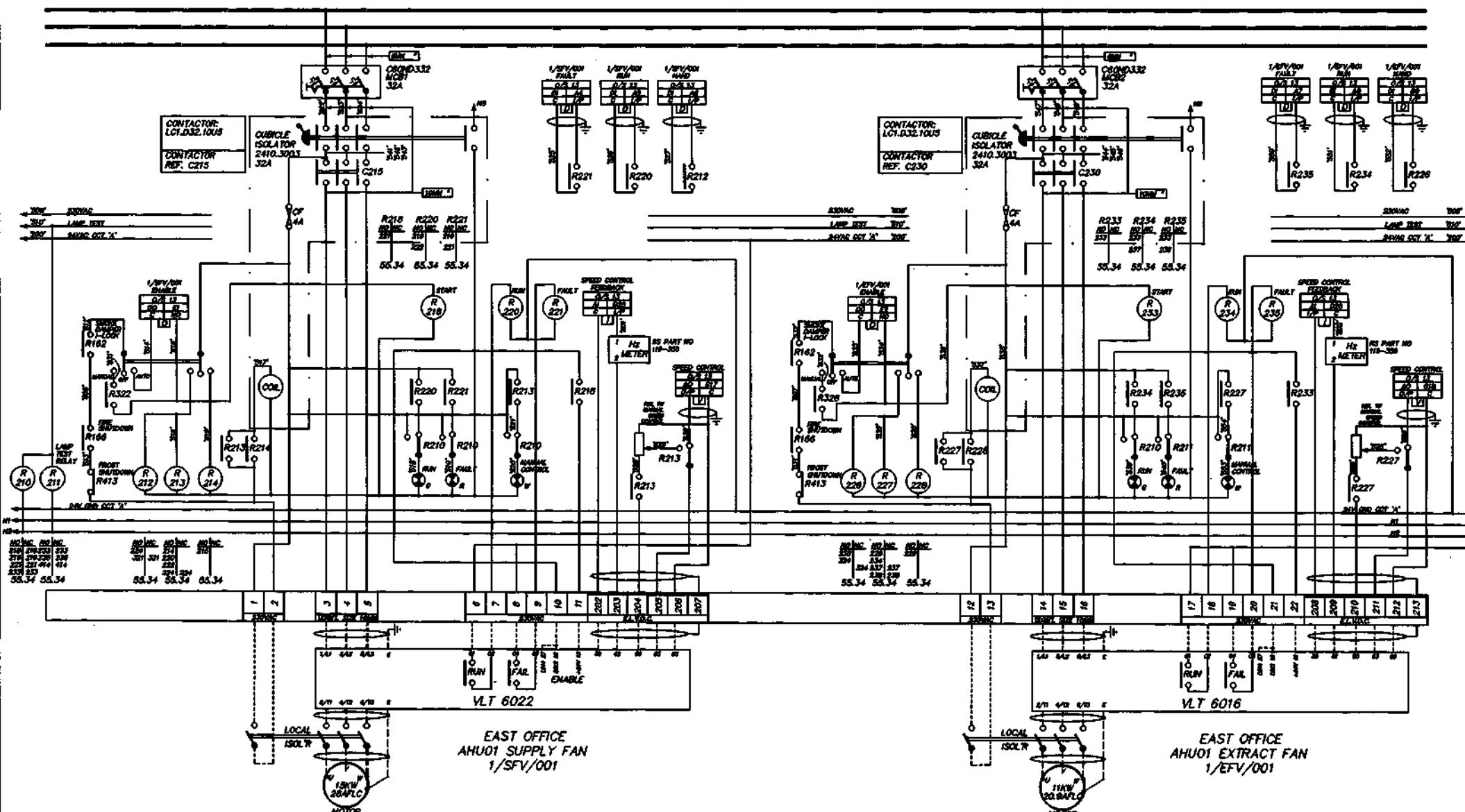
210

220

230

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DRG No. S98057-32



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CLIENT BENCHMARK GROUP PLC

PROJECT 5-7 CARLTON GARDENS

DRG No. S98057-32

ISSUE D

SCHEMATIC WIRING DIAGRAM  
AND EXTERNAL FIELD WIRING FOR  
MOTOR CONTROL PANEL  
MCCB/2  
(SHEET 2 OF 12)



HORTON ROAD, COLNBROOK, SLOUGH, BERKSHIRE  
TEL: 01753 738000 FAX: 01753 771001

TITLE

01.07.98

DATE

SBC

DRAWN

SBC

CHECKED

DATE

J.W.Y.

INITIALS

DATE

DSO

DRAWN

DSO

INITIALS

DATE

DSO

310

0 1 2 3 4 5 6 7 8 9

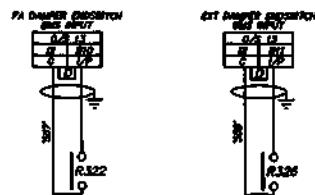
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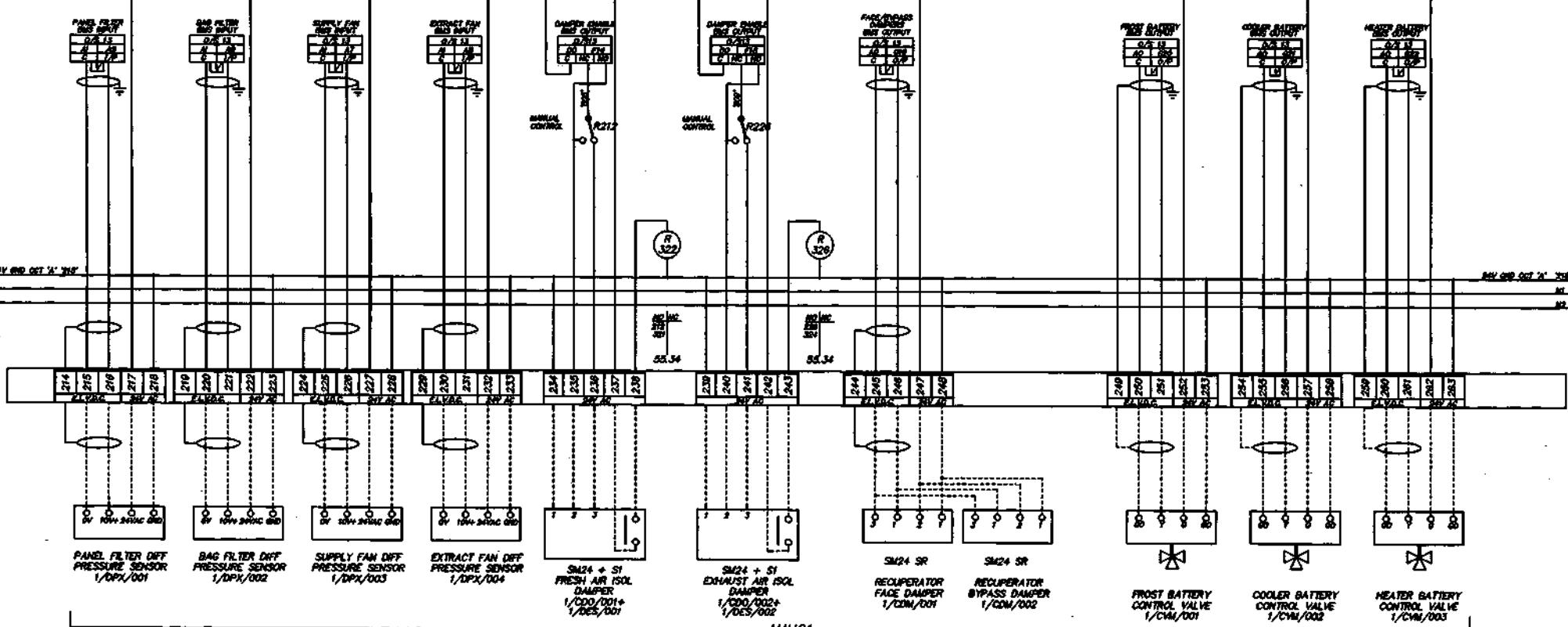
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DRG No. S98057-33



2000  
2001 LAMP TEST  
2002 BATTERY OFF 24V  
2003 BATTERY OFF 24V

2004 LAMP TEST 30V  
2005 BATTERY OFF 24V  
2006 BATTERY OFF 24V



RE	DATE	DETAIL	RE	OWNER	DATE
A	3/9/98	O&P COMMENTS		DPM	01.07.98
B	05/11/98	AS FITTED		DSO	DATE
				DSO	DATE

SCHEMATIC WIRING DIAGRAM  
AND EXTERNAL FIELD WIRING FOR  
MOTOR CONTROL PANEL  
MCCB/2  
(SHEET 3 OF 12)

SYNCHRONISED  
SYSTEMS

HORTON ROAD, COLNBROOK, SLOUGH, BERKSHIRE  
TEL: 01753 738000  
FAX: 01753 771001

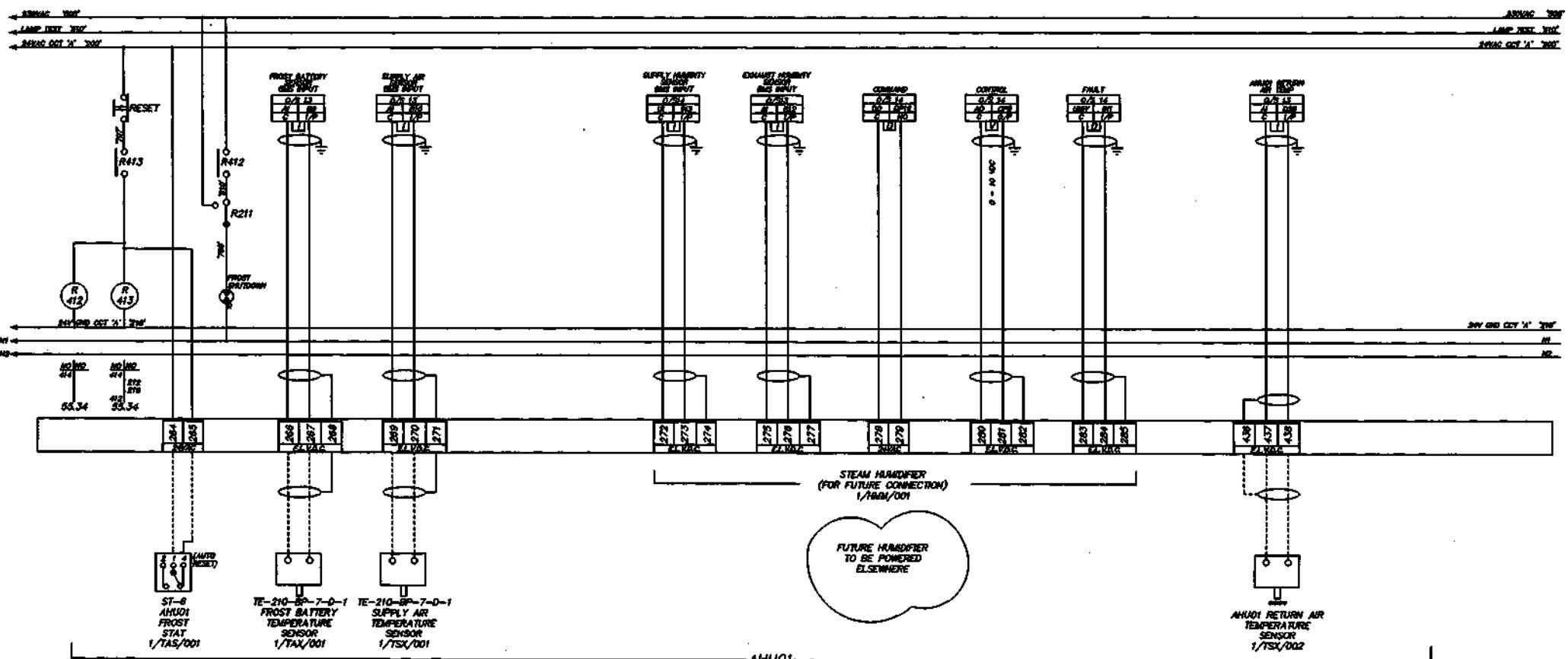
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420

430

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DRG No. S98057-34



AHU01

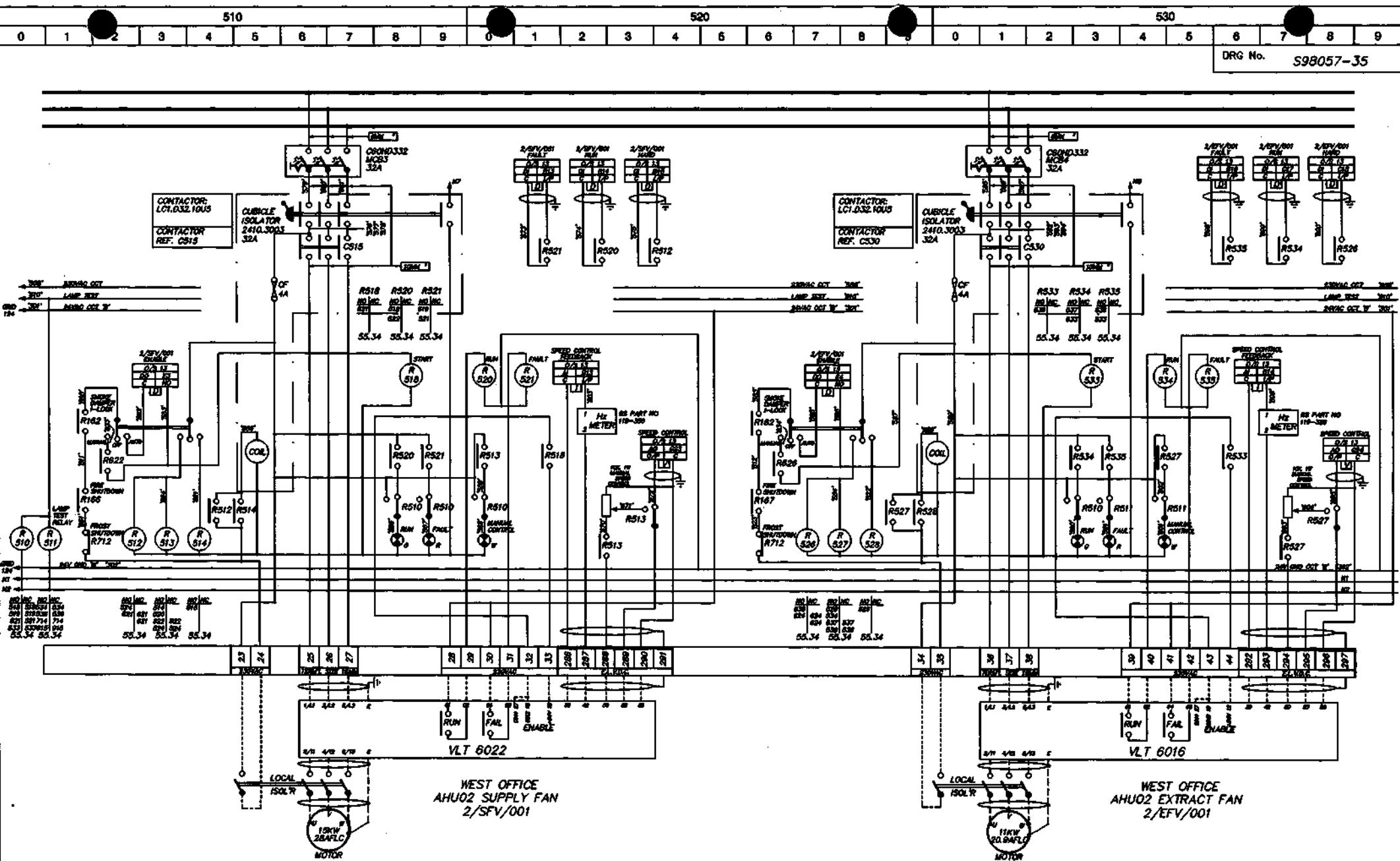
	DATE	DETAIL	BY	OWNER	DATE	TITLE
A	2/9/98	OAP COMMENTS	SBC	SBC	01.07.98	SCHEMATIC WIRING DIAGRAM AND EXTERNAL FIELD WIRING FOR MOTOR CONTROL PANEL MCCB/2 (SHEET 4 OF 12)
B	18/10/98	MODIFIED AS PER MEETING AT OPE ARUP OFFICES 15/10/98	JHW	OWNER	DATE	
C	05/11/98	AS FITTED	DSO	DSO	DATE	

SYNCHRONISED SYSTEMS

HORTON ROAD, COLNBROOK, SLOUGH, BERKSHIRE  
TEL: 01753 738000  
FAX: 01753 771001

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CLIENT BENCHMARK GROUP PLC PROJECT 5-7 CARLTON GARDENS DRG No. S98057-34 ISSUE C



ITEM	DATE	DETAIL
A	3/9/98	OAP COMMENTS
B	18/10/98	MODIFIED AS PER MEETING AT ONE ARUP OFFICES 15/10/98
C	05/11/98	AS FITTED
D	16/08/00	INVERTOR RUN/FAL CONTACTS CHANGED TO 24VAC

• SBC JHW DSO DSO

**SCHEMATIC WIRING DIAGRAM  
AND EXTERNAL FIELD WIRING FOR  
MOTOR CONTROL PANEL  
MCCB/2  
(SHEET 5 OF 12)**

WEST OFFICE  
AHU02 EXTRACT FAN  
2/EVF/001

**SYNCHRONISED  
SYSTEMS**

BENCHMARK GROUP PI C

OBJECT 5-7 CARLTON GARDEN

DRG No. S98057-35

## ISSUE

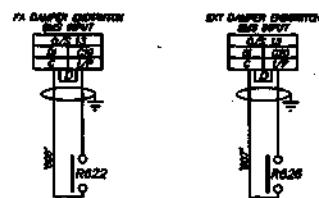
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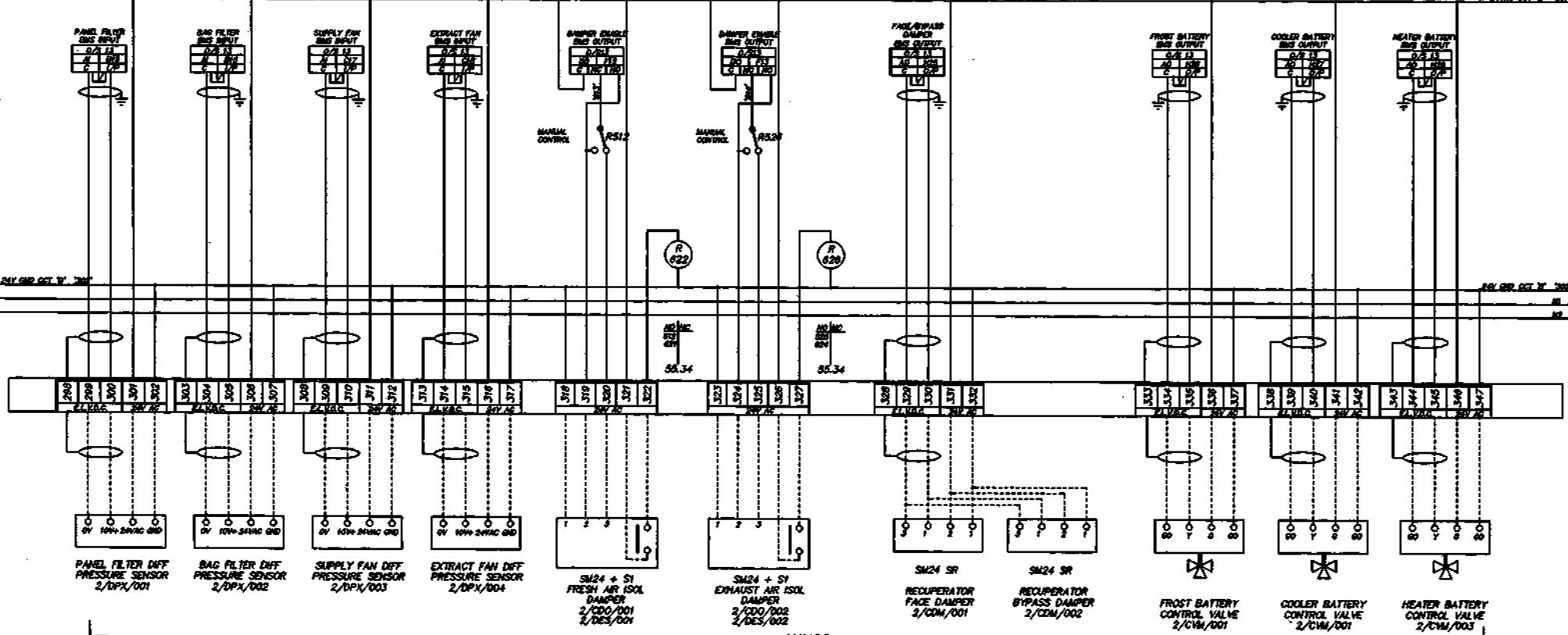
620

630

DRG No. S98057-36



SW1 SWING GATE  
SW2 LINE TEST  
SW3 SWING GATE IN  
SW4 SWING GATE OUT  
SW5 SWING GATE IN  
SW6 SWING GATE OUT



AHU02

ID	DATE	REVISION	DRG
A	2/9/98	SBC	01.07.98
B	05/11/98	DSO	

TITLE

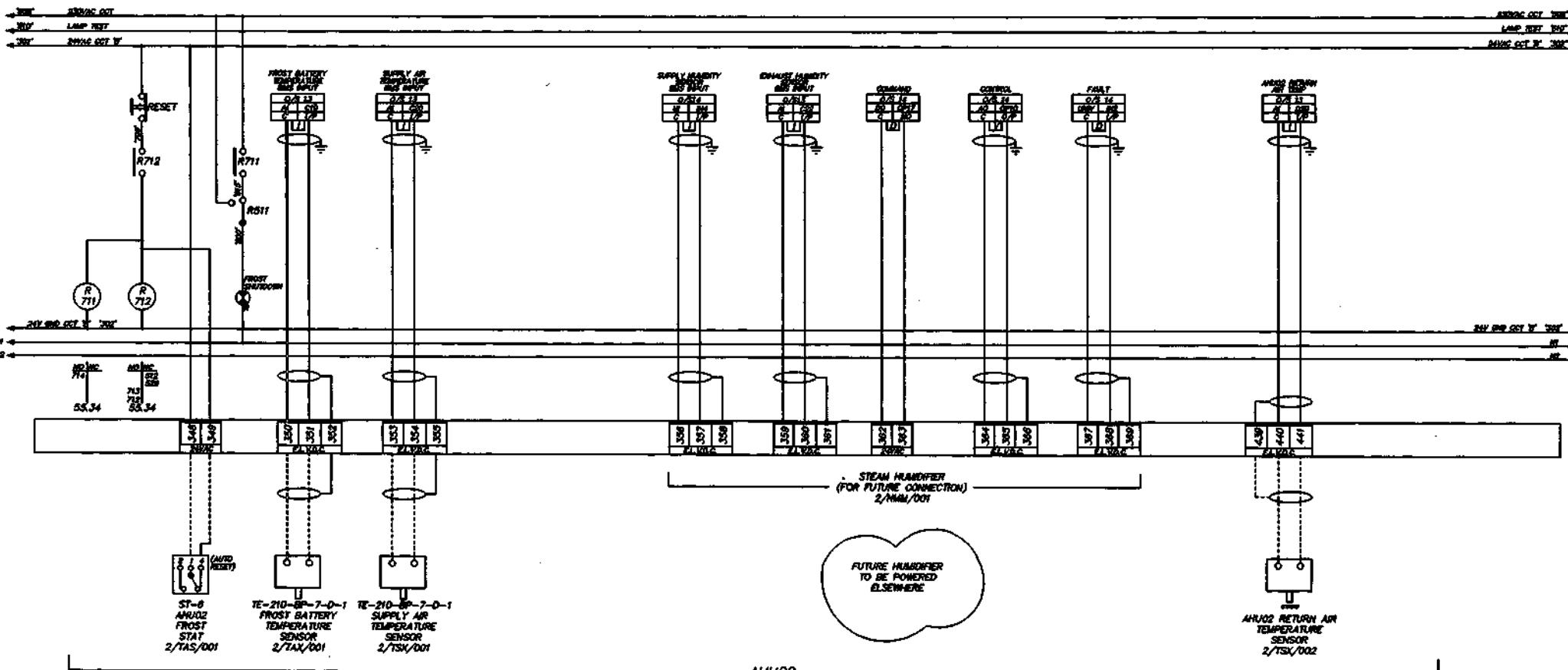
SCHEMATIC WIRING DIAGRAM  
AND EXTERNAL FIELD WIRING FOR  
MOTOR CONTROL PANEL  
MCCB/2  
(SHEET 6 OF 12)

SYNCHRONISED  
SYSTEMS

HORTON ROAD, COLNBROOK, SLOUGH, BERKSHIRE  
TEL: 01753 738000  
FAX: 01753 771001

710 720 730 DPC No.

ORG No. S98057-37



REF	DATE	DETAIL	BY	OWNER	SEC	DATE
A	2/9/98	DAP COMMENTS	SBC	OWNER	SEC	DATE
B	18/10/98	MODIFIED AS PER MEETING AT ONE ARUP OFFICES 15/10/98	JRW	OWNER	SEC	DATE
C	05/11/98	AS FIFTED	DSD	OWNER	DSO	DATE

**SCHEMATIC WIRING DIAGRAM  
AND EXTERNAL FIELD WIRING FOR  
MOTOR CONTROL PANEL  
MCCB/2  
(SHEET 7 OF 12)**

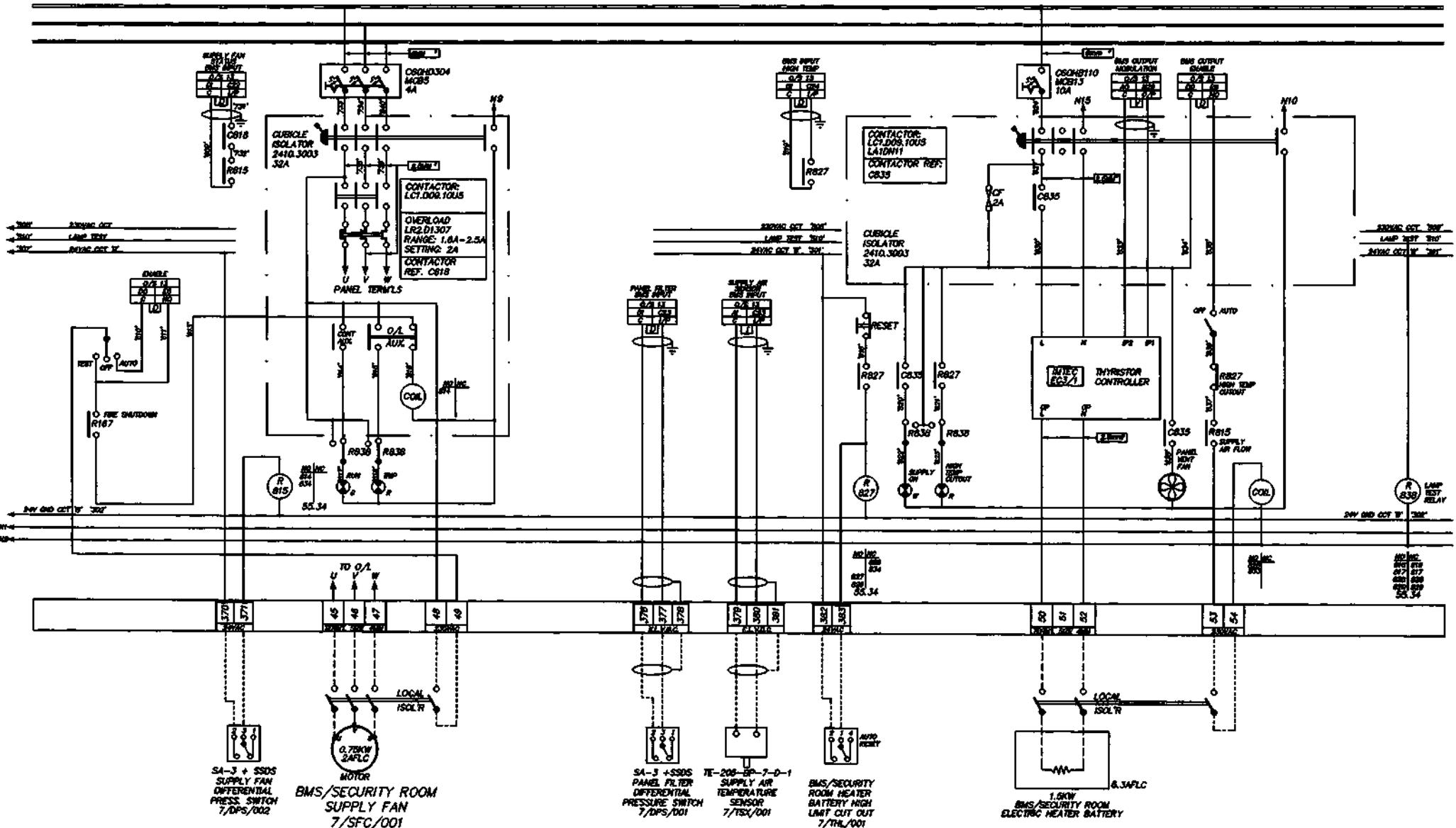


HORTON ROAD, COLNBROOK, SLOUGH, BUCKINGHAMSHIRE  
TEL: 01753 738000 FAX: 01753 771001

810 820 830

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DRG No. S98057-38



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CLIENT

BENCHMARK GROUP PLC

PROJECT

5-7 CARLTON GARDENS

DRG No.

S98057-38

ISSUE

SYNCHRONISED  
SYSTEMS

HORTON ROAD, COLNBROOK, SLOUGH, BERKSHIRE  
TEL: 01753 738000  
FAX: 01753 771001

TITLE  
SCHEMATIC WIRING DIAGRAM  
AND EXTERNAL FIELD WIRING FOR  
MOTOR CONTROL PANEL  
MCCB/2  
(SHEET 8 OF 12)

IN	OUT	DETAIL	IN	OUT	DETAIL
A	3/9/98	OAP COMMENTS	SSC	01.07.98	
B	05/11/98	AS FITTED	DSO		

910

0 1 2 3 4 5 6 7 8 9

920

0 1 2 3 4 5 6 7 8 9

930

0 1 2 3 4 5 6 7 8 9

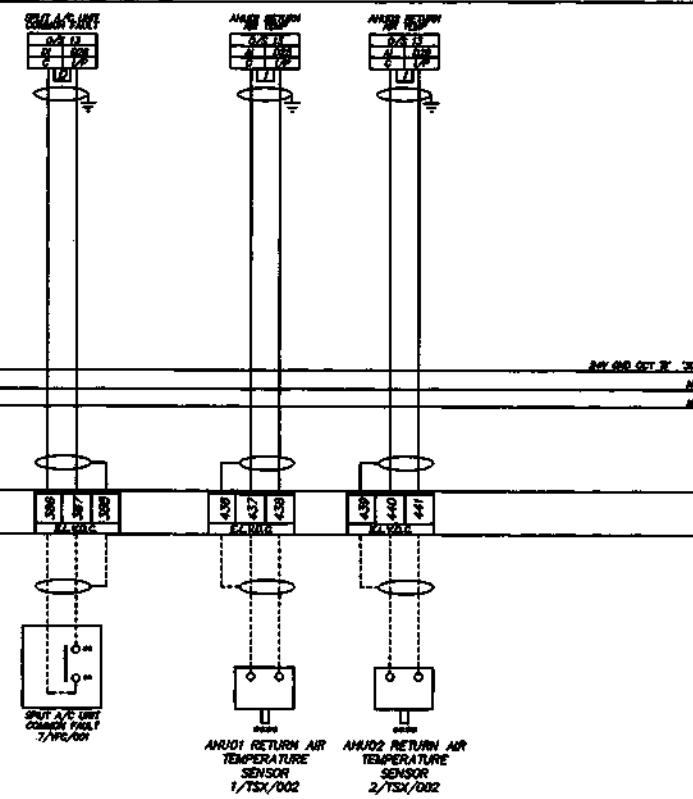
DRG No. S98057-39

100' 24VAC OUT  
200' LINE OUT  
300' PWR OUT 24VDC

100' 24VAC OUT 24VDC  
200' LINE OUT 24VDC  
300' PWR OUT 24VDC

LAMP TEST RELAY  
24V 0.02A 27V 30W

M1  
M2



REF	DATE	DETAIL	#	DRAWN BY	SPC	DATE	TITLE	SYNCHRONISED SYSTEMS	
								SCHEMATIC WIRING DIAGRAM AND EXTERNAL FIELD WIRING FOR MOTOR CONTROL PANEL MCCB/2 (SHEET 9 OF 12)	
								HORTON ROAD, COLNBROOK, SLOUGH, BERKSHIRE	TEL: 01753 738000
								FAX: 01753 771001	
A	3/9/98	DAP COMMENTS	SBC	JHW	01.07.98				
B	18/10/98	MODIFIED AS PER MEETING AT ONE ARUP OFFICES 15/10/98.	JHW						
C	05/11/98	AS FITTED	DSO						
D	14/04/99	SITE MODIFICATION	DO						
		THIS DRAWING IS THE PROPERTY OF SYNCHRONISED SYSTEMS LTD AND CANNOT BE REPRODUCED OR ALIENED IN WHOLE OR PART WITHOUT THE PRIOR PERMISSION OF THAT COMPANY.	CLIENT	BENCHMARK GROUP PLC	PROJECT	5-7 CARLTON GARDENS	DRG No.	S98057-39	ISSUE D

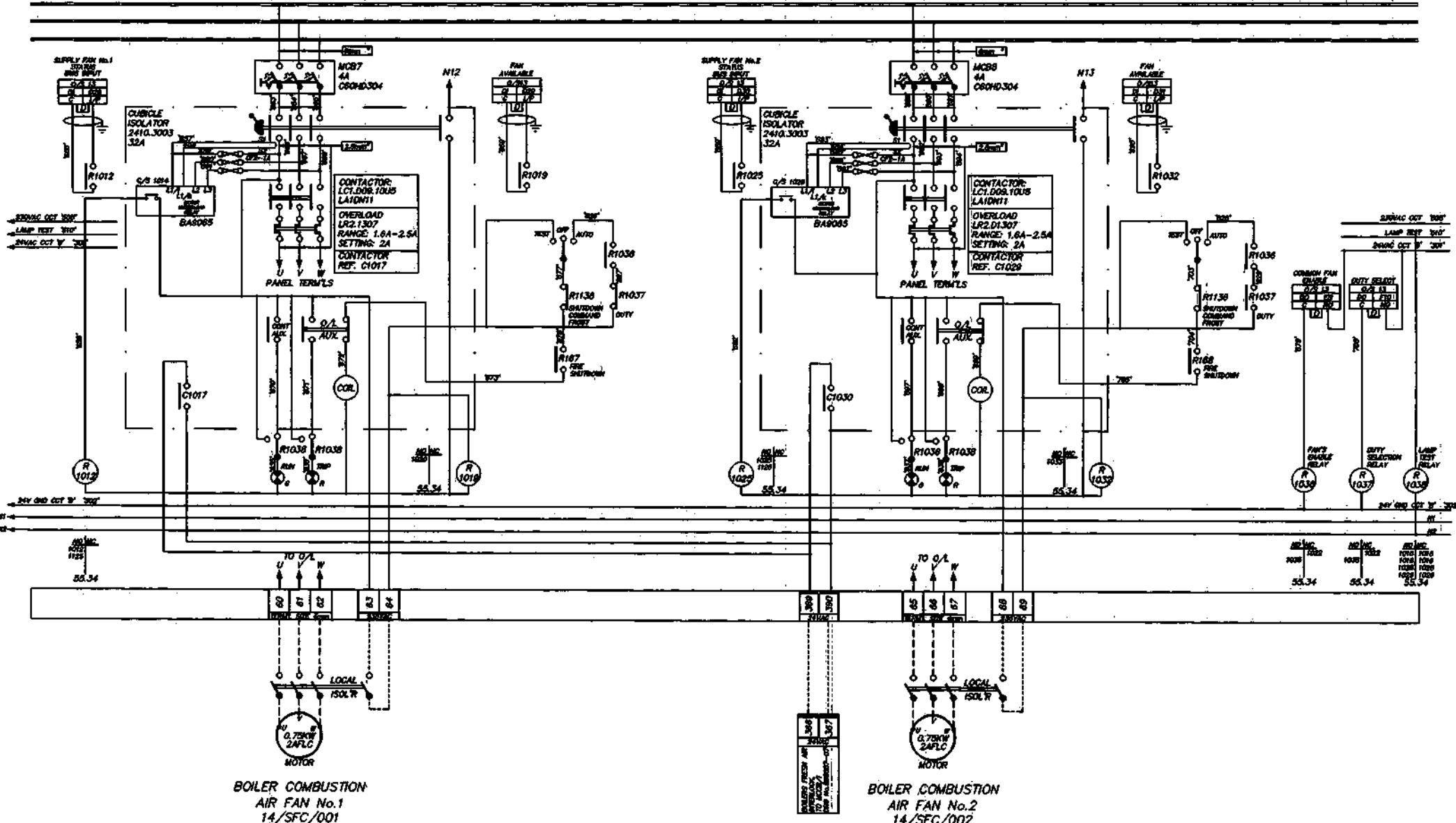
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1020

103

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DRG No. 598057-40



DATE	RETRIEVED
3/9/98	GAP COMMENTS
10/10/98	MODIFIED AS PER MEETING AT CIV ARB OFFICES 15/10/98
05/11/98	AS FITTED

BB	SWAN	SBC	DATE 01.07.98	TITLE
SBC	SWANED		DATE	
JHN	SWINGER	DSO	DATE	
DSO				
CLIENT				

**SCHEMATIC WIRING DIAGRAM  
AND EXTERNAL FIELD WIRING FOR  
MOTOR CONTROL PANEL  
MCCB/2  
(SHEET 10 OF 12)**

**SYNCHRONISED  
SYSTEMS**

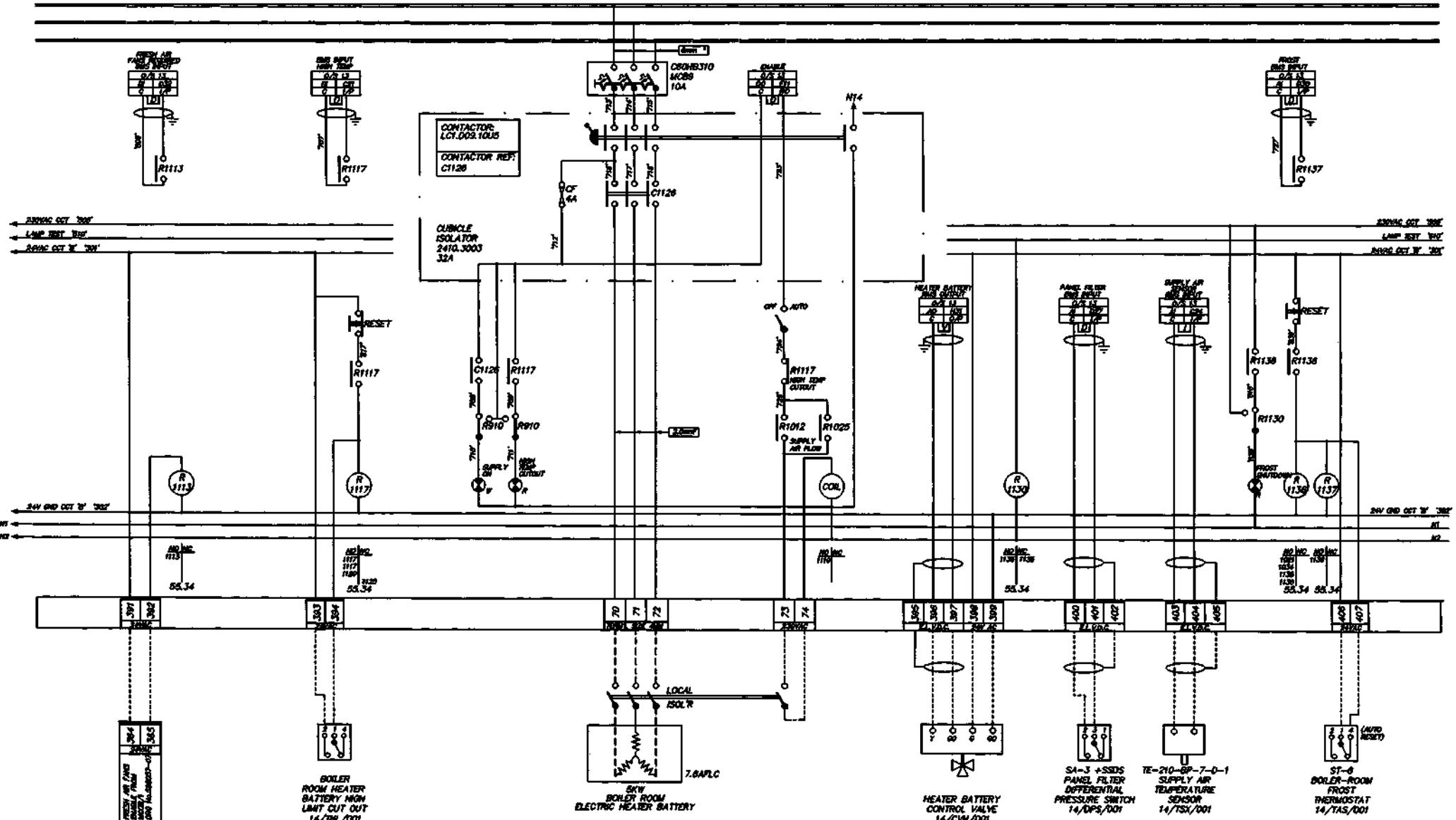
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1120

113

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DRG No. S98057-41



REF	NAME	DETAILS	REC'D BY	REMARKS
A	3/9/96	OAP COMMENTS	SBC	OBSTACLES
B	18/10/96	MODIFIED AS PER MEETING AT ONE ARUP OFFICES 19/10/96	JHW	OBSTACLES
C	05/11/96	AS FITTED	DSO	

הה

**SCHEMATIC WIRING DIAGRAM  
AND EXTERNAL FIELD WIRING FOR  
MOTOR CONTROL PANEL  
MCCB/2  
(SHEET 11 OF 12)**

**SYNCHRONISED  
SYSTEMS**

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CLIENT

BENCHMARK GROUP PLC

PROJECT

5-7 CARN TON GARDEN

ORG No

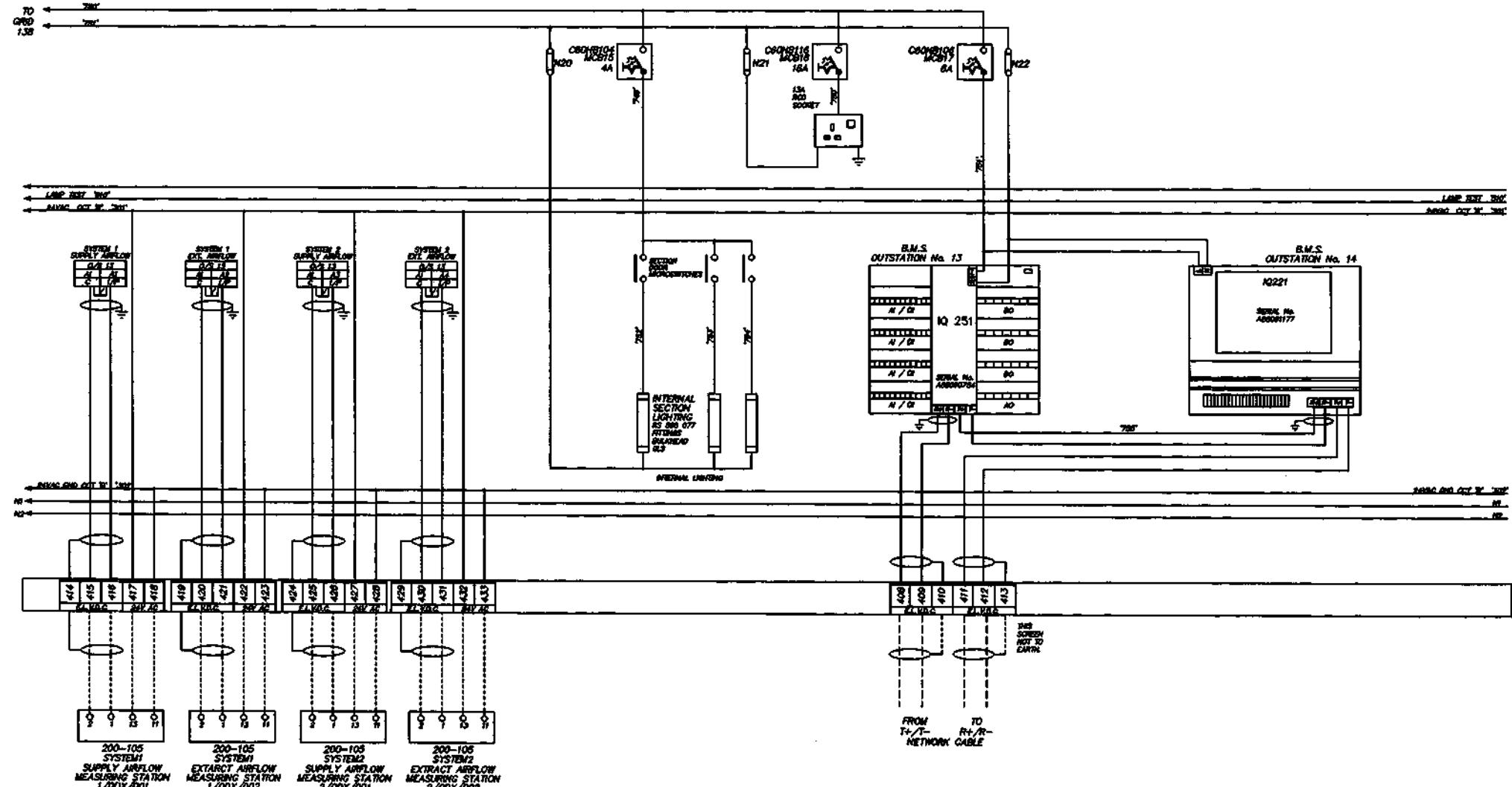
S98057-41

ISSUE

1210 1220 1230

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DRG No. S98057-42



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DATE: 01.07.98

REV: 00049

ISSUE: DSO

DATE: 01.07.98

REV: DSO

ISSUE: DSO

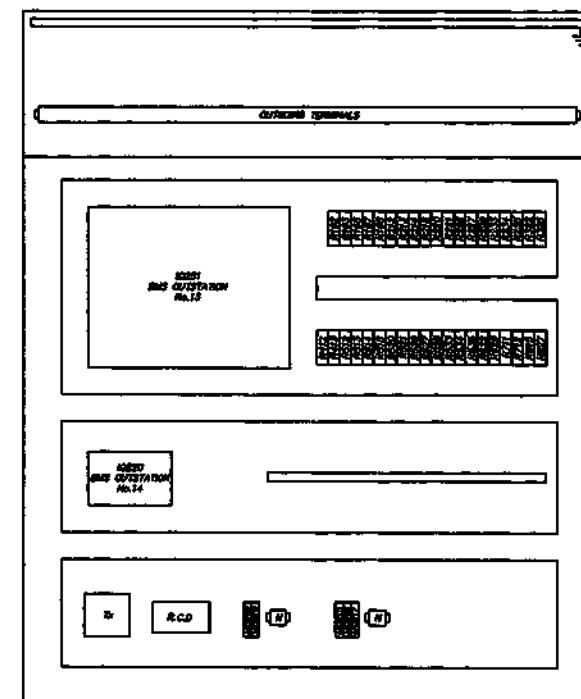
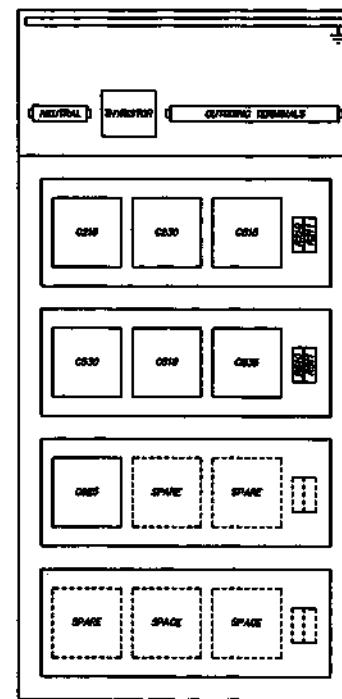
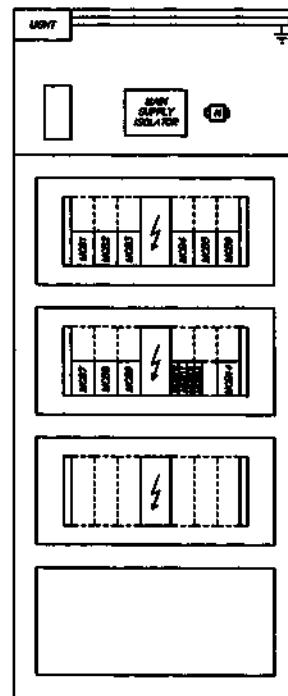
DATE: 01.07.98

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0 1 2 3 4 5 6 7 8 9

0 1 2 3 4 5 6 7 8 9

DRG No. S98057-45



## **INTERNAL LAYOUT**

#	DATE	DETAIL	BY	FROM	TO
A	3/9/98	OAP COMMENTS	SBC	OWNER	DAE
B	14/04/98	SITE MODIFICATION	DO	OWNER	DAE

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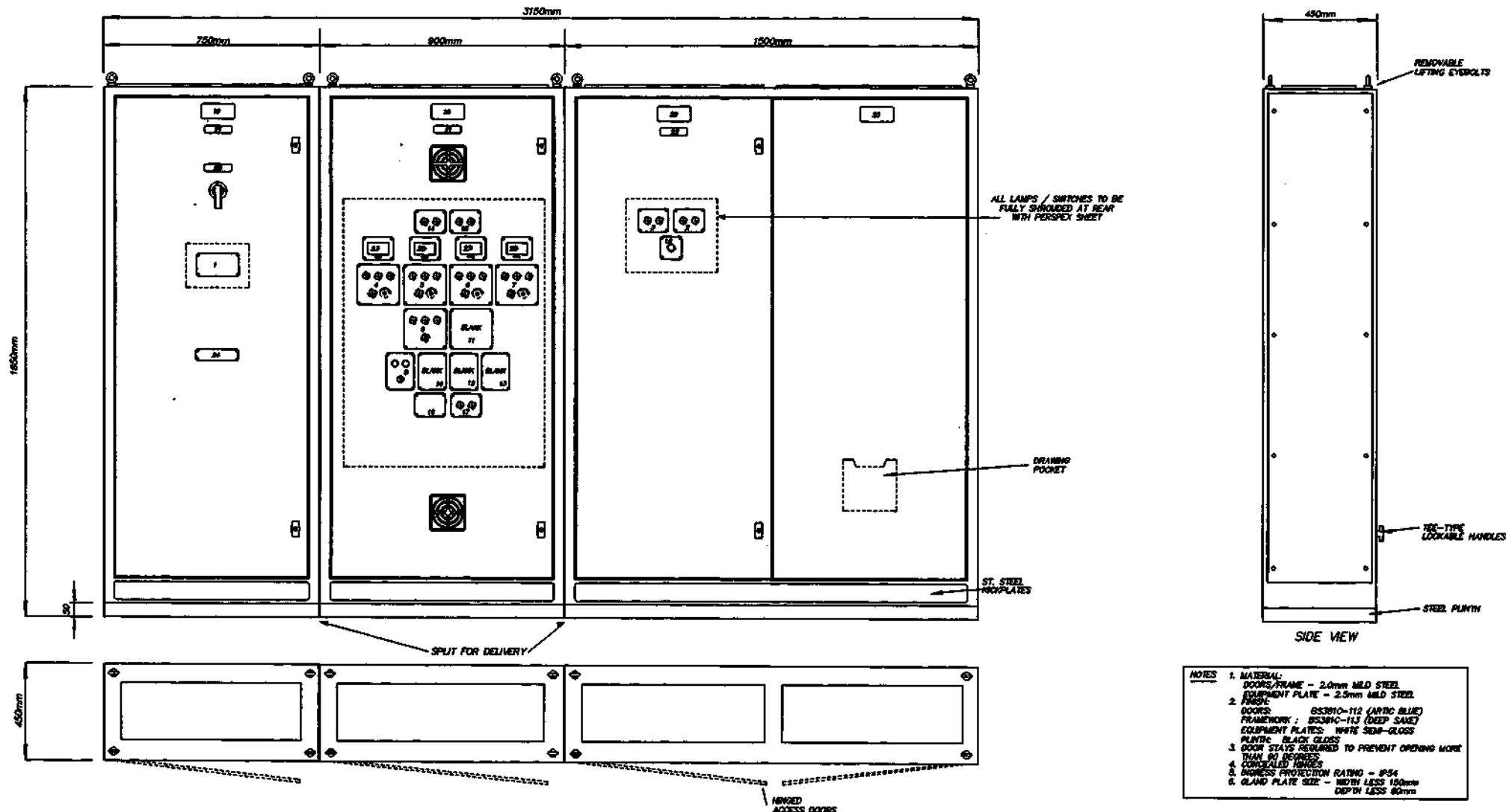
**INTERNAL LAYOUT DETAILS  
FOR MOTOR CONTROL PANEL  
MCCB/2**



HORTON ROAD, COLNBROOK, SLOUGH, BERKSHIRE  
TEL: 01753 738000 FAX: 01753 771001

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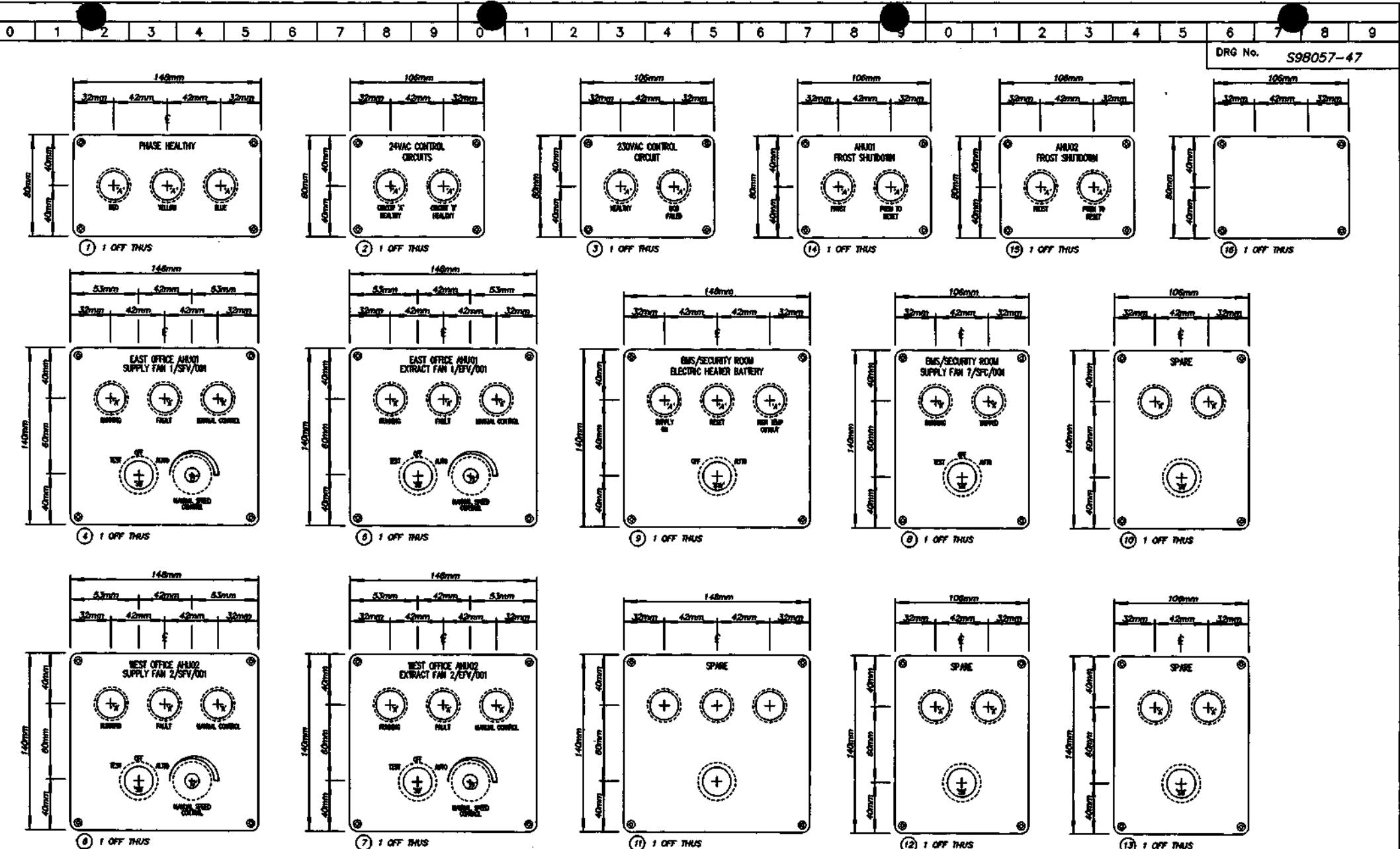
DRG No. S98057-46



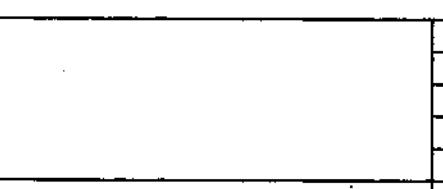
NOTES

1. MATERIAL:  
DOORS FRAME - 2.0mm MILD STEEL  
EQUIPMENT PLATE - 2.5mm MILD STEEL
2. FINISH:  
DOORS : BS3910-112 (APRICOT BLUE)  
FRAMING : BS3910-113 (DEEP SAFF)
3. EQUIPMENT PLATES: WHITE SATIN-GLOSS  
PLASTIC BLACK GLOSS
4. DOOR STAYS REQUIRED TO PREVENT OPENING MORE THAN 90 DEGREES
5. ACCESS PANELS
6. ACCESS PROTECTION RATING - IP54
7. GLAND PLATE SIZE - WIDTH LESS 150mm  
DEPTH LESS 60mm

	NO	DATE	DETAIL	NO	NAME	SEC	DATE	TITLE	
	A	3/9/98	GAP COMMENTS	SBC	01908	DATE	28.07.98		
	B	16/10/98	MODIFIED AS PER MEETING AT CCE AREA OFFICES 15/10/98	JWW	01908	DATE			
	C	14/04/98	SITE MODIFICATION	DD	01908	DATE			
GENERAL ARRANGEMENT DETAILS FOR MOTOR CONTROL PANEL MCCB/2									
 <b>HORTON ROAD, COLNBROOK, SLOUGH, BERKSHIRE</b> TEL: 01753 738000      FAX: 01753 771001									
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				DRG No. S98057-46			ISSUE	C	



DRG No. S98057-47



NO	DATE	DETAIL	NO	DRWNR	SEC	DATE
A	3/9/98	OAP COMMENTS		SBC	000000	7/7/98
B	18/10/98	MODIFIED AS PER MEETING AT CFC GROUP OFFICES 15/10/98		JHW	000000	DATE
C	14/04/98	SITE MODIFICATION		DO	000	DATE

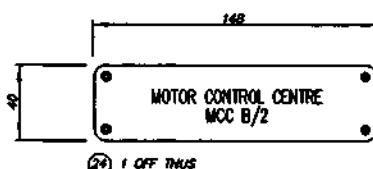
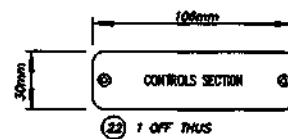
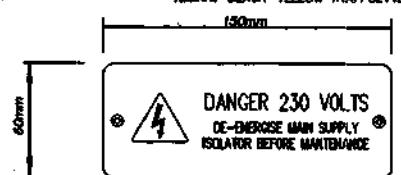
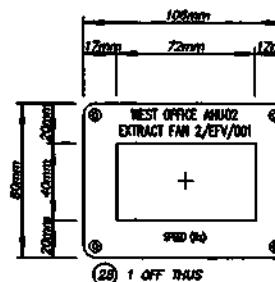
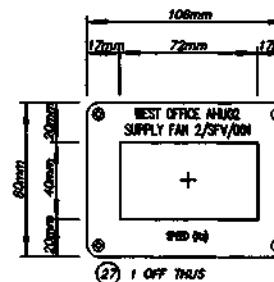
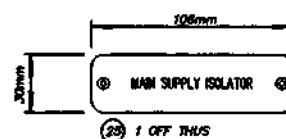
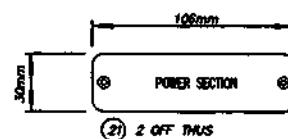
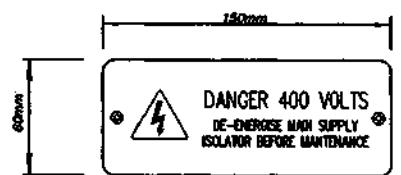
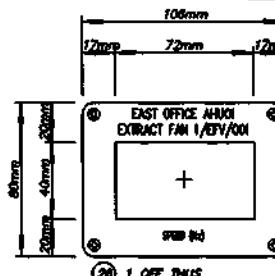
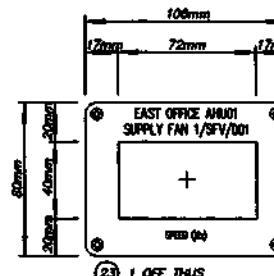
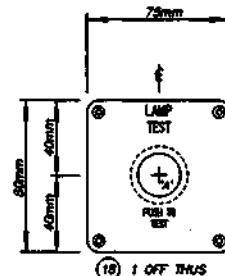
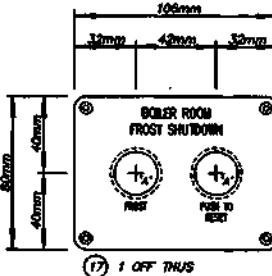
TITLE  
LABEL DETAILS  
FOR MOTOR CONTROL PANEL  
MCCB/2  
(SHEET 1 OF 2)

**SYNCHRONISED  
SYSTEMS**

HORTON ROAD, COLNBROOK, SLOUGH, BERKSHIRE  
TEL: 01753 738000

FAX: 01753 771001

DRG No. S98057-48



**NOTES:**

1. **LABELS TO BE WHITE-BLACK-WHITE TRAFFOLITE UNLESS OTHERWISE STATED**
2. **LEADS TO HAVE 6mm. RADUS CORNERS, AND 3mm. COUNTERSUNK FIXING HOLES.**
3. **MAIN TITLES TO BE APPROX. 5mm. HIGH, AND SUB-TITLES APPROX. 3mm. HIGH.**
4. **CUTOUT DETAILS** A' Holes - 22.8mm. dia. (26.5mm. setel), B' Holes - 10.0mm. dia., C' Holes - 22.5mm. dia. (30mm. setel).

BB	DATE	REASON	SO	DRIVER
A	3/8/98	CAP COMMENTS	SBC	SHRED
				SHRED
				DRIVER
				DS

LABEL DETAILS  
FOR MOTOR CONTROL PANEL  
MCCB/2  
(SHEET 2 OF 2)

HORTON ROAD, COLN BROOK, SLOUGH, BERKSHIRE  
TEL: 01753 738000 FAX: 01753 771001

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310

BENCHMARK GROUP P10

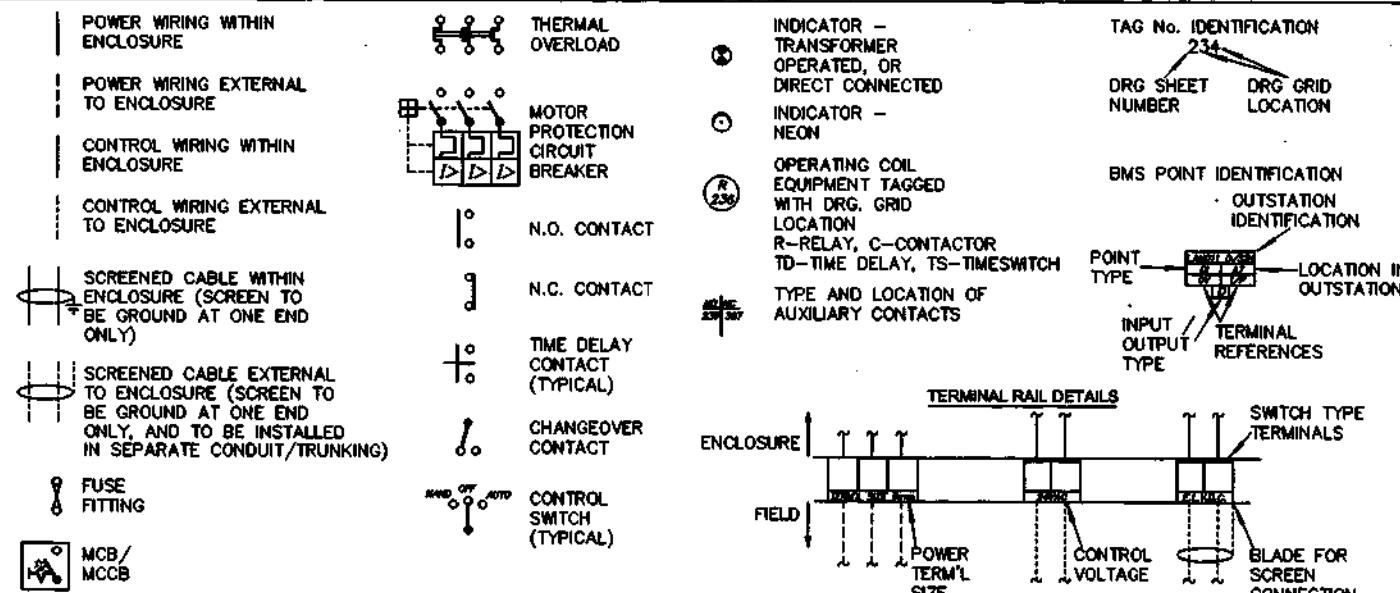
1880 EFC

CARLTON GARDENS

Page 1

S08057-4B

ISSUE



ID	DATE	DETAILS
A	3.9.98	AS PER CLIENTS COMMENTS
B	18/10/98	DROS 32 53 54 55, AND 56 MODIFIED
C	05/11/98	DROS 31 32 33 54 55 56 57 AND 58 MODIFIED AS FITTED

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819

BENCHMARK GROUP PLC

**DRAWING INDEX  
EQUIPMENT SCHEDULE/NOTE  
FOR  
MCP2**



HORTON ROAD, COLNBROOK, SLOUGH, BERKSHIRE  
TEL: 01753 738000 FAX: 01753 771001

FAX: 01753 771001

10015

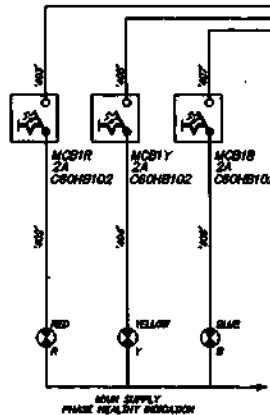
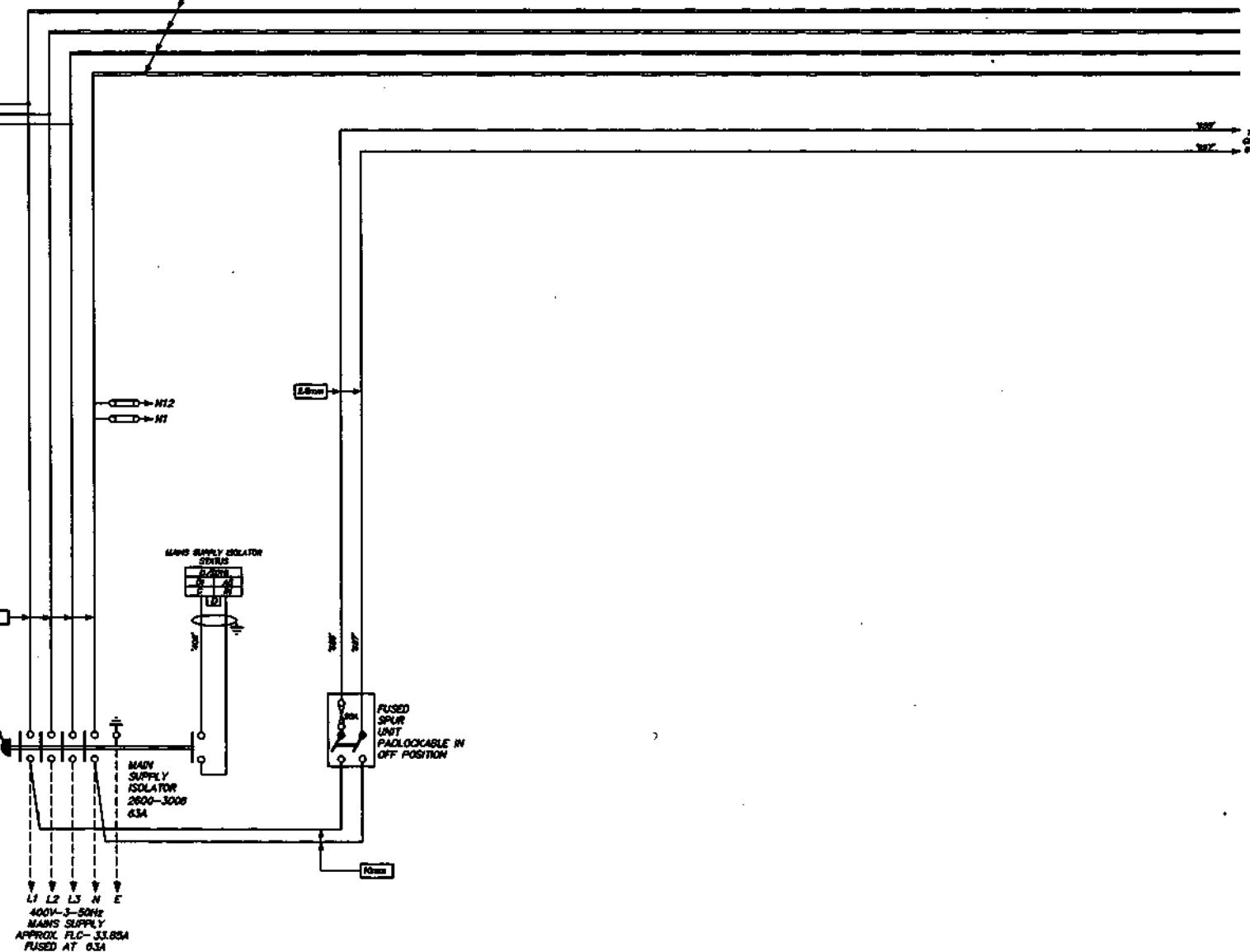
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DRG No. S98057-51

20 x ONE BUSBAR  
20A CAPACITY  
20A / 1 SECOND

CLIENT

BENCHMARK GROUP PLC

PROJECT

5-7 CARLTON GARDENS

DRG No.

S98057-51

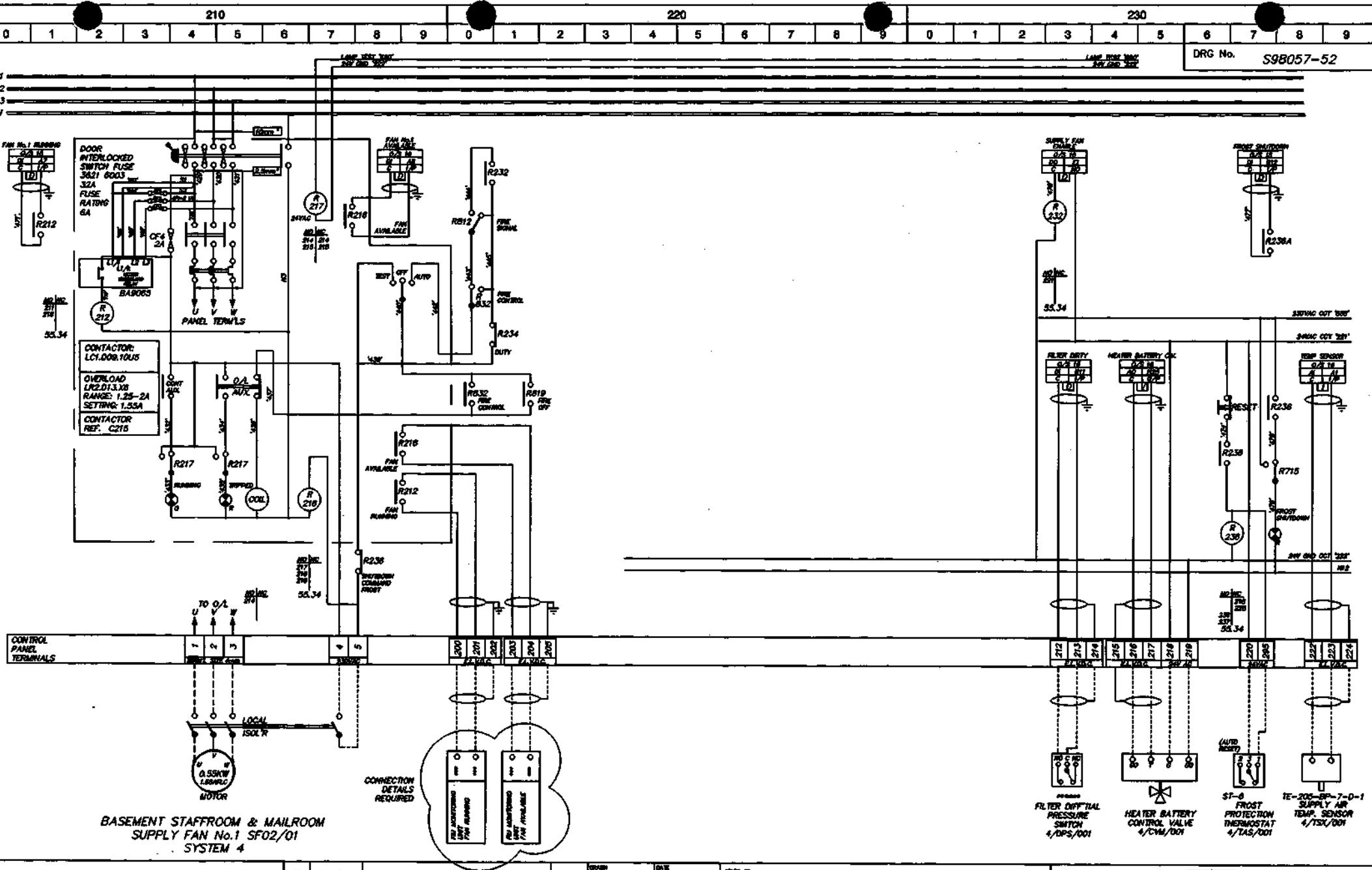
ISSUE B

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SCHEMATIC WIRING DIAGRAM  
AND EXTERNAL FIELD WIRING FOR  
MOTOR CONTROL PANEL  
MCP2  
(SHEET 1 OF 9)



HORTON ROAD, COLNBROOK, SLOUGH, BERKSHIRE  
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FAX: 01753 771001



	<b>M</b>
	<b>A</b>
	<b>B</b>
	<b>C</b>
	<b>D</b>

DATE	DETAILS
3/9/98	AS PER CLIENTS COMMENTS
3/10/98	MODIFIED AS PER MEETING AT ONE ARUP OFFICES 15/10/98
5/11/98	AS FITTED
4/04/99	SITE INSPECTION

GRASS  
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**SCHEMATIC WIRING DIAGRAM  
AND EXTERNAL FIELD WIRING FOR  
MOTOR CONTROL PANEL  
MCP2  
(SHEET 2 OF 9)**

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THE HISTORY OF THE GOVERNMENT OF THE UNITED STATES OF AMERICA

CLIENT

BENCHMARK GROUP PLC

PROJECT

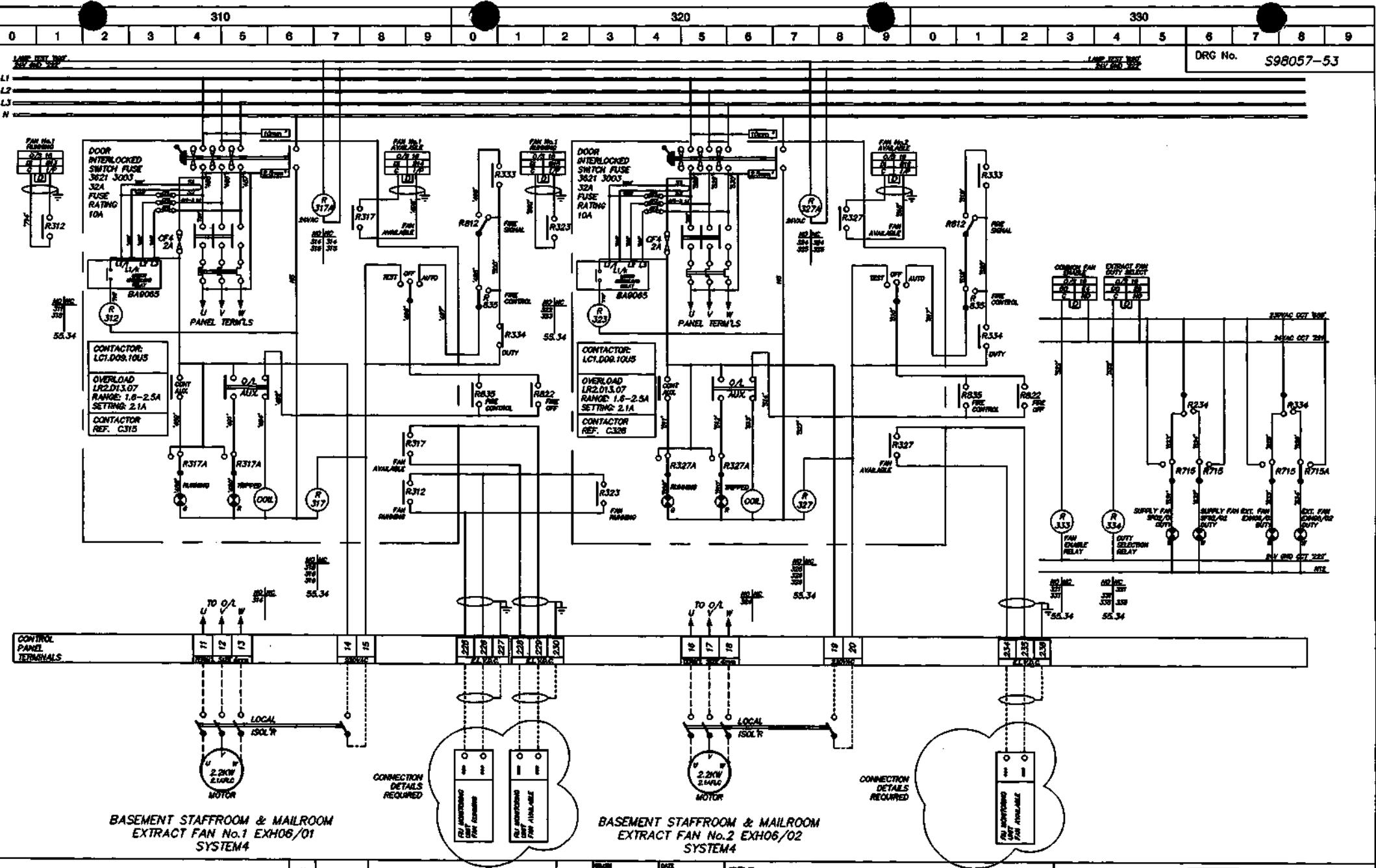
5-7 CARLTON GARDENS

Page No.

508057-52

ISSUE





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PROJECT

5-7 CARLTON GARDENS

DRG No.

S98057-53

ISSUE

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SCHEMATIC WIRING DIAGRAM  
AND EXTERNAL FIELD WIRING FOR  
MOTOR CONTROL PANEL  
MCP2  
(SHEET 3 OF 9)

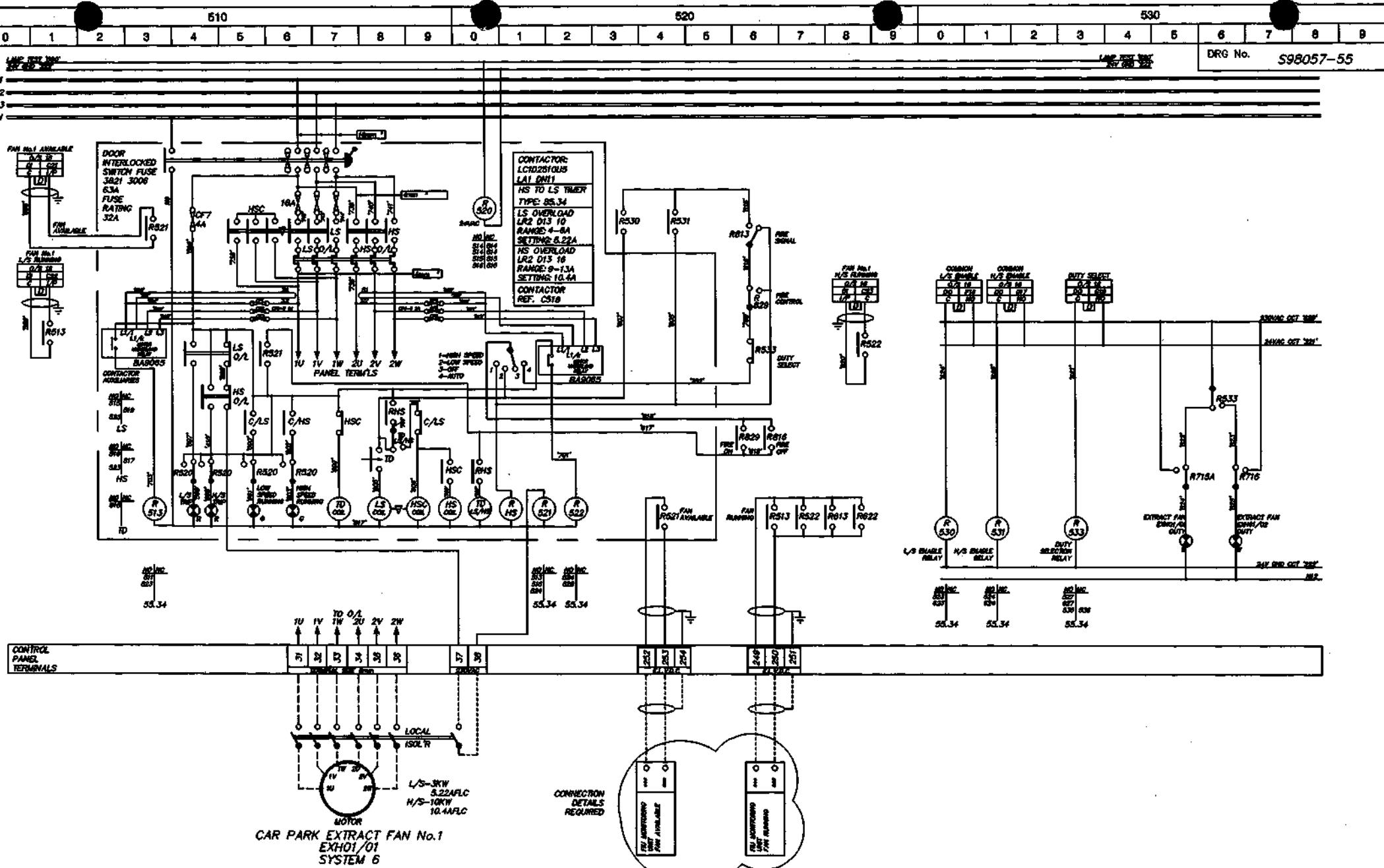


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FAX: 01753 771001

IN	OUT	DETAIL	IN	OUT	DETAIL
A	3.9.98	AS PER CLIENTS COMMENTS	TRC	DPW	DATE 10.6.98
B	16/10/98	MODIFIED AS PER MEETING AT CIVIC AVAIP OFFICES 15/10/98	JHW	DSO	DATE
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D	14/04/99	SITE MODIFICATION	DO	DO	DATE

DRG No. S98057-53

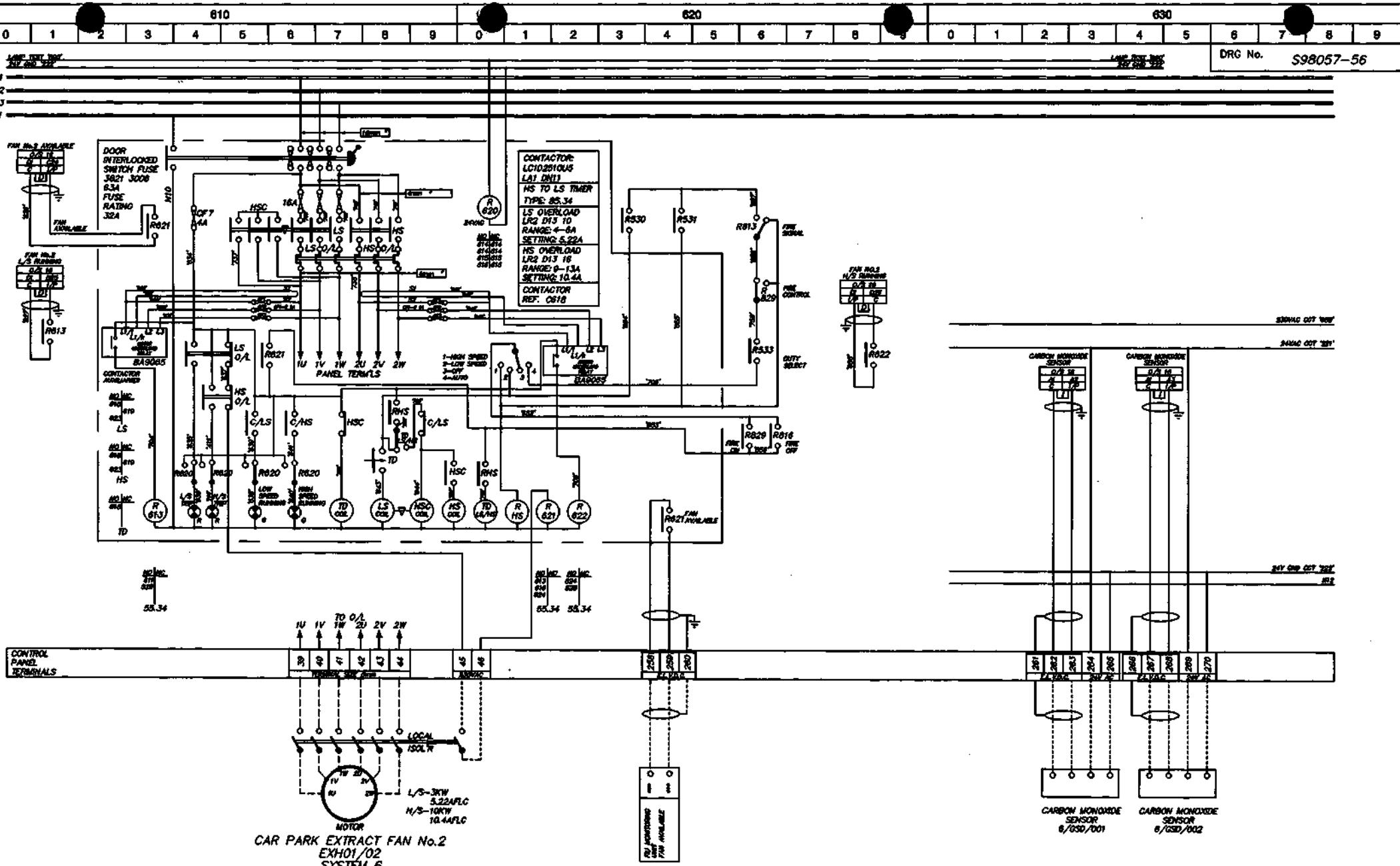




IN	ONE	DETAIL	BY	DRWNS	DATE	TITLE	
E	14/04/98	SITE MODIFICATION	DO	DPW	19.6.98	SCHEMATIC WIRING DIAGRAM AND EXTERNAL FIELD WIRING FOR MOTOR CONTROL PANEL MCP2 (SHEET 5 OF 9)	SYNCHRONISED SYSTEMS  HORTON ROAD, COLNBROOK, SLOUGH, BERKSHIRE TEL: 01753 738000 FAX: 01753 771001
B	18/10/98	MODIFIED AS PER MEETING AT ONE ARUP OFFICES 18/10/98	JHW	DRWNS	DATE		
C	03/11/98	HIGH SPEED START CIRCUIT MODIFIED	DSO	DRWNS	DATE		
D	05/11/98	AS FITTED	DSO				

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CLIENT: BENCHMARK GROUP PLC PROJECT: 5-7 GARDTON GARDENS DRG NO. SORCE7 55 ISSUE -

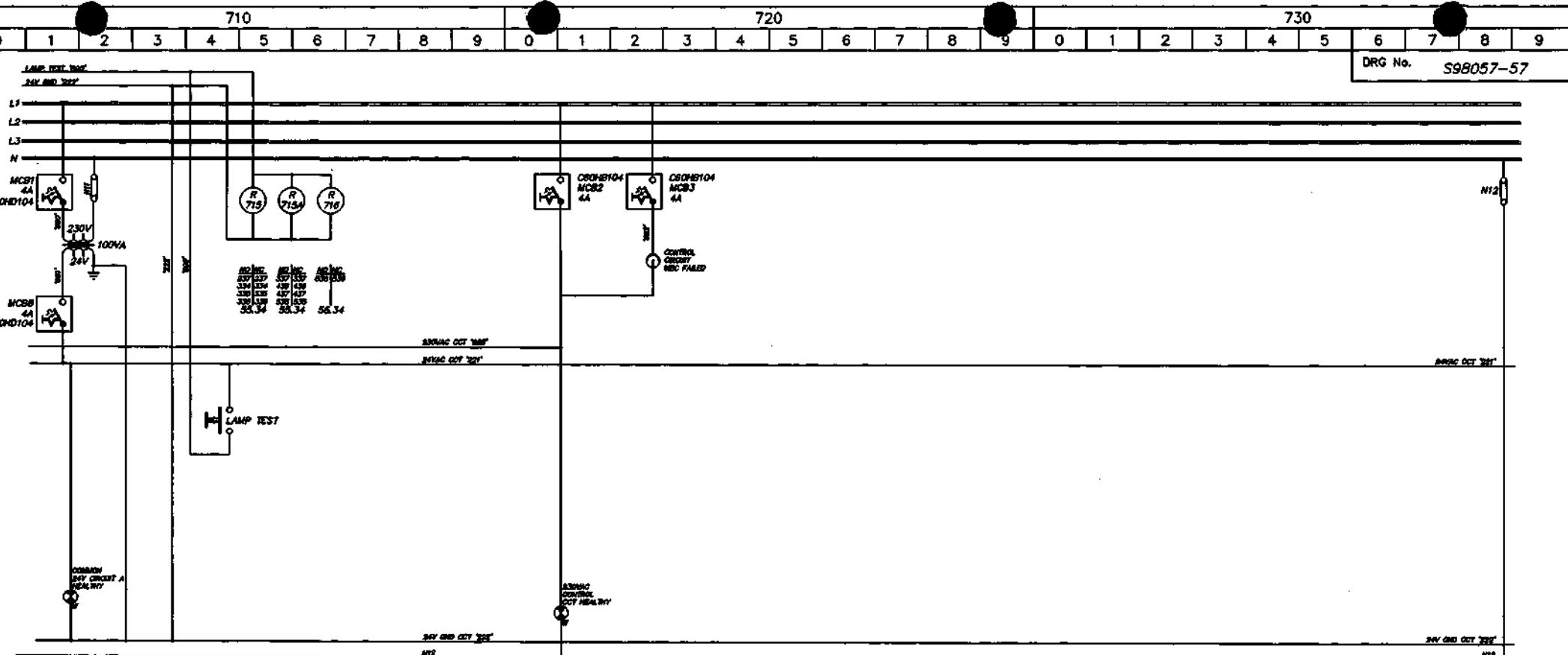


ID	DATE	DETAIL	EE	OWNER
E	14/04/98	SITE MODIFICATION	DO	DPM
B	10/10/98	MODIFIED AS PER MEETING AT ONE ARUP OFFICES 15/10/98	JHW	WHEATLEY
C	03/11/98	HIGH SPEED START CIRCUIT MODIFIED	DSO	DS
D	05/11/98	AS FITTED	DSO	

**SCHEMATIC WIRING DIAGRAM  
AND EXTERNAL FIELD WIRING FOR  
MOTOR CONTROL PANEL  
MCP2  
(SHEET 6 OF 9)**



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REF	DATE	DETAIL	BY	DRIVER	OPW	DATE
A	3.9.98	AS PER CLIENTS COMMENTS	IRC	CHIEFED	DATE	
B	05/11/98	AS FITTED	DSO	INCHIEF	DSO	DATE

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**SCHEMATIC WIRING DIAGRAM  
AND EXTERNAL FIELD WIRING FOR  
MOTOR CONTROL PANEL  
MCP2  
(SHEET 7 OF 9)**



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BENCHMARK GROUP PLC

5-7 CARLTON GARDENS

DRG No. S98057-57

**ISSUE**

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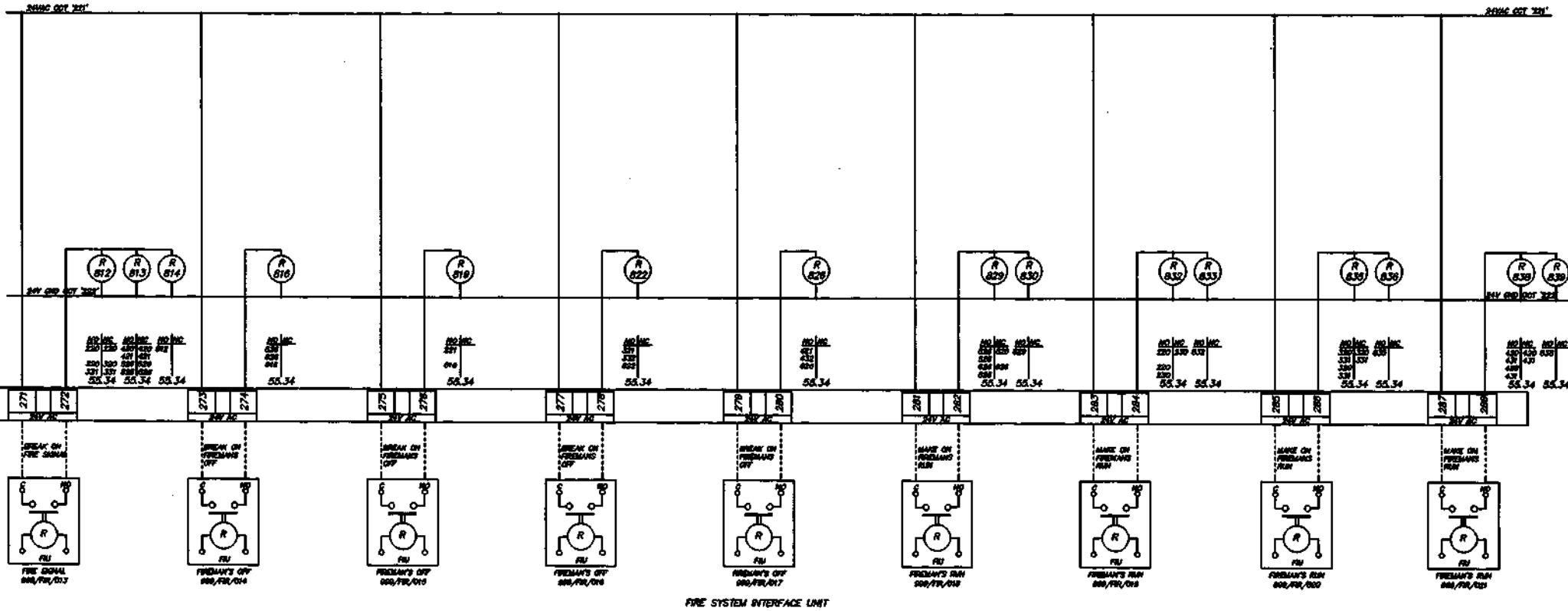
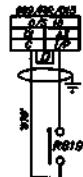
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DRG No. S98057-58



REF ID:

SHEET

8 OF 9

DRAWN

DPW

DATE

29.6.98

DESIGNED

DATE

**SYNCHRONISED SYSTEMS**

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FAX: 01753 771001

SCHEMATIC WIRING DIAGRAM  
AND EXTERNAL FIELD WIRING FOR  
MOTOR CONTROL PANEL  
MCP2  
(SHEET 8 OF 9)

BENCHMARK GROUP PLC

PROJECT 5-7 CARLTON GARDENS

DRG No. S98057-58

ISSUE B

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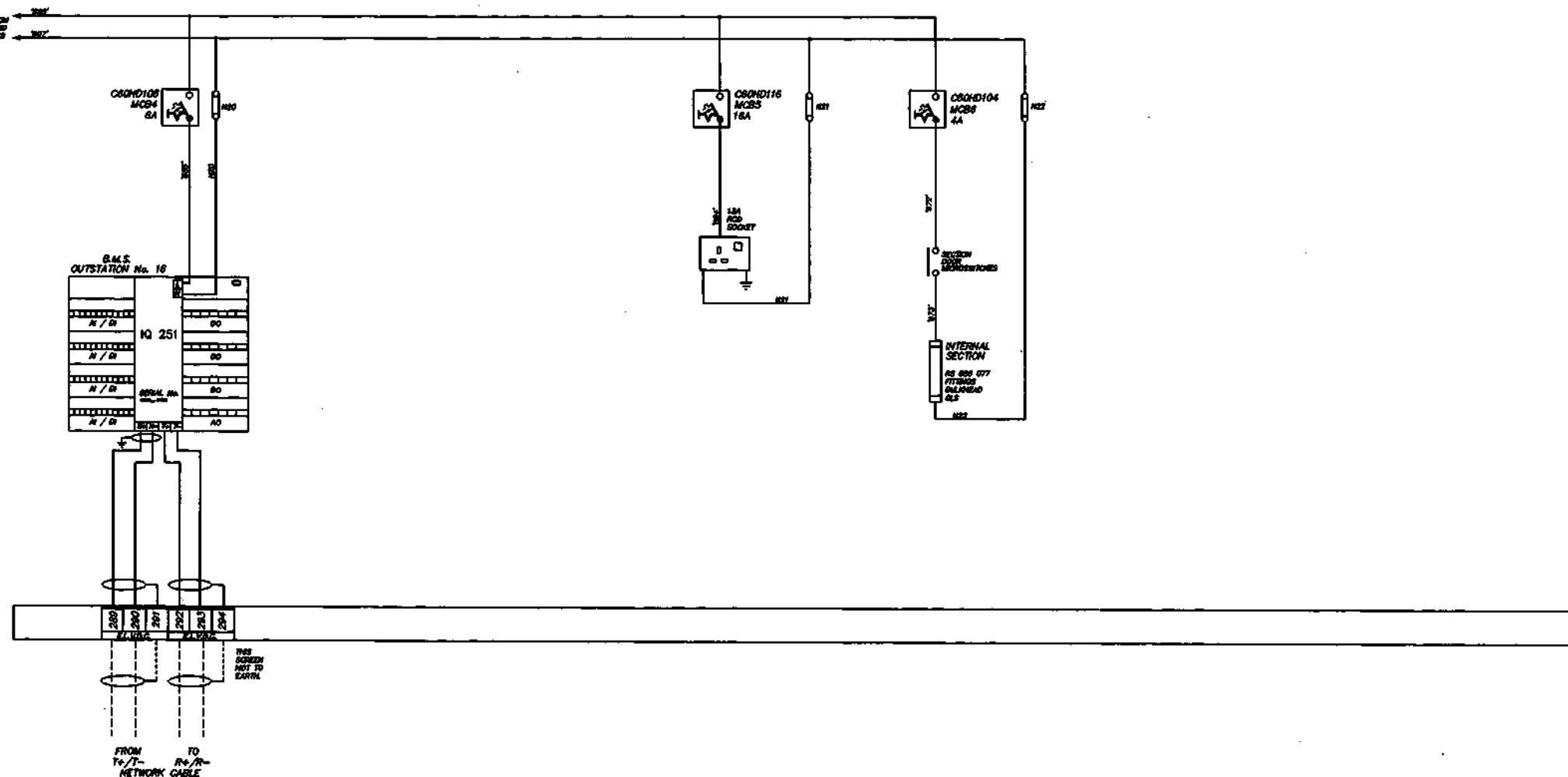
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DRG No. S98057-59



	DATE	GEN.	BY	DRW	REV	DATE
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B	05/11/98	AS FITTED	DSO	REMOVED		

## TITLE

SCHEMATIC WIRING DIAGRAM  
AND EXTERNAL FIELD WIRING FOR  
MOTOR CONTROL PANEL  
MCP2  
(SHEET 9 OF 9)



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BENCHMARK GROUP PLC

PROJECT

5-7 CARLTON GARDENS

DRG No.

S98057-59

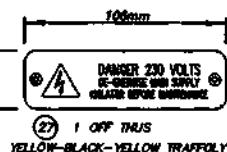
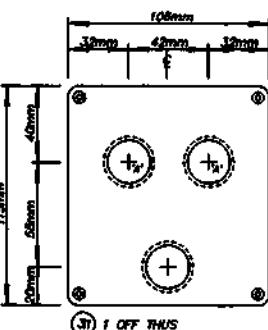
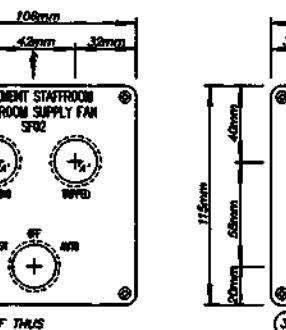
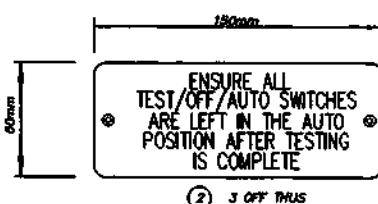
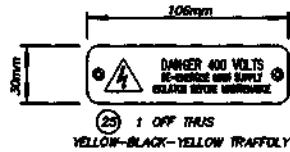
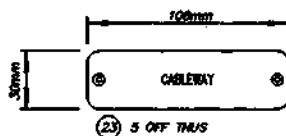
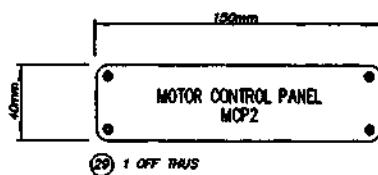
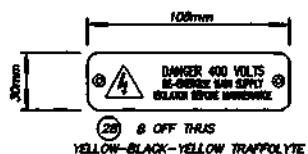
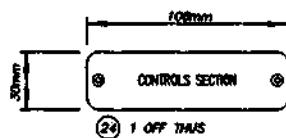
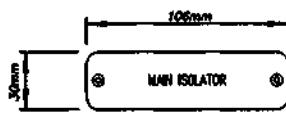
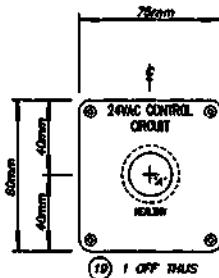
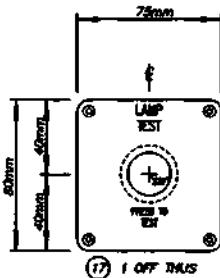
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DRG No. S98057-62

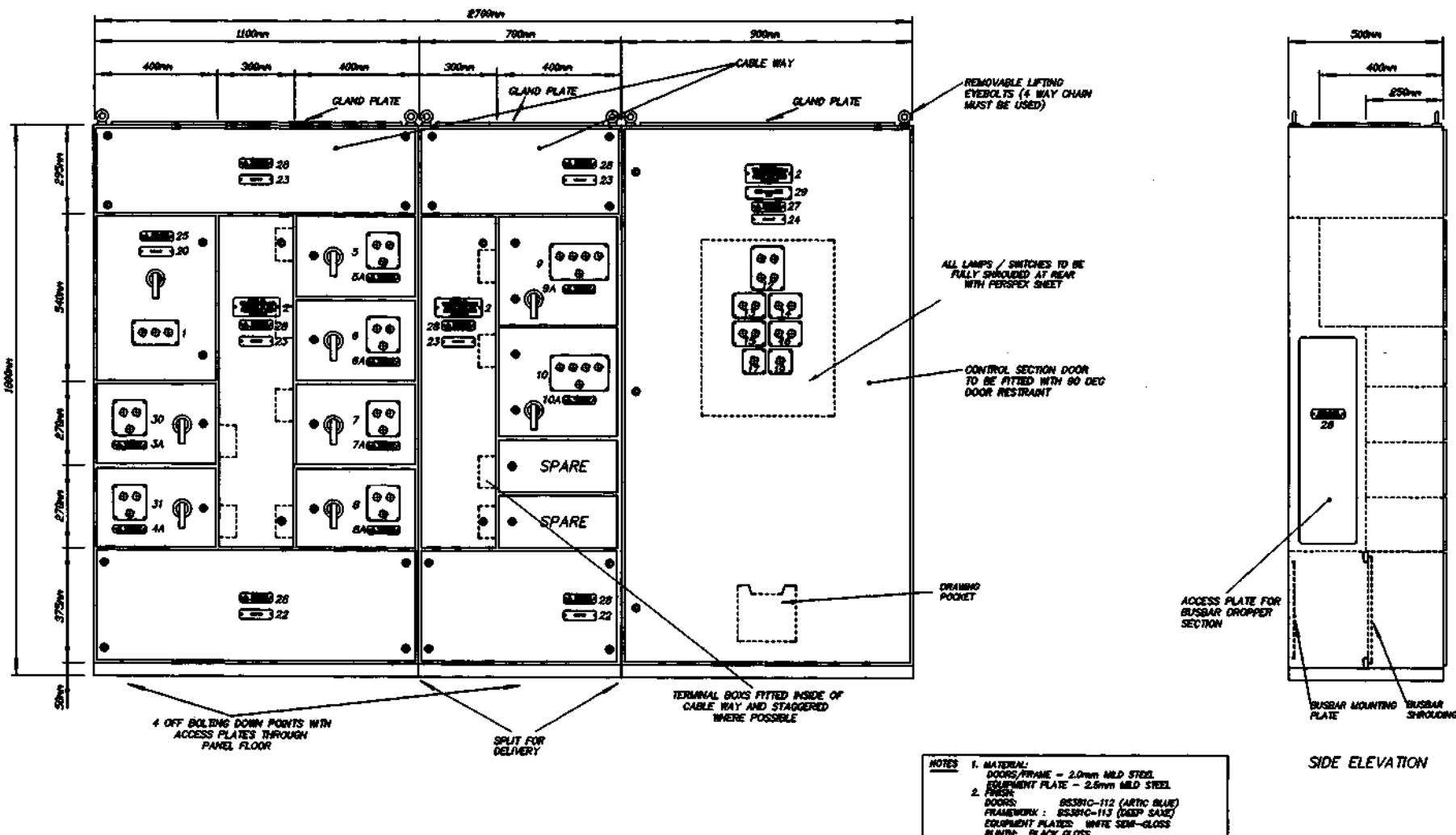


NOTES:  
 1. LABELS TO BE WHITE-BLACK-WHITE TRAFFOLITE UNLESS OTHERWISE STATED.  
 2. LABELS TO HAVE 6mm. RADIUS CORNERS, AND 3mm. COUNTERSUNK FITTING HOLES.  
 3. MAIN TITLES TO BE APPROX. 3mm. HIGH, AND SUB-TITLES APPROX. 1mm. HIGH.  
 4. CUTOUT DETAILS: 'A' HOLES - 22.5mm DIA. (28.5mm BEZEL)  
 'B' HOLES - 10.0mm DIA.  
 'SW' HOLES - 22.5mm DIA. (30mm BEZEL)

REF	DATE	TITLE	DRAWN BY			TITLE	LABEL DETAILS FOR MOTOR CONTROL PANEL MCP2 (SHEET 2 OF 2)	SYNCHRONISED SYSTEMS			
			NAME	DESIGN	SPEC						
			A	3.8.98	AS PER CLIENTS COMMENTS	SBC	DATE				
			B	14/04/99	SITE MODIFICATION (LABEL Nos. 30 & 31 ADDED)	DESIGNER	DATE				
						DO	DATE				
						DSD	DATE				
CLIENT			PROJECT			5-7 CARLTON GARDENS					
BENCHMARK GROUP PLC			DRG No.			S98057-62					
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DRG No. S98057-63



## NOTES

1. MATERIAL:  
DOORS FRAME - 2.0mm MILD STEEL  
EQUIPMENT PLATE - 2.5mm MILD STEEL
2. FINISH:  
DOORS : BS3900-112 (ARTIC BLUE)  
FRAMWORK : BS3900-113 (DADP SAVEX)  
EQUIPMENT PLATES : WHITE SEMI-GLOSS
3. PAINT - BLACK CLASS
4. CONCEALED Hinges
5. DOOR STAYS REQUIRED TO PREVENT OPENING MORE THAN 90 DEGREES
6. IP65 PROTECTION RATING
7. GLAND PLATE SIZE - WIDTH LESS 150mm  
DEPTH LESS 80mm

FRONT ELEVATION

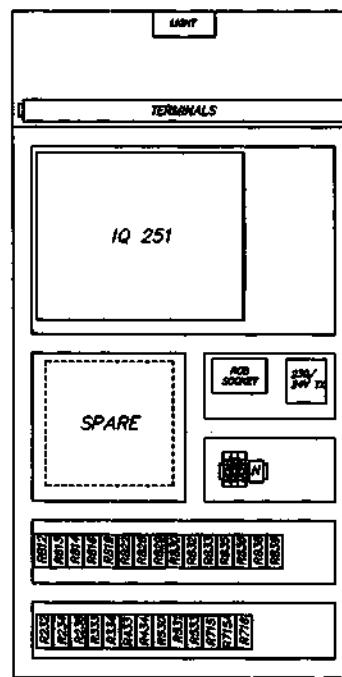
SIDE ELEVATION

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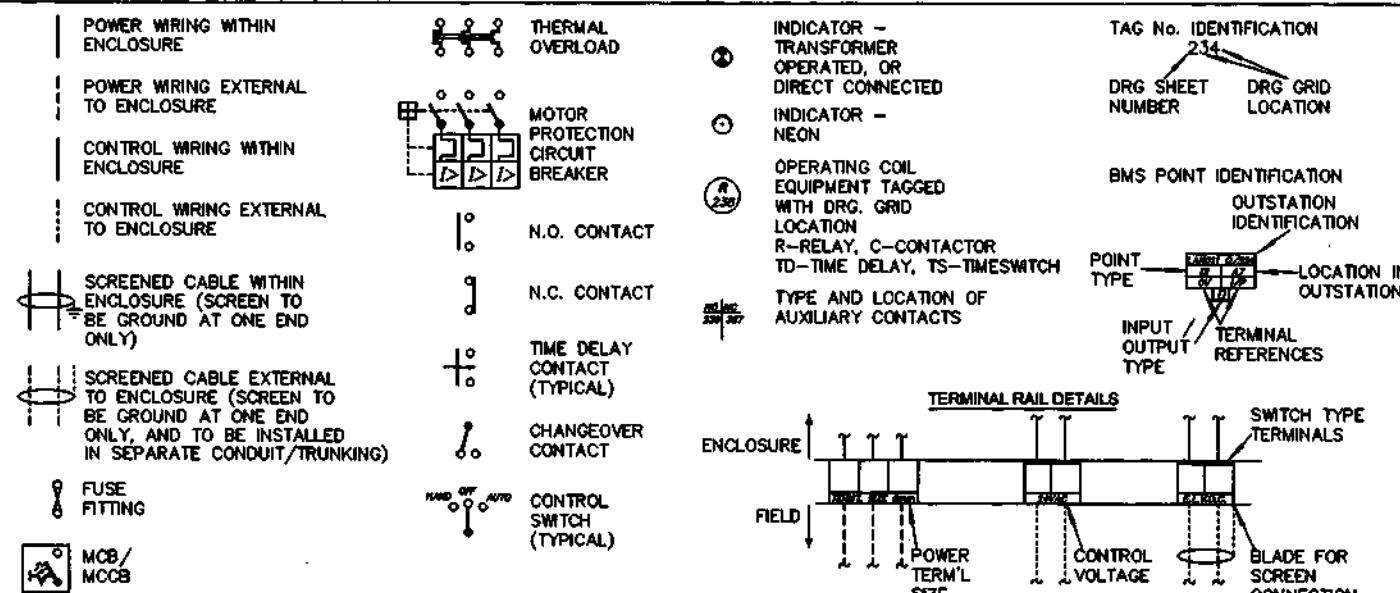
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ORG No. 598057-63A



INTERNAL LAYOUT

WIRING NOTES	EQUIPMENT NOTES	DRAWING No.	ISSUE	DESCRIPTION
1. MINIMUM POWER WIRING 2.5mm	1. ALL STARTERS TO BE OF TELEMECANIQUE MANUFACTURE	S98057-71	A	MAIN SUPPLY
2. MINIMUM CONTROL WIRING 1.0mm	2. MAIN SUPPLY ISOLATORS TO BE OF SOCOMEC/TELEMECANIQUE MANUFACTURE	S98057-72	B	RESIDENTIAL STAIRCASE PRESSURISATION FANS
3. POWER CABLES TO BE FITTED WITH CORD END TERMINALS, OR LUGS, DEPENDING ON SIZE, AND TYPE OF CONNECTION.	3. FUSE SWITCHES TO BE OF SOCOMEC MANUFACTURE	S98057-73	B	OFFICE STAIRCASE PRESSURISATION FANS
4. CONTROL CABLES TO BE FITTED WITH CORD END TERMINALS, PIN, OR FORK, CONFIGURATION, DEPENDING ON TYPE OF CONNECTION.	4. MCB'S, AND MCCB'S TO BE OF MERLIN GERIN, OR SIEMENS MANUFACTURE.	S98057-74	C	FIRE FIGHTING STAIRCASE PRESSURISATION FANS
5. ALL CABLES TO 16mm TO BE COLOUR CODED AS FOLLOWS:- 400 VOLTS L1.L2.L3. - RED, YELLOW, BLUE 230 VOLTS NEUTRAL - BLACK LOW VOLTAGE A.C. - BROWN EXTRA LOW VOLTAGE D.C. - GREY 115 VOLTS A.C. - ORANGE	4A. FUSES TO BE OF GEC MANUFACTURE	S98057-75	A	BMS EQUIPMENT
6. ALL CABLES ABOVE 16mm TO BE BLACK WITH ENDS HEAT SHRINK COLOUR CODED PHASE IDENTIFICATION.	5. ALL OUTGOING TERMINALS TO BE OF ENTRELEC MANUFACTURE.	S98057-76	A	COMMON CONTROLS
7. ALL CONTROL CABLES TO BE IDENTIFIED AT EACH END BY THE USE OF COLOUR CODED FERRULES. THE NUMBERS ARE SHOWN THUS ON THE DIAGRAM - '105'	6. ALL PILOT LIGHTS TO BE OF TRANILAMP MANUFACTURE.	S98057-77	B	FIRE SYSTEM INTERFACE UNITS
8. FINAL CABLE No. '76'	7. SELECTOR SWITCHES TO BE OF TELEMECANIQUE MANUFACTURE.	S98057-80	B	LABEL DETAILS (SHEET 1 OF 2)
9. WHEN A CABLE CONNECTS TO AN OUTGOING TERMINAL THE CABLE IDENTIFICATION NUMBER IS THE SAME AS THE TERMINAL NUMBER.	8. CONTROL RELAYS TO BE FINDER 55.34.	S98057-81	A	LABEL DETAILS (SHEET 2 OF 2)
10. FINAL TERMINAL No. POWER/230VAC - 38 FINAL TERMINAL NO. ELVDC/24VAC - 262	9. TIME DELAY RELAYS TO BE FINDER 85.34.	S98057-82	B	GENERAL ARRANGEMENT
	10. WHERE HRC FUSE CARRIERS ARE INDICATED ON THE SCHEMATIC DIAGRAM THE CARRIERS ARE TO BE OF GEC MANUFACTURE.	S98057-83	A	INTERNAL LAYOUT
FIELD WIRING NOTES				
	1. NETWORK CABLE TO BE BELDEN 9501/9502			
	2. SENSOR CABLE TO BE BELDEN 9501			



DRAWING INDEX EQUIPMENT SCHEDULE/NOTES FOR MCP1	SHEET		CONNECTION				
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	B	230388	AS FITTED AND TESTED	MAY	00000000		
	C	14/04/98	SITE MODIFICATIONS	DO	00000000		

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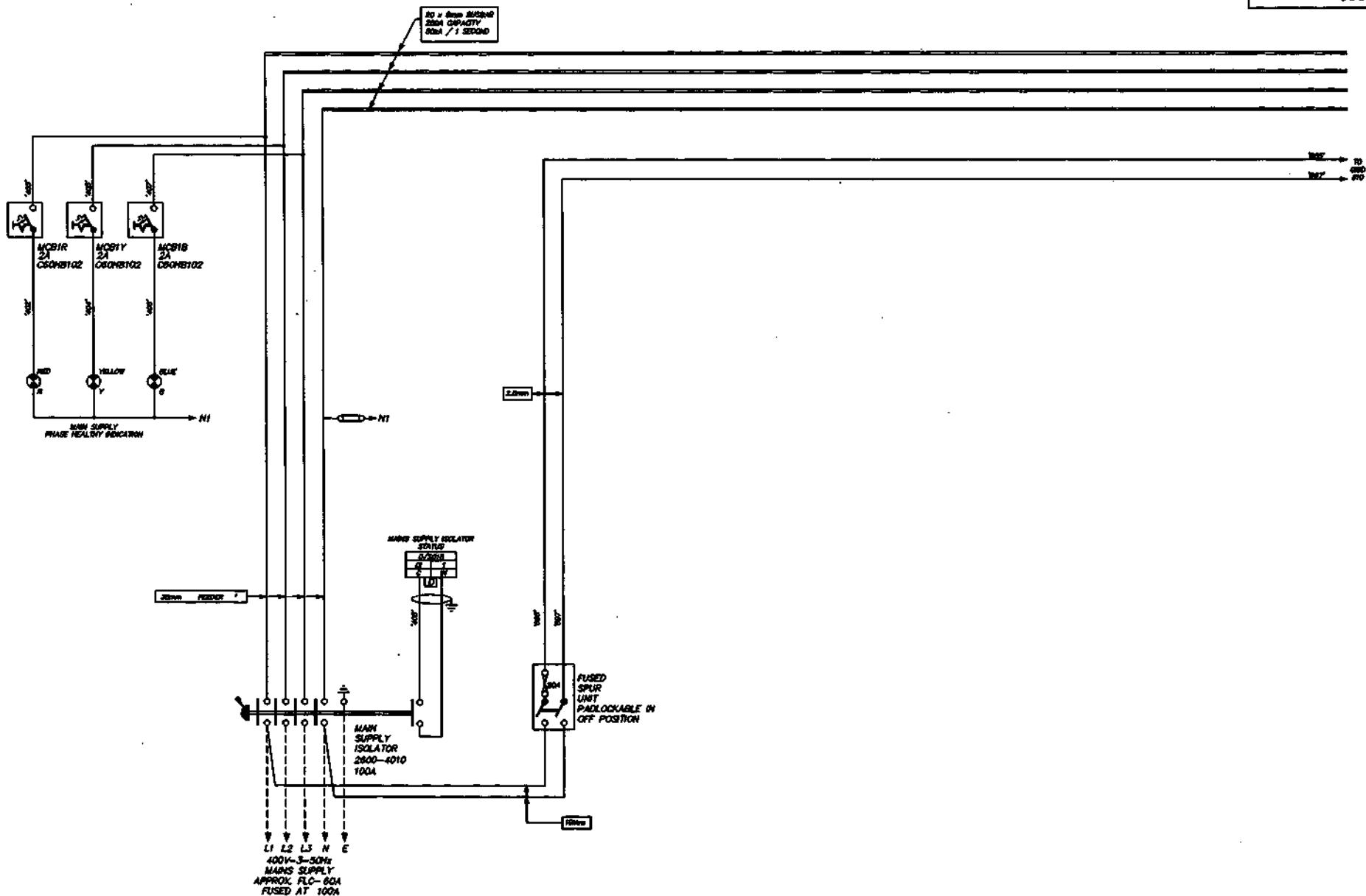
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DRG No. S98057-71



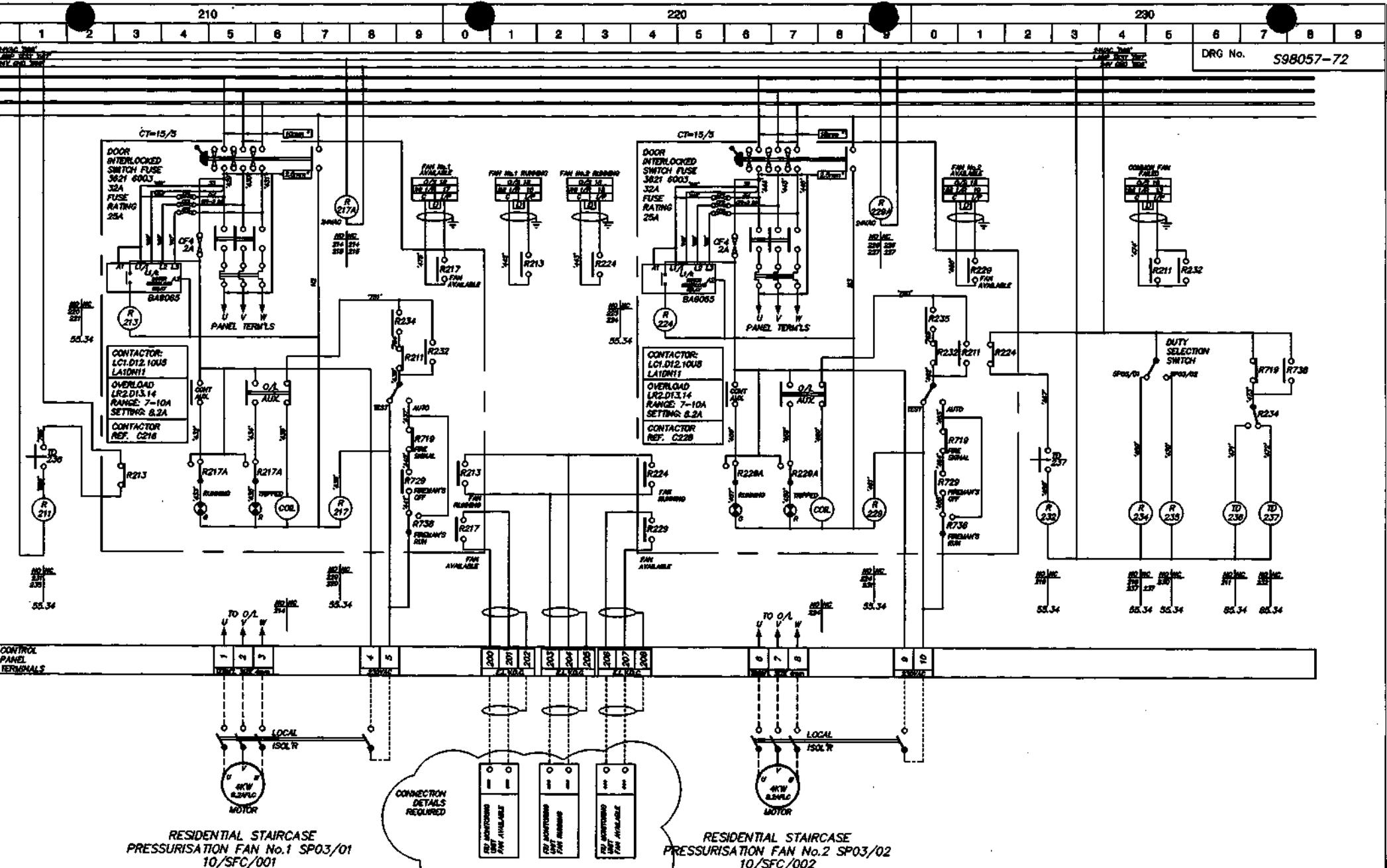
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A	230399	AS FITTED AND TESTED	M&W	P&G	12/8/98
				OWNER	DATE
				DESIGNER	DATE
				D&D	DATE

TITLE

SCHEMATIC WIRING DIAGRAM  
AND EXTERNAL FIELD WIRING FOR  
MOTOR CONTROL PANEL  
MPC1  
(SHEET 1 OF 7)

SYNCHRONISED SYSTEMS

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DATE: 10/11/98 DRAFT: 12/8/98 TITLE: SCHEMATIC WIRING DIAGRAM AND EXTERNAL FIELD WIRING FOR MOTOR CONTROL PANEL MCP1 (SHEET 2 OF 7)

REF: 230396 AS FITTED AND TESTED DRAWN: DATE: 10/11/98 CHECKED: DATE: 12/8/98

DESIGNED: DATE: 10/11/98 APPROVED: DATE: 12/8/98

CLIENT

BENCHMARK GROUP PLC

PROJECT

5-7 CARLTON GARDENS

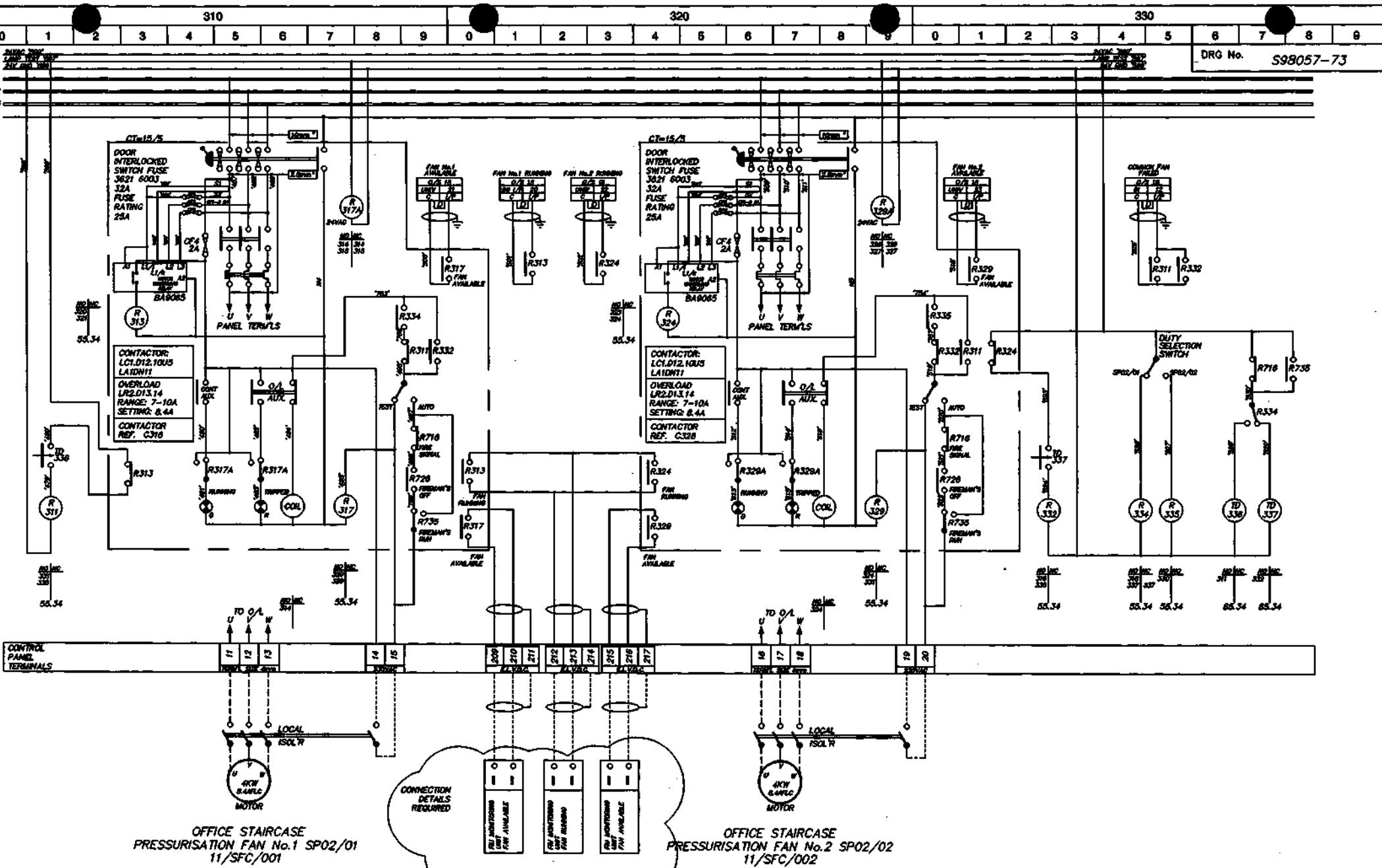
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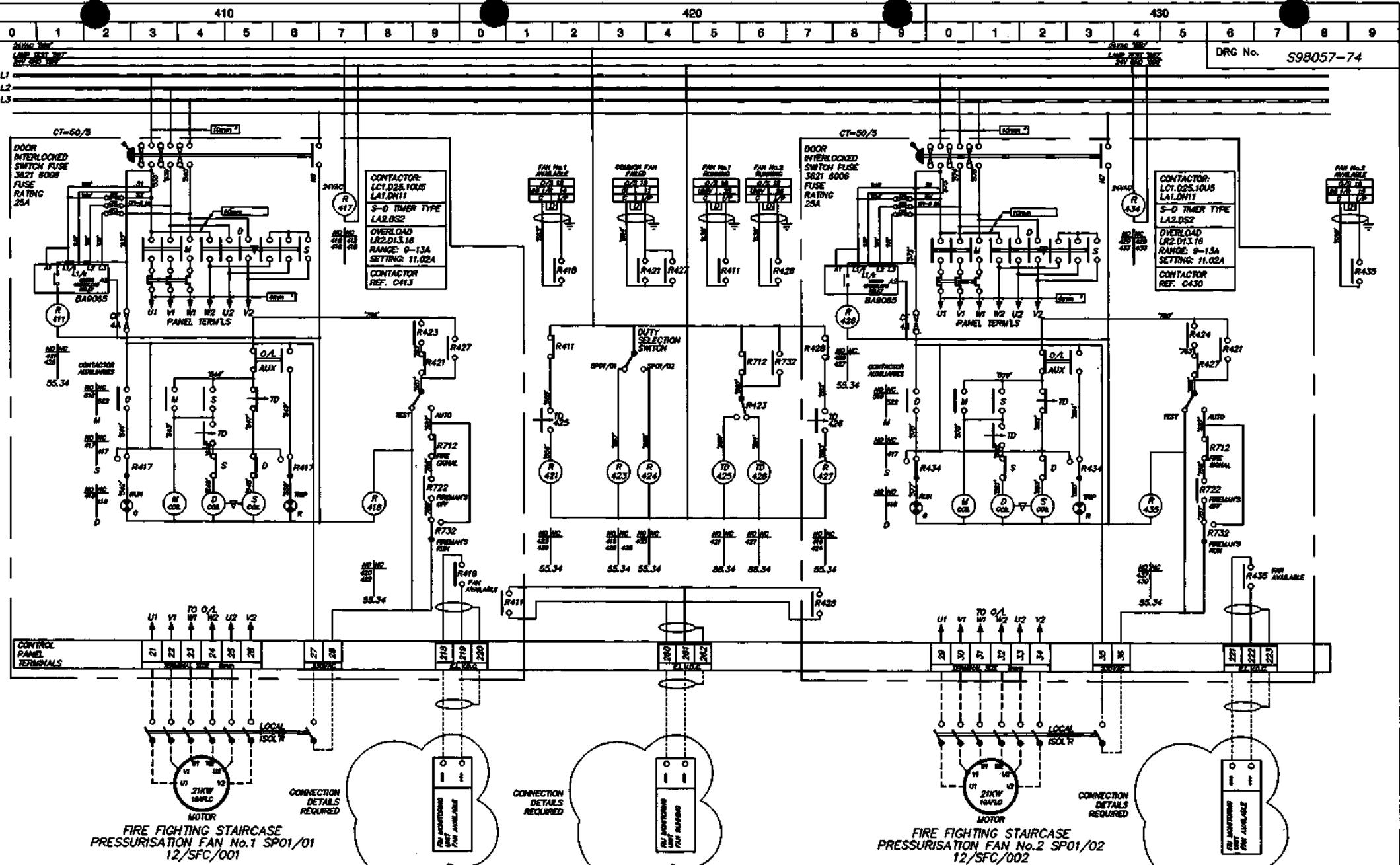
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B	230308	AS FITTED AND TESTED	M/W RECORDED
			DS

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**SCHEMATIC WIRING DIAGRAM  
AND EXTERNAL FIELD WIRING FOR  
MOTOR CONTROL PANEL  
MCP1  
(SHEET 3 OF 7)**



HORTON ROAD, COLNBROOK, SLOUGH, BERKSHIRE  
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NO	DATE	REVISION	NO	DATE	REVISION	TITLE
A	10/11/98	OAP COMMENTS	DSO	08/09	DATE	SCHEMATIC WIRING DIAGRAM AND EXTERNAL FIELD WIRING FOR MOTOR CONTROL PANEL MCP1 (SHEET 4 OF 8)
B	23/03/99	AS FITTED AND TESTED	AMW	08/09	DATE	
C	14/04/99	SITE MODIFICATION	DO	08/09	DATE	

SYNCHRONISED SYSTEMS

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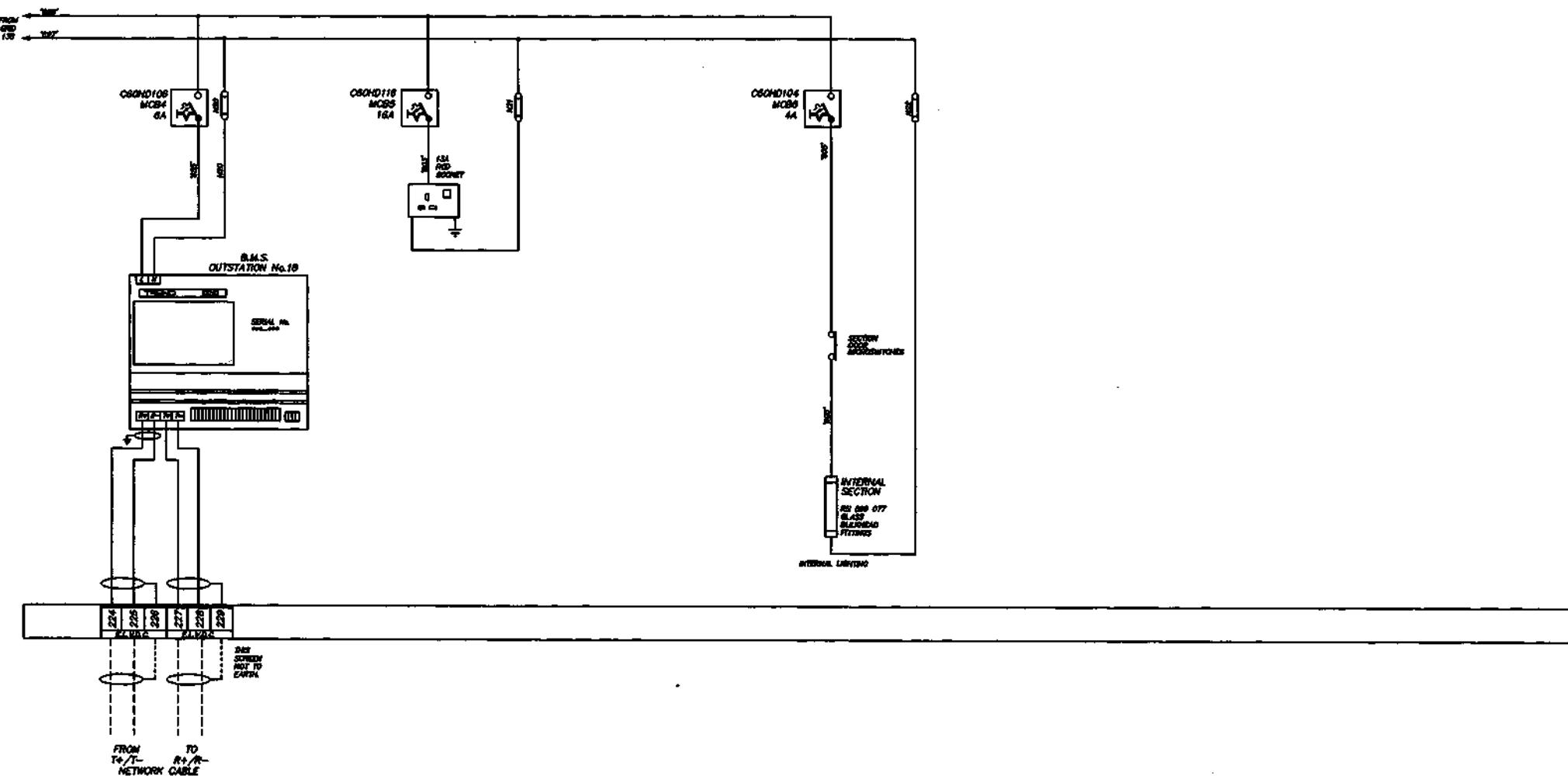
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DRG No. S98057-75



REF

DATE

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DATE

DESIGNER

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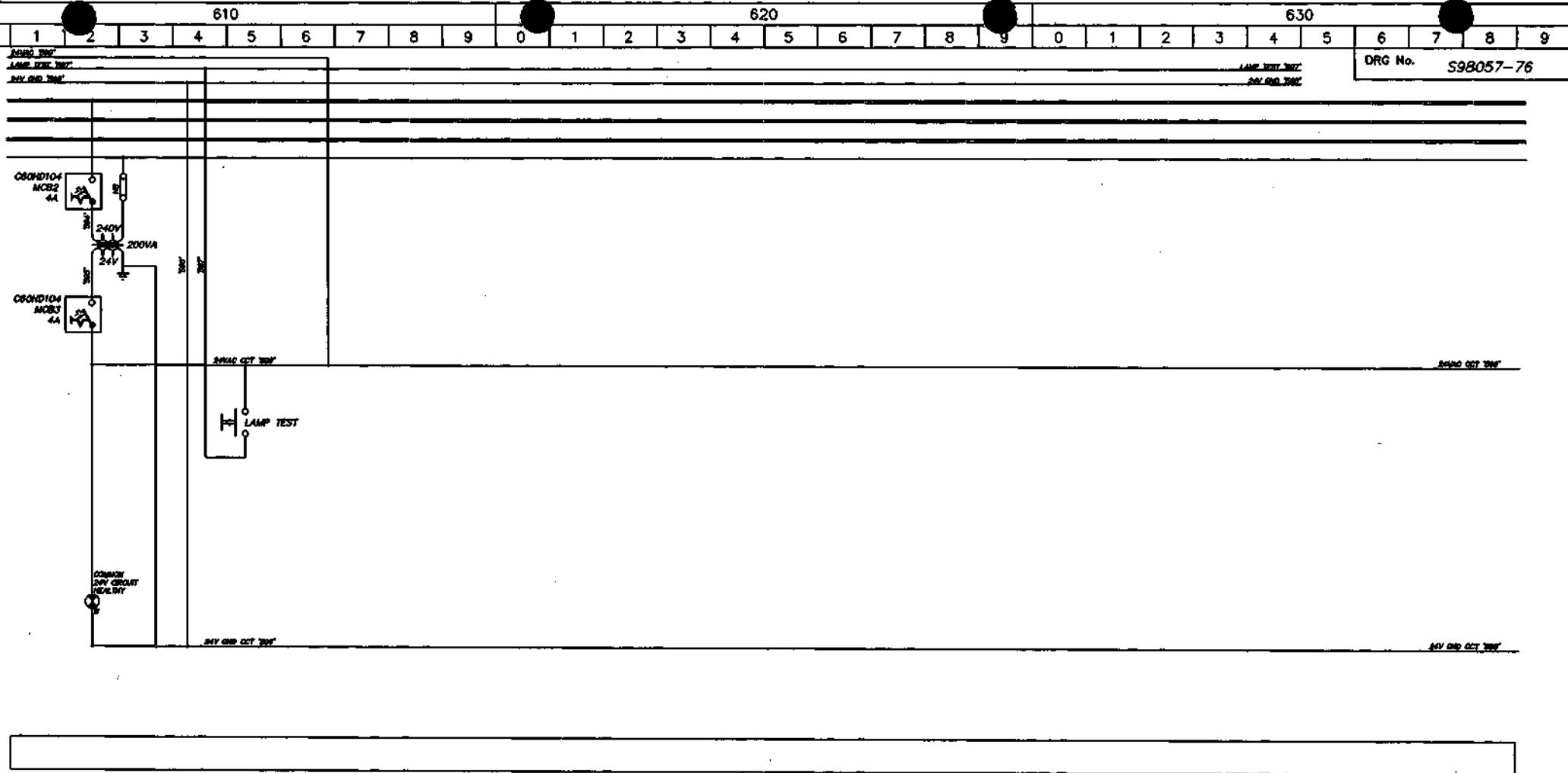
REVIEWED

DATE

CHECKED

DATE

APPROVED



REF	DATE	DETAILS	BY	DRIVER PSO	DATE
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				DRIVER	ONE
				PSO	ONE

THE SOUTHERN CALIFORNIA CONFERENCE SCHOOLS LTD. AND SOUTHERN CALIFORNIA

CLIENT

BENCHMARK GROUP PLC

**SCHEMATIC WIRING DIAGRAM  
AND EXTERNAL FIELD WIRING FOR  
MOTOR CONTROL PANEL  
MCP1  
(SHEET 6 OF 7)**



HORTON ROAD, COLNBROOK, SLOUGH, BERKSHIRE  
TEL: 01753 738000 FAX: 01753 771001

**PROJECT**      **5-7 CARLTON GARDENS**

**DRG No.**

SABOETZ 76

## ISSUE

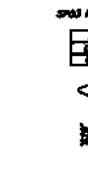
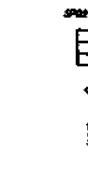
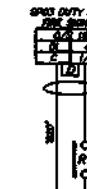
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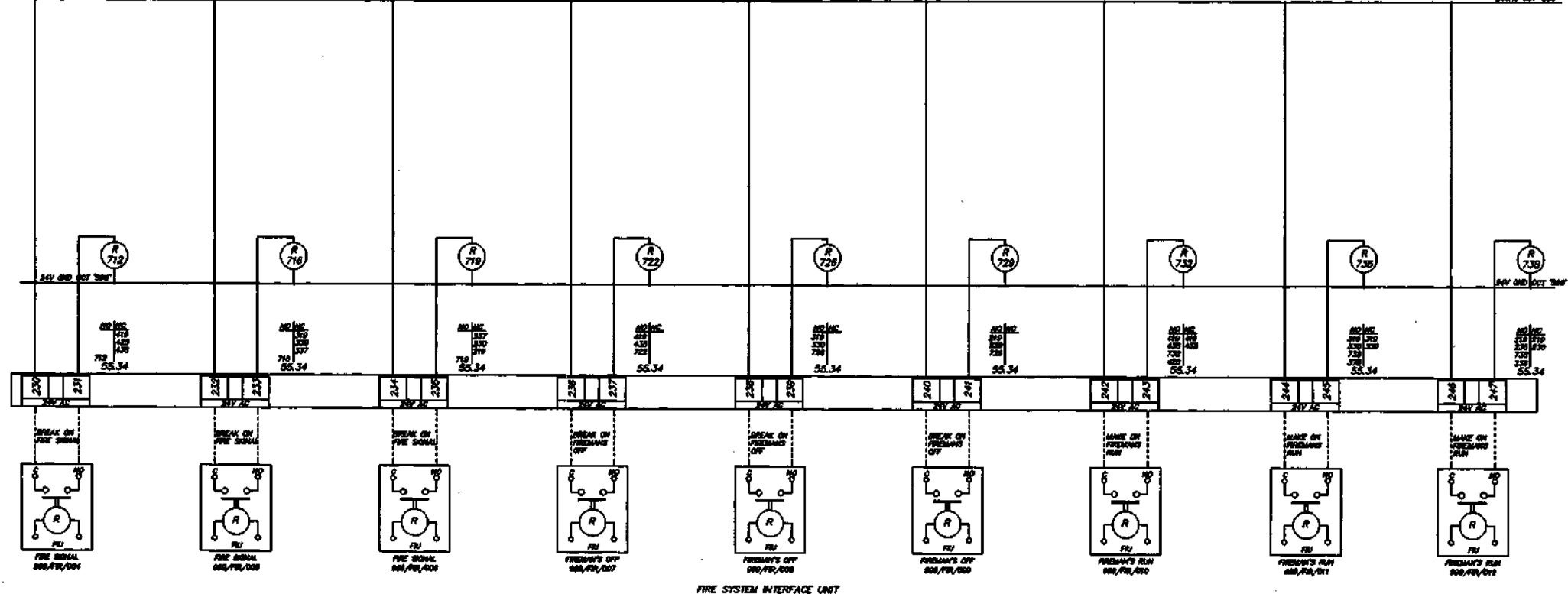
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DRG No. S98057-77



2014-07-30

2012 SET 100



ID	DATE	REMARKS
A	10/11/98	OAP COMMENTS
B	230300	AS FITTED AND TESTED

NAME PSC	DATE 12/8/98
NAME	
NAME BSC	

**SCHEMATIC WIRING DIAGRAM  
AND EXTERNAL FIELD WIRING FOR  
MOTOR CONTROL PANEL  
MCP1  
(SHEET 7 OF 7)**



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**CLIENT**

BENCHMARK GROUP PLC

PROJECT

5-7 CARLTON GARDENS

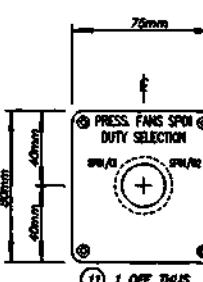
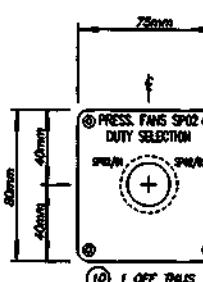
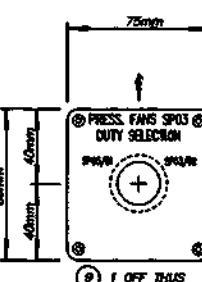
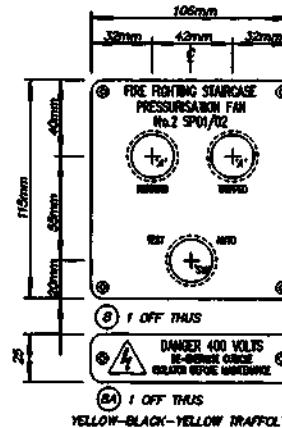
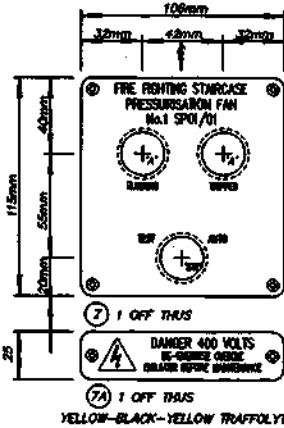
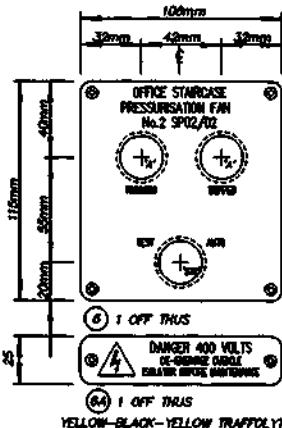
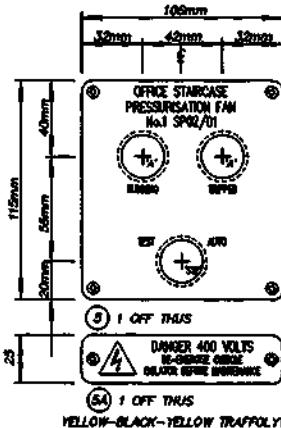
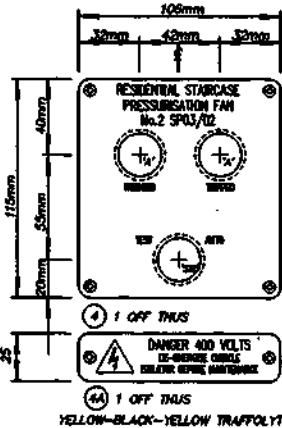
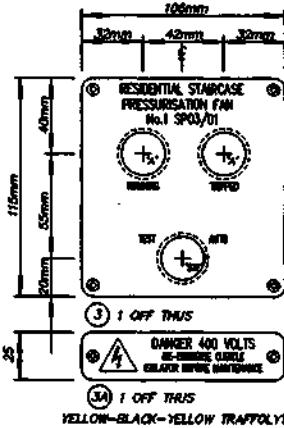
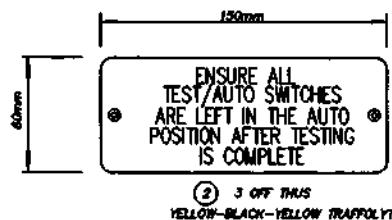
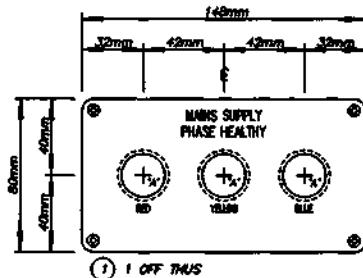
Doc No.

598057-1

**ISSUE**

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DRG No. S98057-80



ID	DATE	REVAL	ID	OWNER	PCB	DATE	TITLE
A	10/11/98	OAP COMMENTS	DSO	CREATED	DATE	12/8/98	LABEL DETAILS FOR MOTOR CONTROL PANEL MCP1 (SHEET 1 OF 2)
B	230300	AS FITTED AND TESTED	M.W.	CHANGED	SOUL	DSO	

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BENCHMARK GROUP PLC

PROJECT

5-7 CARLTON GARDENS

DRG No.

S98057-80

ISSUE

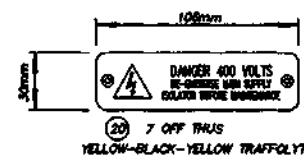
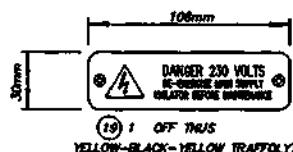
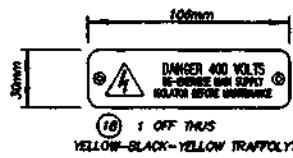
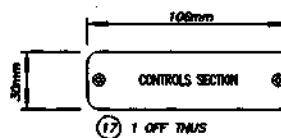
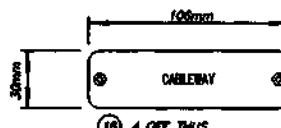
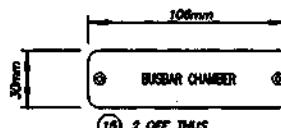
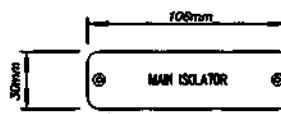
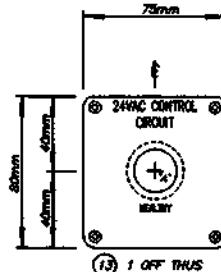
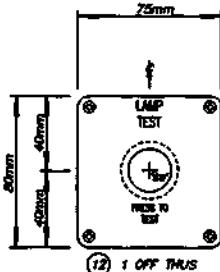
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SYNCHRONISED  
SYSTEMS

HORTON ROAD, COLNBROOK, SLOUGH, BERKSHIRE  
TEL: 01753 738000  
FAX: 01753 771001

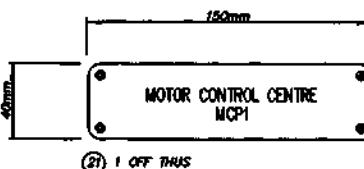
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DRG No. S98057-81



(20) 7 OFF THUS

YELLOW-BLACK-YELLOW TRAFFOLYTE



NOTES:

1. LABELS TO BE WHITE-BLACK-WHITE TRAFFOLYTE UNLESS OTHERWISE STATED.
2. LABELS TO HAVE 8mm. RADIUS CORNERS AND 3MM COUNTERSINK FORNC HOLE.
3. MAIN TITLES TO APPROX 3mm. HIGH AND SUB-TITLES APPROX 3mm. HIGH.
4. CUTOUT DETAILS: 'A' HOLES - 22.5mm DIA. (26.5mm BEZEL)  
                   'B' HOLES - 10.0mm DIA.  
                   'SW' HOLES - 22.5mm DIA. (30mm BEZEL)

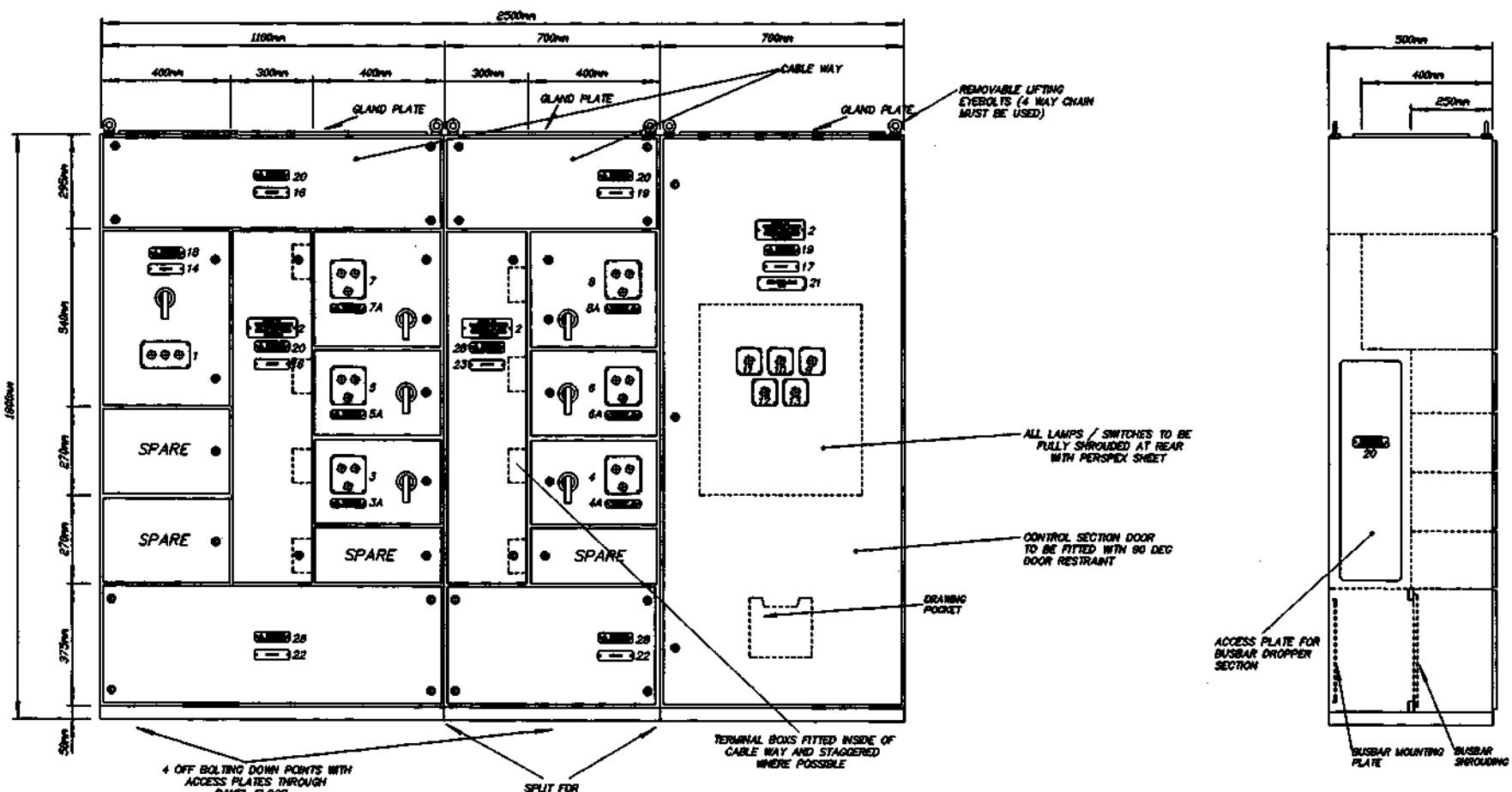
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A	230399	AS FITTED AND TESTED	44/4	CHECKED	DATE		LABEL DETAILS FOR MOTOR CONTROL PANEL MCP1 (SHEET 2 OF 2)

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CLIENT: BENCHMARK GROUP PLC PROJECT: 5-7 CARLTON GARDENS DRG No. S98057-81 ISSUE A

HORTON ROAD, COLNBROOK, SLOUGH, BERKSHIRE  
TEL: 01753 738000 FAX: 01753 771001

**SYNCHRONISED SYSTEMS**



**FRONT ELEVATION**

**NOTES**

1. MATERIAL:  
DOORS/FRAME - 2.0mm MILD STEEL  
EQUIPMENT PLATE - 2.5mm MILD STEEL
2. FINISH:  
DOORS - BS3800-112 (ARTIC BLUE)  
FRAMING - BS3800-103 (DEEP SAGE)  
EQUIPMENT PLATES - WHITE SEMI-GLOSS  
PAINTING - BLACK GLOSS
3. DOOR STAYS REQUIRED TO PREVENT OPENING MORE THAN 90 DEGREES
4. CONCRETE BASE
5. ANTI-THIEF PROTECTION RATING - IP54
6. GLAND PLATE SIZE - WIDTH LESS 150mm  
DEPTH LESS 80mm

**GENERAL ARRANGEMENT FOR  
MOTOR CONTROL PANEL  
MCP1**

ID	DATE	ITEM	IN	DRIVER	PBC	DATE
A	10/11/06	OAP COMMENTS	DSO	CHIEFED	DATE	
B	230399	AS FITTED AND TESTED	ADM	DRIVER	DSO	

10

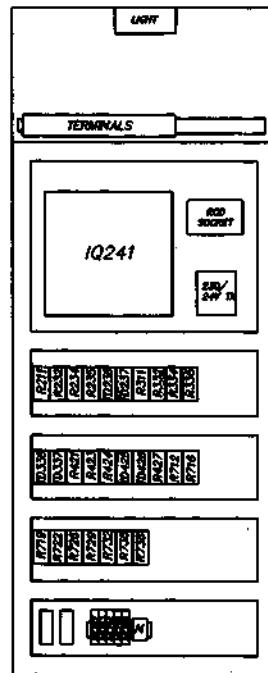
**GENERAL ARRANGEMENT FOR  
MOTOR CONTROL PANEL  
MCP1**



HORTON ROAD, COLNBROOK, SLOUGH, BERKSHIRE  
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DRG No. S98057-83



INTERNAL LAYOUT

NO	DATE	ITEM	REV	MANUFACTURER	JOB	DATE	
A	23/03/98	AS FITTED AND TESTED			ORDERED	DATE	INTERNAL LAYOUT FOR MOTOR CONTROL PANEL MCP1
					ISSUED	DATE	
					BSO	DATE	



SYNCHRONISED  
SYSTEMS

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BENCHMARK GROUP PLC

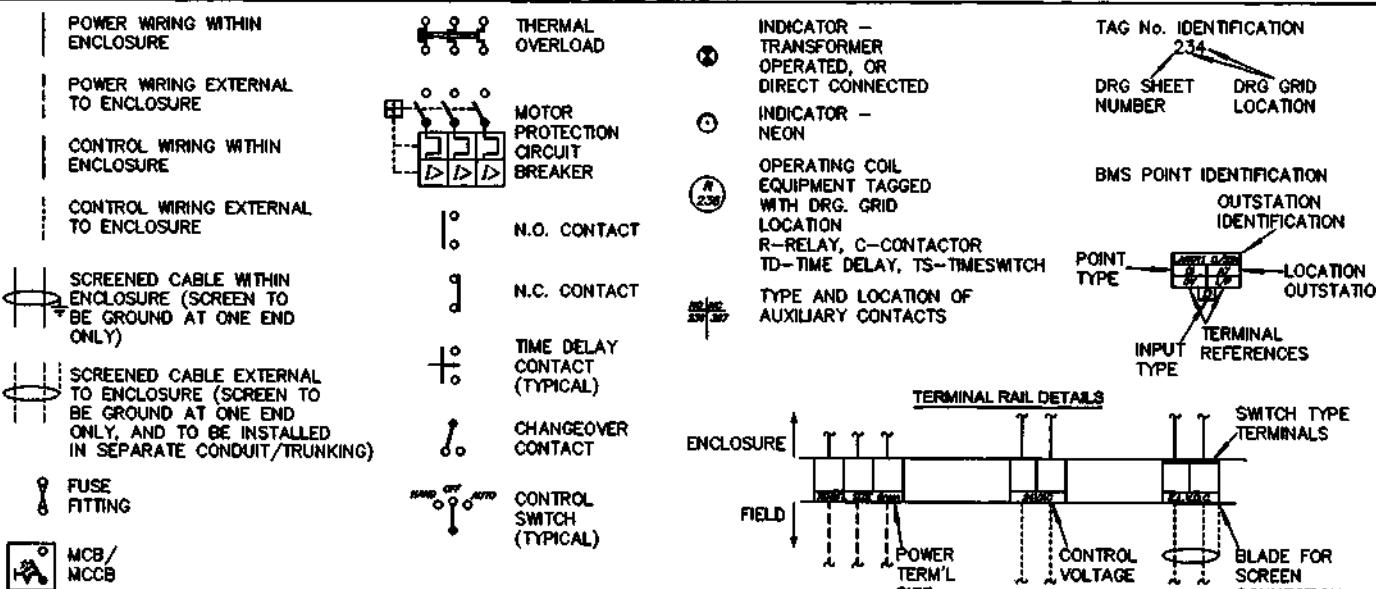
PROJECT

5-7 CARLTON GARDENS

DRG No.

S98057-83

ISSUE A



ITEM	DATE	DETAIL	END	CREATED	PBC	DATE
				CHANGED		T4/
E	23/03/99	AS FITTED AND TESTED	MARF	CHANGED		
F	15/04/99	SITE MODIFICATION	DSO	CHANGED		
C	08/02/99	R737 DUTY CONTACTS SWAPPED	DSO		DSO	
D	10/03/99	INTERHALS MODIFIED	GAW			

**DRAWING INDEX  
EQUIPMENT SCHEDULE/NOTES  
FOR  
MCP3**



**HORTON ROAD, COLNBROOK, SLOUGH, BERKSHIRE**  
**TEL: 01753 738000 FAX: 01753 771001**

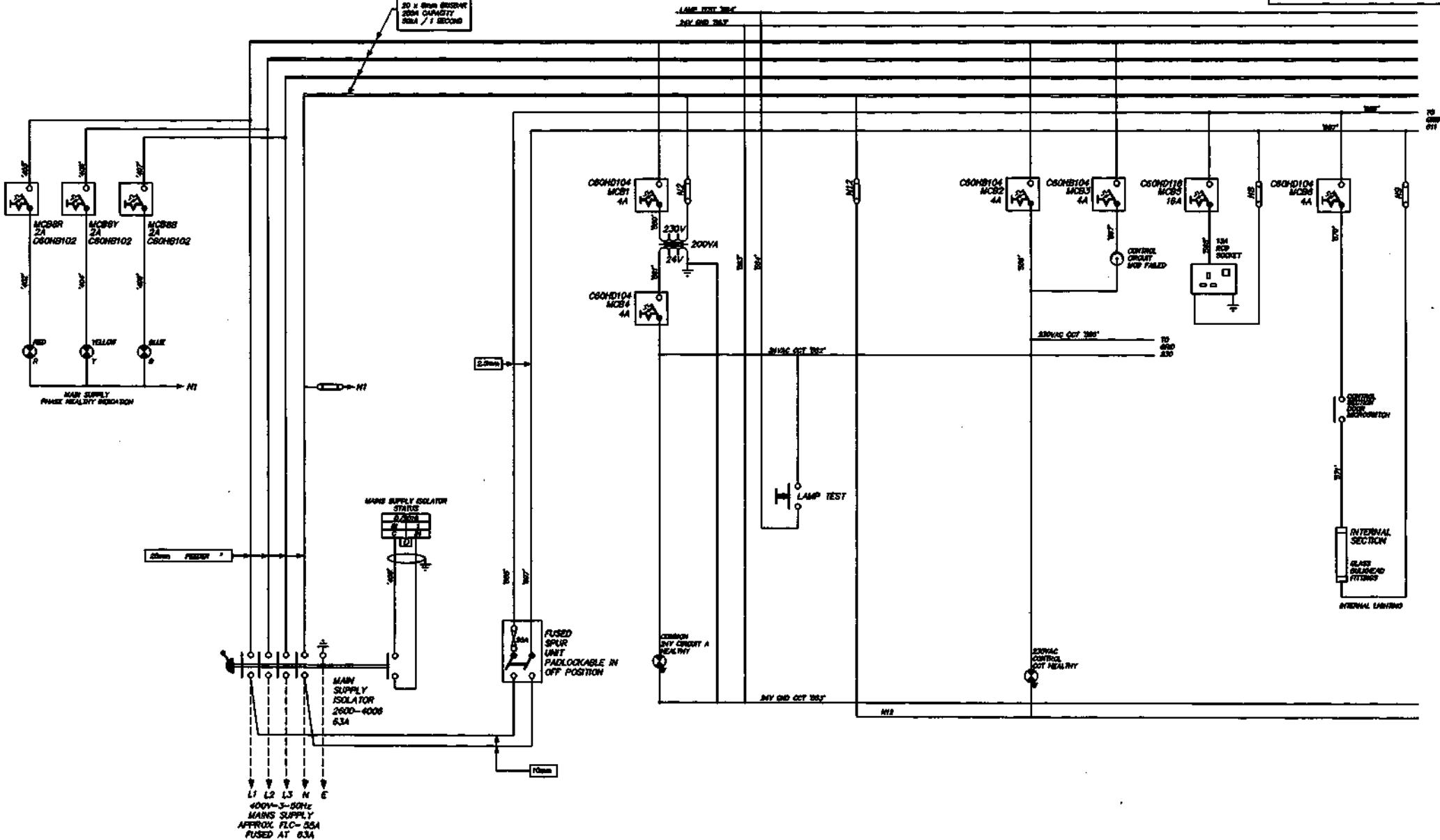
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DRG No. S98057-91



ID	DATE	DETAIL	BY	PART	DATE
A	23/01/98	<u>BOILER SUPPLY FANS AND EXHAUST EXTRACT FANS ADDED</u>	DSO	CHECKED	DATE
B	23/03/98	<u>AS FITTED AND TESTED</u>	MAN	ENGINER	DATE
C	14/04/98	<u>AS FITTED AND TESTED</u>	DO	DSO	DATE

**SCHEMATIC WIRING DIAGRAM  
AND EXTERNAL FIELD WIRING FOR  
MOTOR CONTROL PANEL  
MCP3  
(SHEET 1 OF 9)**



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BENCHMARK GROUP PLC

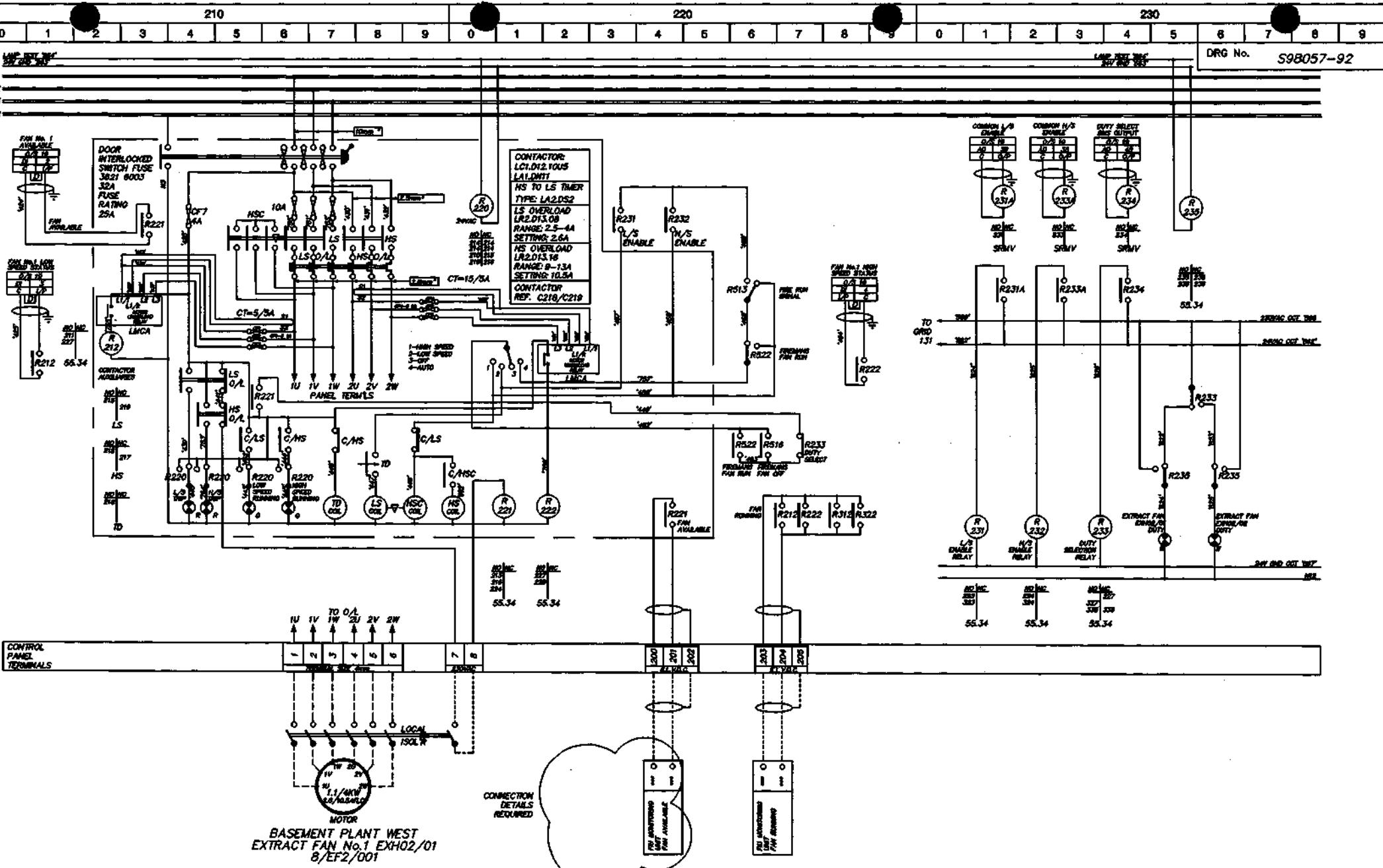
PROJECT

5-7 CARLTON GARDENS

Page No.

S98057-91

UE



NO	DATE	DETAILS	BY	REASON	PERIOD	DATE
A	09/11/98	DAP COMMENTS	DSO	CHANGED	DALE	
B	25/01/99	BOILER SUPPLY FANS AND EXHAUST EXTRACT FANS ADDED	DSO	CHANGED	DALE	
C	230399	AS FITTED AND TESTED	MHN	DSO	DALE	

**SCHEMATIC WIRING DIAGRAM  
AND EXTERNAL FIELD WIRING FOR  
MOTOR CONTROL PANEL  
MCP3  
(SHEET 2 OF 9)**

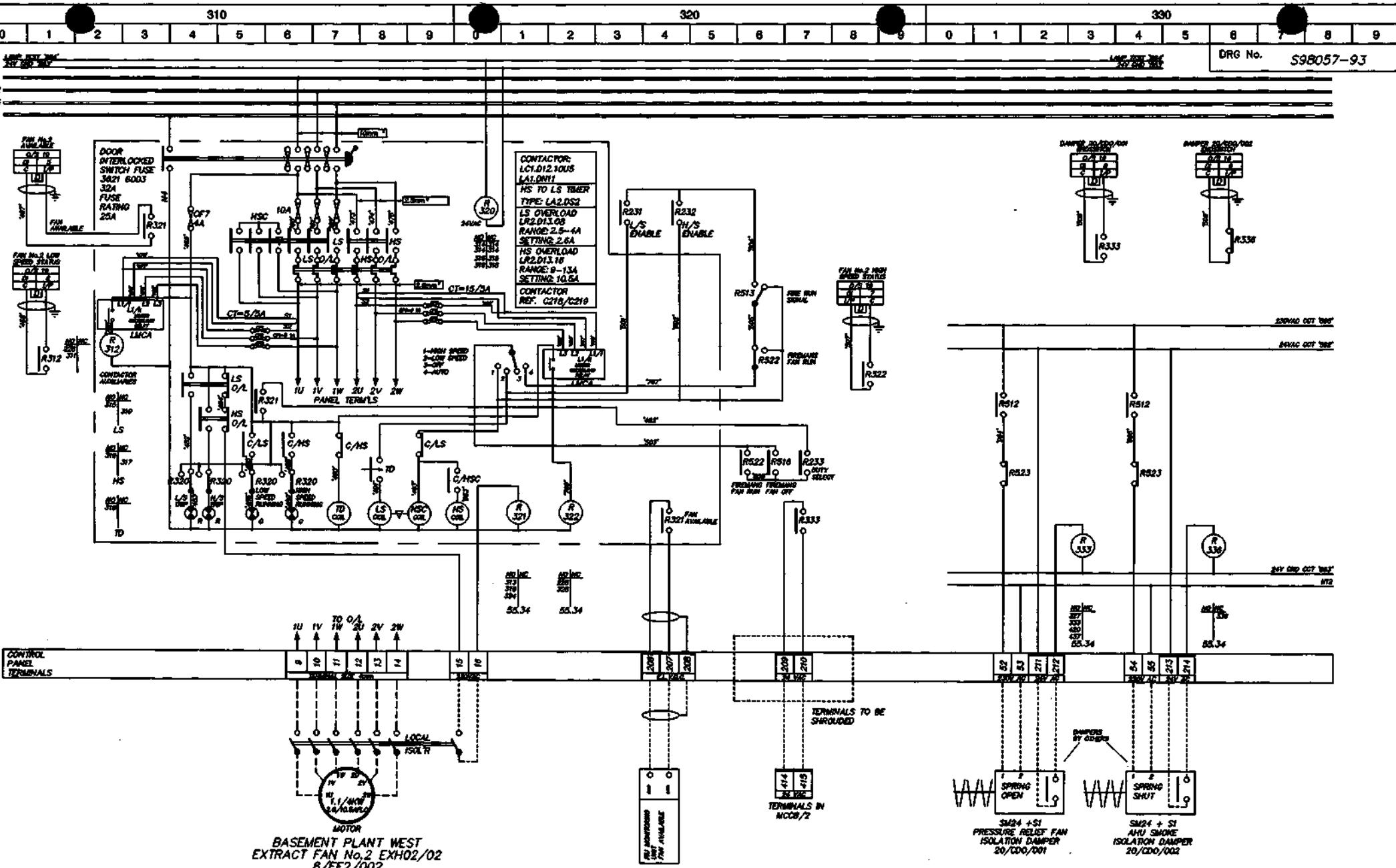


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BENCHMARK GROUP PLC

**PROJECT**

DRG No.	S2805Z-22	ISSUE
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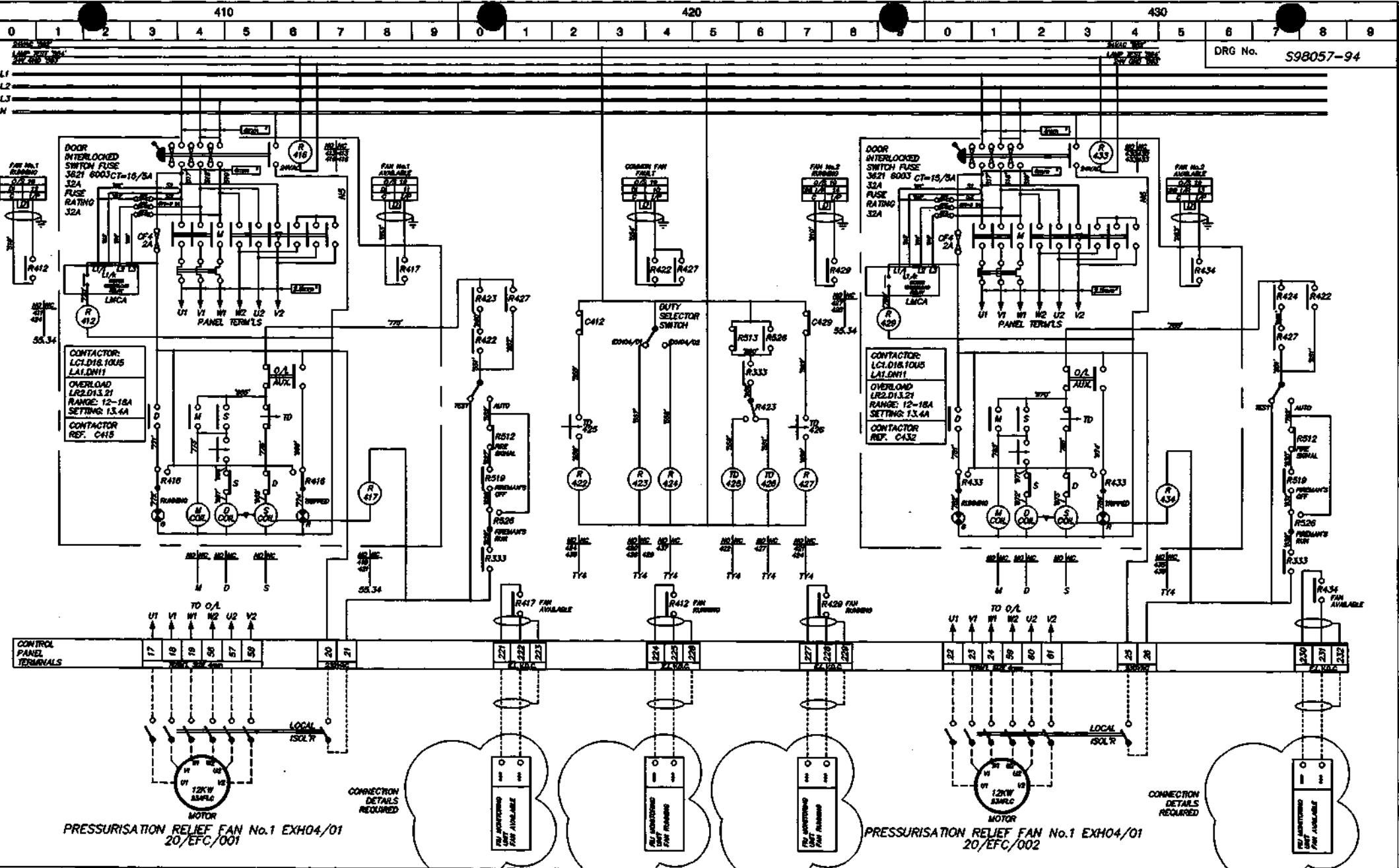


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A	10/11/98	AOP COMMENTS	DSO	OWNER	DSO	OC
B	25/01/99	BOLER SUPPLY FANS AND EXHAUST EXTRACT FANS ADDED	DSO	OWNER	DSO	OC
C	23/03/99	AS FITTED AND TESTED	M/W	OWNER	DSO	OC
D	14/04/98	SITE AUTHENTICATION	DSO	OWNER	DSO	OC

**SCHEMATIC WIRING DIAGRAM  
AND EXTERNAL FIELD WIRING FOR  
MOTOR CONTROL PANEL  
MCP-3**



HORTON ROAD, COLNBROOK, SLOUGH, BERKSHIRE  
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IN	OUT	ACROSS
A 10/11/98		OAP COMMENTS
B 25/01/99		BOLTER SUPPLY FANS AND EXHAUST EXTRACT FANS ADDED
C 230399		AS FITTED AND TESTED
D 14/04/99		SITE MODIFICATION

DSO  
DSO  
DSO  
DSO

DSO  
DSO  
DSO

DSO  
DSO

DATE  
DATE  
DATE  
DATE

12/8/98

12/8/98

12/8/98

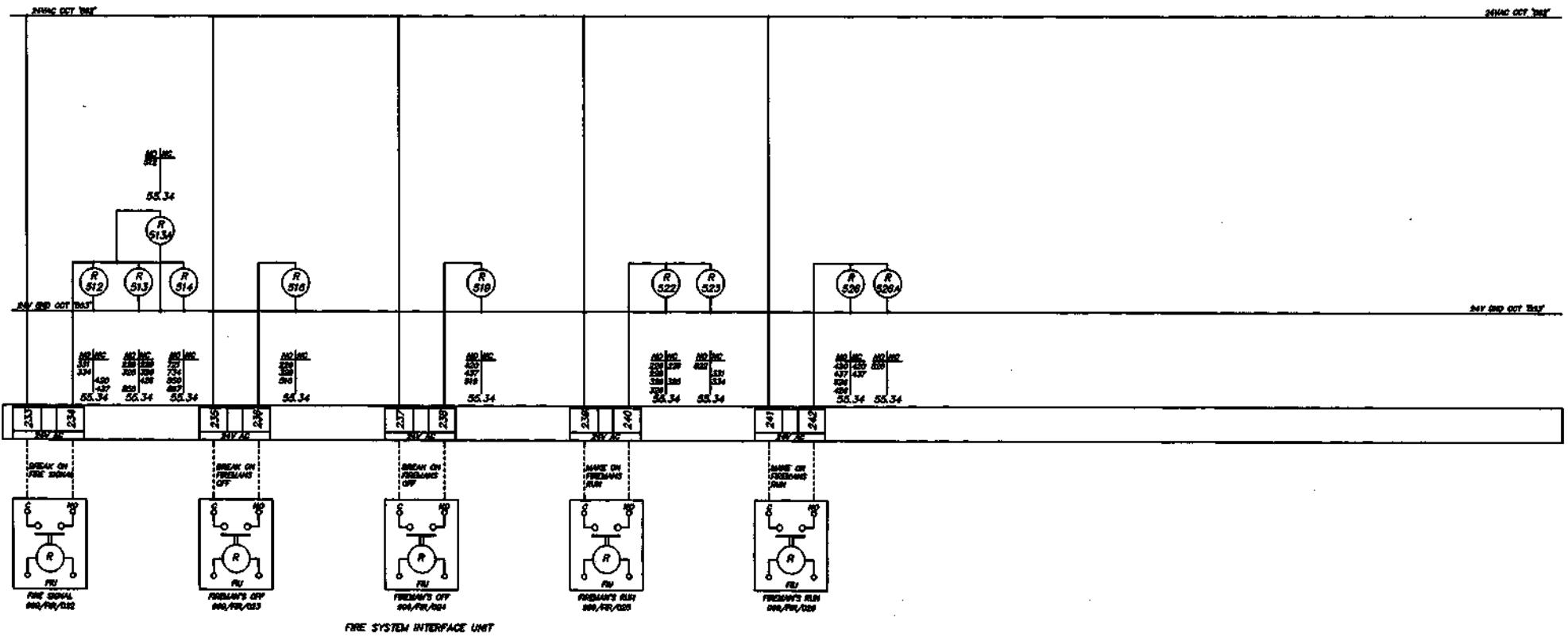
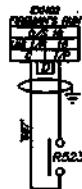
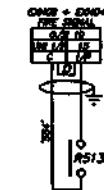
12/8/98

SCHEMATIC WIRING DIAGRAM  
AND EXTERNAL FIELD WIRING FOR  
MOTOR CONTROL PANEL  
MCP3  
(SHEET 4 OF 9)

SYNCHRONISED  
SYSTEMS

HORTON ROAD, COLNBROOK, SLOUGH, BERKSHIRE  
TEL: 01753 738000  
FAX: 01753 771001

510										520										530									
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LAMP TEST 200V 24VDC 200 200T										LAMP TEST 200V 24VDC 200 200T										LAMP TEST 200V 24VDC 200 200T									



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FAX: 01753 771001

REF	DATE	REV	REASON	REF	DATE	TITLE
A	10/11/98	DSO	ISSUED	DSO	14/8/98	SCHEMATIC WIRING DIAGRAM AND EXTERNAL FIELD WIRING FOR MOTOR CONTROL PANEL MCP3 (SHEET 5 OF 9)
B	25/01/99	DSO	ISSUED			
C	23/03/99	M.W.	ISSUED	DSO		
D	14/04/99	DO	ISSUED			

CLIENT

BENCHMARK GROUP PLC

PROJECT

5-7 CARLTON GARDENS

DRG No.

S98057-95

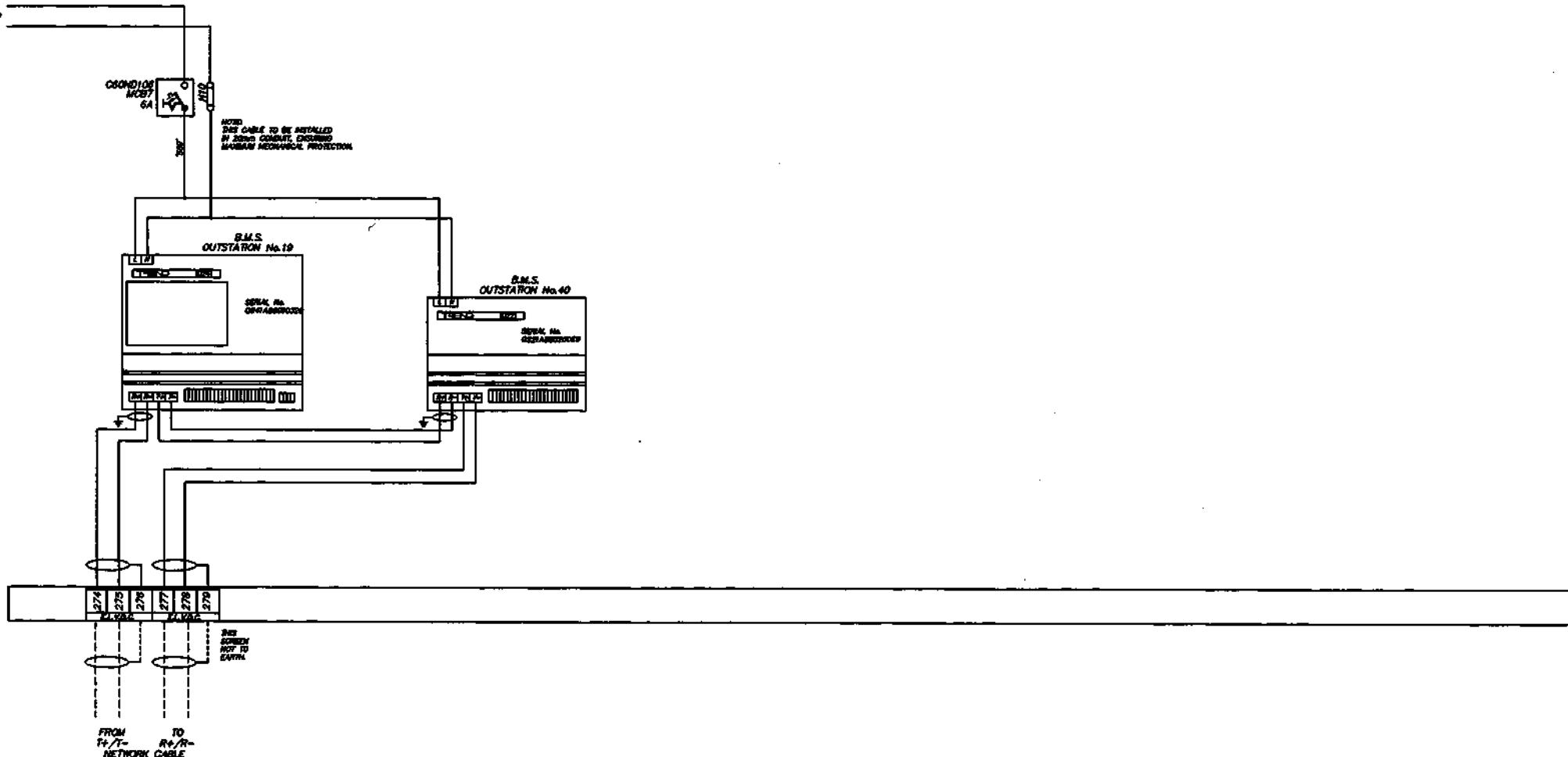
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LAMP TEST 30V  
24V GND TEST

LAMP TEST 30V  
24V GND TEST

DRG No. S98057-96

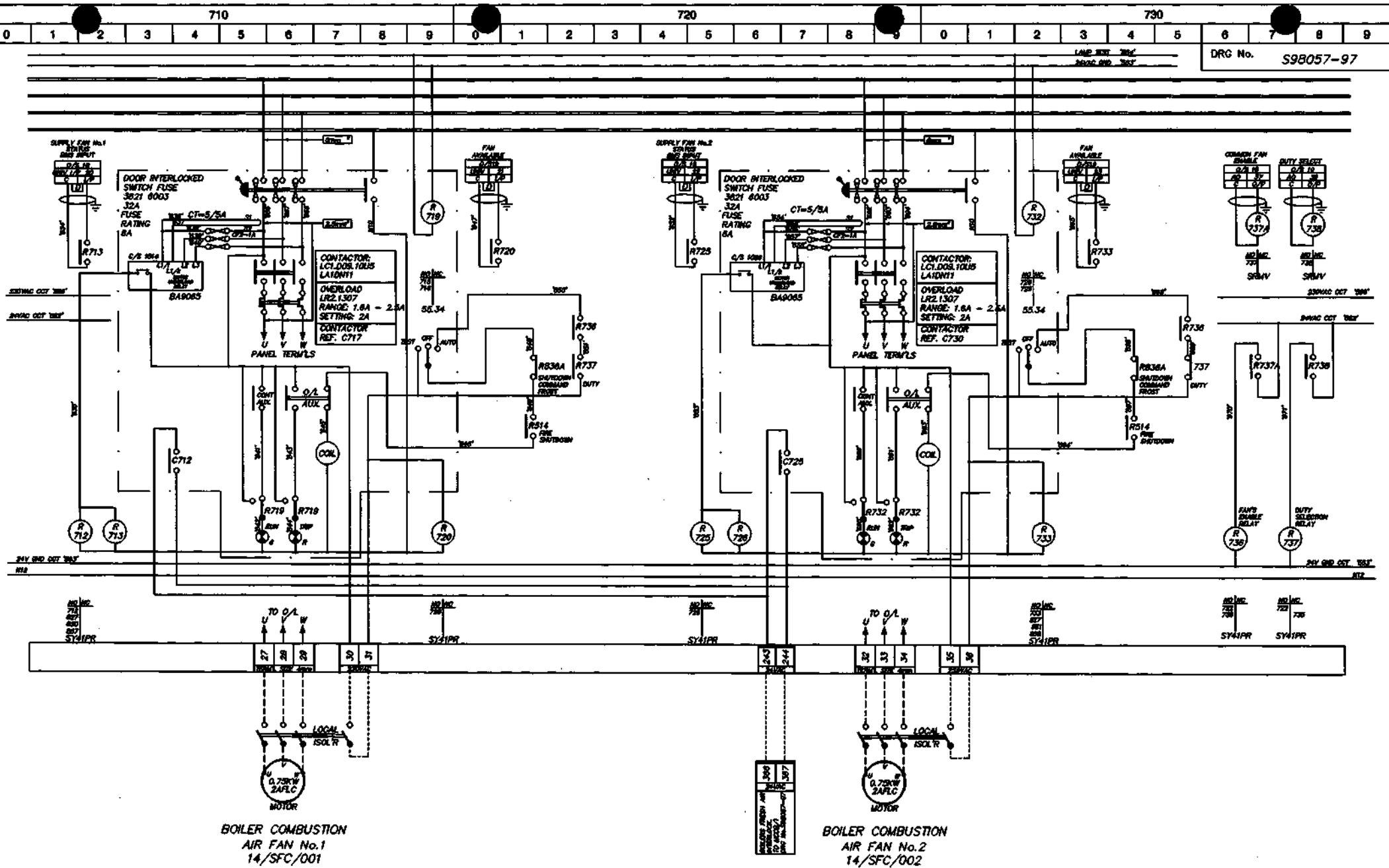


IN	DATE	ITEM	IN	DRAWN BY	PBG	DATE
A	25/01/98	BOILER SUPPLY FANS AND EXTRACT FANS ADDED	DSO	CHECKED	DATE	14/8/98
B	23/03/98	AS FITTED AND TESTED	M.W.	DESIGNED	DATE	

TITLE  
SCHEMATIC WIRING DIAGRAM  
AND EXTERNAL FIELD WIRING FOR  
MOTOR CONTROL PANEL  
MCP3  
(SHEET 6 OF 9)

SYNCHRONISED  
SYSTEMS

HORTON ROAD, COLNBROOK, SLOUGH, BERKSHIRE  
TEL: 01753 736000  
FAX: 01753 771001



NO	DATE	DETAIL	BY	OWNER	DSO	DATE
A	08/02/99	R737 DUTY CONTACTS SWAPPED OVER	DO	CHIEF	ONE	25-01
B	230300	AS FITTED AND TESTED	MJW	OWNER	ONE	
				OWNER	DSO	

תב

**SCHEMATIC WIRING DIAGRAM  
AND EXTERNAL FIELD WIRING FOR  
MOTOR CONTROL PANEL  
MCP 3  
(SHEET 7 OF 9)**



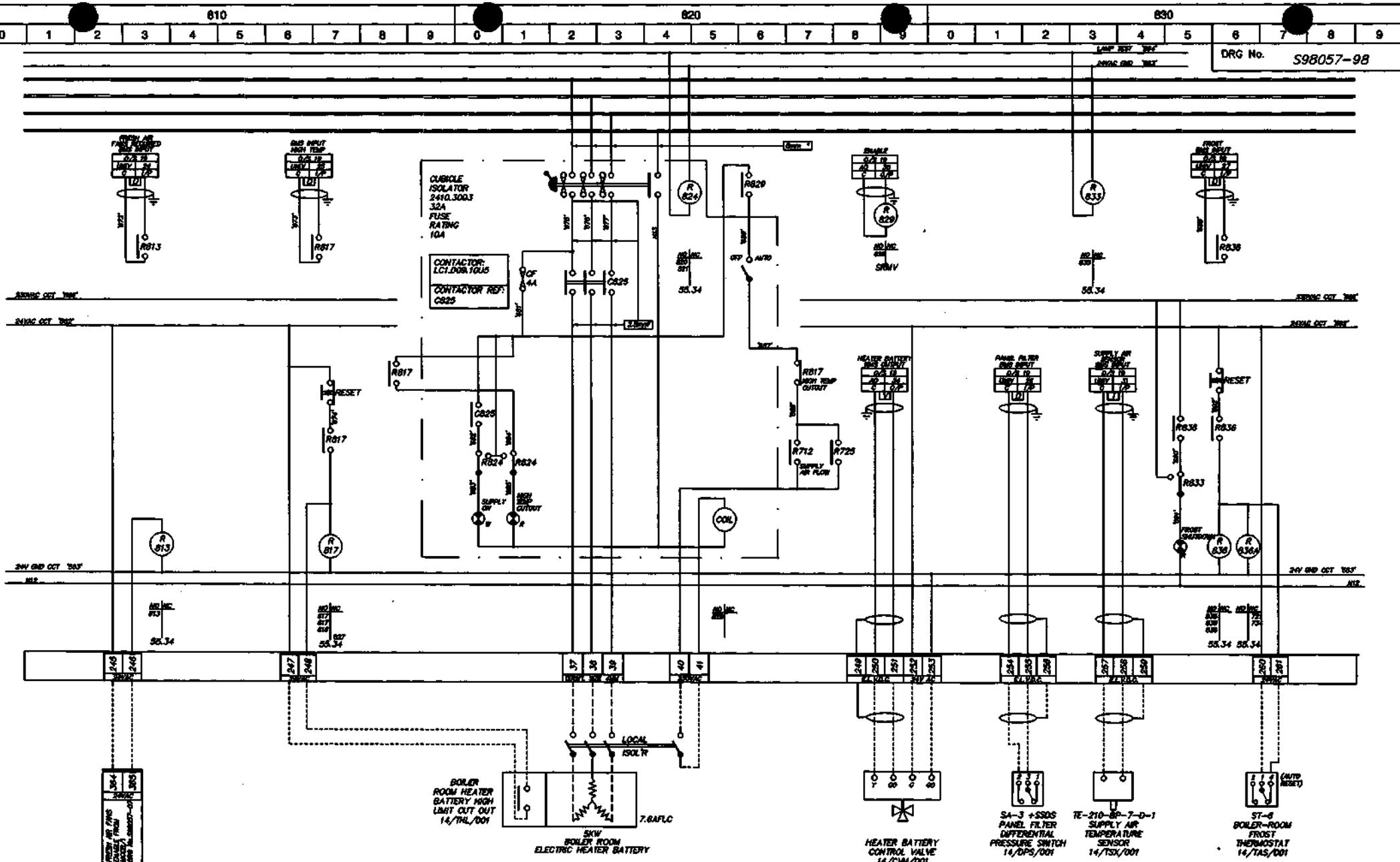
HORTON ROAD, COLNBROOK, SLOUGH, BERKSHIRE  
TEL: 01753 738000 FAX: 01753 771001

BENCHMARK GROUP PLC

5-7 CARLTON GARDENS

DRG No. S98057-07

ISSUE B



NO	DATE	ITEM	BY	PART	DISC
A	230390	AS FITTED AND TESTED	AMW	RECORDED	
				RECORDED	
				RECORDED	
				RECORDED	

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PROJECT

5-7 CARLTON GARDENS

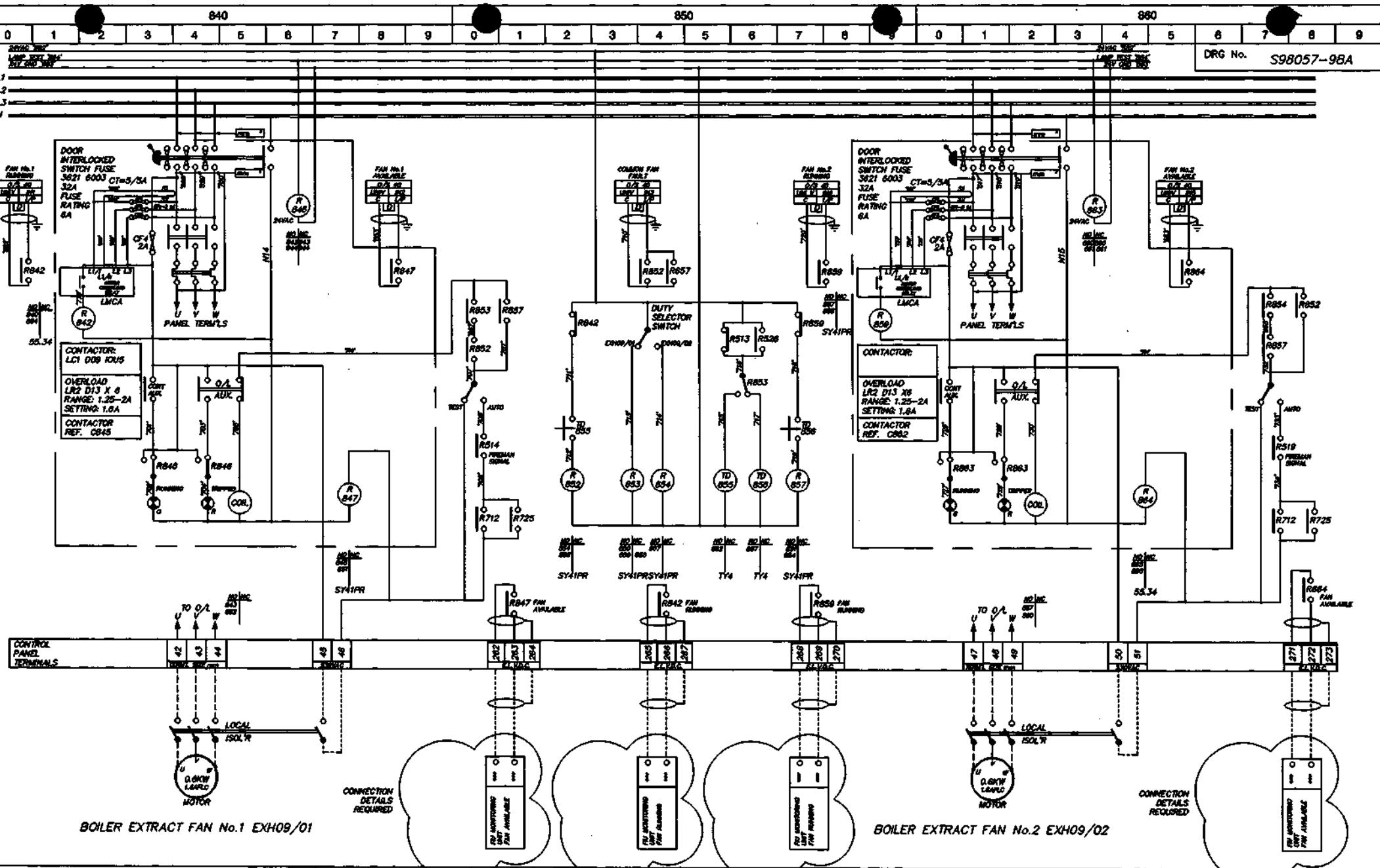
**SCHEMATIC WIRING DIAGRAM  
AND EXTERNAL FIELD WIRING FOR  
MOTOR CONTROL PANEL  
MCP 3  
(SHEET 8 OF 9)**



HORTON ROAD, COLNBROOK, SLOUGH, BERKSHIRE  
TEL: 01753 738000 FAX: 01753 771001

FAX: 01753 771001

ISSUE



ITEM	DATE	REMARKS
A	230398	AS FITTED AND TESTED

M.W.

11

DSO	DATE 25/01/89	TITLE
D	DATE	
D	NAME	
DSO	NAME	

A

**SCHEMATIC WIRING DIAGRAM  
AND EXTERNAL FIELD WIRING FOR  
MOTOR CONTROL PANEL  
MCP3  
(SHEET 9 OF 9)**

**SYNCHRONISED  
SYSTEMS**

**HORTON ROAD, C**  
TEL: 01282 788000

HORTON ROAD

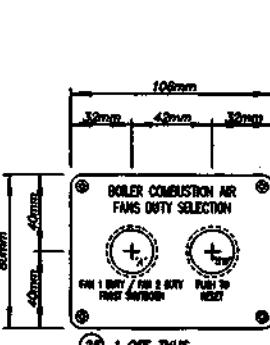
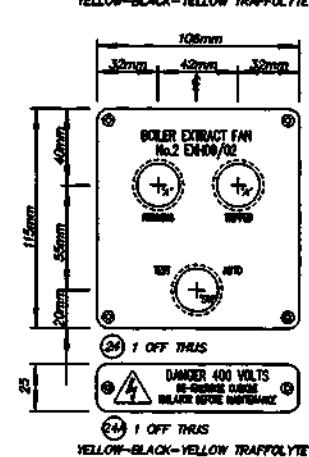
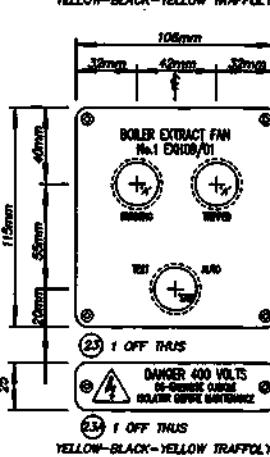
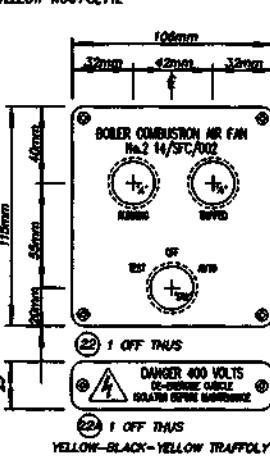
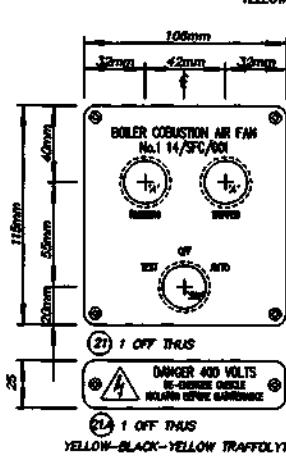
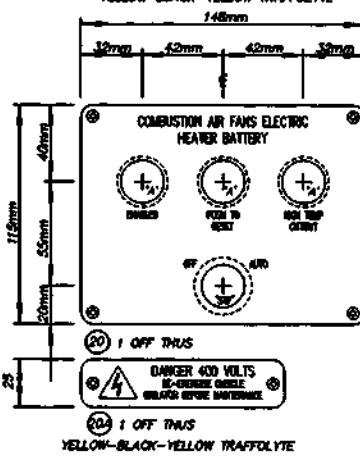
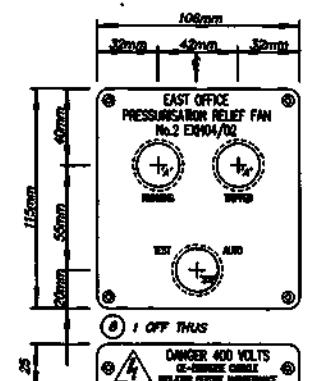
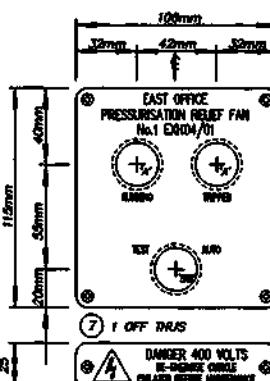
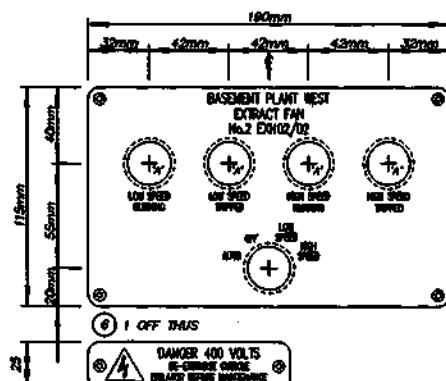
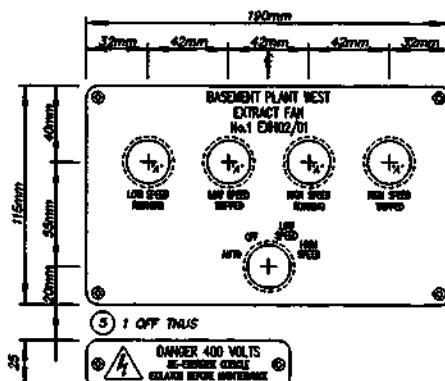
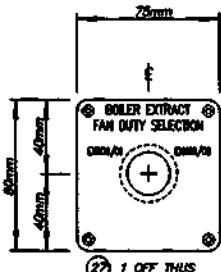
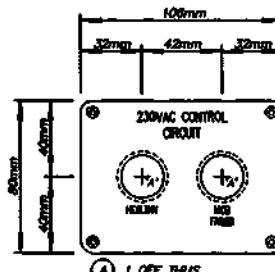
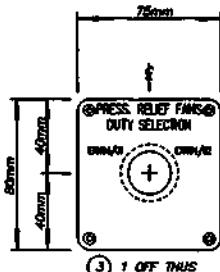
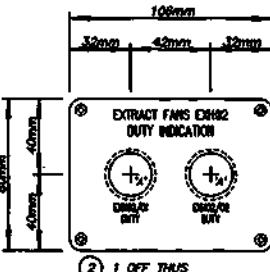
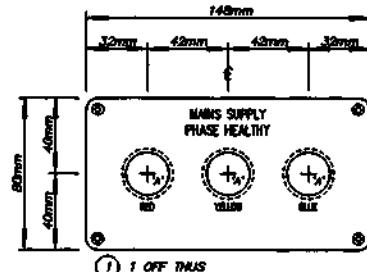
TEL: 01753 738000

FAX: 01753 771001

**ISSUE**

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DRG No. S98057-99



TITLE  
LABEL DETAILS FOR  
MOTOR CONTROL PANEL  
MCP3  
(SHEET 1 OF 2)

SYNCHRONISED  
SYSTEMS

HORTON ROAD, COLNBROOK, SLOUGH, BERKSHIRE  
TEL: 01753 738000  
FAX: 01753 771001

NO.	DATE	DETAIL	NO.	DRAWN	RECD	DATE
A	19/11/98	LABELS 5 & 6 REVISED	PUN	DSO		17/8/98
B	10/11/98	OAP COMMENTS	DSO	DSO		
C	25/01/99	BOILER SUPPLY FANS AND EXHAUST EXTRACT FANS ADDED	DSO	DSO		
D	23/03/99	AS FITTED AND TESTED	MAR			

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CLIENT

BENCHMARK GROUP PLC

PROJECT

5-7 CARLTON GARDENS

DRG No.

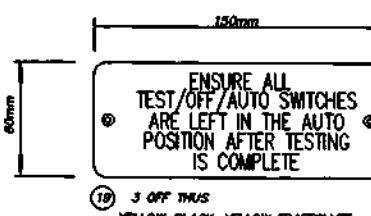
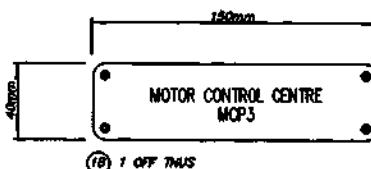
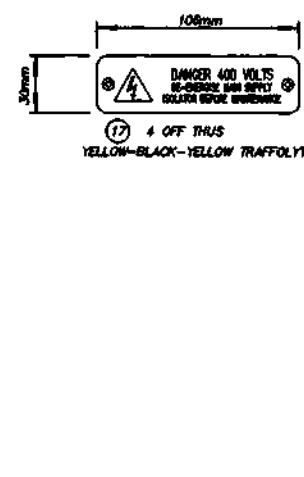
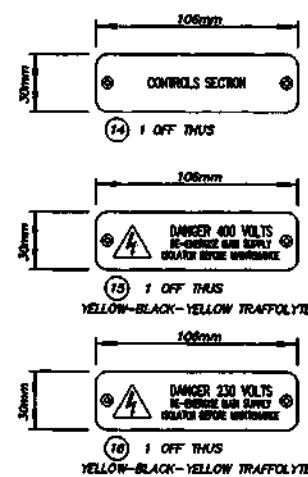
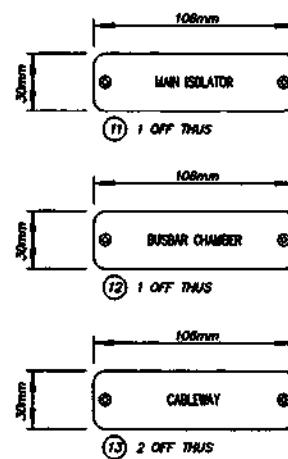
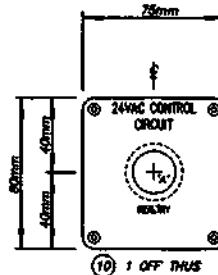
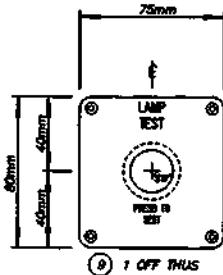
S98057-99

ISSUE

D

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DRG No. S98057-100



NOTES:  
 1. LABELS TO BE WHITE-BLACK-WHITE TRAFFOLYTE UNLESS OTHERWISE STATED.  
 2. LABELS TO HAVE 8mm. RADIUS CORNERS, AND 3mm. COUNTERSINK FIXING HOLES.  
 3. MAIN TITLES TO BE APPROX. 5mm. HIGH, AND SUB-TITLES APPROX. 3mm. HIGH.  
 4. CUTOUT DETAILS: 'A' HOLES - 22.5mm DIA. (26.5mm BEZEL)  
 'B' HOLES - 10.0mm DIA.  
 'SW' HOLES - 22.5mm DIA. (30mm BEZEL)

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DATE 23.03.98

DETAIL AS FITTED AND TESTED

DRAWN BY JMW

CHECKED BY

APPROVED BY

DSO

REVISERED BY

TITLE

DATE 17/3/98

LABEL DETAILS FOR  
MOTOR CONTROL PANEL  
MCP3  
(SHEET 2 OF 2)

**SYNCHRONISED  
SYSTEMS**

HORTON ROAD, COLNBROOK, SLOUGH, BERKSHIRE  
TEL: 01763 738000 FAX: 01763 771001

CLIENT

BENCHMARK GROUP PLC

PROJECT

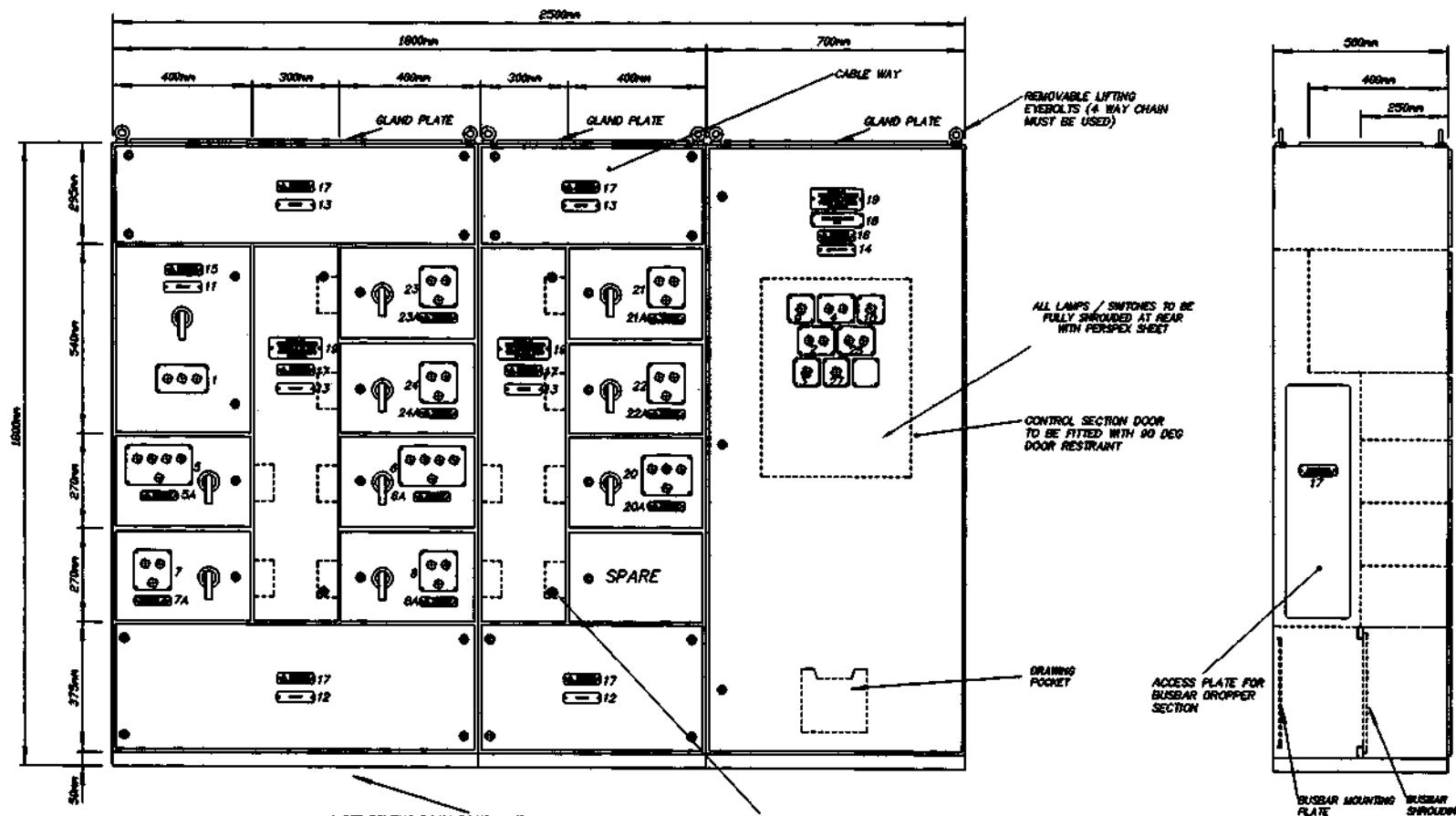
5-7 CARLTON GARDENS

DRG No. S98057-100

ISSUE A

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DRG No. S98057-101



FRONT ELEVATION

TERMINAL BOXS FITTED INSIDE OF CABLE WAY AND STAGGERED WHERE POSSIBLE

SIDE ELEVATION

NOTES	
1. MATERIAL:	DOORS/FRAME - 2.0mm MILD STEEL ASSEMBLY PLATE - 2.5mm MILD STEEL
2. PAINT:	DOORS: BS3900-112 (ARTIC BLUE) FRAMEWORK: BS3900C-113 (DEEP SAND) EQUIPMENT PLATES: WHITE SEMI-GLOSS PLUNGE: BLACK GLOSS
3. DOOR STAYS REQUIRED TO PREVENT OPENING MORE	
4. CONCEALED HINGES	
5. INGRESS PROTECTION RATING - IP64	
6. GLAND PLATE SIZE - WIDTH LESS 130mm DEPTH LESS 50mm	

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CLIENT

BENCHMARK GROUP PLC

PROJECT

5-7 CARLTON GARDENS

DRG No.

S98057-101

ISSUE B

**SYNCHRONISED  
SYSTEMS**

HORTON ROAD, COLNBROOK, SLOUGH, BERKSHIRE  
TEL: 01753 738000 FAX: 01753 771001

NO	DATE	ITEM	SN	OWNER	PBG	DATE
A	25/01/98	BOILER SUPPLY FANS AND EXHAUST EXTRACT FANS ADDED		DSO	00000	17/03/98
B	230300	AS FITTED AND TESTED		MAY	00000	

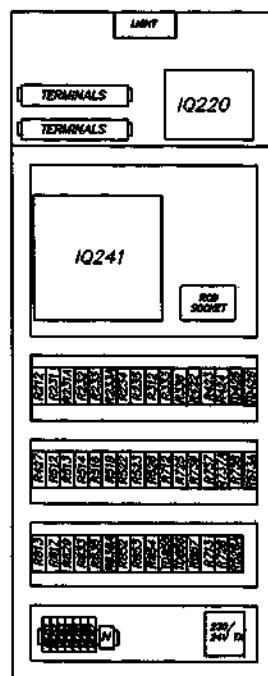
GENERAL ARRANGEMENT FOR  
MOTOR CONTROL PANEL  
MCP3

0 1 2 3 4 5 6 7 8 9 0

0 1 2 3 4 5 6 7 8

0 1 2 3 4 5 6 7 8 9

DRG No. S98057-102



INTERNAL LAYOUT

REF	DATE	DETAIL	BY	NAME	JMB	DATE
A	25/01/99	BOILER SUPPLY FANS AND EXHAUST FANS ADDED	DSO	CREATED	DATE	17/01/99
B	10/03/99	INTERNAL MODIFIED	GAW	CHANGER	ROLE	
C	230399	AS FITTED AND TESTED	AWN		DSO	

πΕ

**INTERNAL LAYOUT FOR  
MOTOR CONTROL PANEL  
MCP3**



HORTON ROAD, COLNBROOK, SLOUGH, BERKSHIRE  
TEL: 01753 738000 FAX: 01753 771001

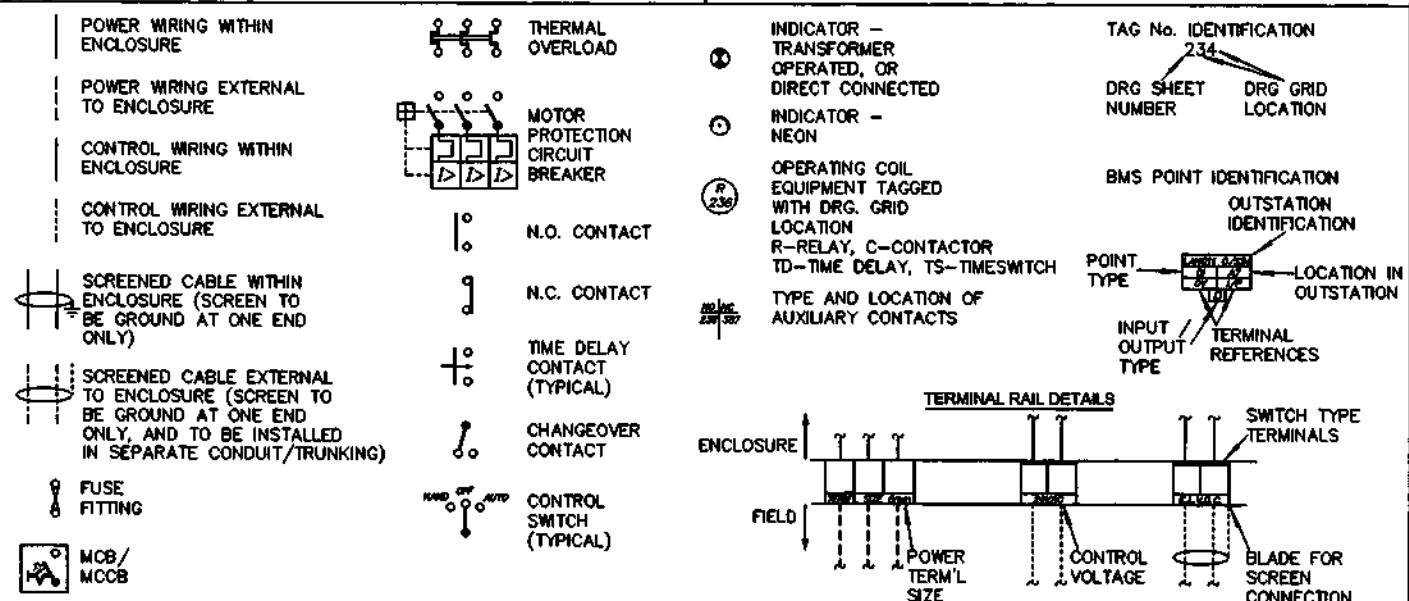
BENCHMARK GROUP PLC

**PROJECT**

DRG No. S98057-102

ISSUE

WIRING NOTES	EQUIPMENT NOTES	DRAWING No.	ISSUE	DESCRIPTION
1. MINIMUM POWER WIRING 2.5mm	1. ALL STARTERS TO BE OF TELEMECANIQUE MANUFACTURE	S98057-111	C	MAIN SUPPLY ISOLATOR / INTERNAL LIGHTS / FIRE
2. MINIMUM CONTROL WIRING 1.0mm	2. MAIN SUPPLY ISOLATORS TO BE OF SOCOMEC/TELEMECANIQUE MANUFACTURE	S98057-112	C	AHU03 SUPPLY FAN / DAMPER MONITORING
3. POWER CABLES TO BE FITTED WITH CORD END TERMINALS, OR LUGS, DEPENDING ON SIZE, AND TYPE OF CONNECTION.	3. FUSE SWITCHES TO BE OF SOCOMEC MANUFACTURE	S98057-113	C	AHU03 EXTRACT FANS
4. CONTROL CABLES TO BE FITTED WITH CORD END TERMINALS, PIN, OR FORK, CONFIGURATION, DEPENDING ON TYPE OF CONNECTION.	4. MCB'S, AND MCCB'S TO BE OF MERLIN GERIN, OR SIEMENS MANUFACTURE.	S98057-114	B	AHU03 RECUPERATOR DAMPERS / MONITORING POINTS
5. ALL CABLES TO 16mm TO BE COLOUR CODED AS FOLLOWS:- 400 VOLTS L1.L2.L3. - RED, YELLOW, BLUE 230 VOLTS NEUTRAL - BLACK LOW VOLTAGE A.C. - BROWN EXTRA LOW VOLTAGE D.C. - GREY 115 VOLTS A.C. - ORANGE	4A. FUSES TO BE OF GEC MANUFACTURE.	S98057-115	C	DRY AIR COOLER POWER SUPPLIES
6. ALL CABLES ABOVE 16mm TO BE BLACK WITH ENDS HEAT SHRINK COLOUR CODED PHASE IDENTIFICATION.	5. ALL OUTGOING TERMINALS TO BE OF ENTRELEC MANUFACTURE.	S98057-116		SPARE
7. ALL CONTROL CABLES TO BE IDENTIFIED AT EACH END BY THE USE OF COLOUR CODED FERRULES. THE NUMBERS ARE SHOWN THUS ON THE DIAGRAM - '105'	6. ALL PILOT LIGHTS TO BE OF TRANILAMP MANUFACTURE.	S98057-117	C	GENERAL ARRANGEMENT AND INTERNAL LAYOUT
8. FINAL CABLE No. '435'	7. SELECTOR SWITCHES TO BE OF TELEMECANIQUE MANUFACTURE.	S98057-118	A	LABEL DETAILS
9. WHEN A CABLE CONNECTS TO AN OUTGOING TERMINAL THE CABLE IDENTIFICATION NUMBER IS THE SAME AS THE TERMINAL NUMBER.	8. CONTROL RELAYS TO BE FINDER 55.34.			
10. FINAL TERMINAL No. POWER/230VAC - 27 FINAL TERMINAL No. ELVDC/24VAC - 149	9. TIME DELAY RELAYS TO BE FINDER 85.34.			
	10. WHERE HRC FUSE CARRIERS ARE INDICATED ON THE SCHEMATIC DIAGRAM THE CARRIERS ARE TO BE OF GEC MANUFACTURE.			
FIELD WIRING NOTES				
	1. NETWORK CABLE TO BE BELDEN 9501/9502			
	2. SENSOR CABLE TO BE BELDEN 9501			



ID	DATE	DETAIL
E	03/07/99	RESIDENCE WATER METERS ADDED
B	08/04/99	DRY AIR COOLER POWER SUPPLIES ADDED
C	16/04/99	AS FITTED AND TESTED
D	15/05/99	NEUTRALS ADDED TO DRY AIR SYSTEMS

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BENCHMARK GROUP PLC

DRAWING INDEX  
EQUIPMENT SCHEDULE/NOTE  
FOR  
MCC7/1



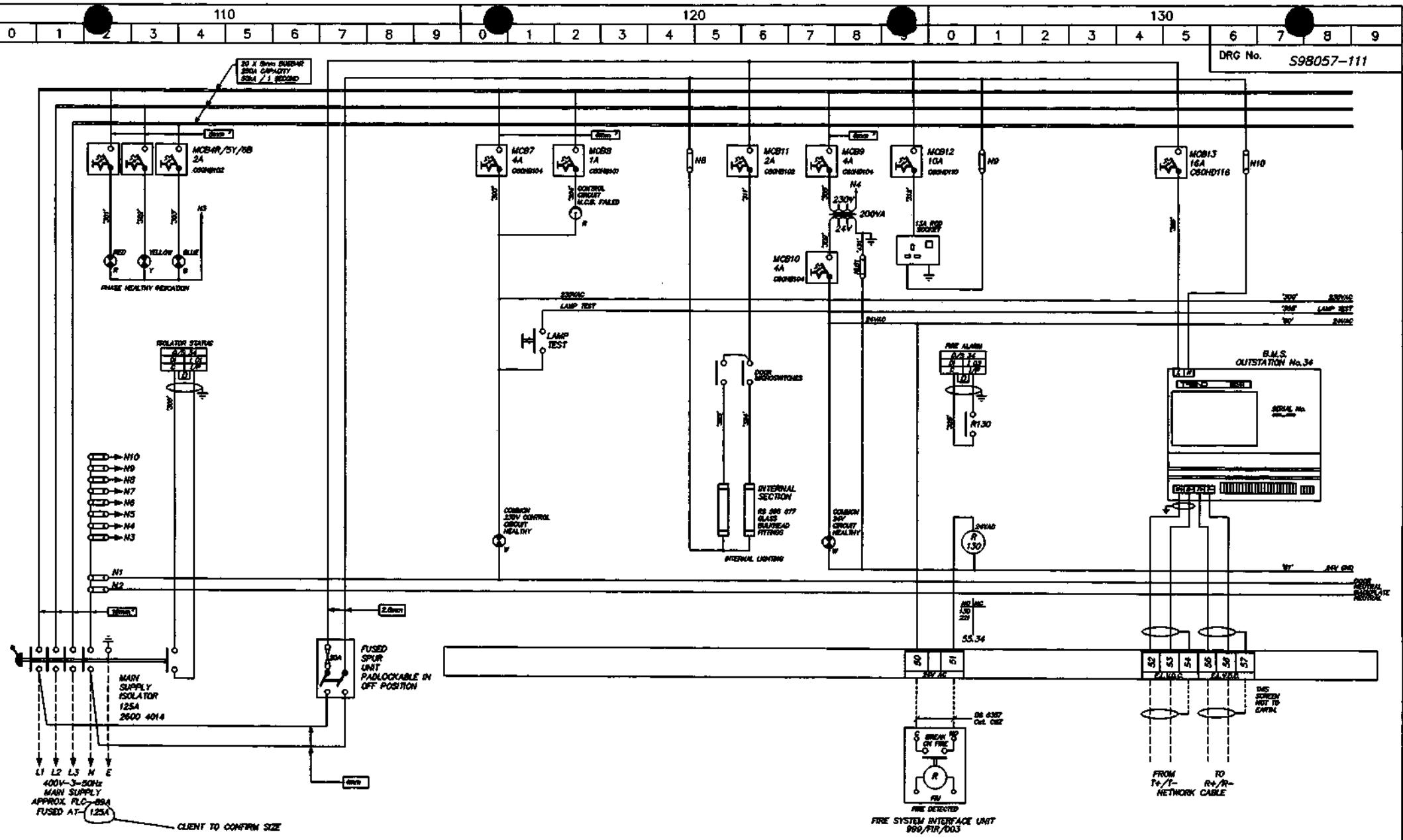
HORTON ROAD, COLNBROOK, SLOUGH, BERKSHIRE  
TEL: 01753 738000 FAX: 01753 771001

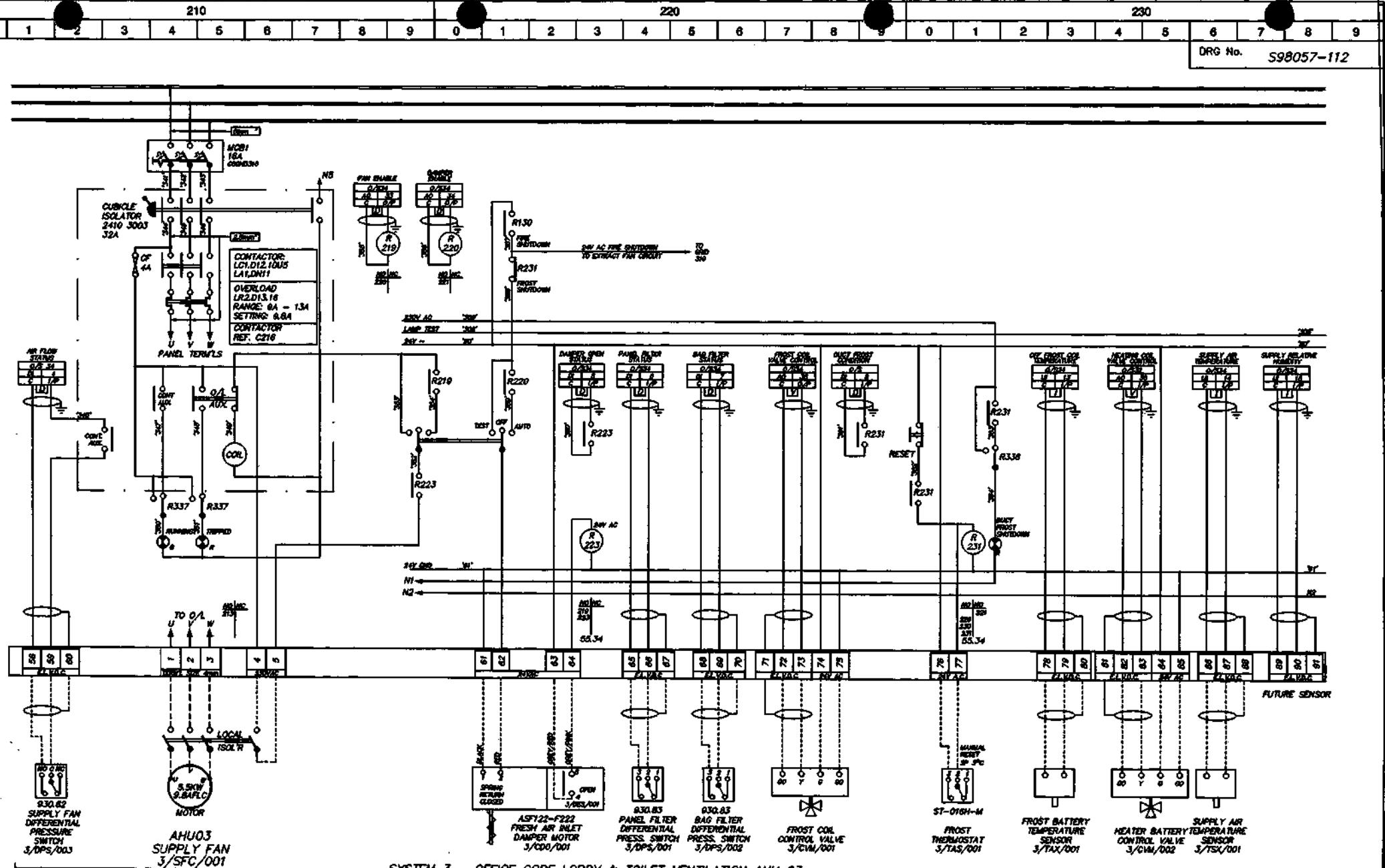
FAX: 01753 771001

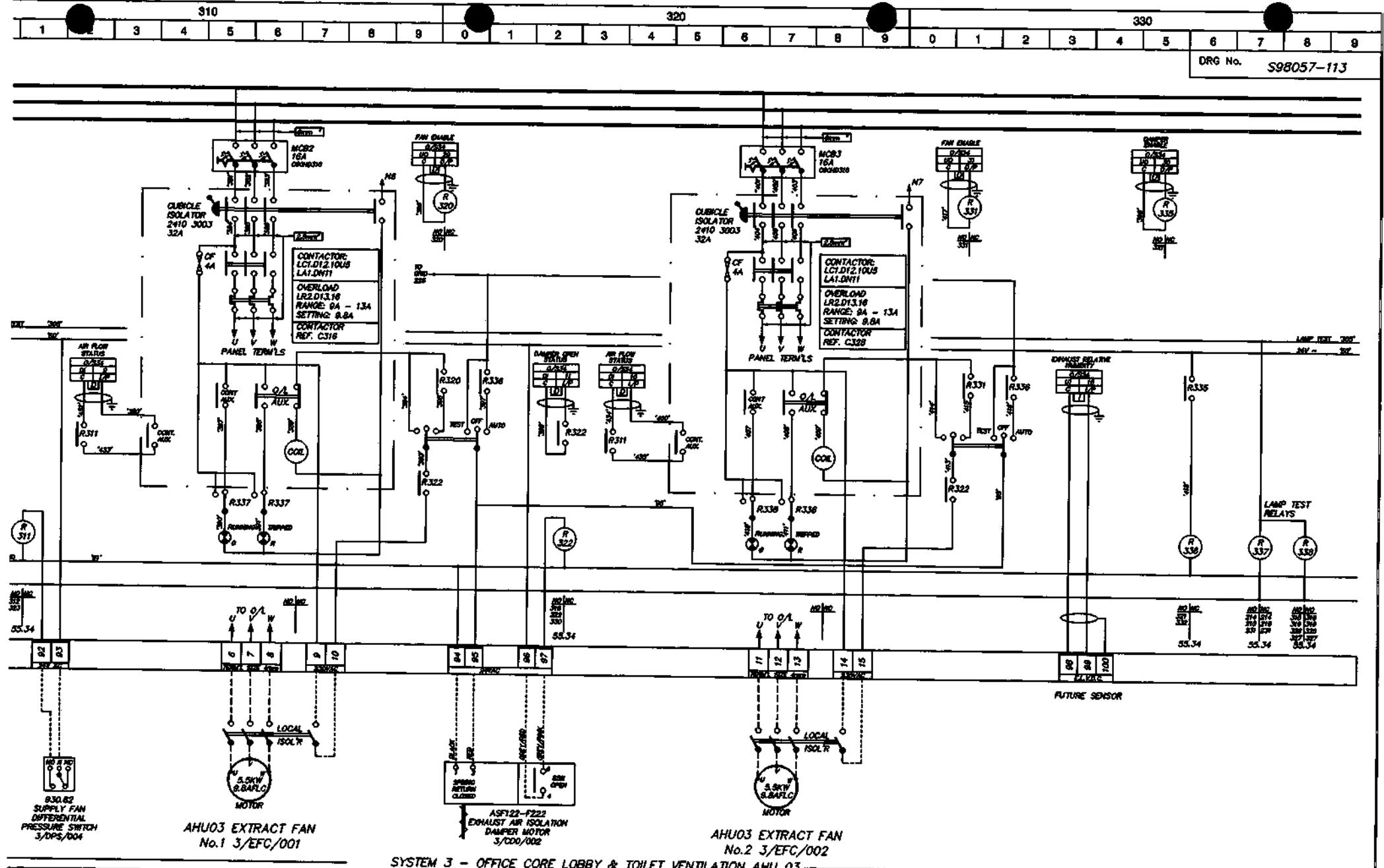
S98057-110

ISSUE

F







ID	NAME	ITEM	ID	BRANCH	J.M.B.	DATE
A	08/04/98	DRY AIR COOLER POWER SUPPLIES ADDED (SHEET NUMBER CHANGED)	D0	CHECKED		25/8/98
B	18/04/98	AS FITTED AND TESTED	M/W	RECHECKED		
				DSO		

TITLE

SCHEMATIC WIRING DIAGRAM  
AND EXTERNAL FIELD WIRING FOR  
MOTOR CONTROL PANEL  
MCC7/1  
(SHEET 3 OF 5)

**SYNCHRONISED SYSTEM'S**  
HORTON ROAD, COLNBROOK, SLOUGH, BERKSHIRE  
TEL: 01753 738000     FAX: 01753 771001

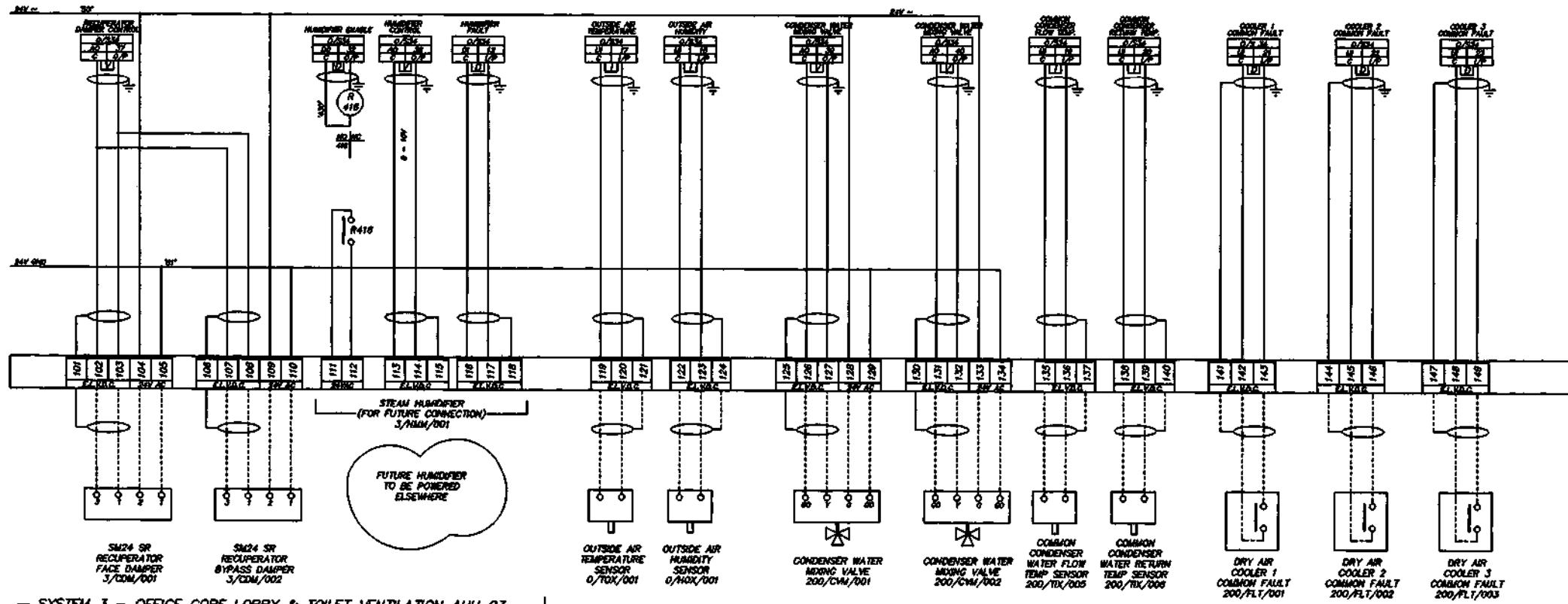
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DRG No. S98057-114



## — SYSTEM 3 - OFFICE CORE LOBBY &amp; TOILET VENTILATION AHU 03 —

REF	DATE	REVISION	REF	DATE
A	08/04/98	DRY AIR COOLER POWER SUPPLIES ADDED (SHEET NUMBER CHANGED)	DO	25/8/98
B	16/04/98	AS FITTED AND TESTED	M/W	
			DSO	

SCHEMATIC WIRING DIAGRAM  
AND EXTERNAL FIELD WIRING FOR  
MOTOR CONTROL PANEL  
MCC7/1  
(SHEET 4 OF 5)

SYNCHRONISED  
SYSTEMS

HORTON ROAD, COLNBROOK, SLOUGH, BERKSHIRE  
TEL: 01753 738000  
FAX: 01753 771001

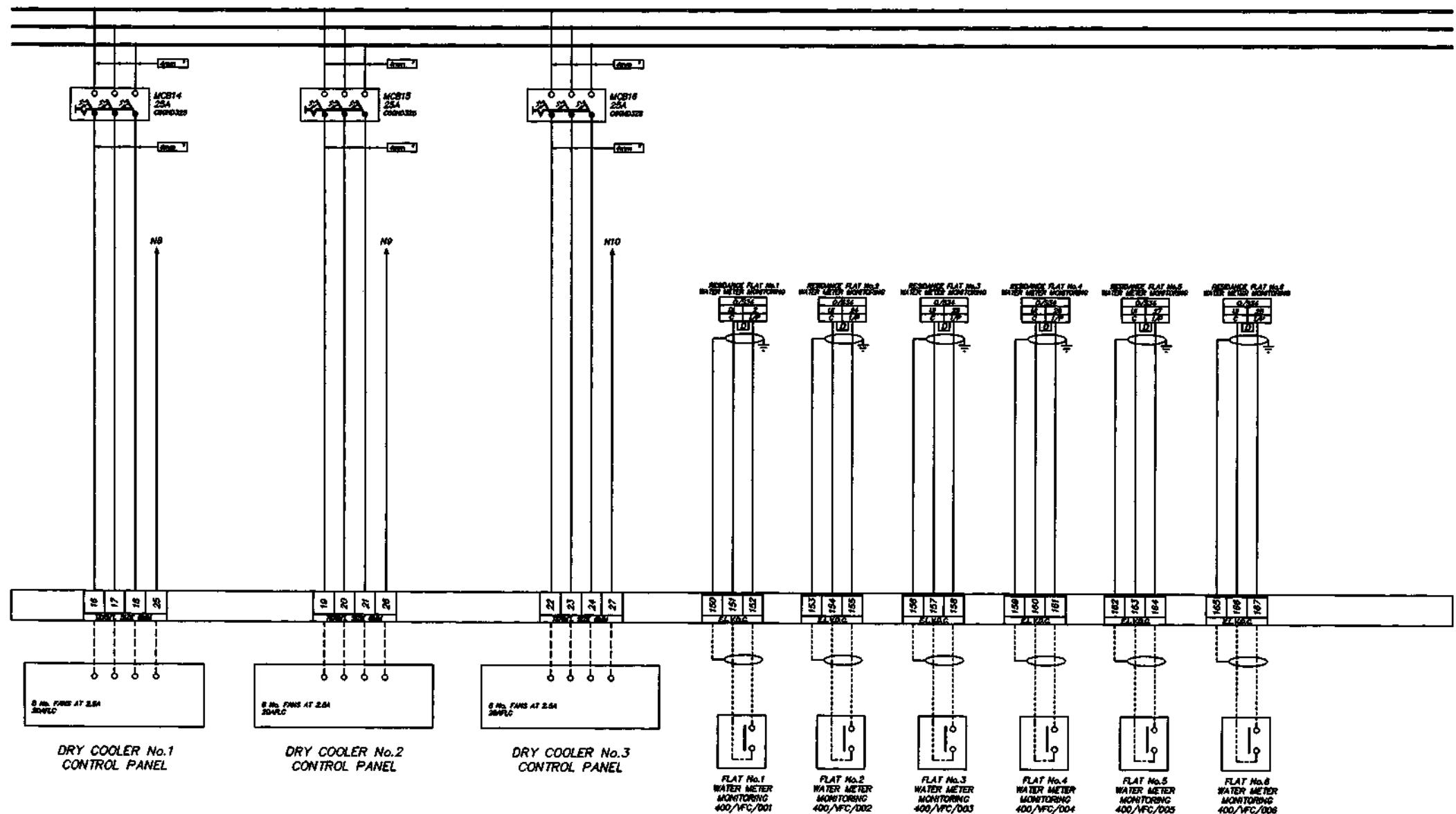
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520

530

DRG No. S98057-115



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CLIENT BENCHMARK GROUP PLC PROJECT 5 - 7 CARLTON GARDENS DRG No. S98057-115 ISSUE C

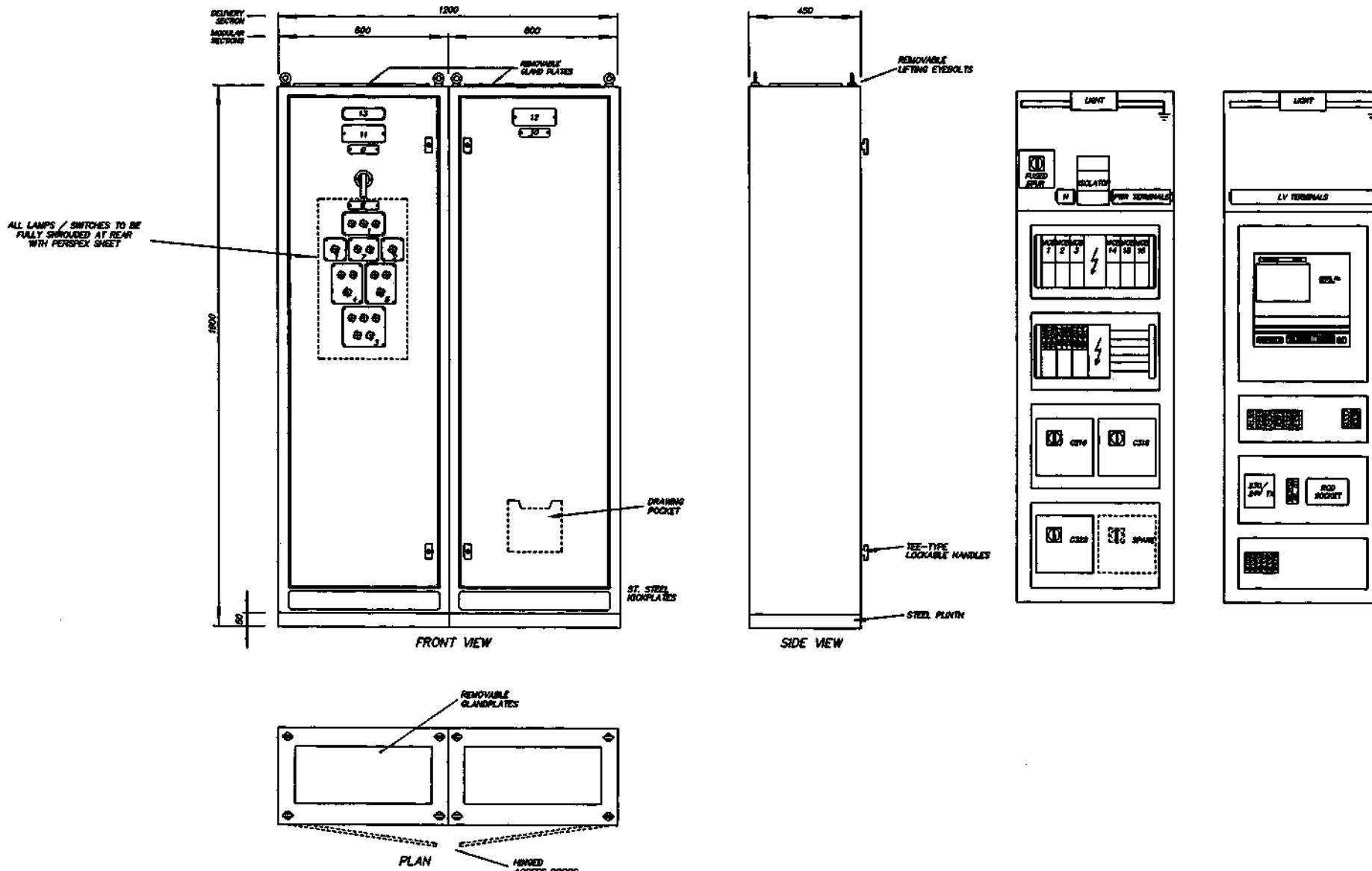
TITLE  
SCHEMATIC WIRING DIAGRAM  
AND EXTERNAL FIELD WIRING FOR  
MOTOR CONTROL PANEL  
MCC7/1  
(SHEET 5 OF 5)

SYNCHRONISED  
SYSTEMS

HORTON ROAD, COLNBROOK, SLOUGH, BERKSHIRE  
TEL: 01753 738000  
FAX: 01753 771001

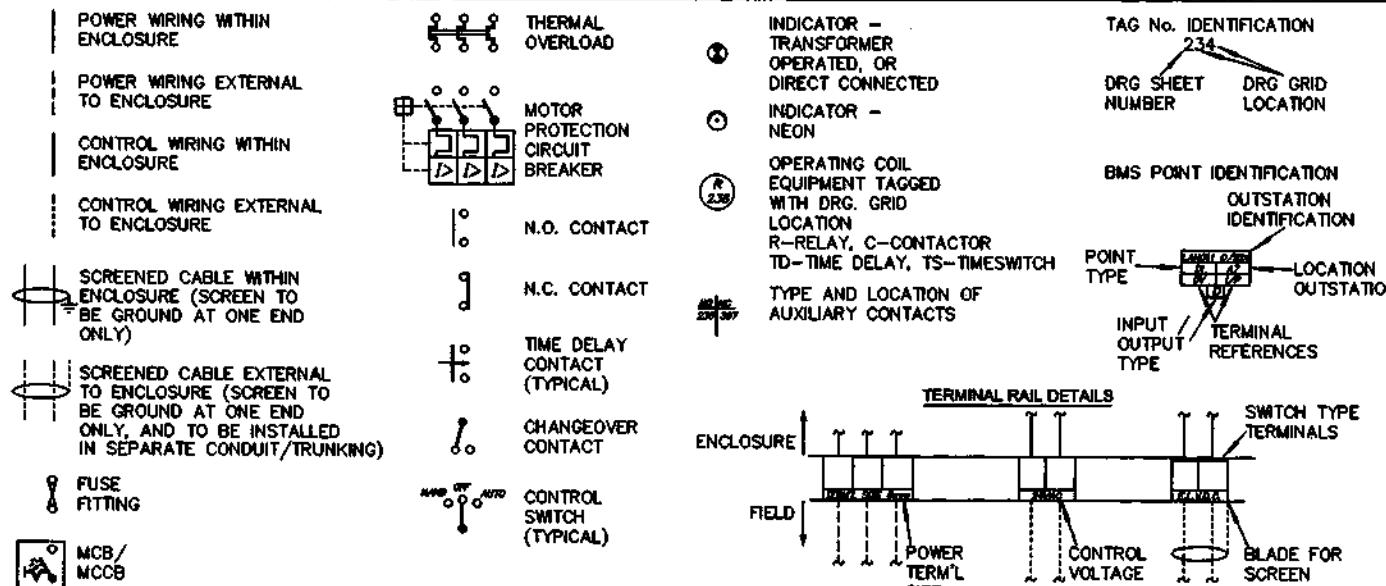
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DRG No. S98057-117

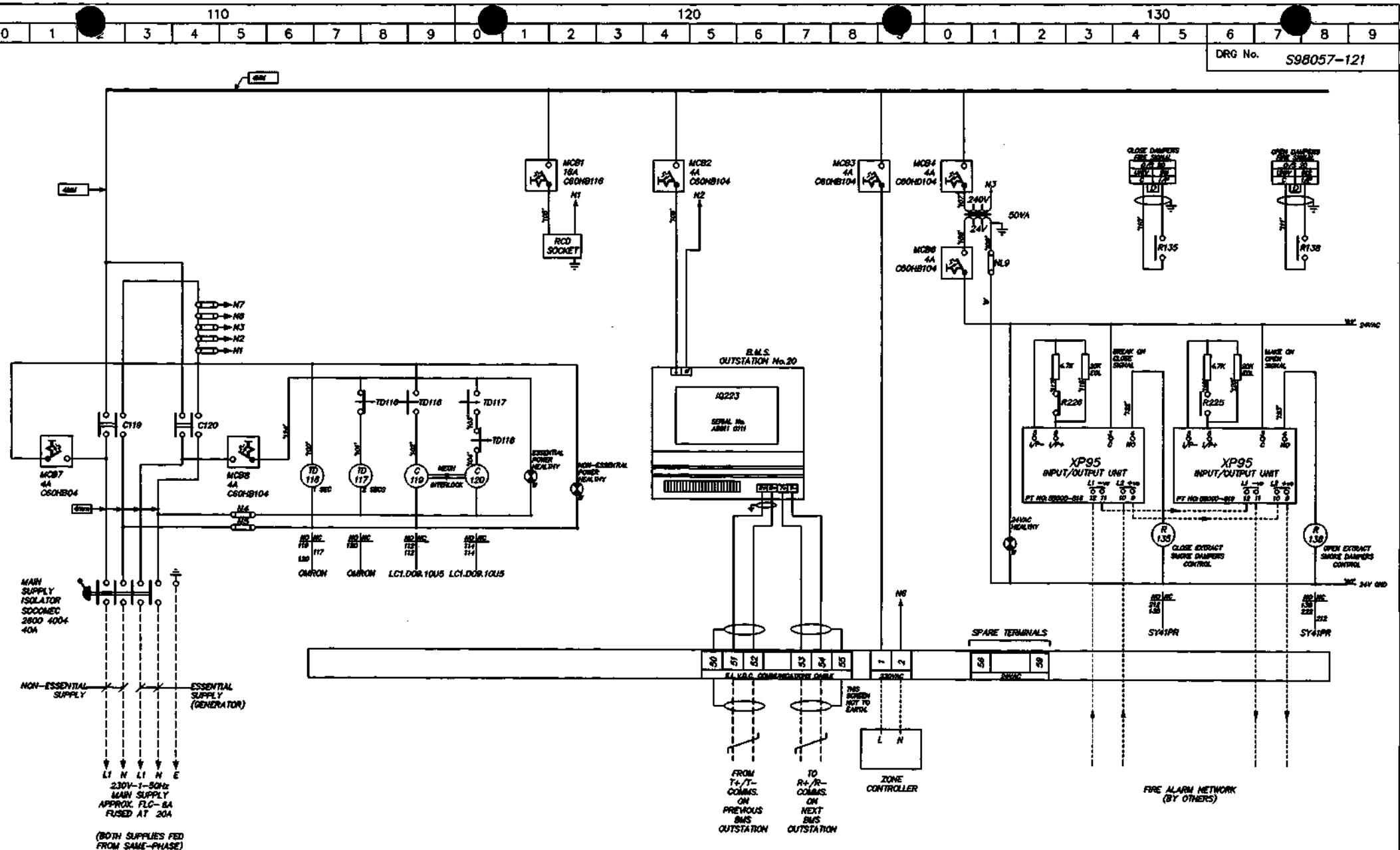




WIRING NOTES	EQUIPMENT NOTES	DRAWING No.	ISSUE	DESCRIPTION
1. MINIMUM POWER WIRING 2.5mm	1. ALL STARTERS TO BE OF TELEMECANIQUE MANUFACTURE	S98057-121	B	MAIN SUPPLIES / BMS OUTSTATION / 24VAC OCT
2. MINIMUM CONTROL WIRING 1.0mm	2. MAIN SUPPLY ISOLATORS TO BE OF SOCOME/TELEMECANIQUE MANUFACTURE	S98057-122	D	SMOKE DAMPERS
3. POWER CABLES TO BE FITTED WITH CORD END TERMINALS, OR LUGS, DEPENDING ON SIZE, AND TYPE OF CONNECTION.	3. FUSE SWITCHES TO BE OF SOCOME MANUFACTURE	S98057-123		SPARE
4. CONTROL CABLES TO BE FITTED WITH CORD END TERMINALS, PIN, OR FORK, CONFIGURATION, DEPENDING ON TYPE OF CONNECTION.	4. MCB'S, AND MCCB'S TO BE OF MERLIN GERIN, OR SIEMENS MANUFACTURE.	S98057-124	B	GENERAL ARRANGEMENT AND LABEL DETAILS
5. ALL CABLES TO 16mm TO BE COLOUR CODED AS FOLLOWS:- 400 VOLTS L1,L2,L3. - RED, YELLOW, BLUE 230 VOLTS NEUTRAL - BLACK LOW VOLTAGE A.C. - BROWN EXTRA LOW VOLTAGE D.C. - GREY 115 VOLTS A.C. - ORANGE	5. ALL OUTGOING TERMINALS TO BE OF ENTRELEC MANUFACTURE.			
6. ALL CABLES ABOVE 16mm TO BE BLACK WITH ENDS HEAT SHRINK COLOUR CODED PHASE IDENTIFICATION.	6. ALL PILOT LIGHTS TO BE OF TRANILAMP MANUFACTURE.			
7. ALL CONTROL CABLES TO BE IDENTIFIED AT EACH END BY THE USE OF COLOUR CODED FERRULES. THE NUMBERS ARE SHOWN THUS ON THE DIAGRAM - '105'	7. SELECTOR SWITCHES TO BE OF TELEMECANIQUE MANUFACTURE.			
8. FINAL CABLE No. 124	8. CONTROL RELAYS TO BE EINDENR-55.34. IMO SY41PR			
9. WHEN A CABLE CONNECTS TO AN OUTGOING TERMINAL THE CABLE IDENTIFICATION NUMBER IS THE SAME AS THE TERMINAL NUMBER.	9. TIME DELAY RELAYS TO BE EINDENR-65.34. OMRON			
10. FINAL TERMINAL No. POWER/230VAC - 6 FINAL TERMINAL No. ELVDC/24VAC - 83	10. WHERE HRC FUSE CARRIERS ARE INDICATED ON THE SCHEMATIC DIAGRAM THE CARRIERS ARE TO BE OF GEC MANUFACTURE.			



DRAWING INDEX EQUIPMENT SCHEDULE/NOTES FOR SMOKE DAMPER CONTROL PANEL SCP/LG/E	REF	DATE	DETAIL	BY	SBC	DATE	TITLE	SYNCHRONISED SYSTEMS  HORTON ROAD, COLNBROOK, SLOUGH, BERKSHIRE TEL: 01753 738000 FAX: 01753 771001
	A	02/11/98	AS PER CLIENTS COMMENTS	J.M.B	050	21/08/98		
	B	02/12/98	SPACE TEMP. SENSOR REMOVED	DO	050	05/09/98		
	C	08/01/99	AS FITTED AND TESTED	M.J.W				
	D	15/08/98	FCU CONTROLLER ADDED FOR OPTIMISER SIGNAL	DO				



DATE	DETAILS	REMARKS	OWNER
2/11/98	AS PER CLIENTS COMMENTS	J.M.B	OWNER
9/01/99	AS FITTED AND TESTED	M.J.W	OWNER

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**SCHEMATIC WIRING DIAGRAM  
AND EXTERNAL FIELD WIRING FOR  
SMOKE DAMPER CONTROL PANEL**

HORTON ROAD, COLNBROOK, SLOUGH, BERKSHIRE  
TEL: 01753 738000 FAX: 01753 771001



CLIENT

BENCHMARK GROUP PLC

PROJECT

5-7 CARLTON GARDENS

DRC No

S98057-121

100

ISSUE

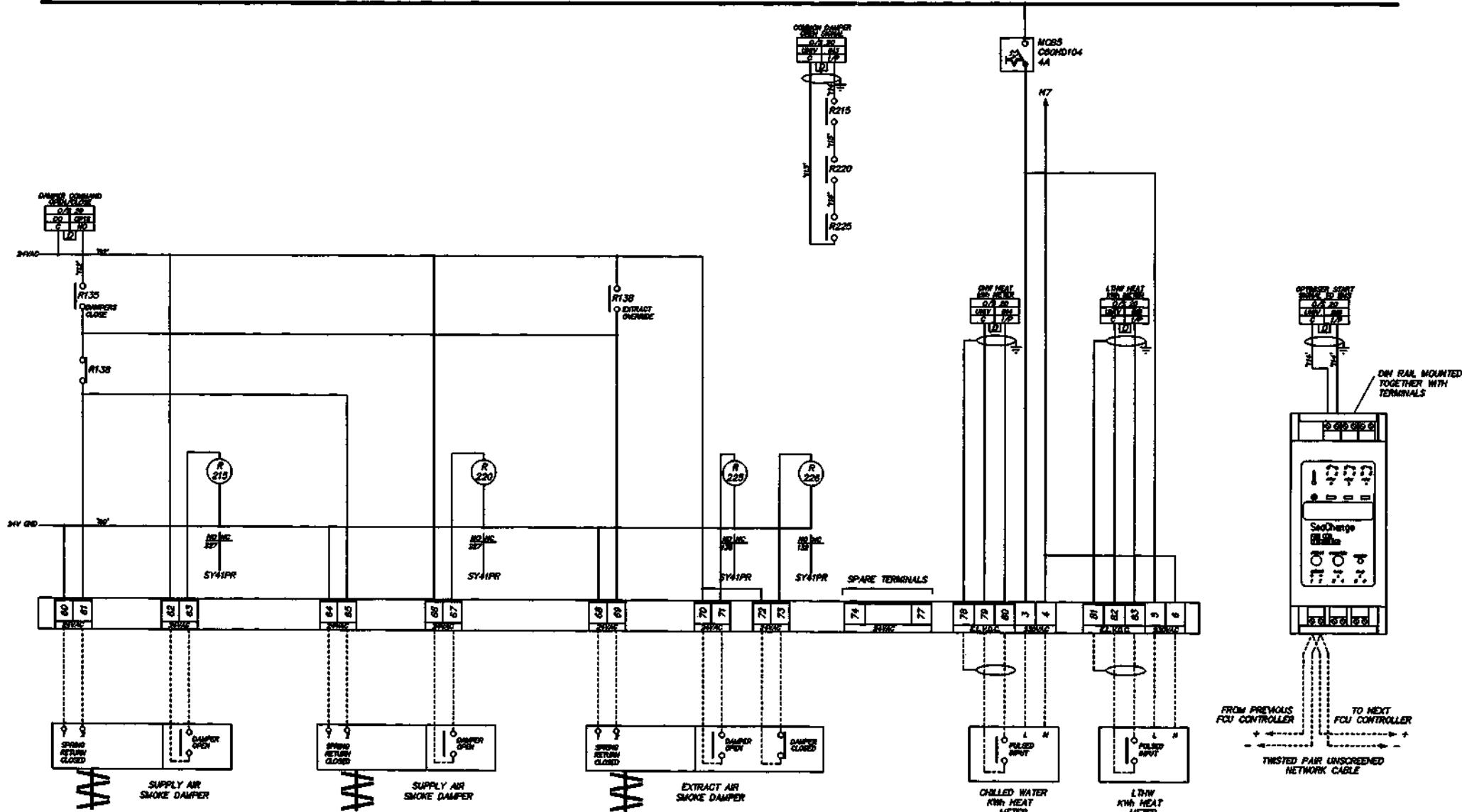
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DRG No. S98057-122



	REF	DESC	REV	DRAWN	DATE
A	02/11/98	AS PER CLIENTS COMMENTS	J.M.B	SBC	21/06/98
B	02/12/98	SPACE TEMP. SENSOR REMOVED	DO	DSO	DATE
C	09/01/99	AS FITTED AND TESTED	M.J.W	DSO	DATE
D	15/06/99	FCU CONTROLLER ADDED FOR OPTIMISER SIGNAL	DO		

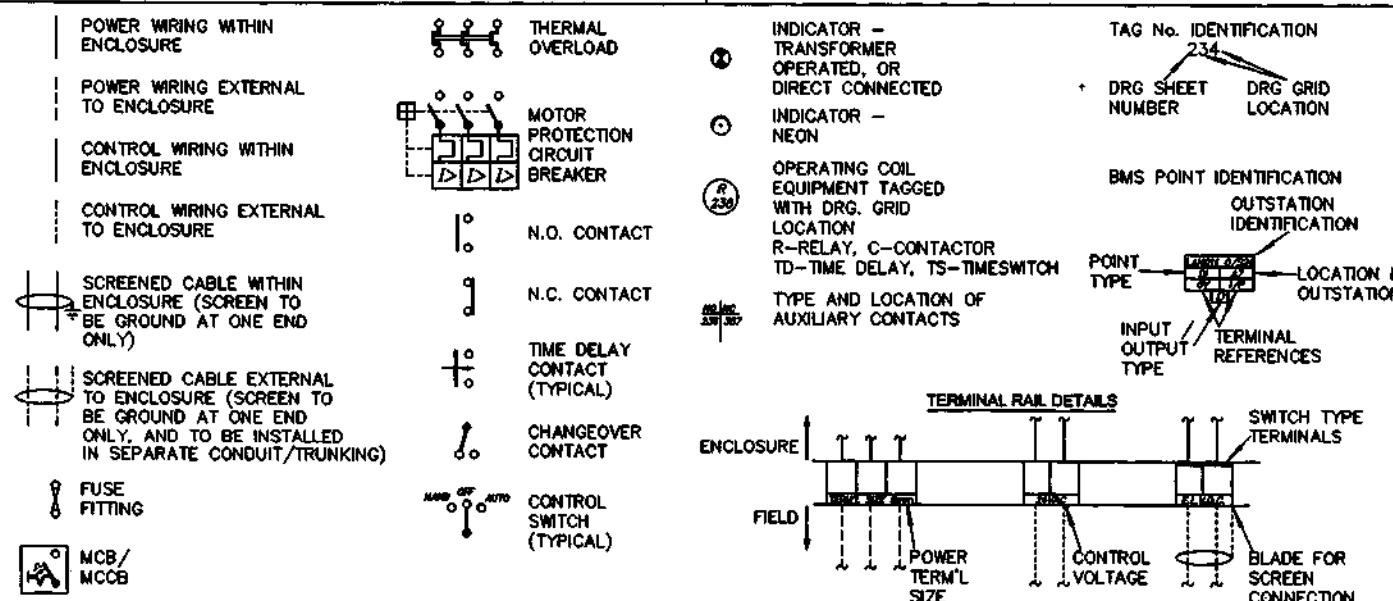
SCHEMATIC WIRING DIAGRAM  
AND EXTERNAL FIELD WIRING FOR  
SMOKE DAMPER CONTROL PANEL  
SCP/LG/E  
(SHEET 2 OF 2)

SYNCHRONISED  
SYSTEMS

HORTON ROAD, COLNBROOK, SLOUGH, BERKSHIRE  
TEL: 01753 738000 FAX: 01753 771001



WIRING NOTES			EQUIPMENT NOTES		
1. MINIMUM POWER WRING 2.5mm			1. ALL STARTERS TO BE OF TELEMECANIQUE MANUFACTURE		
2. MINIMUM CONTROL WRING 1.0mm			2. MAIN SUPPLY ISOLATORS TO BE OF SOCOMECA/TELEMECANIQUE MANUFACTURE		
3. POWER CABLES TO BE FITTED WITH CORD END TERMINALS, OR LUGS, DEPENDING ON SIZE, AND TYPE OF CONNECTION.			3. FUSE SWITCHES TO BE OF SOCOMECA MANUFACTURE		
4. CONTROL CABLES TO BE FITTED WITH CORD END TERMINALS, PIN, OR FORK, CONFIGURATION, DEPENDING ON TYPE OF CONNECTION.			4. MCB'S, AND MCCB'S TO BE OF MERLIN GERIN, OR SIEMENS MANUFACTURE.		
5. ALL CABLES TO 16mm TO BE COLOUR CODED AS FOLLOWS:- 400 VOLTS L1,L2,L3. - RED, YELLOW, BLUE 230 VOLTS NEUTRAL - BLACK LOW VOLTAGE A.C. - BROWN EXTRA LOW VOLTAGE D.C. - GREY 115 VOLTS A.C. - ORANGE			5. ALL OUTGOING TERMINALS TO BE OF ENTRELEC MANUFACTURE.		
6. ALL CABLES ABOVE 16mm TO BE BLACK WITH ENDS HEAT SHRINK COLOUR CODED PHASE IDENTIFICATION.			6. ALL PILOT LIGHTS TO BE OF TRANILAMP MANUFACTURE.		
7. ALL CONTROL CABLES TO BE IDENTIFIED AT EACH END BY THE USE OF COLOUR CODED FERRULES. THE NUMBERS ARE SHOWN THUS ON THE DIAGRAM - '105'			7. SELECTOR SWITCHES TO BE OF TELEMECANIQUE MANUFACTURE.		
8. FINAL CABLE No. 121			8. CONTROL RELAYS TO BE EINDER-55.34. IMO SY41PR		
9. WHEN A CABLE CONNECTS TO AN OUTGOING TERMINAL THE CABLE IDENTIFICATION NUMBER IS THE SAME AS THE TERMINAL NUMBER.			9. TIME DELAY RELAYS TO BE EINDER-55.34. OMRON		
10. FINAL TERMINAL No. POWER/230VAC - 6 FINAL TERMINAL No. ELVDC/24VAC - 87			10. WHERE HRC FUSE CARRIERS ARE INDICATED ON THE SCHEMATIC DIAGRAM THE CARRIERS ARE TO BE OF GEC MANUFACTURE.		
FIELD WIRING NOTES					
1. NETWORK CABLE TO BE BELDEN 9501/9502					
2. SENSOR CABLE TO BE BELDEN 9501					



NO	DATE	DETAIL
A	02/12/98	SPACE TEMP. SENSOR REMOVED
B	08/01/99	AS FITTED AND TESTED
C	12/07/99	FOU CONTROLLER ADDED FOR OPTIMISE SIGNAL

GLEN

BENCHMARK GROUP PLC

DRAWING INDEX  
EQUIPMENT SCHEDULE/NOTES  
FOR  
SMOKE DAMPER CONTROL PANEL  
SOD A-2-24



HORTON ROAD, COLNBROOK, SLOUGH, BERKSHIRE  
TEL: 01753 738000 FAX: 01753 771001

FAX: 01753 771001

**DRG No.**

ISSUE

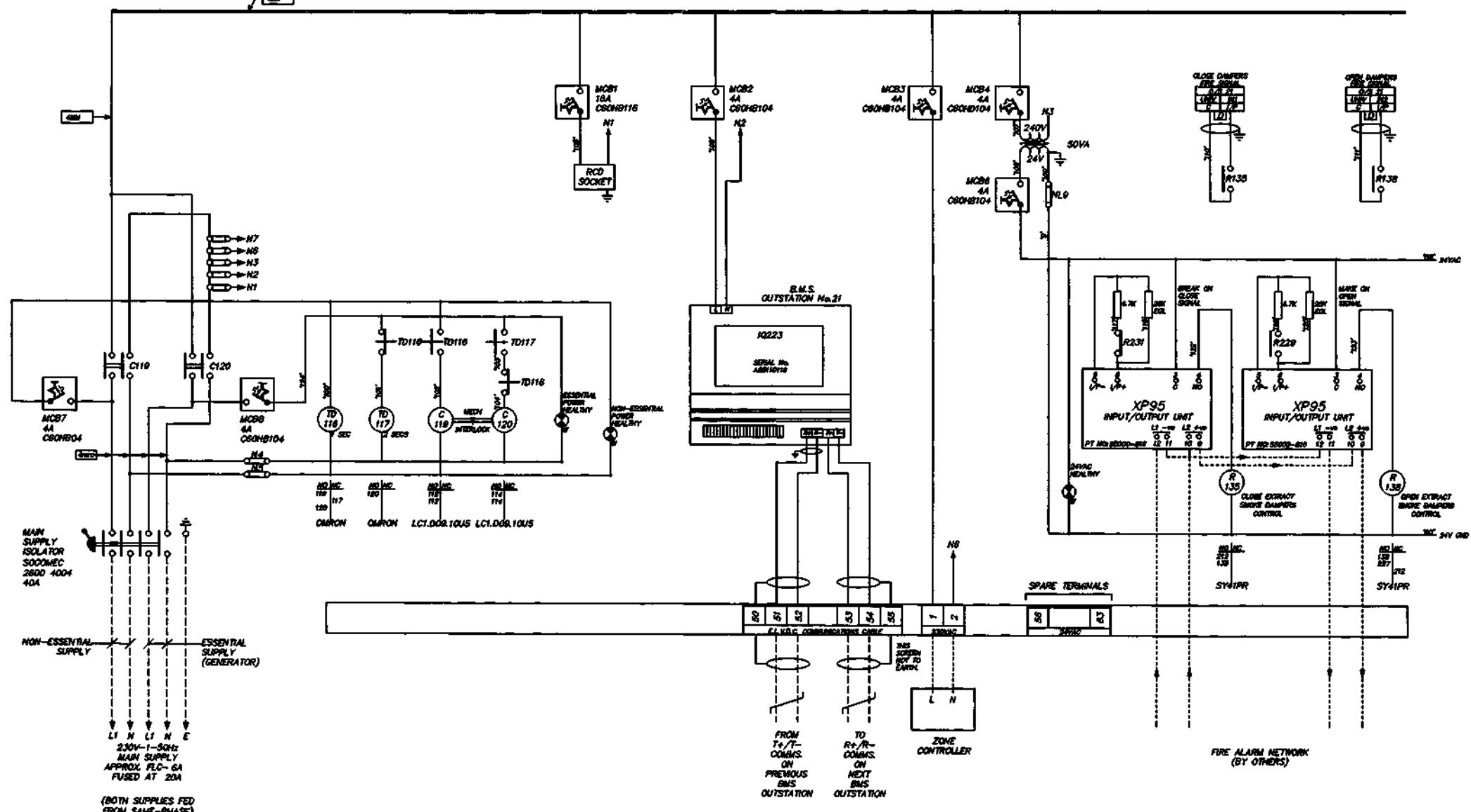
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DRG No. S98057-126



DATE	REASON	EE	DRIVER
09/01/98	AS FITTED AND TESTED	MJW	CHIEF
			CHIEF
			CHIEF
			CHIEF

11

**SCHEMATIC WIRING DIAGRAM  
AND EXTERNAL FIELD WIRING FOR  
SMOKE DAMPER CONTROL PANEL  
SCP/LG/W  
(SHEET 1 OF 2)**



HORTON ROAD, COLNBROOK, SLOUGH, BERKSHIRE  
TEL: 01753 738000 FAX: 01753 771001

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CHEN

BENCHMARK GROUP PI C

PROJECT

5-7 CARN TON GARDENS

DRG No

S98057-126

2016

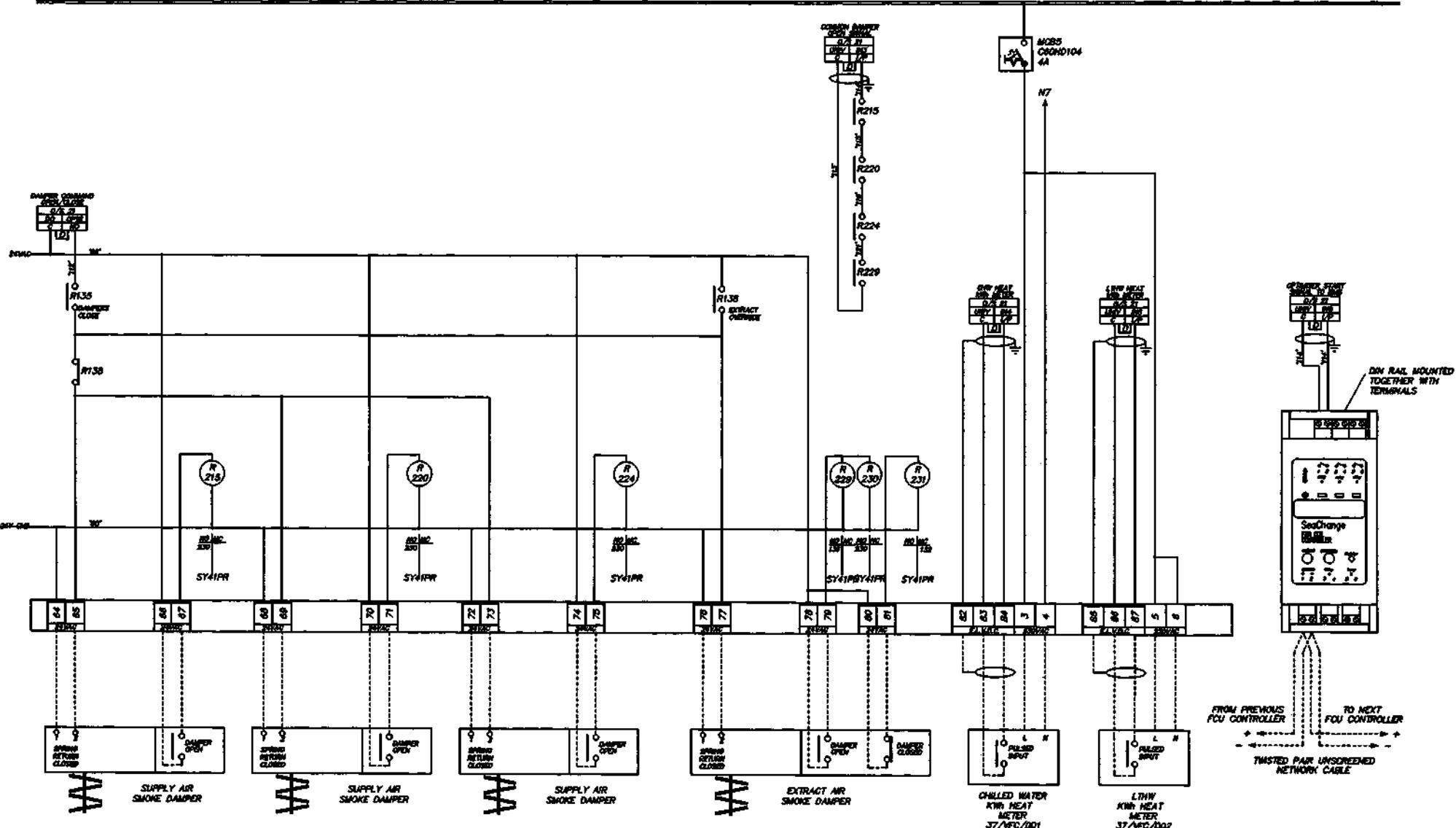
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DRG No. S98057-127



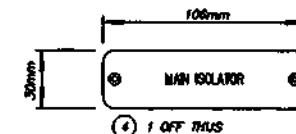
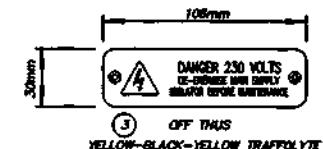
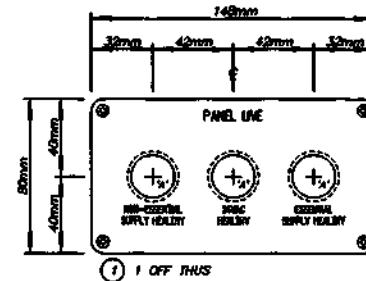
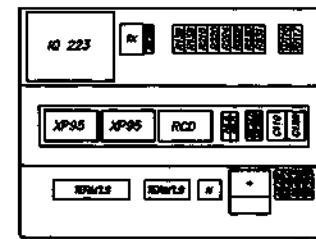
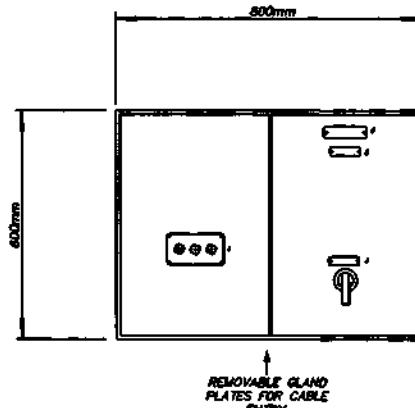
#	DATE	NOTE	#	OWNER	DATE
A	02/12/98	SPACE TEMP. SENSOR REMOVED	A	SBC	21/08/98
B	09/01/99	AS FITTED AND TESTED	MJW	ONRECD	DATE
C	12/07/99	FCU CONTROLLER ADDED FOR OPTIMISER SIGNAL	MAP	DSO	DATE

TITLE  
SCHEMATIC WIRING DIAGRAM  
AND EXTERNAL FIELD WIRING FOR  
SMOKE DAMPER CONTROL PANEL  
SCP/LG/W  
(SHEET 2 OF 2)

SYNCHRONISED SYSTEMS  
HORTON ROAD, COLNBROOK, SLOUGH, BERKSHIRE  
TEL: 01753 738000 FAX: 01753 771001

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DRG No. S98057-129



NOTES

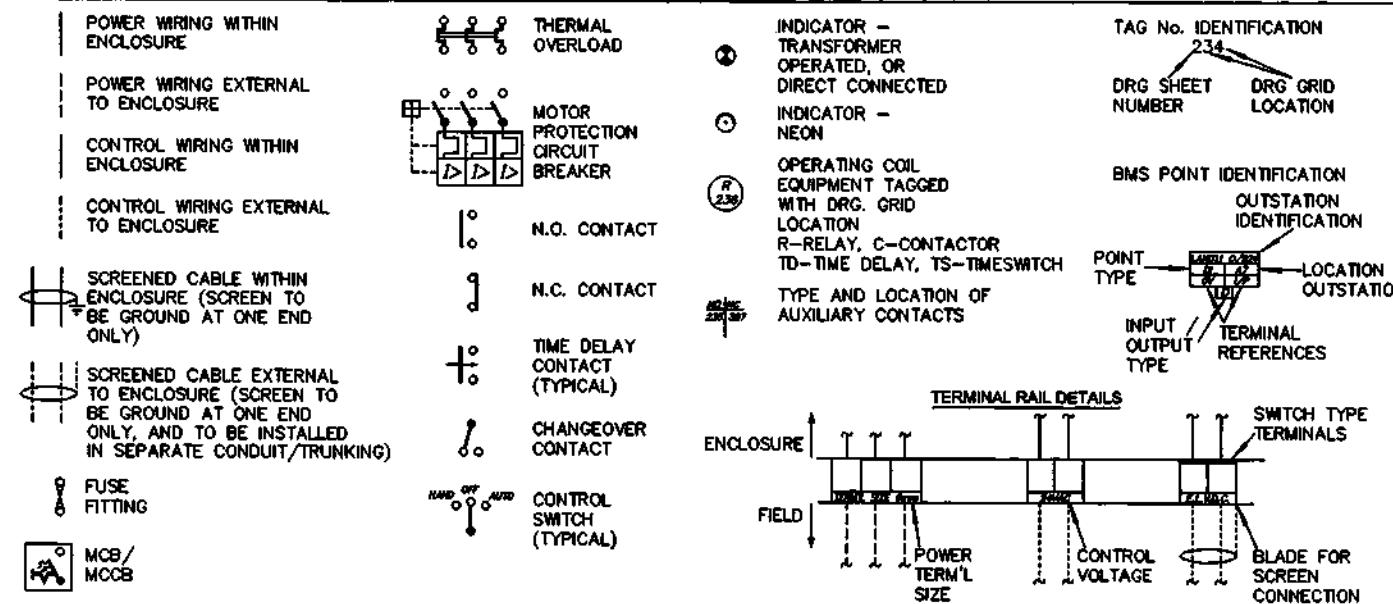
1. MATERIAL:  
DOORS FRAME - 2.0mm MILD STEEL  
EQUIPMENT PLATE - 2.5mm MILD STEEL  
FRONT - RAL 7035 (GREY)  
EQUIPMENT PLATES: WHITE SEMI-GLOSS
2. INGRESS PROTECTION RATING - IP54

NOTES:

1. LABELS TO BE WHITE-BLACK-WHITE TRAFFOLYTE UNLESS OTHERWISE STATED
2. LABELS TO HAVE 5mm RADIUS CORNERS, AND 3mm COUNTERSUNK FIXING HOLES
3. MAIN TITLES TO BE APPROX 5mm HIGH, AND SUB-TITLES APPROX 3mm HIGH
4. OUTOUT DETAILS: A' HOLES - 22.5mm DIA. (26.5mm BEZEL)  
SW HOLES - 22.5mm DIA. (30mm BEZEL)

#	DATE	DETAIL	#	DRAWN SPC	DATE 21/08/98	TITLE	SYNCHRONISED SYSTEMS	
A	09/01/99	AS FITTED AND TESTED	MJW	REMOVED	DATE	GENERAL ARRANGEMENT AND LABEL DETAILS FOR SMOKE DAMPER CONTROL PANEL	HORTON ROAD, COLNBROOK, SLOUGH, BERKSHIRE	
				DSD	DATE	SCP/LG/W	TEL: 01753 738000	
						(SHEET 1 OF 1)	FAX: 01753 771001	
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CLIENT: BENCHMARK GROUP PLC				PROJECT: 5-7 CARLTON GARDENS		DRG No.	S98057-129	ISSUE: A

WIRING NOTES	EQUIPMENT NOTES	DRAWING NO.	ISSUE	DESCRIPTION
1. MINIMUM POWER WIRING 2.5mm	1. ALL STARTERS TO BE OF TELEMECANIQUE MANUFACTURE	S98057-131	A	MAIN SUPPLIES / BMS OUTSTATION / 24VAC CCT
2. MINIMUM CONTROL WIRING 1.0mm	2. MAIN SUPPLY ISOLATORS TO BE OF SOCOMEC/TELEMECANIQUE MANUFACTURE	S98057-132	C	FCU CONTROLLER ADDED FOR OPTIMISER SIGNAL
3. POWER CABLES TO BE FITTED WITH CORD END TERMINALS, OR LUGS, DEPENDING ON SIZE, AND TYPE OF CONNECTION.	3. FUSE SWITCHES TO BE OF SOCOMEC MANUFACTURE	S98057-133		SPARE
4. CONTROL CABLES TO BE FITTED WITH CORD END TERMINALS, PIN, OR FORK, CONFIGURATION, DEPENDING ON TYPE OF CONNECTION.	4. MCB'S, AND MCCB'S TO BE OF MERLIN GERIN, OR SIEMENS MANUFACTURE.	S98057-134	O	GENERAL ARRANGEMENT AND LABEL DETAILS
5. ALL CABLES TO 16mm TO BE COLOUR CODED AS FOLLOWS:- 400 VOLTS L1,L2,L3. - RED, YELLOW, BLUE 230 VOLTS NEUTRAL - BLACK LOW VOLTAGE A.C. - BROWN EXTRA LOW VOLTAGE D.C. - GREY 115 VOLTS A.C. - ORANGE	5. ALL OUTGOING TERMINALS TO BE OF ENTRELEC MANUFACTURE.			
6. ALL CABLES ABOVE 16mm TO BE BLACK WITH ENDS HEAT SHRINK COLOUR CODED PHASE IDENTIFICATION.	6. ALL PILOT LIGHTS TO BE OF TRANILAMP MANUFACTURE.			
7. ALL CONTROL CABLES TO BE IDENTIFIED AT EACH END BY THE USE OF COLOUR CODED FERRULES. THE NUMBERS ARE SHOWN THUS ON THE DIAGRAM - '105'	7. SELECTOR SWITCHES TO BE OF TELEMECANIQUE MANUFACTURE.			
8. FINAL CABLE No. '120'	8. CONTROL RELAYS TO BE FINDER 55.34.			
9. WHEN A CABLE CONNECTS TO AN OUTGOING TERMINAL THE CABLE IDENTIFICATION NUMBER IS THE SAME AS THE TERMINAL NUMBER.	9. TIME DELAY RELAYS TO BE FINDER 85.34.			
10. FINAL TERMINAL No. POWER/230VAC - 10 FINAL TERMINAL No. ELVDC/24VAC - 75	10. WHERE HRC FUSE CARRIERS ARE INDICATED ON THE SCHEMATIC DIAGRAM THE CARRIERS ARE TO BE OF GEC MANUFACTURE.			
FIELD WIRING NOTES				
1. NETWORK CABLE TO BE BELDEN 9501/9502				
2. SENSOR CABLE TO BE BELDEN 9501				



	DATE	DETAILS
A	17/12/98	SPACE TEMP. SENSOR REMOVED
B	22/12/98	DAMPERS CHANGED TO 230VAC
C	12/07/99	FOU CONTROLLER ADDED FOR OPTIMISER SIGNAL

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15

BENCHMARK GROUP PLC

DRAWING INDEX  
EQUIPMENT SCHEDULE/NOTES  
FOR  
SMOKE DAMPER CONTROL PANEL  
SCP/G/N

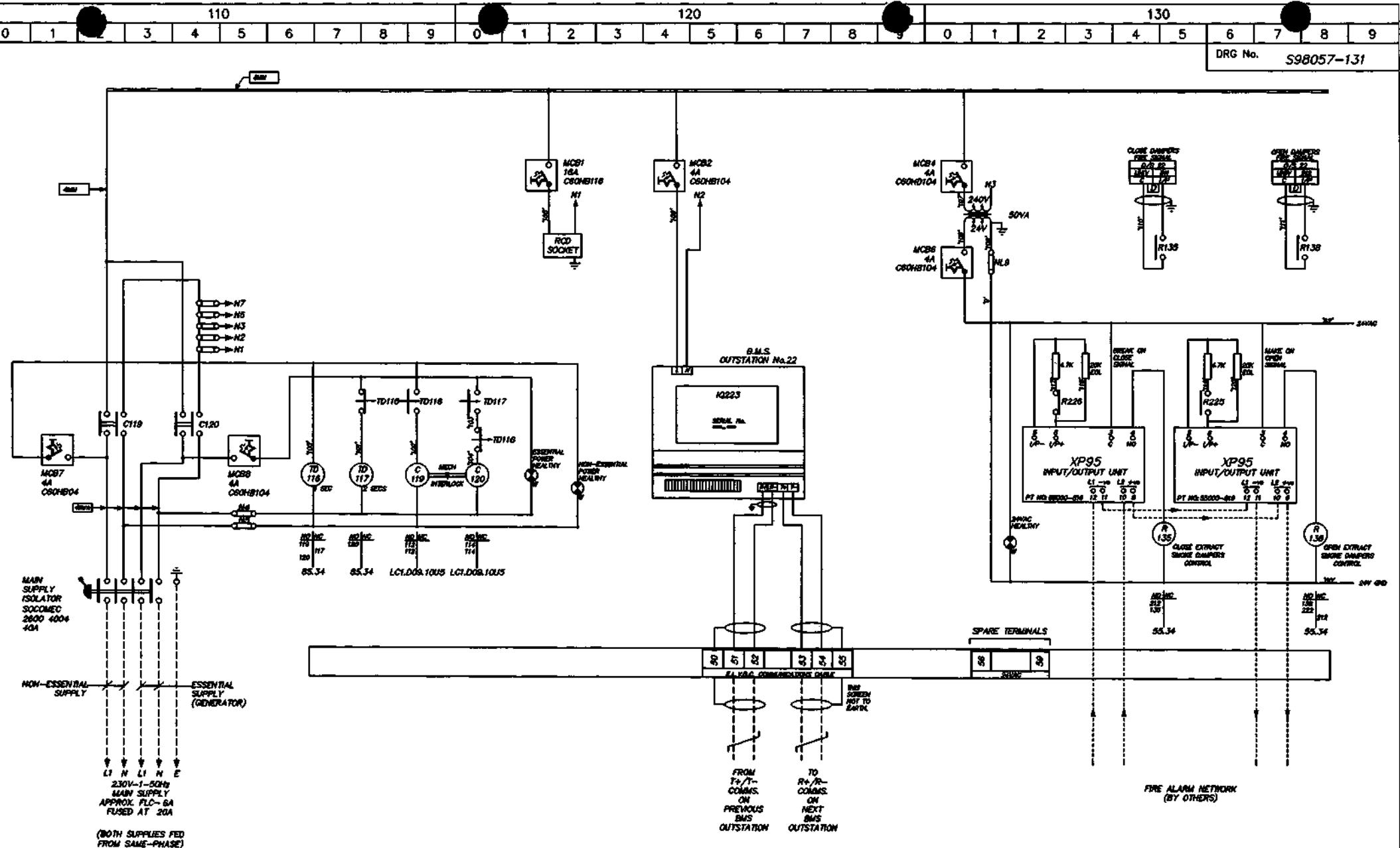


HORTON ROAD, COLNBROOK, SLOUGH, BERKSHIRE  
TEL: 01753 738000 FAX: 01753 771001

FAX: 01763 771001

PROJECT

**DRG No.** 100-000-00000 | **ISSUE**



DATE	ITEM	AMOUNT	DRIVER
22/12/08	DAMPERS CHANGED TO 230VAC	DO	CHANGED
			CHANGED
			DO

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CLIENT

BENCHMARK GROUP PLC

**SCHEMATIC WIRING DIAGRAM  
AND EXTERNAL FIELD WIRING FOR  
SMOKE DAMPER CONTROL PANEL  
SOP/G/N  
(SHEET 1 OF 2)**

**SYNCHRONISED  
SYSTEMS**

5-7 CARLTON GARDENS

**DRG No.**

S98057-131

ISSUE 4

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210

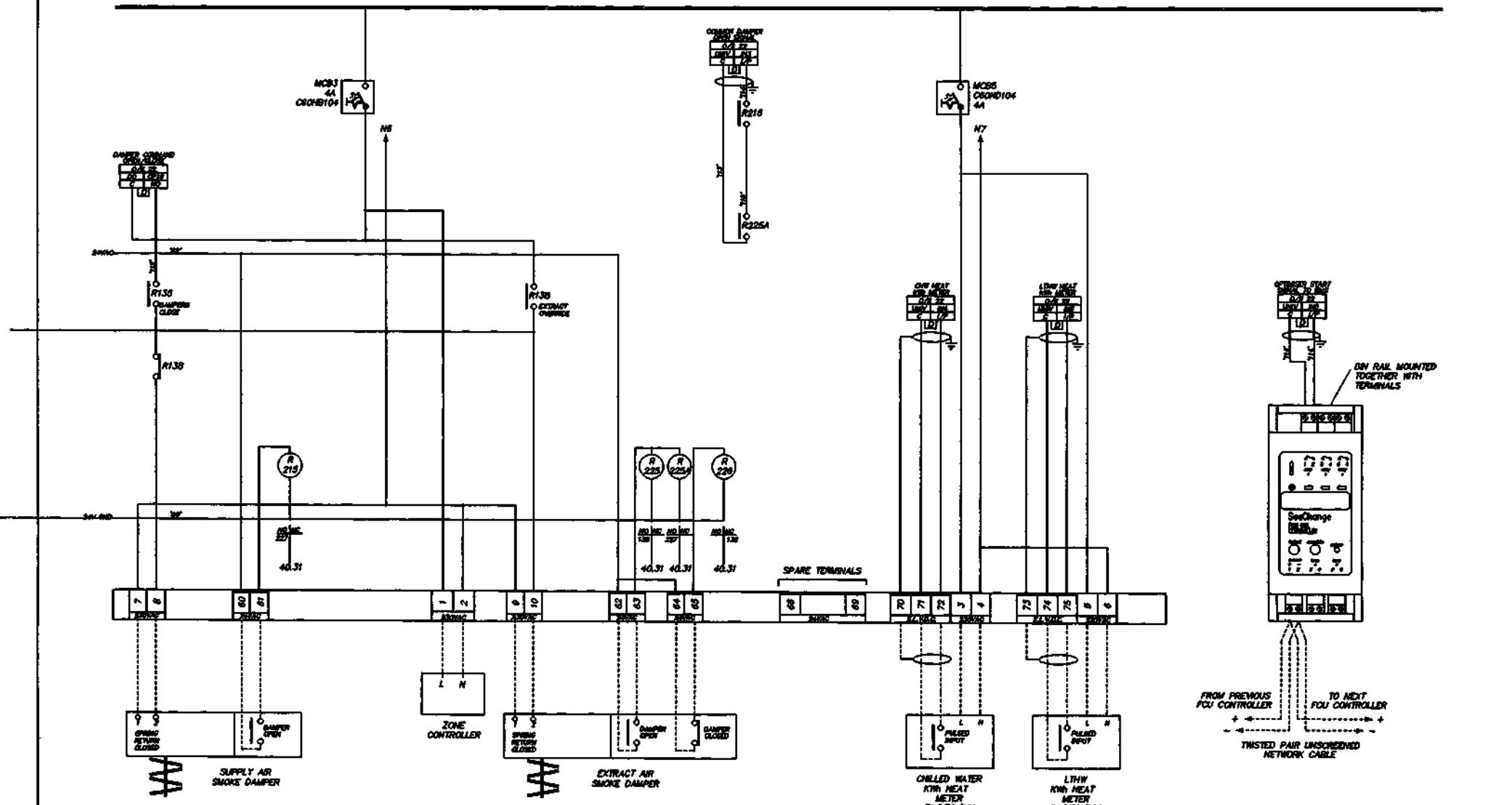
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DRG No. S98057-132



ITEM	DATE	DETAIL	SP	OWNER	SPEC	DATE	TITLE
A	17/12/98	SPACE TEMP. SENSOR REMOVED	00	CHASER	DATA	21/08/98	SCHEMATIC WIRING DIAGRAM AND EXTERNAL FIELD WIRING FOR SMOKE DAMPER CONTROL PANEL SCP/G/N (SHEET 2 OF 2)
B	22/12/98	DAMPERS CHANGED TO 230VAC	00	CHASER	DATA		
C	13/07/99	POU CONTROLLER ADDED FOR OPEN/BUSY SIGNAL	MAP	DSO	DATA		

NOT DRAWN IN THE EXPERTISE OF ENGINEERED SYSTEMS LTD AND SHOULD NOT BE DEPENDENT  
OR RELIED ON UNLESS AS PART OF THE OVERALL PERFORMANCE OF THAT EQUIPMENT

CLIENT	BENCHMARK GROUP PLC	PROJECT
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HORTON ROAD, COLNBROOK, SLOUGH, BUCKINGHAMSHIRE  
TEL: 01753 738000 FAX: 01753 771001

SCHEMATIC WIRING DIAGRAM  
AND EXTERNAL FIELD WIRING FOR  
SMOKE DAMPER CONTROL PANEL  
SCP/G/N  
(SHEET 2 OF 2)

- CLIENT

BENCHMARK GROUP PLC

**PROJECT**

DRG No. 608057 123

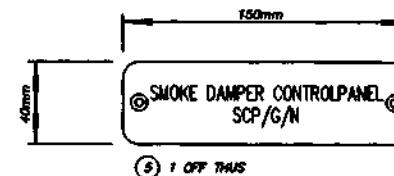
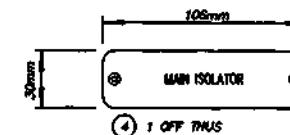
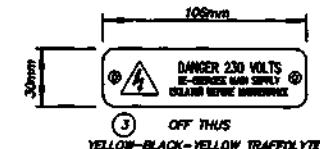
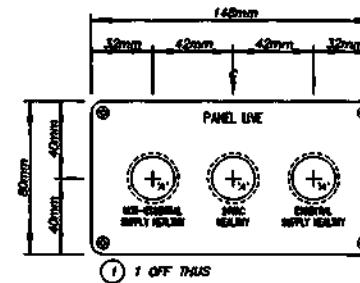
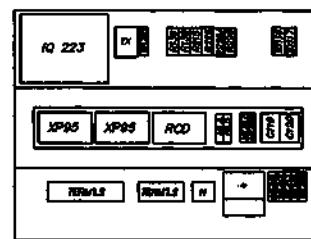
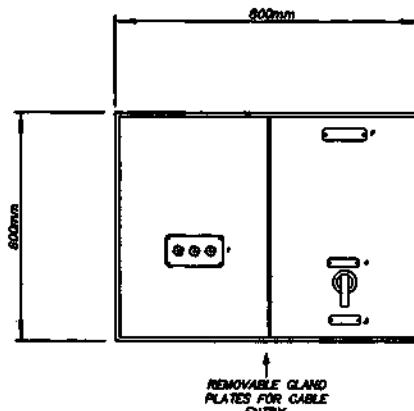
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DRG No. S98057-134



NOTES

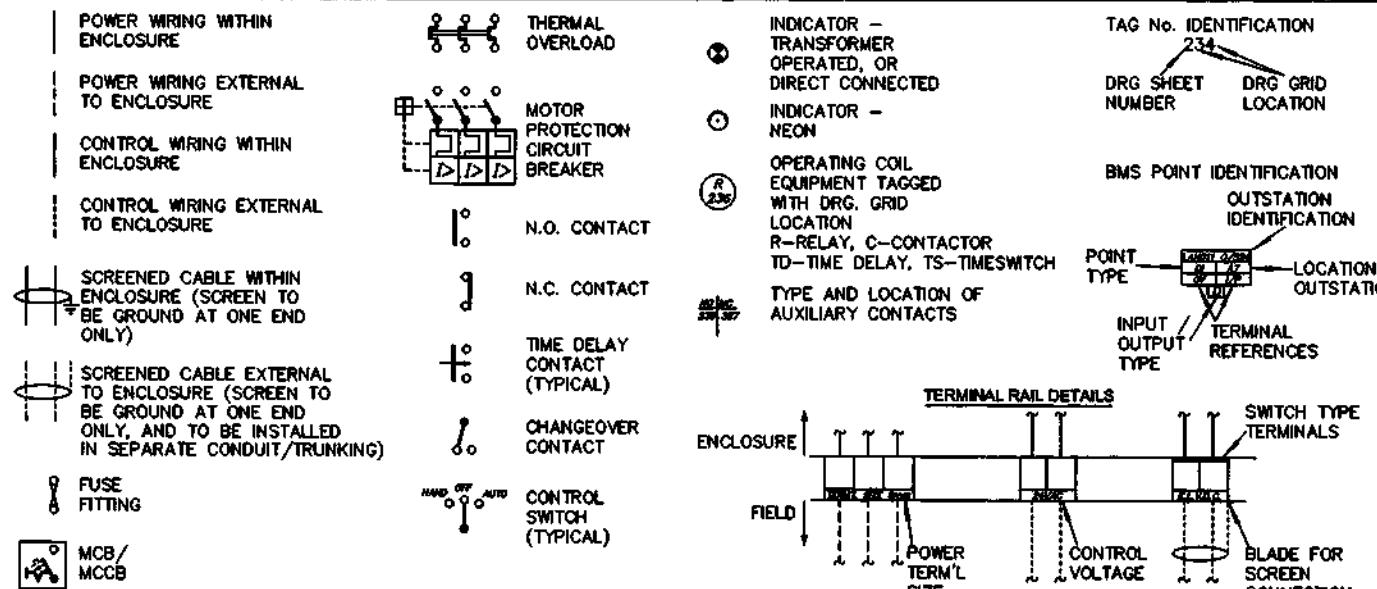
1. MATERIAL:  
DOORS/FRAME - 2.0mm MILD STEEL  
EQUIPMENT PLATE - 2.5mm MILD STEEL
2. FINISH  
RAL 7032 (GREY)  
EQUIPMENT PLATES: WHITE SEMI-GLOSS
3. INGRESS PROTECTION RATING - IP64

NOTES

1. LABELS TO BE WHITE-BLACK-WHITE TRAFFOLYTE UNLESS OTHERWISE STATED
2. LABELS TO HAVE 6mm. RADIUS CORNERS AND 3mm. COUNTERSINK FIXING HOLES
3. MAIN TITLES TO BE APPROX. 5mm. HIGH AND SUB-TITLES APPROX. 3mm. HIGH
4. CUTOUT DETAILS: "A" HOLES - 22.5mm DIA. (26.5mm BEZEL)  
SW HOLES - 22.5mm DIA. (30mm BEZEL)

	IN	BAR	ITEM	IN	MAIN SEC	DATE	TITLE
					CHEM	DATE	
					PROJ	DATE	
							GENERAL ARRANGEMENT AND LABEL DETAILS FOR SMOKE DAMPER CONTROL PANEL SCP/G/N (SHEET 1 OF 1)
							 HORTON ROAD, COLNBROOK, SLOUGH, BERKSHIRE TEL: 01753 738000 FAX: 01753 771001

WIRING NOTES	EQUIPMENT NOTES	DRAWING No.	ISSUE	DESCRIPTION
1. MINIMUM POWER WIRING 2.5mm	1. ALL STARTERS TO BE OF TELEMECANIQUE MANUFACTURE	S98057-136	A	MAIN SUPPLIES / BMS OUTSTATION / 24VAC CCT
2. MINIMUM CONTROL WIRING 1.0mm	2. MAIN SUPPLY ISOLATORS TO BE OF SOCOME/C/TELEMECANIQUE MANUFACTURE	S98057-137	A	SMOKE DAMPERS
3. POWER CABLES TO BE FITTED WITH CORD END TERMINALS, OR LUGS, DEPENDING ON SIZE, AND TYPE OF CONNECTION.	3. FUSE SWITCHES TO BE OF SOCOME/C MANUFACTURE	S98057-138	C	FCU CONTROLLER ADDED FOR OPTIMISER SIGNAL
4. CONTROL CABLES TO BE FITTED WITH CORD END TERMINALS, PIN, OR FORK, CONFIGURATION, DEPENDING ON TYPE OF CONNECTION.	4. MCB'S, AND MCCB'S TO BE OF MERLIN GERIN, OR SIEMENS MANUFACTURE.	S98057-139	O	GENERAL ARRANGEMENT AND LABEL DETAILS
5. ALL CABLES TO 16mm TO BE COLOUR CODED AS FOLLOWS:- 400 VOLTS L1-L2-L3. - RED, YELLOW, BLUE 230 VOLTS NEUTRAL - BLACK LOW VOLTAGE A.C. - BROWN EXTRA LOW VOLTAGE D.C. - GREY 115 VOLTS A.C. - ORANGE	5. ALL OUTGOING TERMINALS TO BE OF ENTRELEC MANUFACTURE.			
6. ALL CABLES ABOVE 16mm TO BE BLACK WITH ENDS HEAT SHRINK COLOUR CODED PHASE IDENTIFICATION.	6. ALL PILOT LIGHTS TO BE OF TRANILAMP MANUFACTURE.			
7. ALL CONTROL CABLES TO BE IDENTIFIED AT EACH END BY THE USE OF COLOUR CODED FERRULES. THE NUMBERS ARE SHOWN THUS ON THE DIAGRAM - '105'	7. SELECTOR SWITCHES TO BE OF TELEMECANIQUE MANUFACTURE.			
8. FINAL CABLE NO. '124'	8. CONTROL RELAYS TO BE FINDER 55.34.			
9. WHEN A CABLE CONNECTS TO AN OUTGOING TERMINAL THE CABLE IDENTIFICATION NUMBER IS THE SAME AS THE TERMINAL NUMBER.	9. TIME DELAY RELAYS TO BE FINDER 85.34.			
10. FINAL TERMINAL No. POWER/230VAC - 18 FINAL TERMINAL No. ELVDC/24VAC - 85	10. WHERE HRC FUSE CARRIERS ARE INDICATED ON THE SCHEMATIC DIAGRAM THE CARRIERS ARE TO BE OF GEC MANUFACTURE.			
	FIELD WIRING NOTES			
	1. NETWORK CABLE TO BE BELDEN 9501/9502			
	2. SENSOR CABLE TO BE BELDEN 9501			



DRAWING INDEX EQUIPMENT SCHEDULE/NOTES FOR SMOKE DAMPER CONTROL PANEL SCP/G/S	ID	DATE	ITEM	QTY	REF/	SEC	DATE	TITLE	SYNCHRONISED SYSTEMS  HORTON ROAD, COLNBROOK, SLOUGH, BERKSHIRE TEL: 01753 738000 - FAX: 01753 771001
	A	17/12/98	SPACE TEMP. SENSOR REMOVED	DO	OPENED	REV	21/08/98		
	B	22/12/98	DAMPERS CHANGED TO 230VAC	DO	CLOSED	REV			
	C	13/07/98	FCU CONTROLLER ADDED FOR OPTIMISER SIGNAL	MAP	DOED	REV			

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CLIENT	BENCHMARK GROUP PLC	PROJECT	5 - 7 CARLTON GARDENS	DRG No.	S98057-135	ISSUE	C
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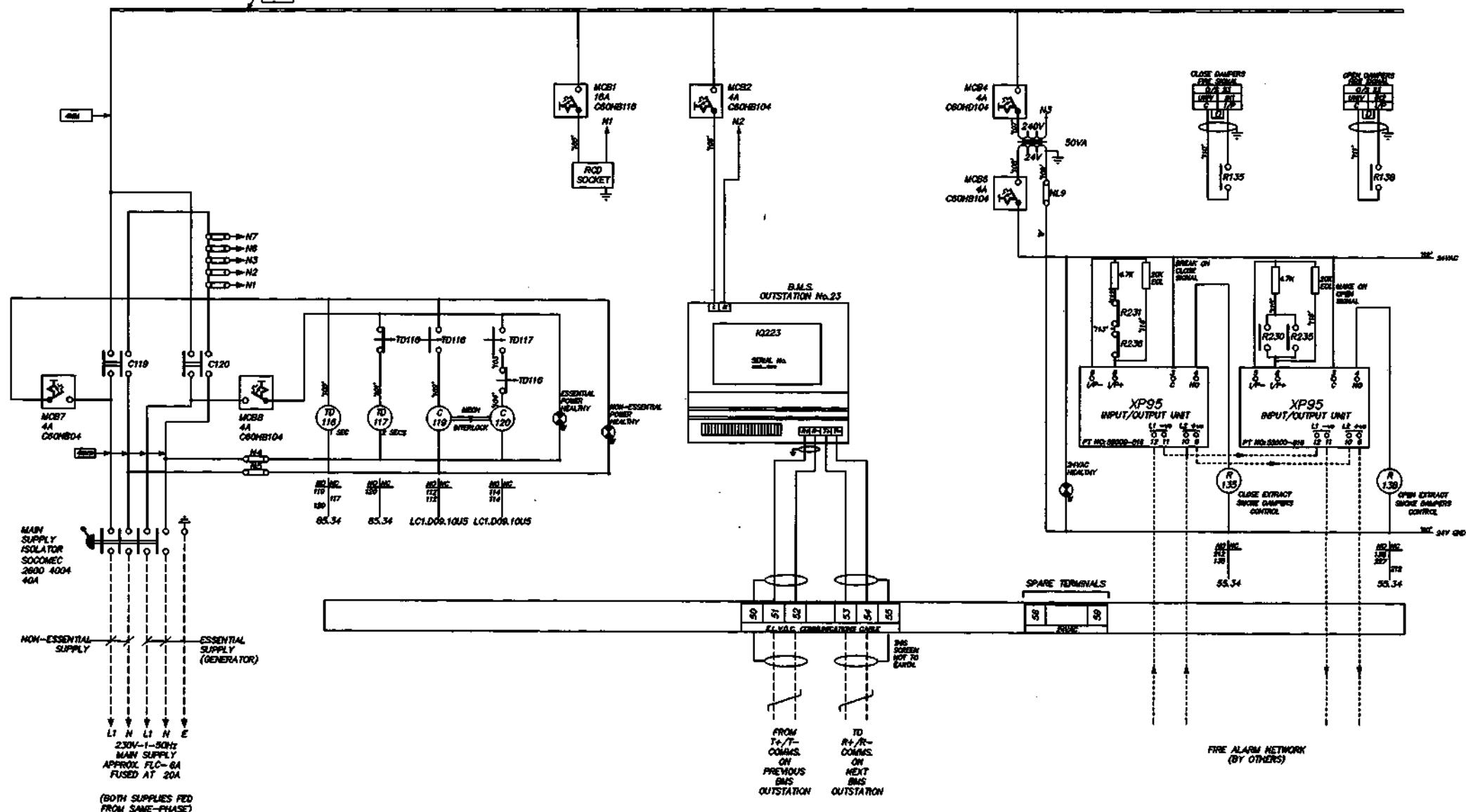
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ORG No. S98057-136



DATE	DETAIL	#	OWNER
22/12/98	DAMPERS CHANGED TO 230VAC	DO	SP
			GATED
			OWNER
			DS

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**SCHEMATIC WIRING DIAGRAM  
AND EXTERNAL FIELD WIRING FOR  
SMOKE DAMPER CONTROL PANEL  
SCP/G/S  
(SHEET 1 OF 3)**



HORTON ROAD, COLNBROOK, SLOUGH, BERKSHIRE  
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CLIENT

BENCHMARK GROUP PLC

**PROJECT**

5-7 CARLTON GARDENS

DBG No

S98057-136

ISSUE

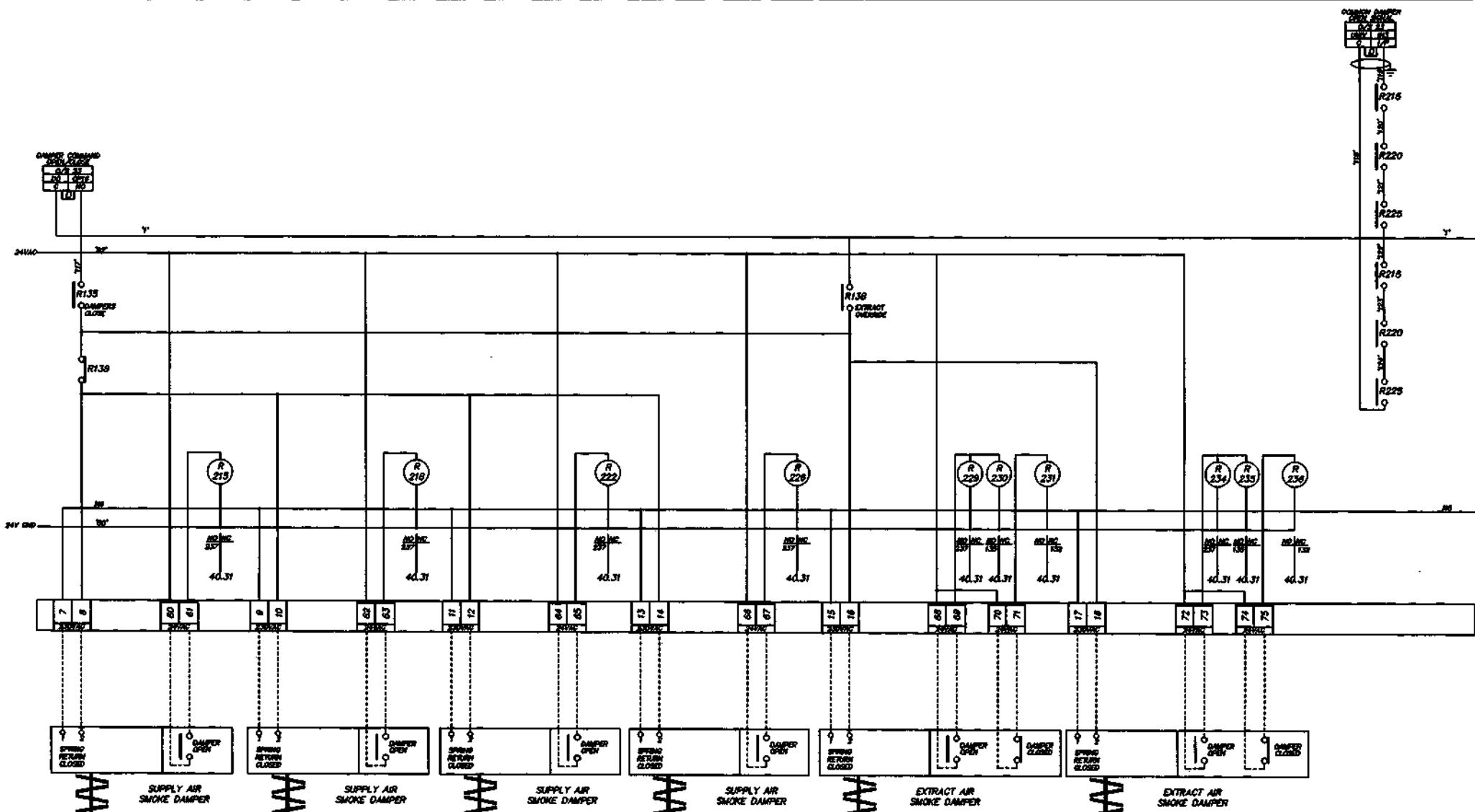
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DRG No. S98057-137



NO	DATE	ITEM	NO	DATE
A	22/12/98	DAMPER CHANGED TO 230VAC	DO	21/08/98
			DSO	

SCHEMATIC WIRING DIAGRAM  
AND EXTERNAL FIELD WIRING FOR  
SMOKE DAMPER CONTROL PANEL  
SCP/G/S  
(SHEET 2 OF 3)

HORTON ROAD, COLNBROOK, SLOUGH, BERKSHIRE  
TEL: 01753 738000 FAX: 01753 771001

310

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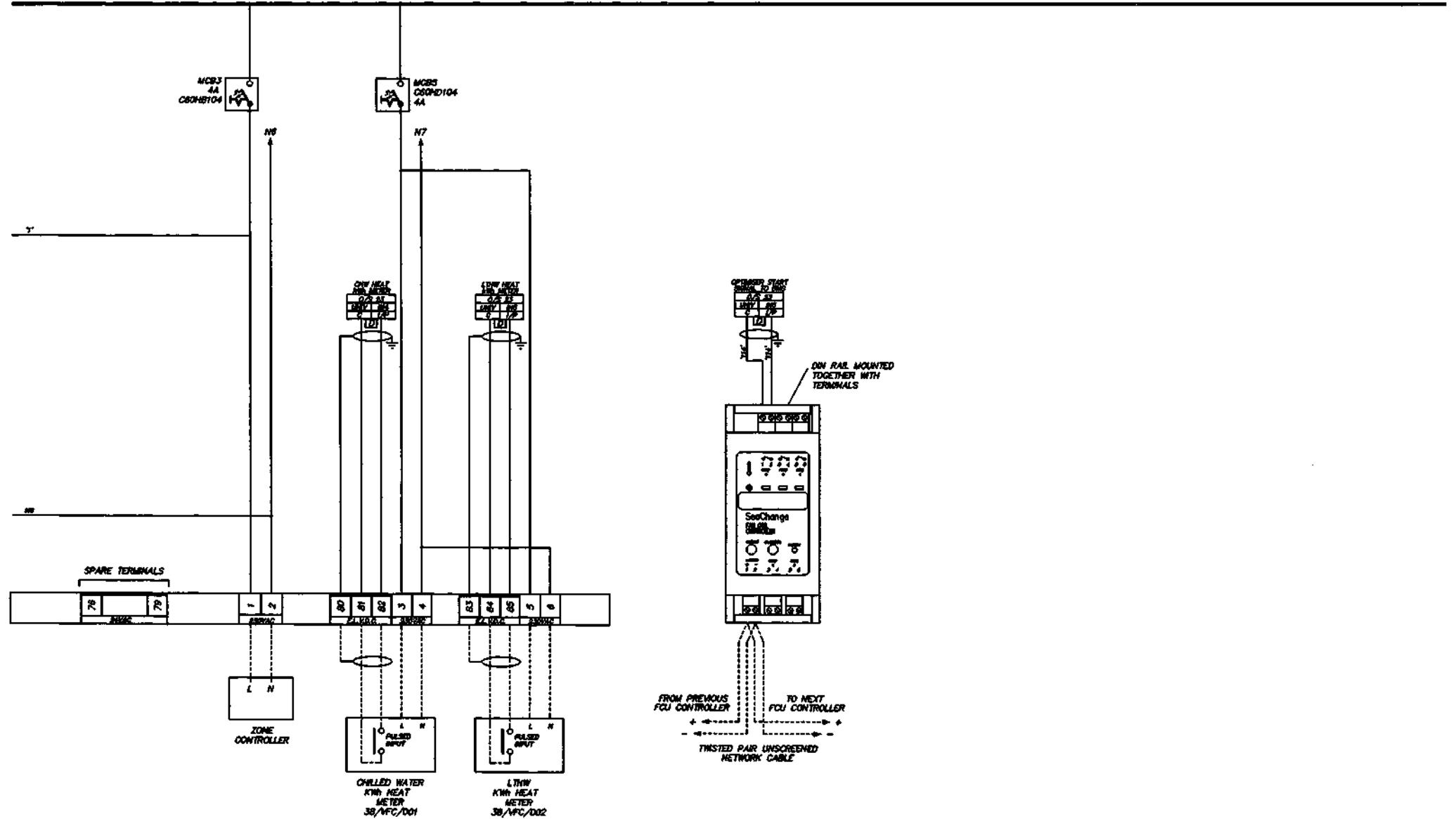
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0 1 2 3 4 5 6 7 8 9

DRG No. S98057-138



#

DATE

ITEM

#

DATE

TITLE

SCHEMATIC WIRING DIAGRAM  
AND EXTERNAL FIELD WIRING FOR  
SMOKE DAMPER CONTROL PANEL  
SCP/G/S  
(SHEET 3 OF 3)

**SYNCHRONISED**  
**SYSTEMS**

HORTON ROAD, COLNBROOK, SLOUGH, BERKSHIRE  
TEL: 01753 738000 FAX: 01753 771001

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BENCHMARK GROUP PLC

PROJECT

5-7 CARLTON GARDENS

DRG No.

S98057-138

ISSUE

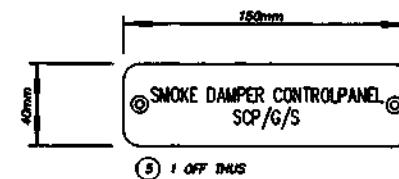
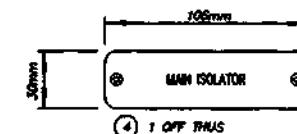
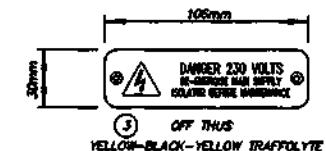
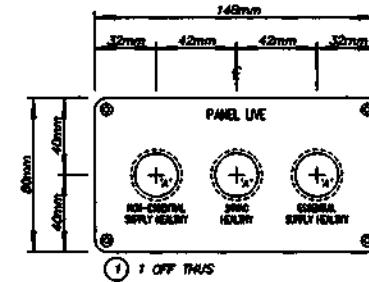
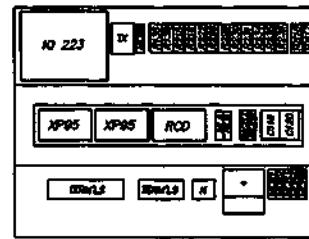
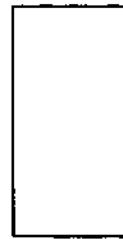
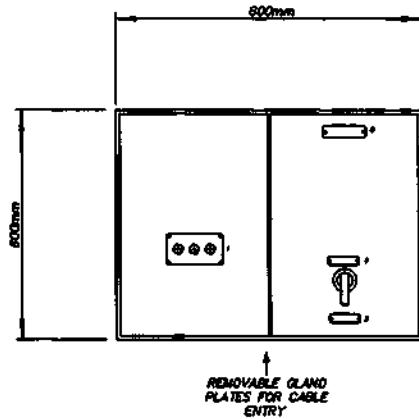
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0 1 2 3 4 5 6 7 8 9

0 1 2 3 4 5 6 7 8 9

0 1 2 3 4 5 6 7 8 9

DRG No. S98057-139



NOTES:

1. MATERIAL:  
DOORS/FRAMES - 2.0mm MILD STEEL  
EQUIPMENT PLATE - 2.5mm MILD STEEL
2. FINISH:  
RAL 7035 (Gloss)  
EQUIPMENT PLATES: WHITE SEMI-GLOSS
3. INGRESS PROTECTION RATING - IP54

NOTES:

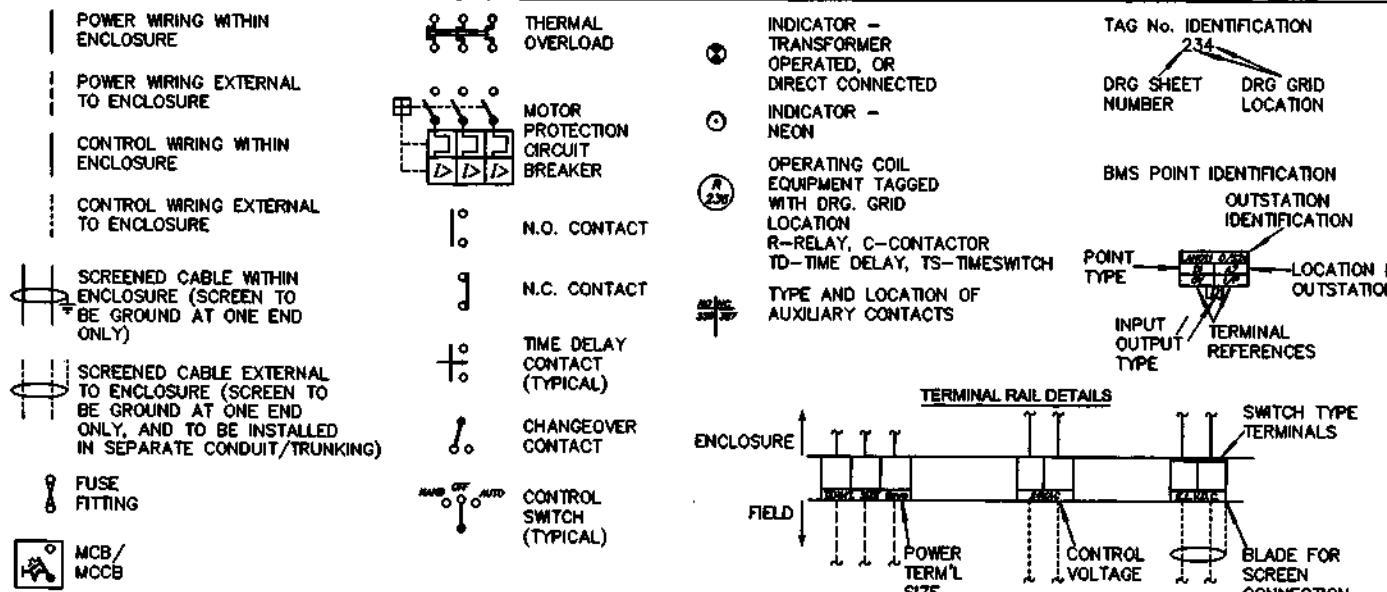
1. LABELS TO BE WHITE-BLACK-WHITE TRAFFOLYTE UNLESS OTHERWISE STATED
2. LABELS TO HAVE 5mm. RADIUS CORNERS.
3. MAIN TILES TO BE APPROX 5mm. HIGH, AND SUB-TILES APPROX 3mm. HIGH.
4. CUTOUT DETAILS: 'A' HOLES - 22.5mm DIA. (26.5mm BEVEL)  
SW Holes - 22.5mm DIA. (30mm BEVEL)

GENERAL ARRANGEMENT AND  
LABEL DETAILS FOR SMOKE  
DAMPER CONTROL PANEL  
SCP/G/S  
(SHEET 1 OF 1)

**SYNCHRONISED  
SYSTEMS**

HORTON ROAD, COLNBROOK, SLOUGH, BERKSHIRE  
TEL: 01753 738000 FAX: 01753 771001

WIRING NOTES	EQUIPMENT NOTES	DRAWING No.	ISSUE	DESCRIPTION
1. MINIMUM POWER WIRING 2.5mm	1. ALL STARTERS TO BE OF TELEMECANIQUE MANUFACTURE	S98057-141	A	MAIN SUPPLIES / BMS OUTSTATION / 24VAC CCT
2. MINIMUM CONTROL WIRING 1.0mm	2. MAIN SUPPLY ISOLATORS TO BE OF SOCOME/C/TELEMECANIQUE MANUFACTURE	S98057-142	B	FCU CONTROLLER ADDED FOR OPTIMISER SIGNAL
3. POWER CABLES TO BE FITTED WITH CORD END TERMINALS, OR LUGS, DEPENDING ON SIZE, AND TYPE OF CONNECTION.	3. FUSE SWITCHES TO BE OF SOCOME/C MANUFACTURE	S98057-143		SPARE
4. CONTROL CABLES TO BE FITTED WITH CORD END TERMINALS, PIN, OR FORK, CONFIGURATION, DEPENDING ON TYPE OF CONNECTION.	4. MCB'S, AND MCCB'S TO BE OF MERLIN GERIN, OR SIEMENS MANUFACTURE.	S98057-144	O	GENERAL ARRANGEMENT AND LABEL DETAILS
5. ALL CABLES TO 16mm TO BE COLOUR CODED AS FOLLOWS:- 400 VOLTS L1,L2,L3. - RED, YELLOW, BLUE 230 VOLTS NEUTRAL - BLACK LOW VOLTAGE A.C. - BROWN EXTRA LOW VOLTAGE D.C. - GREY 115 VOLTS A.C. - ORANGE	5. ALL OUTGOING TERMINALS TO BE OF ENTRELEC MANUFACTURE.			
6. ALL CABLES ABOVE 16mm TO BE BLACK WITH ENDS HEAT SHRINK COLOUR CODED PHASE IDENTIFICATION.	6. ALL PILOT LIGHTS TO BE OF TRANILAMP MANUFACTURE.			
7. ALL CONTROL CABLES TO BE IDENTIFIED AT EACH END BY THE USE OF COLOUR CODED FERRULES. THE NUMBERS ARE SHOWN THUS ON THE DIAGRAM - '105'	7. SELECTOR SWITCHES TO BE OF TELEMECANIQUE MANUFACTURE.			
8. FINAL CABLE No. '120'	8. CONTROL RELAYS TO BE FINDER 55.34.			
9. WHEN A CABLE CONNECTS TO AN OUTGOING TERMINAL THE CABLE IDENTIFICATION NUMBER IS THE SAME AS THE TERMINAL NUMBER.	9. TIME DELAY RELAYS TO BE FINDER 85.34.			
10. FINAL TERMINAL No. POWER/230VAC - 6 FINAL TERMINAL No. ELVDC/24VAC - 83	10. WHERE HRC FUSE CARRIERS ARE INDICATED ON THE SCHEMATIC DIAGRAM THE CARRIERS ARE TO BE OF GEC MANUFACTURE.			



DRAWING INDEX EQUIPMENT SCHEDULE/NOTES FOR SMOKE DAMPER CONTROL PANEL SCP/1/E	REF	DATE	ITEM	REF	DATE	TITLE	SYNCHRONISED SYSTEMS  HORTON ROAD, COLNBROOK, SLOUGH, BERKSHIRE TEL: 01753 738000 FAX: 01753 771001
	A	08/01/99	DAMPER CHARGED TO 230VAC & SPACE SENSOR REMOVED	DO	21/06/98		
	B	13/07/99	FCU CONTROLLER ADDED FOR OPTIMISER SIGNAL	MAP			

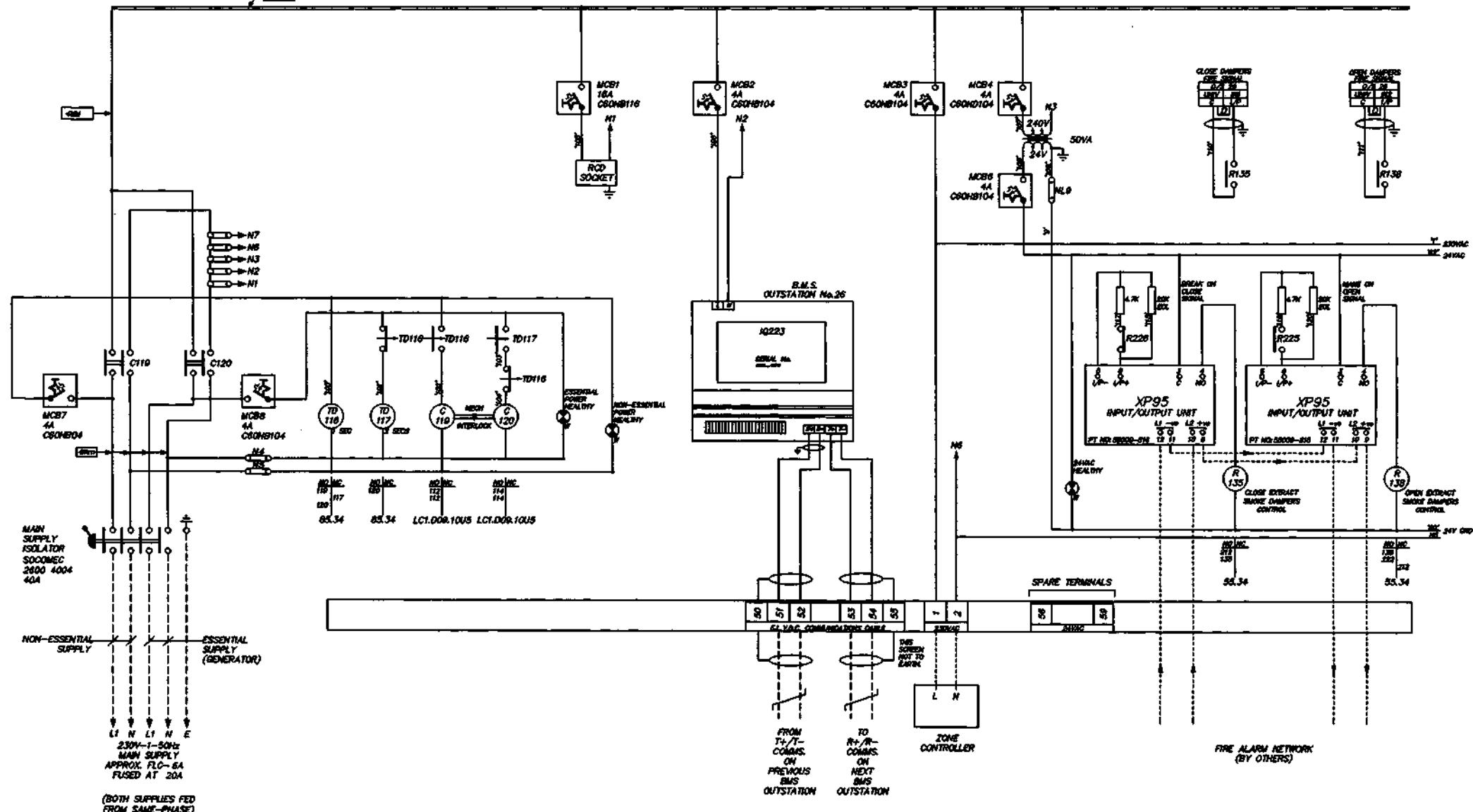
110

120

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0 1 2 3 4 5 6 7 8 9 0 1 2 3 4 5 6 7 8 9 0 1 2 3 4 5 6 7 8 9

DRG No. S98057-141



ITEM	DATE	DETAILS
A	25/01/98	DAMPERS CHANGED TO 230VAC

29

**SCHEMATIC WIRING DIAGRAM  
AND EXTERNAL FIELD WIRING FOR  
SMOKE DAMPER CONTROL PANEL  
SCP/1/E  
(SHEET 1 OF 2)**



MORTON ROAD, COLNBROOK, SLOUGH, BERKSHIRE  
TEL: 01753 738000 FAX: 01753 771001

BENCHMARK GROUP PLC

**PROJECT 5-7 CARLTON GARDENS**

DRG No. S98057-141

ISSUE

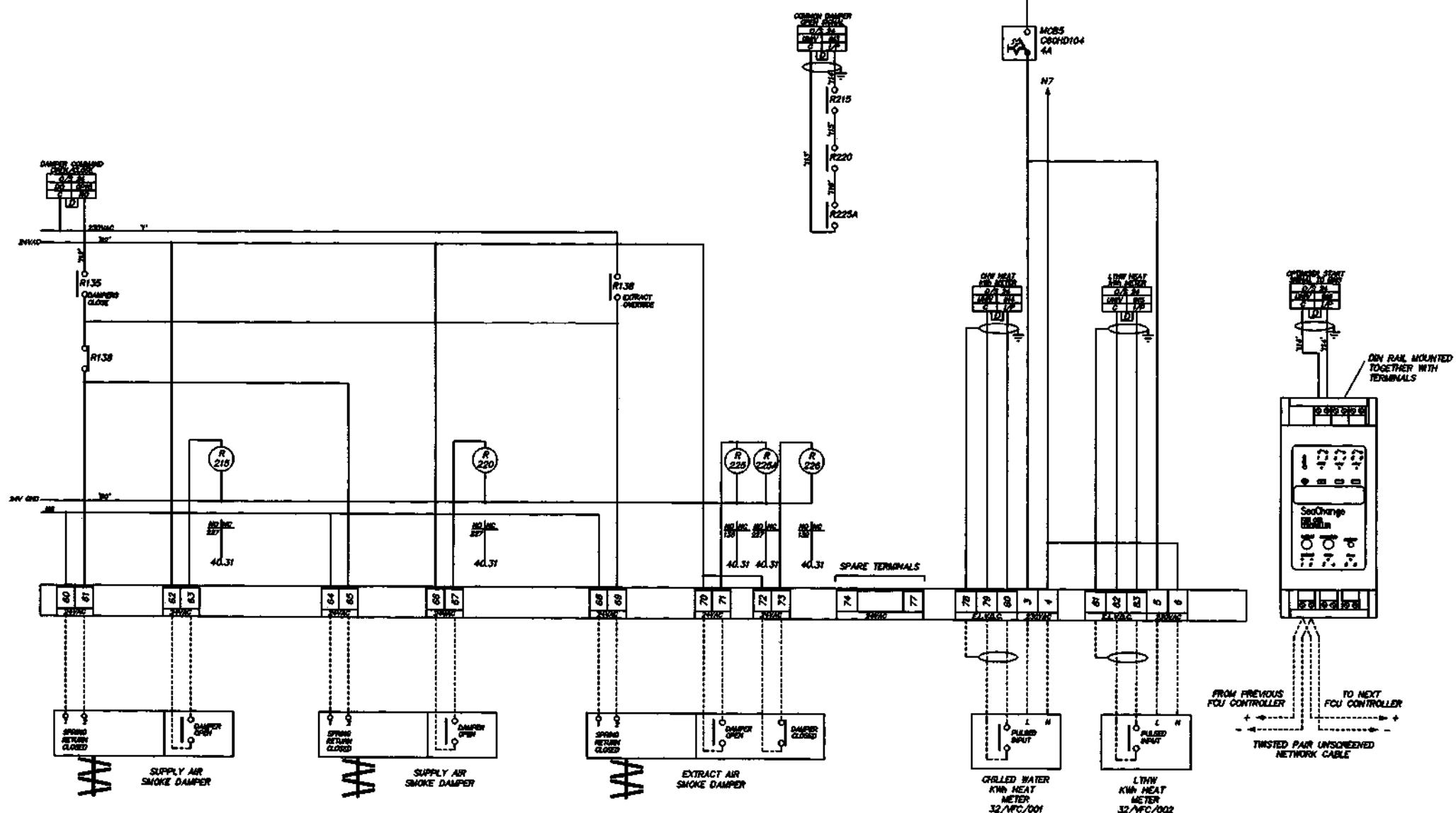
210

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230

0 1 2 3 4 5 6 7 8 9 0 1 2 3 4 5 6 7 8 9 0 1 2 3 4 5 6 7 8 9

DRG No. S98057-142



REC	DATE	DETAIL
A	09/01/99	DAMPERS CHANGED TO 230VAC & SPACE SENSOR REMOVED
B	13/07/99	FOU CONTROLLER ADDER FOR OPTIMISER SIGNAL

	00	DATA SDC	DATE 21/08/
	00	DATA SDC	DATE 21/08/
	MAP	ENGINEER SDC	DATE 21/08/

**SCHEMATIC WIRING DIAGRAM  
AND EXTERNAL FIELD WIRING FOR  
SMOKE DAMPER CONTROL PANEL  
SCP/1/E  
(SHEET 2 OF 2)**



HORTON ROAD, COLNBROOK, SLOUGH, BERKSHIRE  
TEL: 01753 738000 FAX: 01753 771001

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CLIENT

BENCHMARK GROUP PLC

PROJECT

5-7 CARLTON GARDENS

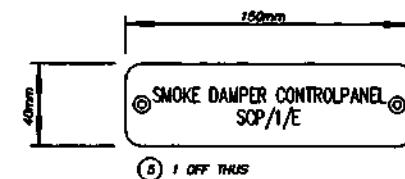
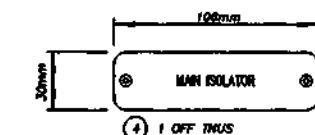
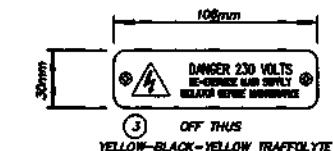
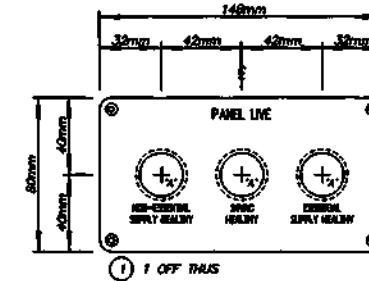
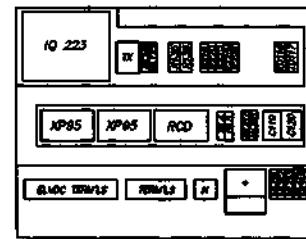
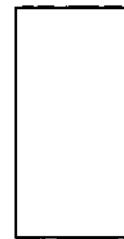
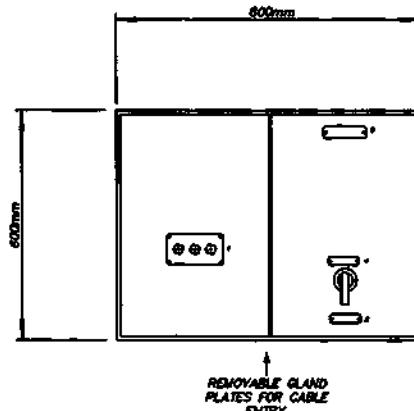
DEG No

S98057-142

ISSUE

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DRG No. S98057-144



NOTES:  
 1. MATERIAL:  
 DOORS/FRAME - 2.0mm MILD STEEL  
 EQUIPMENT PLATE - 2.0mm MILD STEEL  
 2. FINISH:  
 RAL 7035 (Gloss)  
 3. EQUIPMENT PLATES: WHITE SEMI-GLOSS  
 4. INGRESS PROTECTION RATING - IP54

NOTES:  
 1. LABELS TO BE WHITE-BLACK-WHITE TRAFFOLYTE UNLESS OTHERWISE STATED  
 2. LABELS TO HAVE 9MM. RADIUS CORNERS.  
 3. MAIN TILES TO BE APPROX. 50MM HIGH,  
 AND SUB-TILES APPROX. 30MM HIGH.  
 4. CUTOUT DETAILS: "A" HOLES - 22.5mm DIA. (26.5mm BEZEL)  
 SWF HOLES - 22.5mm DIA. (30mm BEZEL)

REF	NAME	DETAIL	#	DRAWN BY CHECKED BY APPROVED BY DRAFTED BY	DATE 21/08/98 DATE DATE DATE	TITLE	GENERAL ARRANGEMENT AND LABEL DETAILS FOR SMOKE DAMPER CONTROL PANEL SCP/1/E (SHEET 1 OF 1)		SYNCHRONISED SYSTEMS HORTON ROAD, COLNBROOK, SLOUGH, BERKSHIRE TEL: 01753 738000 FAX: 01753 771001	
							CLIENT	PROJECT		
							BENCHMARK GROUP PLC	5-7 CARLTON GARDENS		
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DRG No. S98057-144

ISSUE 0

ITEM		DESCRIPTION	ISSUE DATE	REVISION	DATE	CONNECTION	TITLE
A	08/07/99	DAMPERS CHANGED TO 230VAC & SPACE SENSOR REMOVED		A	SBC	21/08/99	
B	13/07/99	FOU CONTROLLER ADDED FOR OPTIMISED SIGNAL		NAP	SBC	DATE	
					DSD	SCALE	
							DRAWING INDEX EQUIPMENT SCHEDULE/NOTES FOR SMOKE DAMPER CONTROL PANEL SCP/1/W



HORTON ROAD, COLNBROOK, SLOUGH, BERKSHIRE  
TEL: 01753 738000 FAX: 01753 771001

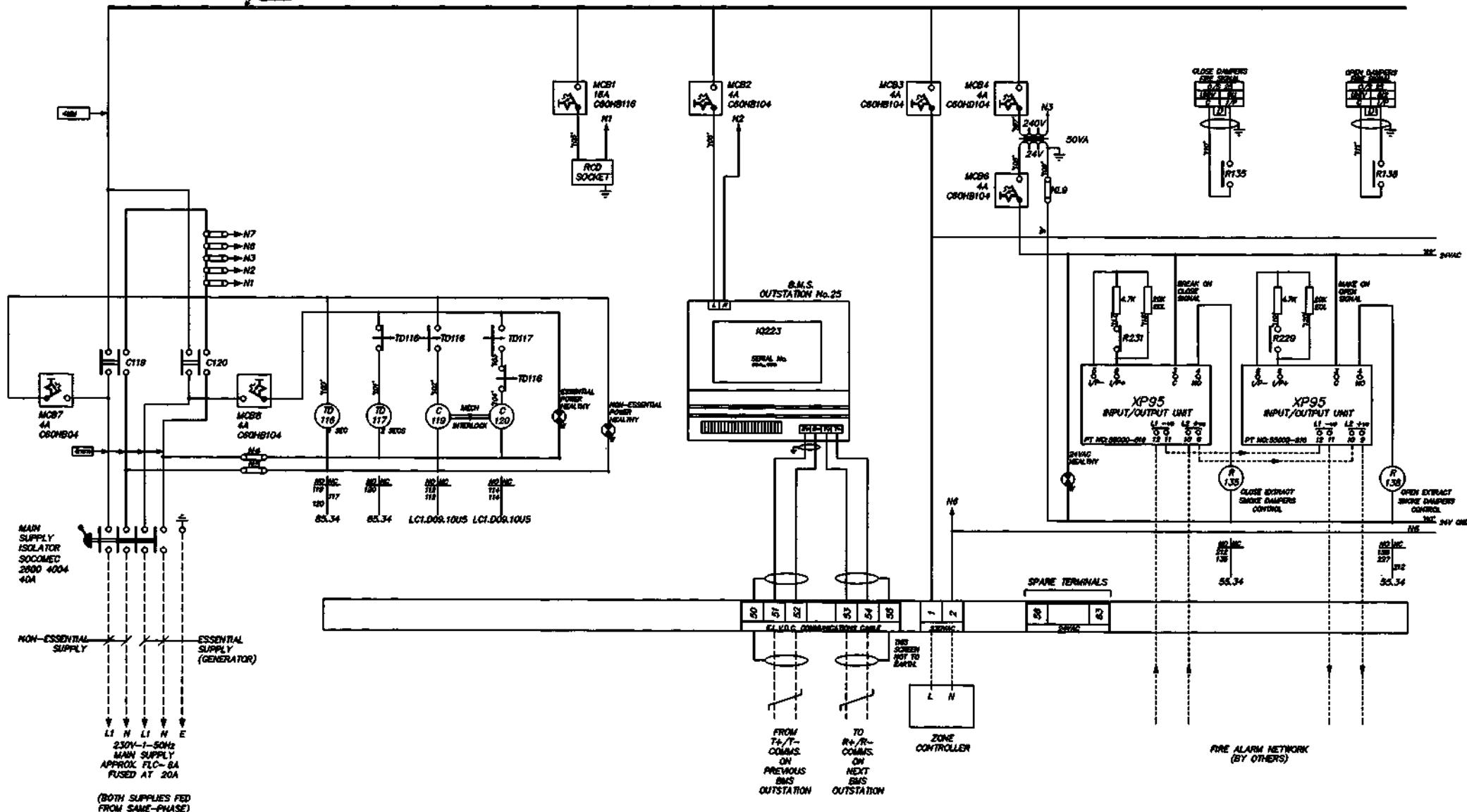
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DRG No. S98057-146



	as
	A

DATE	DETAIL	ID	DISP.
09/01/99	DAMPERS CHANGED TO 230VAC	DO	OPEN
			PEN
			PEN
			PEN

100

**SCHEMATIC WIRING DIAGRAM  
AND EXTERNAL FIELD WIRING FOR  
SMOKE DAMPER CONTROL PANEL  
SCP/1/W  
(SHEET 1 OF 2)**



HORTON ROAD, COLNBROOK, SLOUGH, BERKSHIRE  
TEL: 01753 738000 FAX: 01753 771001

BENCHMARK GROUP PLC

**PROJECT** 5-7 CARLTON GARDEN

ORG No. 608053-146

**ISSUE**

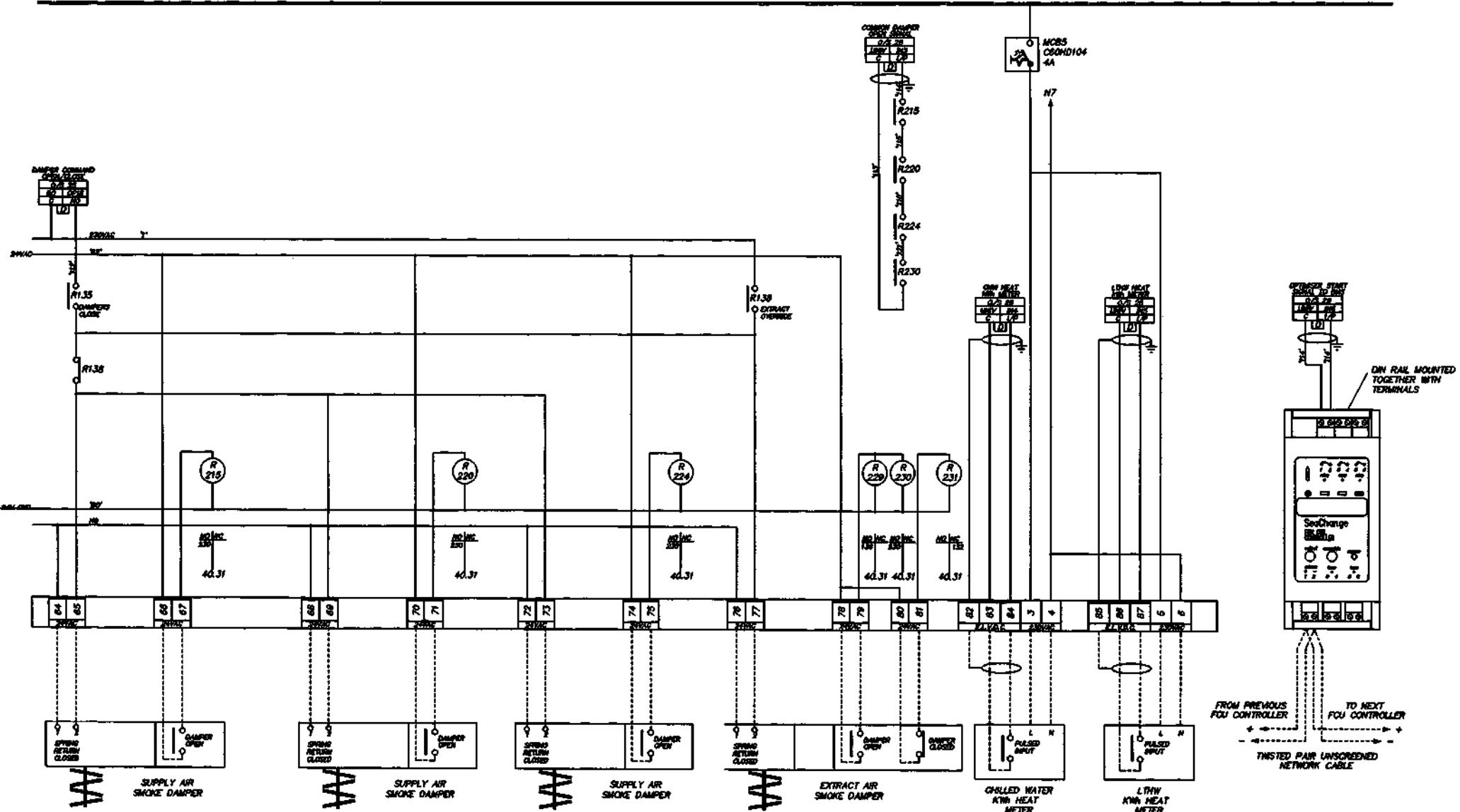
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230.

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DRG No. S98057-147



	DATE	DETAIL		DRG NO.	SDC	DATE
A	09/01/98	DAMPERS CHANGED TO 230VAC SPACE SENSOR REMOVED	A	CHRS0	DATE	21/08/98
B	13/07/98	FOU CONTROLLER ADDED FOR OPTIMISER SIGNAL	MAP	CHRS0	DATE	

TITLE

SCHEMATIC WIRING DIAGRAM  
AND EXTERNAL FIELD WIRING FOR  
SMOKE DAMPER CONTROL PANEL  
SCP/1/W  
(SHEET 2 OF 2)

HORTON ROAD, COLNBROOK, SLOUGH, BERKSHIRE  
TEL: 01753 738000  
FAX: 01753 771001

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OR ALIENED IN WHOLE OR PART WITHOUT THE PRIOR PERMISSION OF THAT COMPANY

CLIENT

BENCHMARK GROUP PLC

PROJECT

5-7 CARLTON GARDENS

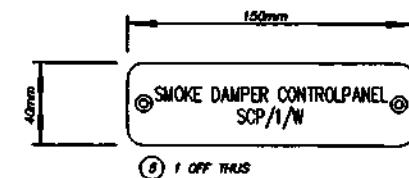
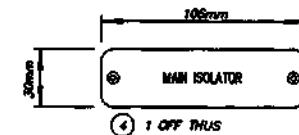
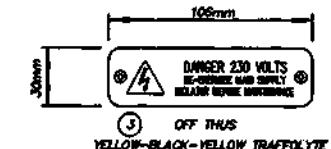
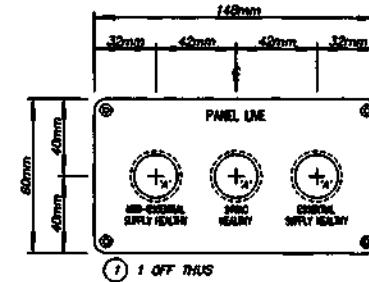
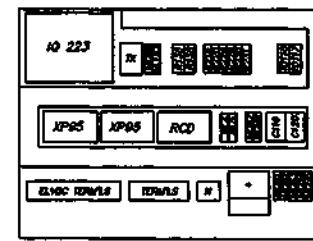
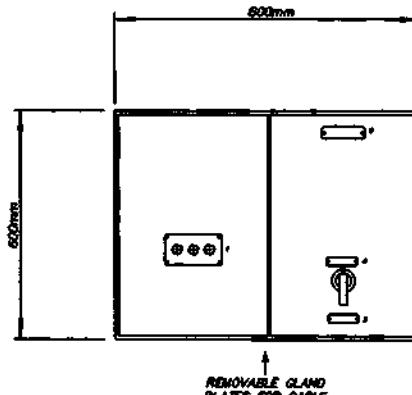
DRG No.

S98057-147

ISSUE B

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DRG No. S98057-149



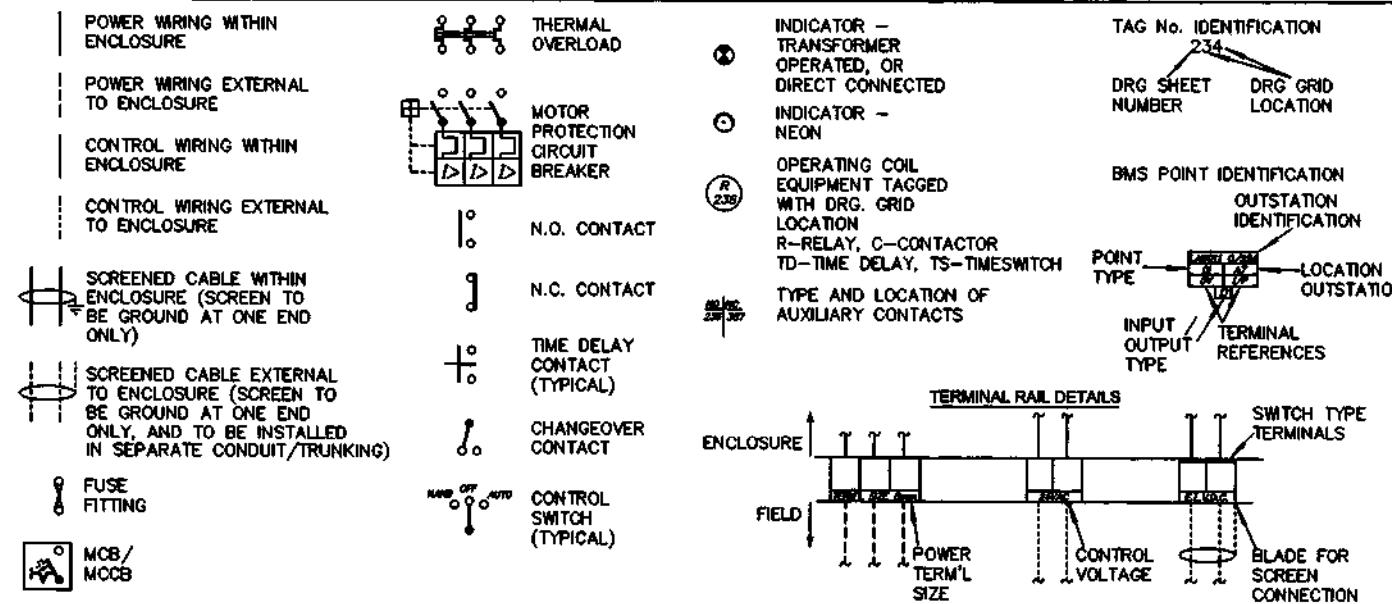
NOTES

- MATERIAL:  
DOORS/FRAME - 2.0mm MILD STEEL  
EQUIPMENT PLATE - 2.5mm MILD STEEL  
FINISH - RAL 7035 (GREY)
- EQUIPMENT PLATES: WHITE SEMI-GLOSS
- INGRESS PROTECTION RATING - IP54

NOTES

- LABELS TO BE WHITE-BLACK-WHITE TRAFFOLYTE UNLESS OTHERWISE STATED
- LABELS TO HAVE 6mm RADIUS CORNERS AND APPROX 1.5mm FIXING HOLES
- MAIN TITLES TO BE APPROX 3mm HIGH, AND SUB-TITLES APPROX 3mm HIGH
- CUTOUT DETAILS: 'A' HOLES - 22.5mm DIA. (26.5mm BEVEL)  
'S' HOLES - 22.5mm DIA. (30mm BEVEL)

WIRING NOTES	EQUIPMENT NOTES	DRAWING No.	ISSUE	DESCRIPTION
1. MINIMUM POWER WIRING 2.5mm	1. ALL STARTERS TO BE OF TELEMECANIQUE MANUFACTURE	S98057-151	B	MAIN SUPPLIES / BMS OUTSTATION / 24VAC CCT
2. MINIMUM CONTROL WIRING 1.0mm	2. MAIN SUPPLY ISOLATORS TO BE OF SOCOMEC/TELEMECANIQUE MANUFACTURE	S98057-152	C	FCU CONTROLLER ADDED FOR OPTIMISER SIGNAL
3. POWER CABLES TO BE FITTED WITH CORD END TERMINALS, OR LUGS, DEPENDING ON SIZE, AND TYPE OF CONNECTION.	3. FUSE SWITCHES TO BE OF SOCOMEC MANUFACTURE	S98057-153		SPARE
4. CONTROL CABLES TO BE FITTED WITH CORD END TERMINALS, PIN, OR FORK, CONFIGURATION, DEPENDING ON TYPE OF CONNECTION.	4. MCB'S, AND MCCB'S TO BE OF MERLIN GERIN, OR SIEMENS MANUFACTURE.	S98057-154	B	GENERAL ARRANGEMENT AND LABEL DETAILS
5. ALL CABLES TO 16mm TO BE COLOUR CODED AS FOLLOWS:- 400 VOLTS L1,L2,L3. - RED, YELLOW, BLUE 230 VOLTS NEUTRAL - BLACK LOW VOLTAGE A.C. - BROWN EXTRA LOW VOLTAGE D.C. - GREY 115 VOLTS A.C. - ORANGE	5. ALL OUTGOING TERMINALS TO BE OF ENTRELEC MANUFACTURE.			
6. ALL CABLES ABOVE 16mm TO BE BLACK WITH ENDS HEAT SHRINK COLOUR CODED PHASE IDENTIFICATION.	6. ALL PILOT LIGHTS TO BE OF TRANILAMP MANUFACTURE.			
7. ALL CONTROL CABLES TO BE IDENTIFIED AT EACH END BY THE USE OF COLOUR CODED FERRULES. THE NUMBERS ARE SHOWN THUS ON THE DIAGRAM - '105'	7. SELECTOR SWITCHES TO BE OF TELEMECANIQUE MANUFACTURE.			
8. FINAL CABLE No. '125'	8. CONTROL RELAYS TO BE FINDER 55.34.			
9. WHEN A CABLE CONNECTS TO AN OUTGOING TERMINAL THE CABLE IDENTIFICATION NUMBER IS THE SAME AS THE TERMINAL NUMBER.	9. TIME DELAY RELAYS TO BE FINDER 85.34.			
10. FINAL TERMINAL No. POWER/230VAC - 12 FINAL TERMINAL No. ELVDC/24VAC - 83	10. WHERE HRC FUSE CARRIERS ARE INDICATED ON THE SCHEMATIC DIAGRAM THE CARRIERS ARE TO BE OF GEC MANUFACTURE.			
	FIELD WIRING NOTES			
	1. NETWORK CABLE TO BE BELDEN 9501/9502			
	2. SENSOR CABLE TO BE BELDEN 9501			



#	DATE	ITEM
A	25/01/99	DAMPERS CHANGED TO 230VAC SEACHANGE REPEATER MODULE ADDED
B	14/02/99	AS FITTED AND TESTED
C	13/07/99	FCU CONTROLLER ADDED FOR OPTIMISER SIGNAL

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13

BENCHMARK GROUP PLC

**DRAWING INDEX  
EQUIPMENT SCHEDULE/NOTES  
FOR  
SMOKE DAMPER CONTROL PANEL  
SCP/2/E**

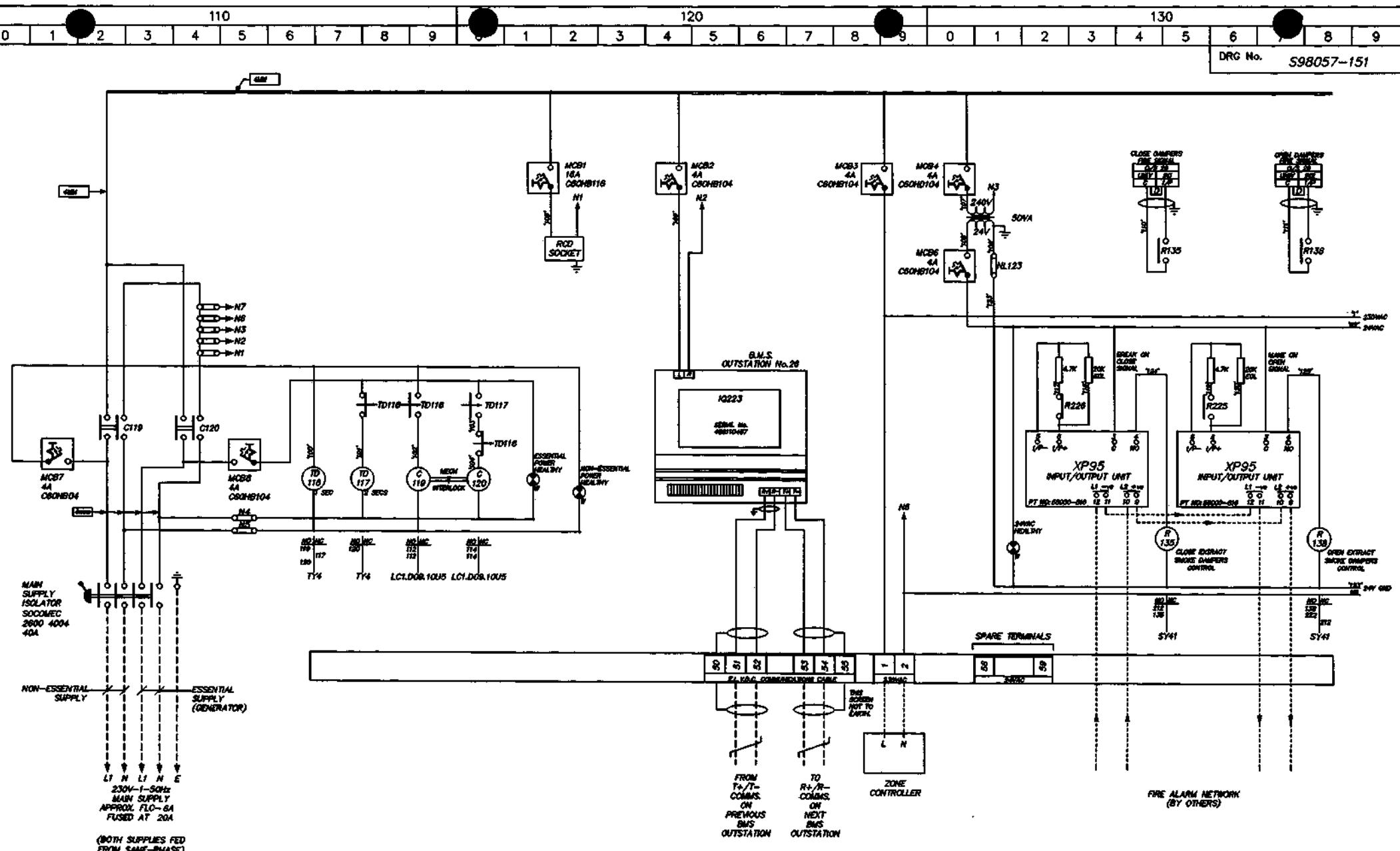


HORTON ROAD, COLNBROOK, SLOUGH, BERKSHIRE  
TEL: 01753 738000 FAX: 01753 771001

FAX: 01753 771001

5 - 7 CARLTON GARDENS

DRG No. S98057-150 ISSUE C



	DATE	DETAIL
1	25/01/99	DAMPERS CHANGED TO 230VAC
2	14/02/99	AS FITTED AND TESTED

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-CLIENT

BENCHMARK GROUP PLC

**SCHEMATIC WIRING DIAGRAM  
AND EXTERNAL FIELD WIRING FOR  
SMOKE DAMPER CONTROL PANEL**



HORTON ROAD, COLNBROOK, SLOUGH, BERKSHIRE  
TEL: 01753 738000 FAX: 01753 771001

PROJECT 5-7 CAMP TOW GARDENS

**DRG No.**

SAB057-151

ISSUE

210

220

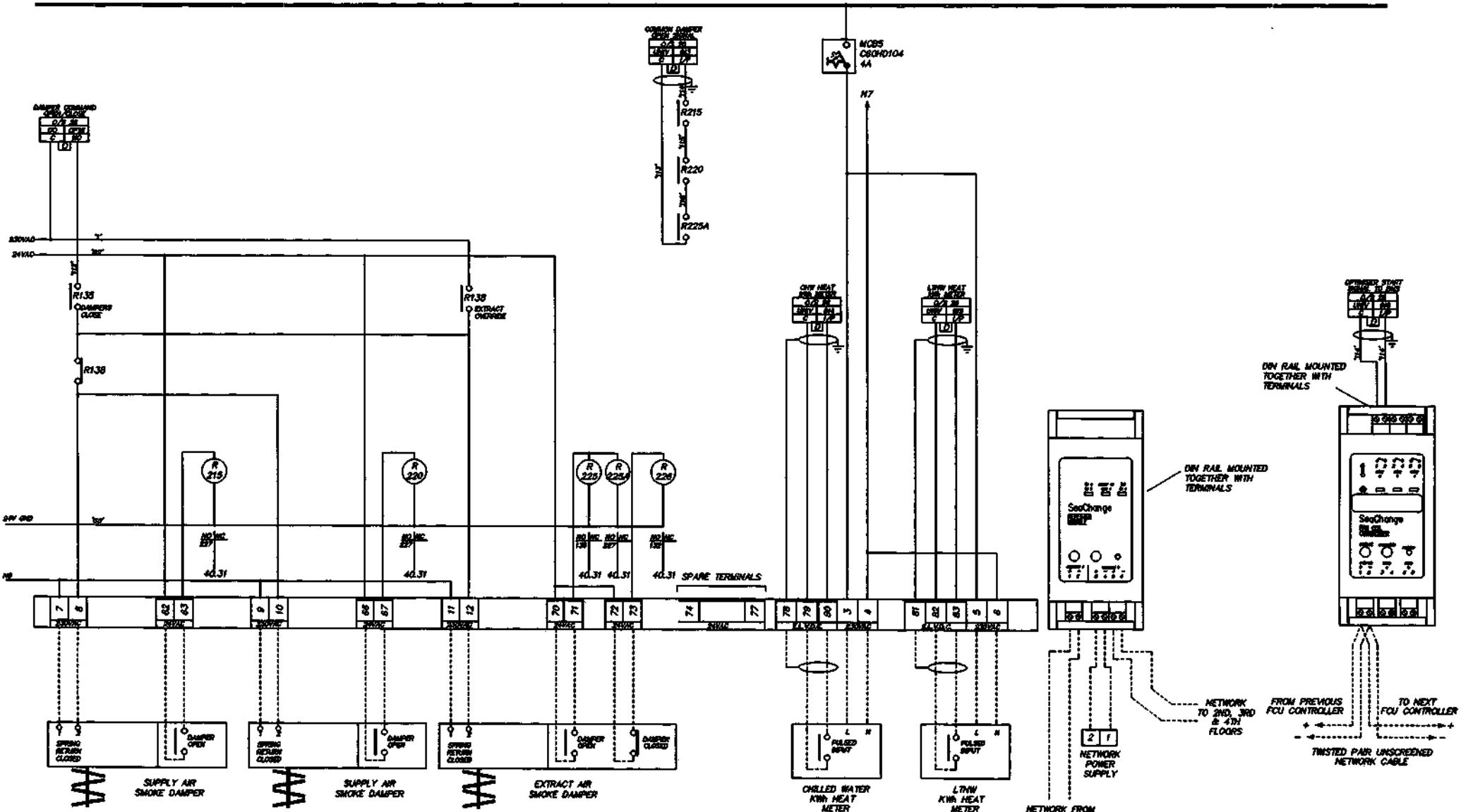
230

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DRG No. S98057-152



NO	DATE	DETAIL	BY	BRANCH	DATE
A	25/01/99	DAMPERS CHANGED TO 230VAC SEACHANGE REPEATER MODULE ADDED	GAW	SBC	21/08/99
B	14/02/99	AS FITTED AND TESTED	MJW	OMERED	DATE
C	13/07/99	FCU CONTROLLER ADDED FOR OPTIMISER SIGNAL	MAP	OSO	DATE

80

**SCHEMATIC WIRING DIAGRAM  
AND EXTERNAL FIELD WIRING FOR  
SMOKE DAMPER CONTROL PANEL**  
**SCP/2/E**  
**(SHEET 2 OF 2)**



HORTON ROAD, COLNBROOK, SLOUGH, BERKSHIRE  
TEL: 01753 738000 FAX: 01753 771001

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## CLIENT

BENCHMARK GROUP PLC

PROJECT

5-7 CARLTON GARDEN

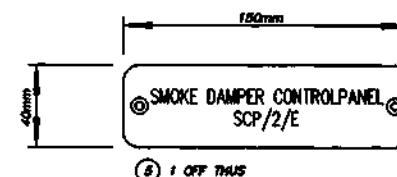
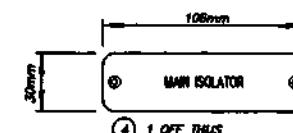
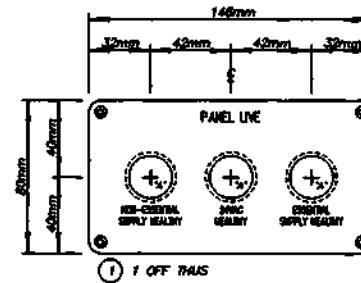
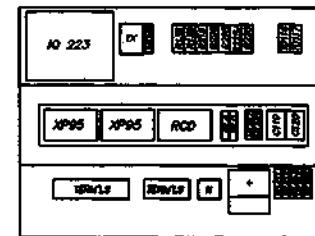
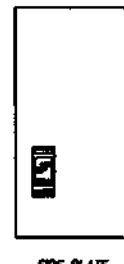
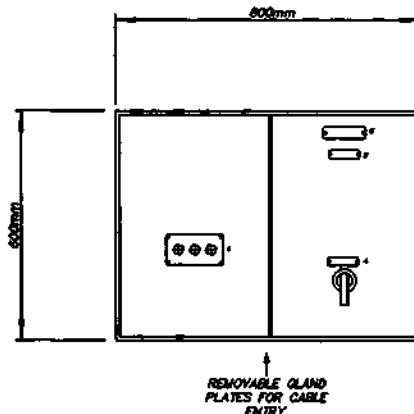
DRG N

S98057-152

ISSUE

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DRG No. S98057-154



NOTES

- MATERIAL:  
DOORS/FRAMES - 2.0mm MILD STEEL  
EQUIPMENT PLATE - 2.5mm MILD STEEL  
FINISH - RAL 7035 (GREY)
- EQUIPMENT PLATES: WHITE SEMI-GLOSS
- INGRESS PROTECTION RATING - IP54

NOTES

- LABELS TO BE WHITE-BLACK-WHITE TRAFFOLYTE UNLESS OTHERWISE STATED
- LABELS TO HAVE 6mm. RADIUS CORNERS, AND 3mm. CUTTING FUSING HOLES
- MAIN TITLE TO BE APPROX. 5mm HIGH, AND SUB-TITLES APPROX. 3mm HIGH
- CUTOUT DETAILS: 'A' HOLES - 22.5mm DIA. (26.5mm BEZEL)  
SW HOLES - 22.5mm DIA. (30mm BEZEL)

ID	DATE	INFO	IN	OWNER	SSC	DATE	TITLE		GENERAL ARRANGEMENT AND LABEL DETAILS FOR SMOKE DAMPER CONTROL PANEL SCP/2/E (SHEET 1 OF 1)	SYNCHRONISED SYSTEMS  HORTON ROAD, COLNBROOK, SLOUGH, BERKSHIRE TEL: 01753 738000 FAX: 01753 771001		
A	27/01/98	SEACHANGE REPEATER MODULE ADDED	A	OWNER	SSC	DATE						
B	14/02/98	AS FITTED AND TESTED	INFO	OWNER	SSC	DATE						
				OWNER	SSC	DATE						
				OWNER	SSC	DATE						

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OR ALTERED IN WHOLE OR PART WITHOUT THE prior permission of that company

CLIENT

BENCHMARK GROUP PLC

PROJECT

5-7 CARLTON GARDENS

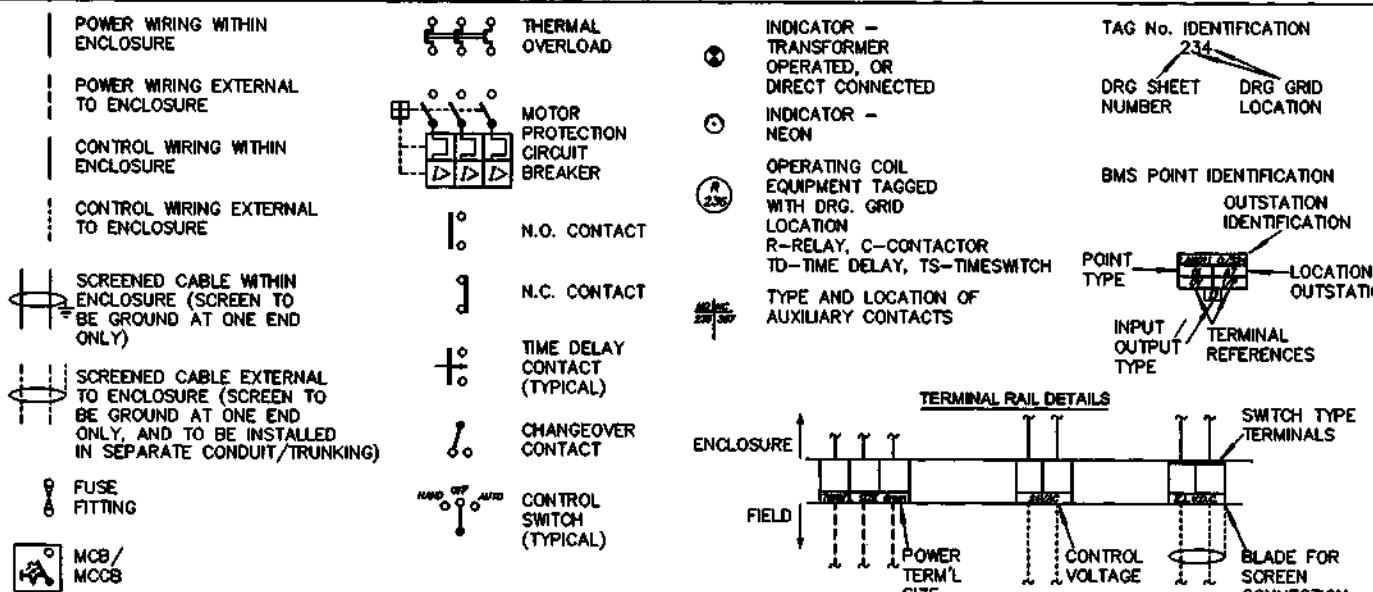
DRG No.

S98057-154

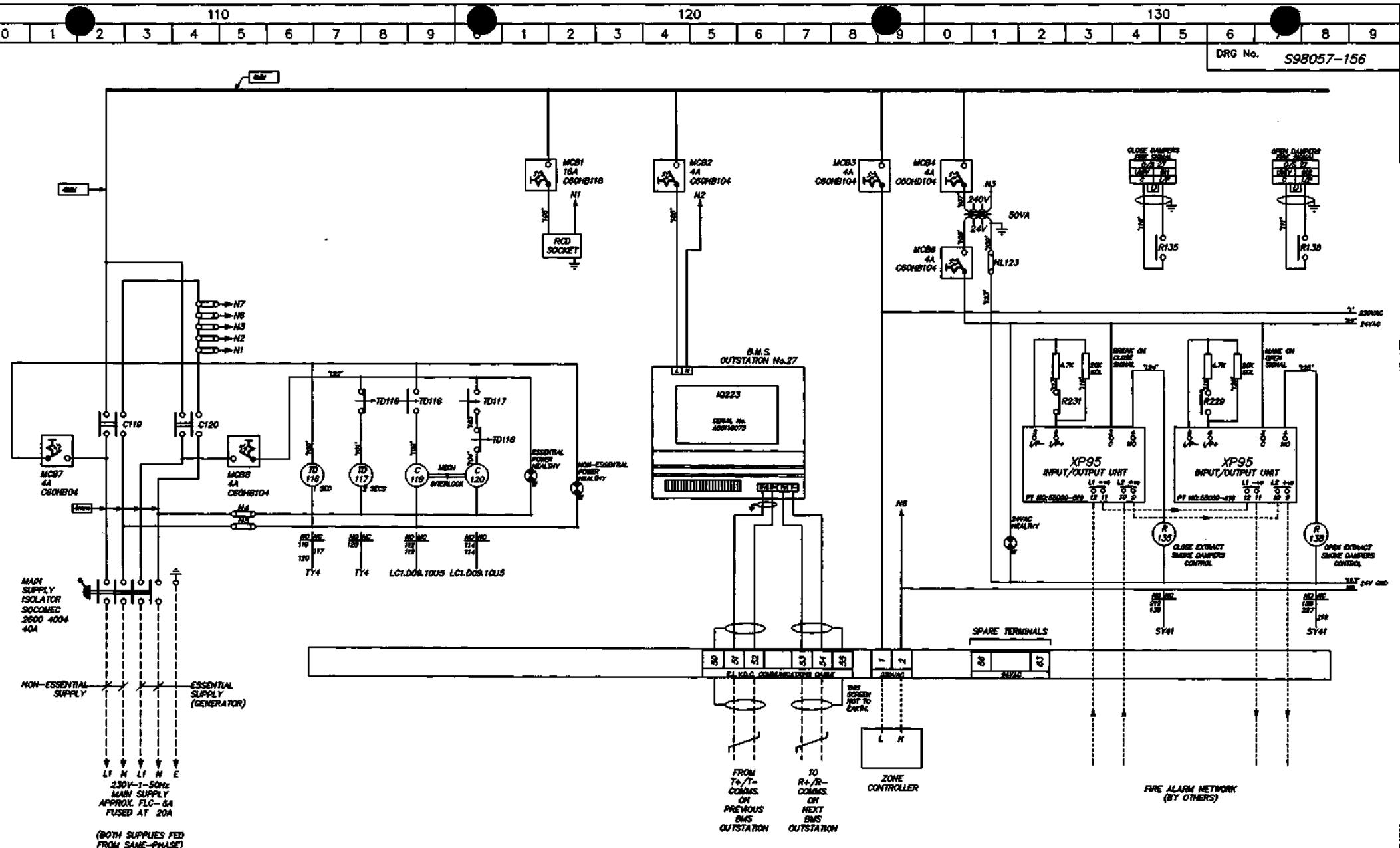
ISSUE

B

WIRING NOTES	EQUIPMENT NOTES	DRAWING No.	ISSUE	DESCRIPTION
1. MINIMUM POWER WIRING 2.5mm	1. ALL STARTERS TO BE OF TELEMECANIQUE MANUFACTURE	S98057-156	B	MAIN SUPPLIES / BMS OUTSTATION / 24VAC CCT
2. MINIMUM CONTROL WIRING 1.0mm	2. MAIN SUPPLY ISOLATORS TO BE OF SOCOME/C/TELEMECANIQUE MANUFACTURE	S98057-157	C	FCU CONTROLLER ADDED FOR OPTIMISER SIGNAL
3. POWER CABLES TO BE FITTED WITH CORD END TERMINALS, OR LUGS, DEPENDING ON SIZE, AND TYPE OF CONNECTION.	3. FUSE SWITCHES TO BE OF SOCOME/C MANUFACTURE	S98057-158		SPARE
4. CONTROL CABLES TO BE FITTED WITH CORD END TERMINALS, PIN, OR FORK, CONFIGURATION, DEPENDING ON TYPE OF CONNECTION.	4. MCB'S, AND MCCB'S TO BE OF MERLIN GERIN, OR SIEMENS MANUFACTURE.	S98057-159	B	GENERAL ARRANGEMENT AND LABEL DETAILS
5. ALL CABLES TO 16mm TO BE COLOUR CODED AS FOLLOWS:- 400 VOLTS L1,L2,L3. - RED, YELLOW, BLUE 230 VOLTS NEUTRAL - BLACK LOW VOLTAGE A.C. - BROWN EXTRA LOW VOLTAGE D.C. - GREY 115 VOLTS A.C. - ORANGE	5. ALL OUTGOING TERMINALS TO BE OF ENTRELEC MANUFACTURE.			
6. ALL CABLES ABOVE 16mm TO BE BLACK WITH ENDS HEAT SHRINK COLOUR CODED PHASE IDENTIFICATION.	6. ALL PILOT LIGHTS TO BE OF TRANILAMP MANUFACTURE.			
7. ALL CONTROL CABLES TO BE IDENTIFIED AT EACH END BY THE USE OF COLOUR CODED FERRULES. THE NUMBERS ARE SHOWN THUS ON THE DIAGRAM - '105'	7. SELECTOR SWITCHES TO BE OF TELEMECANIQUE MANUFACTURE.			
8. FINAL CABLE NO. '125'	8. CONTROL RELAYS TO BE FINDER 55.34.			
9. WHEN A CABLE CONNECTS TO AN OUTGOING TERMINAL THE CABLE IDENTIFICATION NUMBER IS THE SAME AS THE TERMINAL NUMBER.	9. TIME DELAY RELAYS TO BE FINDER 85.34.			
10. FINAL TERMINAL No. POWER/230VAC - 14 FINAL TERMINAL No. ELVDC/24VAC - 87	10. WHERE HRC FUSE CARRIERS ARE INDICATED ON THE SCHEMATIC DIAGRAM THE CARRIERS ARE TO BE OF GEC MANUFACTURE.			



DRAWING INDEX EQUIPMENT SCHEDULE/NOTES FOR SMOKE DAMPER CONTROL PANEL SCP/2/W	DRAWING INDEX EQUIPMENT SCHEDULE/NOTES FOR SMOKE DAMPER CONTROL PANEL SCP/2/W				SYNCHRONISED SYSTEMS  HORTON ROAD, COLNBROOK, SLOUGH, BERKSHIRE TEL: 01753 738000 FAX: 01753 771001
	DATE	ITEM	DRAWN BY	CHECKED BY	
	A 25/01/99	DAMPERS CHANGED TO 230VAC SEACHANGE REPEATER MODULE ADDED	GAW	SBC	
	B 14/02/99	AS FITTED AND TESTED	ANW	DATE	
C 13/07/99	FCU CONTROLLER ADDED FOR OPTIMISER SIGNAL	MAP	DSO	DATE	
THIS DRAWING IS THE PROPERTY OF BENCHMARK GROUP PLC AND SHOULD NOT BE REPRODUCED OR ALIENED IN WHOLE OR PART WITHOUT THE WRITTEN AGREEMENT OF THAT COMPANY				CLIENT BENCHMARK GROUP PLC	PROJECT 5 - 7 CARLTON GARDENS
				DRG No. S98057-155	ISSUE C



DATE	DETAILS	BY	INITIALS
25/01/98	DAMPERS CHANGED TO 230VAC	GAW	GW
14/02/98	AS FITTED AND TESTED	MJW	MJW

88

SCHEMATIC WIRING DIAGRAM  
AND EXTERNAL FIELD WIRING FOR  
SMOKE DAMPER CONTROL PANEL  
SCP/2/W  
(SHEET 1 OF 2)



HORTON ROAD, COLNBROOK, SLOUGH, BERKSHIRE  
TEL: 01753 738000 FAX: 01753 771001

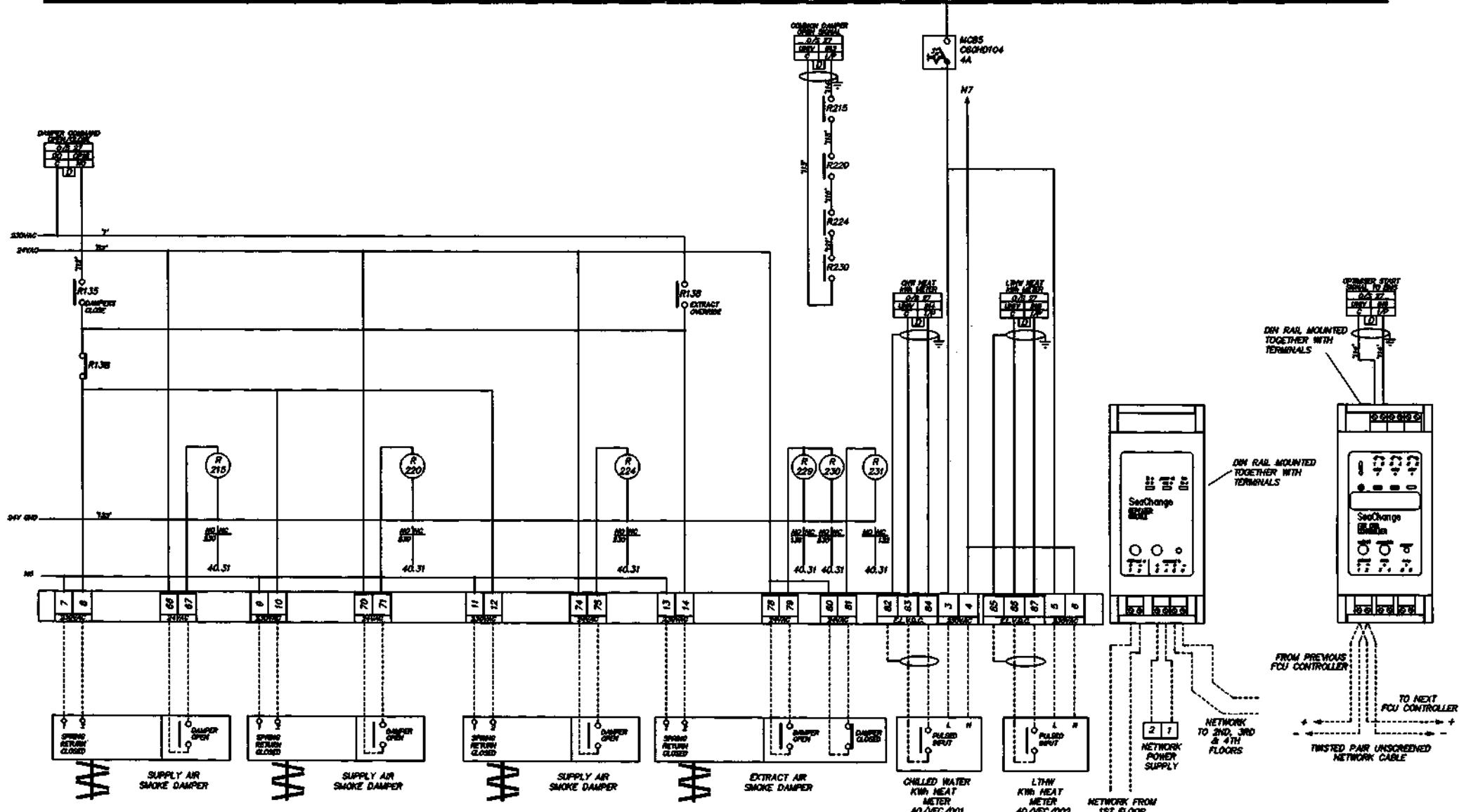
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0 1 2 3 4 5 6 7 8 9 0 1 2 3 4 5 6 7 8 9 0 1 2 3 4 5 6 7 8 9

DRG No. S98057-157



Wk	Date	Notes
A	25/01/99	DAMPERS CHANGED TO 230VAC SEACHANGE REPEATER MODULE ADDED
B	14/02/99	AS FITTED AND TESTED
C	13/07/99	FCU CONTROLLER ADDED FOR OPTIMISER SIGNAL

100 PRACTICAL TESTS OF POLYMERIZERS, CATALYSTS AND POLYMERS

- CLIENT

BENCHMARK GROUP PLC

**SCHEMATIC WIRING DIAGRAM  
AND EXTERNAL FIELD WIRING FOR  
SMOKE DAMPER CONTROL PANEL  
SCP/2/W  
(SHEET 2 OF 2)**



HORTON ROAD, COLNBROOK, SLOUGH, BERKSHIRE  
TEL: 01753 738000 FAX: 01753 771001

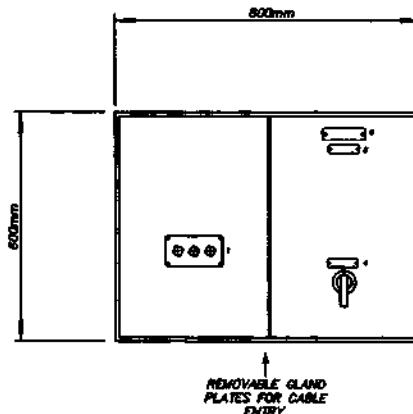
**PROJECT**

Page No.

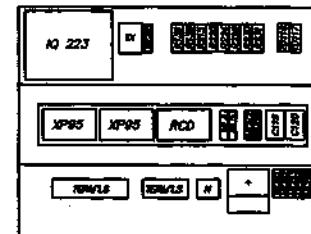
SOR057-157

SUE

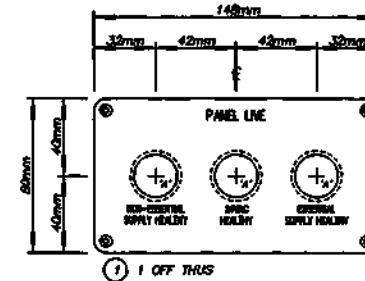
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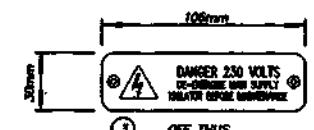
SIDE PLATE



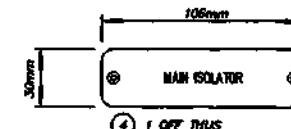
STICK PLA



1 OFF THE



(3) OFF THIS  
YELLOW-BLACK-YELLOW TRAFFIC LINE



④ [GET MORE](#)



5 1 OFF PAGE

100

- 5 1. MATERIAL:  
DOORS/FRAME - 2.0mm MILD STEEL  
EQUIPMENT PLATE - 2.0mm MILD STEEL  
2. FINISH - RAL 7005 (GREY)  
EQUIPMENT PLATES: WHITE SEMI-GLOSS  
3. HARDWARE: ANODIZED ALUMINUM - SILVER

240

- NOTES:**

  1. LABELS TO BE WHITE-BLACK-WHITE TRAFFOLYTE UNLESS OTHERWISE STATED
  2. LABELS TO HAVE 8mm. RADUS CORNERS AND 3mm. COUNTERSUNK FIXING HOLES.
  3. MAIN TITLES TO BE APPROX. 3mm. HIGH AND SUB-TITLES APPROX. 3mm. HIGH
  4. CUTOUT DETAILS: 'A' HOLES - 22.5mm DIA. (28.5mm BEZEL)  
SW. HOLES - 22.5mm DIA. (30mm BEZEL)

HR	SKILL	DETAIL
A	27/01/98	SEACHANGE REPEATER MODULE ADDED
B	14/02/98	AS FITTED AND TESTED

19

BENCHMARK GROUP PLC

100 EASY

5-7 CARLTON GARDENS

BO. 11

S98057-159

400-10

ISSUE

**SYNCHRONISED  
SYSTEMS**

HORTON ROAD, COLNBROOK, SLOUGH, BUCKINGHAMSHIRE  
TEL: 01753 738000 FAX: 01753 771000

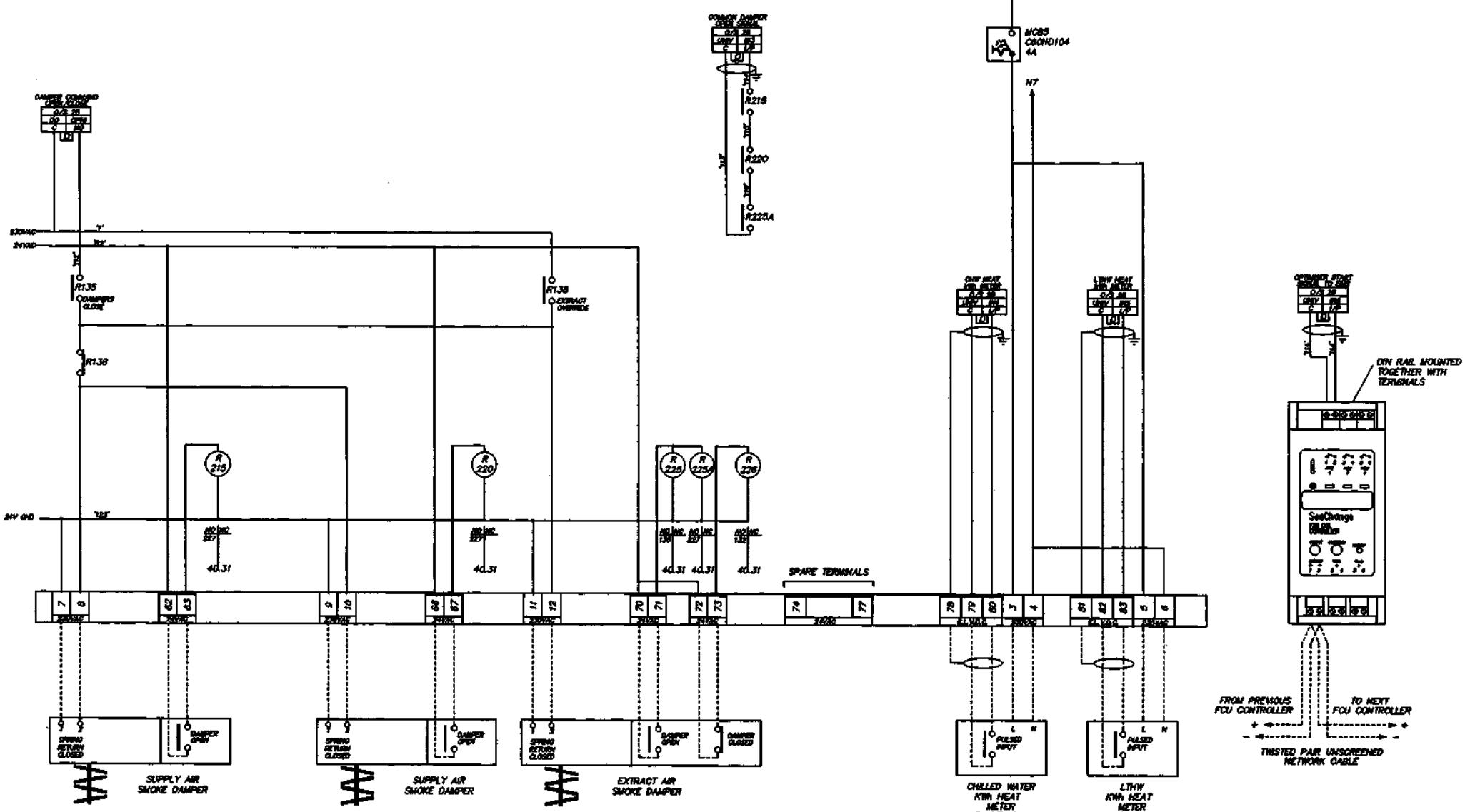
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DRG No. S98057-162



ID	DATE	ITEM	BY	SEC	DATE
A	25/01/99	DAMPERS CHANGED TO 230VAC	GAW	00000	21/08/98
B	01/03/99	AS FITTED AND TESTED	M/W	00000	DATE
C	13/07/99	FOU CONTROLLER ADDED FOR OPTIMISER SIGNAL	MAP	DSO	DATE

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CLIENT

BENCHMARK GROUP PLC

PROJECT

5-7 CARLTON GARDENS

DRG No.

S98057-162

ISSUE

C

TITLE  
**SCHEMATIC WIRING DIAGRAM  
AND EXTERNAL FIELD WIRING FOR  
SMOKE DAMPER CONTROL PANEL  
SCP/3/E  
(SHEET 2 OF 2)**



HORTON ROAD, COLNBROOK, SLOUGH, BERKSHIRE  
TEL: 01753 738000  
FAX: 01753 771001

ID	DATE	ITEM
A	25/01/99	DAMPERS CHANGED TO 230VAC
B	01/03/99	AS FITTED AND TESTED
C	13/07/99	FOU CONTROLLER ADDED FOR OPTIMISER SIGNAL

DRAWING INDEX  
EQUIPMENT SCHEDULE/NOTES  
FOR  
SMOKE DAMPER CONTROL PANEL  
SCP/3/E



HORTON ROAD, COLNBROOK, SLOUGH, BERKSHIRE  
TEL: 01753 738000 FAX: 01753 771001

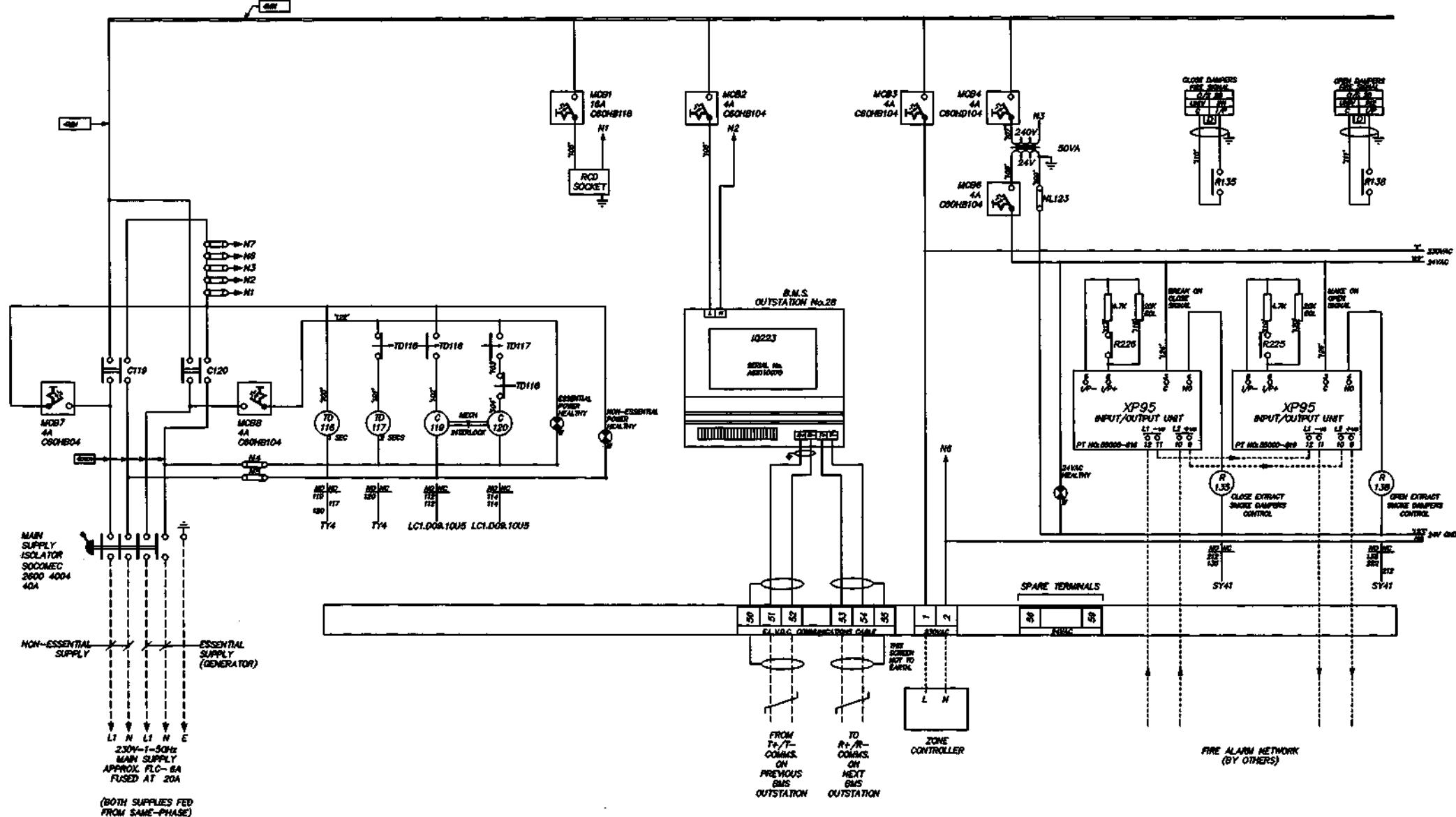
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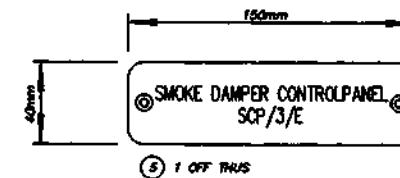
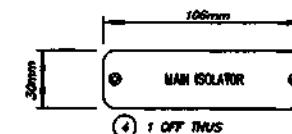
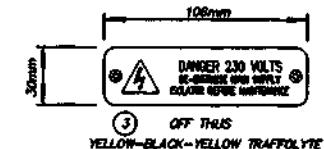
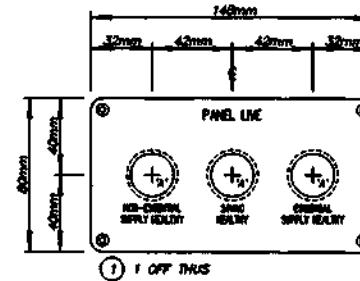
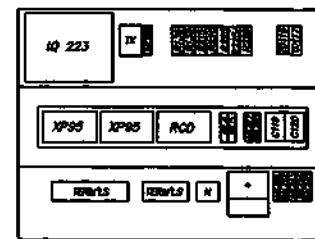
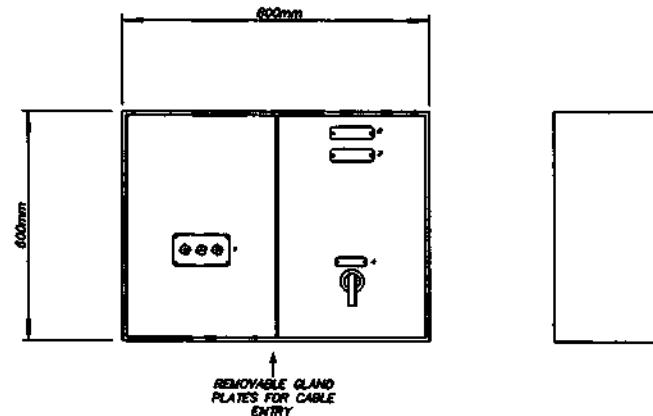
DRG No. S98057-161



RE	DATE	ITEM	SD	SBC	DATE	TITLE	SYNCHRONISED SYSTEMS
A	25/01/99	DAMPERS CHANGED TO 230VAC	GAW	01/02/99	21/08/98	SCHEMATIC WIRING DIAGRAM AND EXTERNAL FIELD WIRING FOR SMOKE DAMPER CONTROL PANEL SCP/3/E (SHEET 1 OF 2)	HORTON ROAD, COLNBROOK, SLOUGH, BERKSHIRE
B	01/03/99	AS FITTED AND TESTED	JAW				TEL: 01753 738000
				DSO			FAX: 01753 771001

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DRG No. S98057-164



NOTES

1. MATERIAL:  
DOORS/FRAME - 2.0mm MILD STEEL  
EQUIPMENT PLATE - 2.0mm MILD STEEL
2. FINISH: RAL 7032 (Gloss)
3. EQUIPMENT PLATES: WHITE SEMI-GLOSS
4. INGRESS PROTECTION RATING - IP54

NOTES:

1. LABELS TO BE WHITE-BLACK-WHITE TRAFFOLYTE UNLESS OTHERWISE STATED.
2. LABELS TO HAVE 6mm. RADIUS CORNERS AND 3mm. COUNTERSUNK FIXING HOLES.
3. MAIN TITLES TO BE APPROX 3mm. HIGH AND SUB-TITLES APPROX 3mm. HIGH.
4. CUTOUT DETAILS: 'A' HOLES - 22.5mm DIA. (20.3mm BEZEL)  
SW HOLES - 22.5mm DIA. (30mm BEZEL)

	DATE	REV'D	BY	DESIGN	SEC	DATE
A	01/03/98		M/W	AS FITTED AND TESTED	G0000	21/03/98
					D50	

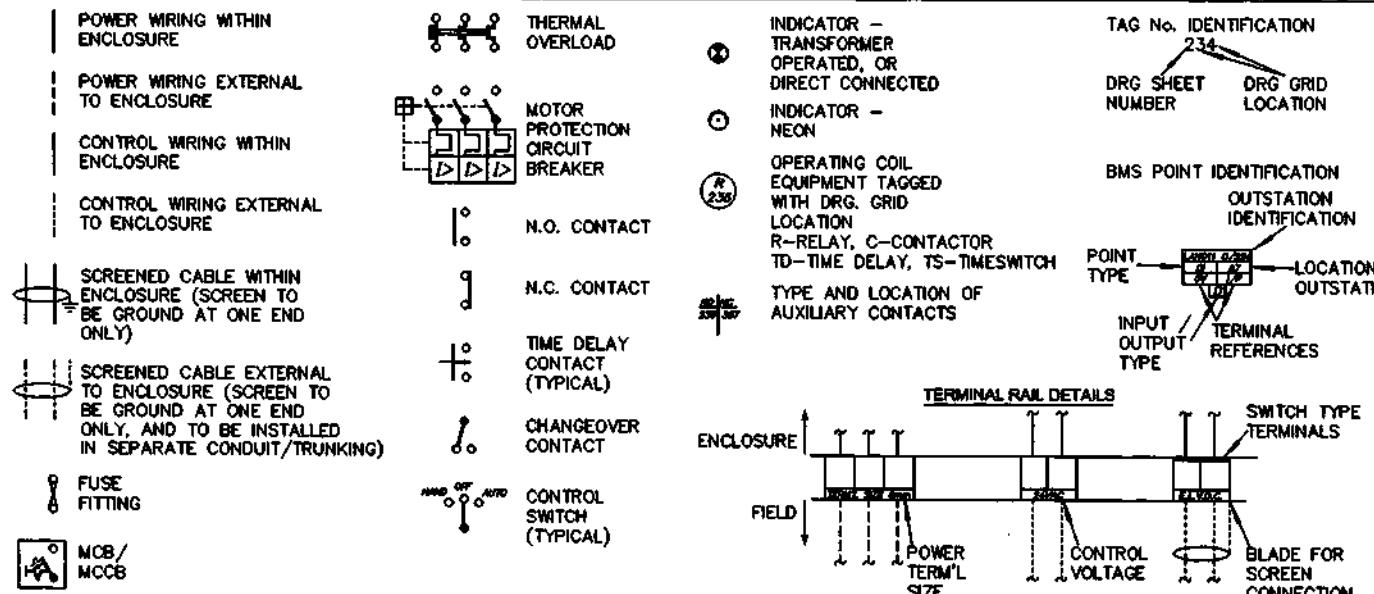
TITLE

GENERAL ARRANGEMENT AND  
LABEL DETAILS FOR SMOKE  
DAMPER CONTROL PANEL  
SCP/3/E  
(SHEET 1 OF 1)

**SYNCHRONISED  
SYSTEMS**

HORTON ROAD, COLNBROOK, SLOUGH, BERKSHIRE  
TEL: 01753 738000  
FAX: 01753 771001

WIRING NOTES	EQUIPMENT NOTES	DRAWING No.	ISSUE	DESCRIPTION
1. MINIMUM POWER WIRING 2.5mm	1. ALL STARTERS TO BE OF TELEMECANIQUE MANUFACTURE	S98057-166	B	MAIN SUPPLIES / BMS OUTSTATION / 24VAC CCT
2. MINIMUM CONTROL WIRING 1.0mm	2. MAIN SUPPLY ISOLATORS TO BE OF SOCOMEC/TELEMECANIQUE MANUFACTURE	S98057-167	C	FCU CONTROLLER ADDED FOR OPTIMISER SIGNAL
3. POWER CABLES TO BE FITTED WITH CORD END TERMINALS, OR LUGS, DEPENDING ON SIZE, AND TYPE OF CONNECTION.	3. FUSE SWITCHES TO BE OF SOCOMEC MANUFACTURE	S98057-168		SPARE
4. CONTROL CABLES TO BE FITTED WITH CORD END TERMINALS, PIN, OR FORK, CONFIGURATION, DEPENDING ON TYPE OF CONNECTION.	4. MCB'S, AND MCCB'S TO BE OF MERLIN GERIN, OR SIEMENS MANUFACTURE.	S98057-169	A	GENERAL ARRANGEMENT AND LABEL DETAILS
5. ALL CABLES TO 16mm TO BE COLOUR CODED AS FOLLOWS:- 400 VOLTS L1,L2,L3. - RED, YELLOW, BLUE 230 VOLTS NEUTRAL - BLACK LOW VOLTAGE A.C. - BROWN EXTRA LOW VOLTAGE D.C. - GREY 115 VOLTS A.C. - ORANGE	5. ALL OUTGOING TERMINALS TO BE OF ENTRELEC MANUFACTURE.			
6. ALL CABLES ABOVE 16mm TO BE BLACK WITH ENDS HEAT SHRINK COLOUR CODED PHASE IDENTIFICATION.	6. ALL PILOT LIGHTS TO BE OF TRANILAMP MANUFACTURE.			
7. ALL CONTROL CABLES TO BE IDENTIFIED AT EACH END BY THE USE OF COLOUR CODED FERRULES. THE NUMBERS ARE SHOWN THUS ON THE DIAGRAM - '105'	7. SELECTOR SWITCHES TO BE OF TELEMECANIQUE MANUFACTURE.			
8. FINAL CABLE No. '121'	8. CONTROL RELAYS TO BE FINDER 55.34.			
9. WHEN A CABLE CONNECTS TO AN OUTGOING TERMINAL THE CABLE IDENTIFICATION NUMBER IS THE SAME AS THE TERMINAL NUMBER.	9. TIME DELAY RELAYS TO BE FINDER 85.34.			
10. FINAL TERMINAL No. POWER/230VAC - 14 FINAL TERMINAL No. ELVDC/24VAC - 87	10. WHERE HRC FUSE CARRIERS ARE INDICATED ON THE SCHEMATIC DIAGRAM THE CARRIERS ARE TO BE OF GEC MANUFACTURE.			
	FIELD WIRING NOTES			
	1. NETWORK CABLE TO BE BELDEN 9501/9502			
	2. SENSOR CABLE TO BE BELDEN 9501			



NO	DATE	DETAIL	DRAWN BY	SEC	DATE	TITLE
A	25/01/98	DAMPERS CHANGED TO 230VAC	GAW	21/08/98		
B	01/03/98	AS FITTED AND TESTED	MJV			
C	13/07/98	FCU CONTROLLER ADDED FOR OPTIMISER SIGNAL	MAP	DSD		

DRAWING INDEX  
EQUIPMENT SCHEDULE/NOTES  
FOR  
SMOKE DAMPER CONTROL PANEL  
SCP/3/W

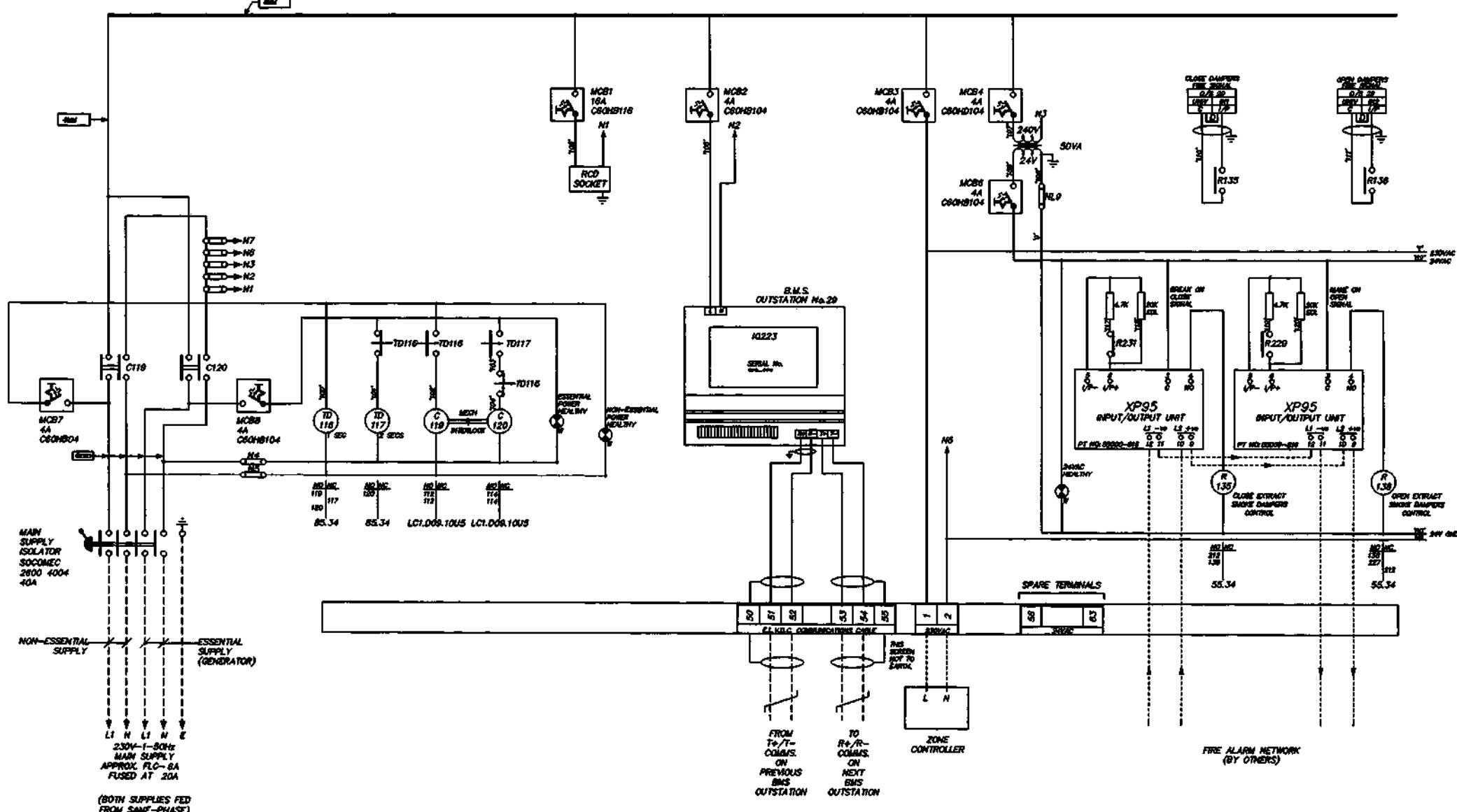
**SYNCHRONISED SYSTEMS**  
HORTON ROAD, COLNBROOK, SLOUGH, BERKSHIRE  
TEL: 01753 738000 FAX: 01753 771001

110

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13

DRG No. S98057-166



NO	DATE	REASON
A	25/01/99	DAMPERS CHANGED TO 230VAC
B	01/03/99	AS FITTED AND TESTED

10

**SCHEMATIC WIRING DIAGRAM  
AND EXTERNAL FIELD WIRING FOR  
SMOKE DAMPER CONTROL PANEL  
SCP/3/W  
(SHEET 1 OF 2)**



**HORTON ROAD, COLN BROOK, SLOUGH, BERKSHIRE  
TEL: 01753 738000 FAX: 01753 771001**

BENCHMARK GROUP PI

## PROJECT

5-7 CARLTON GARDEN

DRG No.

998057-166

## **ISSUE**

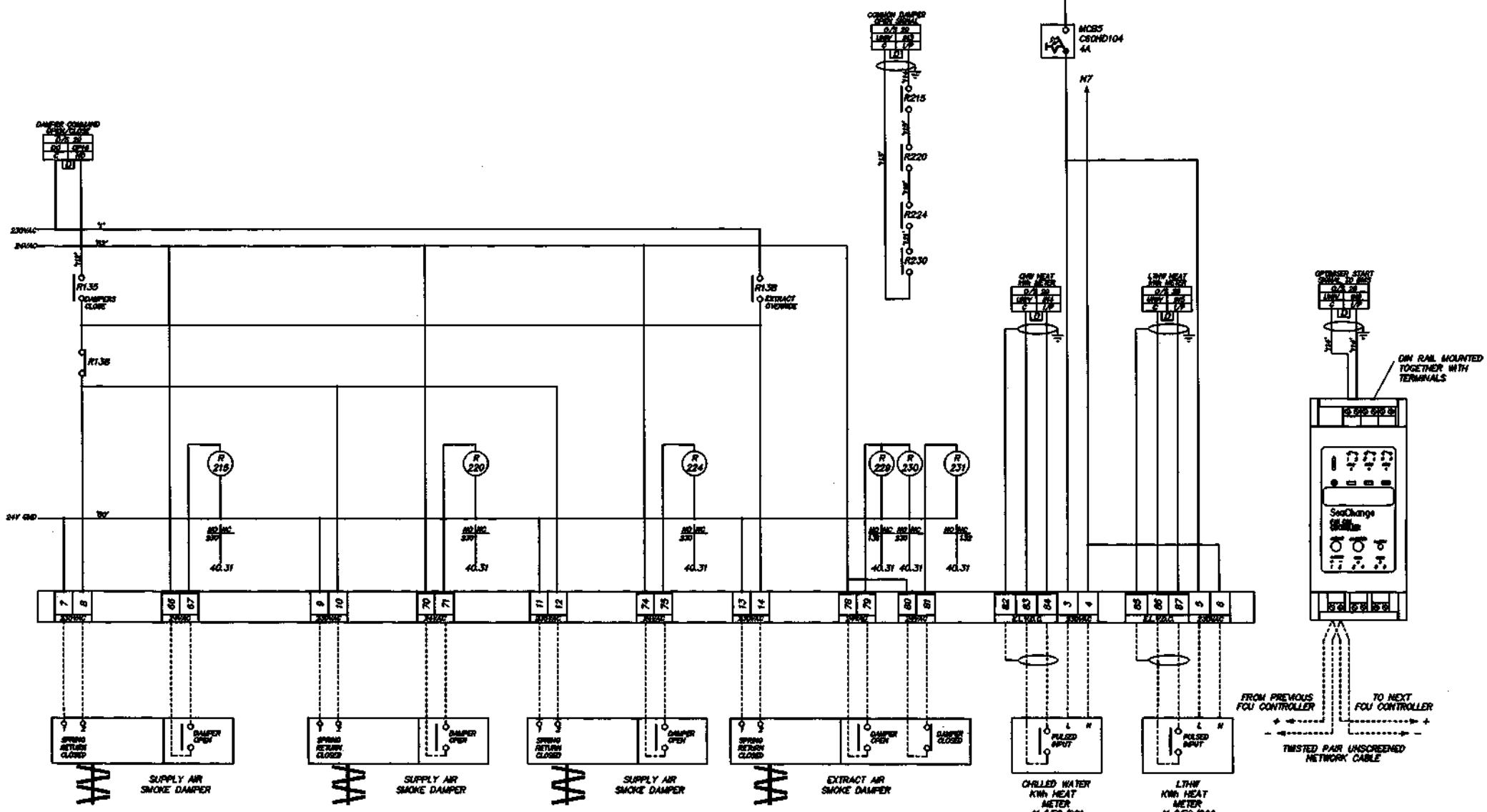
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230

0 1 2 3 4 5 6 7 8 9 0 1 2 3 4 5 6 7 8 9 0 1 2 3 4 5 6 7 8 9

DRG No. S98057-167



ID	DATE	DETAILED
A	25/01/98	DAMPERS CHANGED TO 230VAC
B	01/03/98	AS FITTED AND TESTED
C	13/07/98	FOU CONTROLLER ADDED FOR OPTIMISER SIGNAL

DRIVER	SBC	DATE 21/08/98	TITLE
SAW	CHISSED	GATE	
AW	CHISSED	TOOL	
MAP	DSC		
CLIENT			

**BENCHMARK GROUP**

**SCHEMATIC WIRING DIAGRAM  
AND EXTERNAL FIELD WIRING FOR  
SMOKE DAMPER CONTROL PANEL  
SCP/3/W  
(SHEET 2 OF 2)**



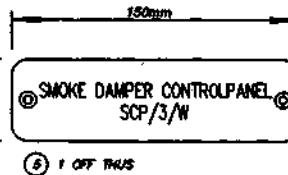
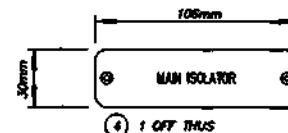
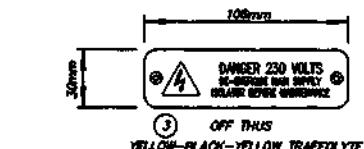
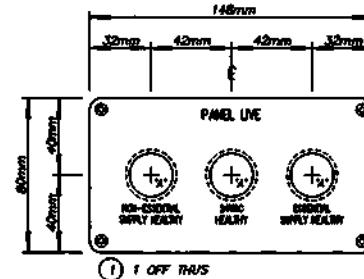
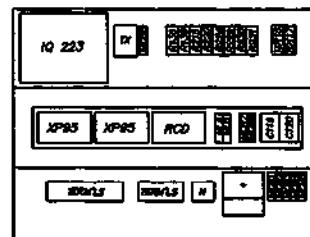
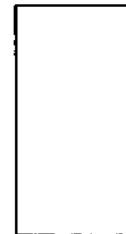
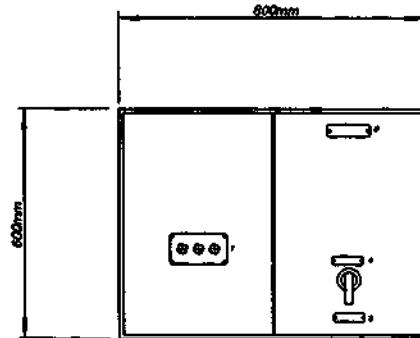
HORTON ROAD, COLNBROOK, SLOUGH, BERKSHIRE  
TEL: 01753 738000 FAX: 01753 771001

FAX: 01753 771001

ISSUE 6

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DRG No. S98057-169



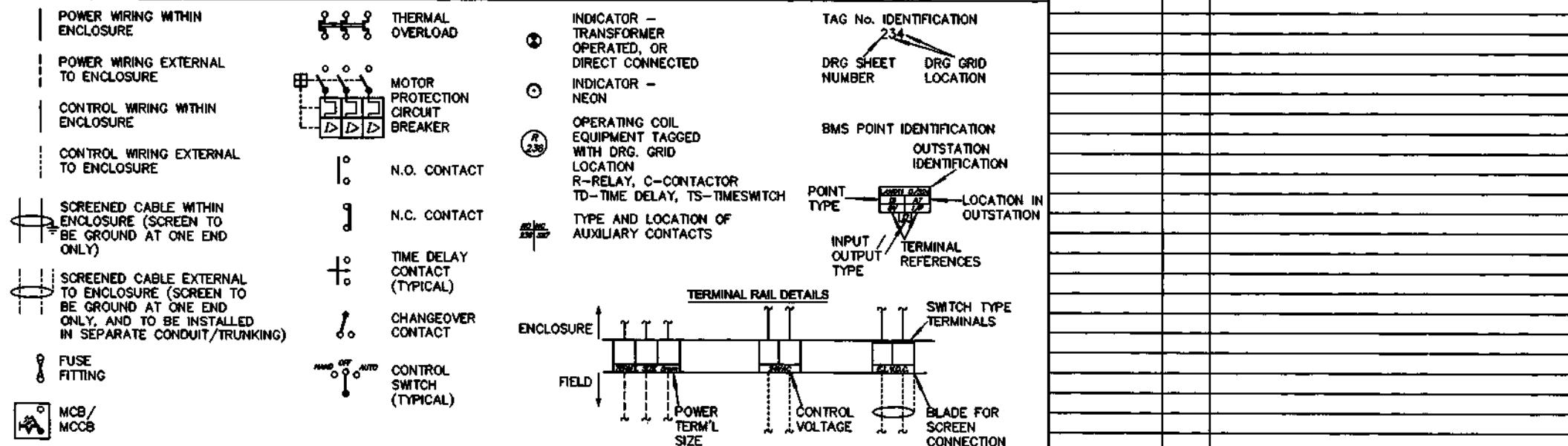
NOTES

- MATERIAL:  
DOORS/FRAME - 2.0mm MILD STEEL  
EQUIPMENT PLATE - 2.5mm MILD STEEL
- FINISH:  
RAL 9003 (Gloss)  
EQUIPMENT PLATES - WHITE SEMI-GLOSS
- INGRESS PROTECTION RATING - IP54

NOTES:

- LABELS TO BE WHITE-BLACK-WHITE TRAFFOLYTE UNLESS OTHERWISE STATED
- LABELS TO HAVE 8MM. RADIUS CORNERS AND 3MM. COUNTERSUNK FIXING HOLES
- MAIN TITLES TO BE APPROX. 5MM. HIGH AND SUB-TITLES APPROX. 3MM. HIGH
- CUTOUT DETAILS: 'A' HOLES - 22.5mm DIA. (28.5mm BEVEL)  
SW Holes - 22.5mm DIA. (30mm BEVEL)

WIRING NOTES	EQUIPMENT NOTES	DRAWING No.	ISSUE	DESCRIPTION
1. MINIMUM POWER WIRING 2.5mm	1. ALL STARTERS TO BE OF TELEMECANIQUE MANUFACTURE	S98057-171	B	MAIN SUPPLIES / BMS OUTSTATION / 24VAC CCT
2. MINIMUM CONTROL WIRING 1.0mm	2. MAIN SUPPLY ISOLATORS TO BE OF SOCOMEC/TELEMECANIQUE MANUFACTURE	S98057-172	C	FCU CONTROLLER ADDED FOR OPTIMISER SIGNAL
3. POWER CABLES TO BE FITTED WITH CORD END TERMINALS, OR LUGS, DEPENDING ON SIZE, AND TYPE OF CONNECTION.	3. FUSE SWITCHES TO BE OF SOCOMEC MANUFACTURE	S98057-173		SPARE
4. CONTROL CABLES TO BE FITTED WITH CORD END TERMINALS, PIN, OR FORK, CONFIGURATION, DEPENDING ON TYPE OF CONNECTION.	4. MOB'S, AND MCCB'S TO BE OF MERLIN GERIN, OR SIEMENS MANUFACTURE.	S98057-174	A	GENERAL ARRANGEMENT AND LABEL DETAILS
5. ALL CABLES TO 16mm TO BE COLOUR CODED AS FOLLOWS:- 400 VOLTS L1.L2.L3. - RED, YELLOW, BLUE 230 VOLTS NEUTRAL - BLACK LOW VOLTAGE A.C. - BROWN EXTRA LOW VOLTAGE D.C. - GREY 115 VOLTS A.C. - ORANGE	5. ALL OUTGOING TERMINALS TO BE OF ENTRELEC MANUFACTURE.			
6. ALL CABLES ABOVE 16mm TO BE BLACK WITH ENDS HEAT SHRINK COLOUR CODED PHASE IDENTIFICATION.	6. ALL PILOT LIGHTS TO BE OF TRANILAMP MANUFACTURE.			
7. ALL CONTROL CABLES TO BE IDENTIFIED AT EACH END BY THE USE OF COLOUR CODED FERRULES. THE NUMBERS ARE SHOWN THUS ON THE DIAGRAM - '105'	7. SELECTOR SWITCHES TO BE OF TELEMECANIQUE MANUFACTURE.			
8. FINAL CABLE No. '122'	8. CONTROL RELAYS TO BE FINDER 55-34. 40.31/MO SY4.PR			
9. WHEN A CABLE CONNECTS TO AN OUTGOING TERMINAL THE CABLE IDENTIFICATION NUMBER IS THE SAME AS THE TERMINAL NUMBER.	9. TIME DELAY RELAYS TO BE FINDER 55-34. MO TY4			
10. FINAL TERMINAL No. POWER/230VAC - 12 FINAL TERMINAL No. ELVDC/24VAC - 83	10. WHERE HRC FUSE CARRIERS ARE INDICATED ON THE SCHEMATIC DIAGRAM THE CARRIERS ARE TO BE OF GEC MANUFACTURE.			
	FIELD WIRING NOTES			
	1. NETWORK CABLE TO BE BELDEN 9501/9502			
	2. SENSOR CABLE TO BE BELDEN 9501			



REF	DATE	DETAIL	REF	OWNER	SEC	DATE	TITLE	DRAWING INDEX EQUIPMENT SCHEDULE/NOTES FOR SMOKE DAMPER CONTROL PANEL SCP/4/E	SYNCHRONISED SYSTEMS	HORTON ROAD, COLNBROOK, SLOUGH, BERKSHIRE TEL: 01753 738000 FAX: 01753 771001
A	25/01/98	DAMPERS CHANGED TO 230VAC	GAW	DRG		21/08/98				
B	23/03/98	AS FITTED AND TESTED	MAY	DRG						
C	13/03/98	FCU CONTROLLER ADDED FOR OPTIMISER SIGNAL	MAP	DRG						

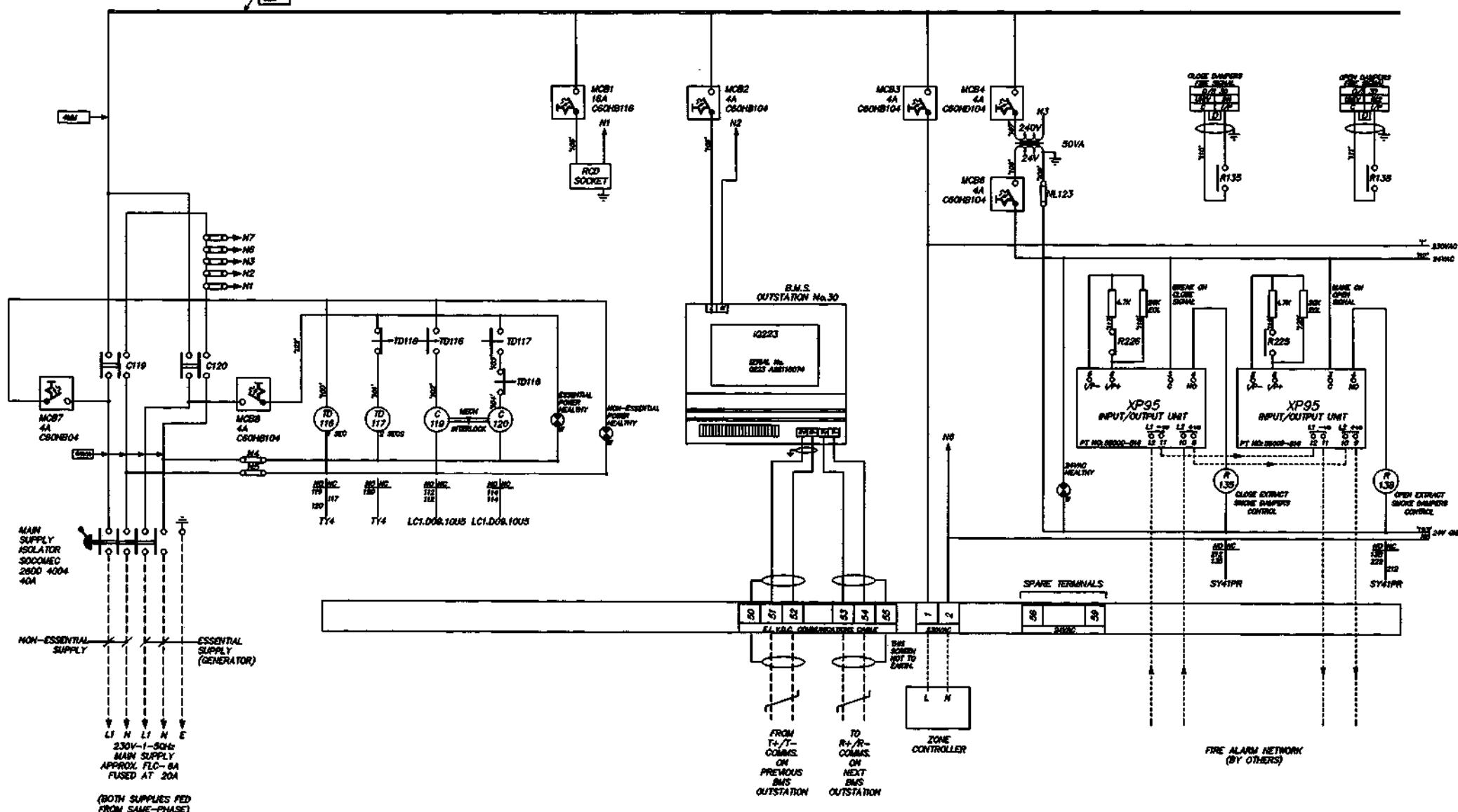
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0 1 2 3 4 5 6 7 8 9 0 1 2 3 4 5 6 7 8 9 0 1 2 3 4 5 6 7 8 9

DRG No. S98057-171



DATE	DETAIL	REMARKS
25/01/98	DAMPERS CHANGED TO 230VAC	GAW
23/01/98	AS FITTED AND TESTED	66W

DRIVEN	SRC	DATE 21/08/98	TITLE
DEPARTED		DATE	
DISPATCHER	CODE		
DSO			
T PENTONALM GROUP PL			

**SCHEMATIC WIRING DIAGRAM  
AND EXTERNAL FIELD WIRING FOR  
SMOKE DAMPER CONTROL PANEL  
SCP/4/E  
(SHEET 1 OF 2)**



HORTON ROAD, COLNBROOK, SLOUGH, BERKSHIRE  
TEL: 01753 738000 FAX: 01753 771001

5-7 CARLTON GARDENS

DRG No. 598057-171

ISSUE

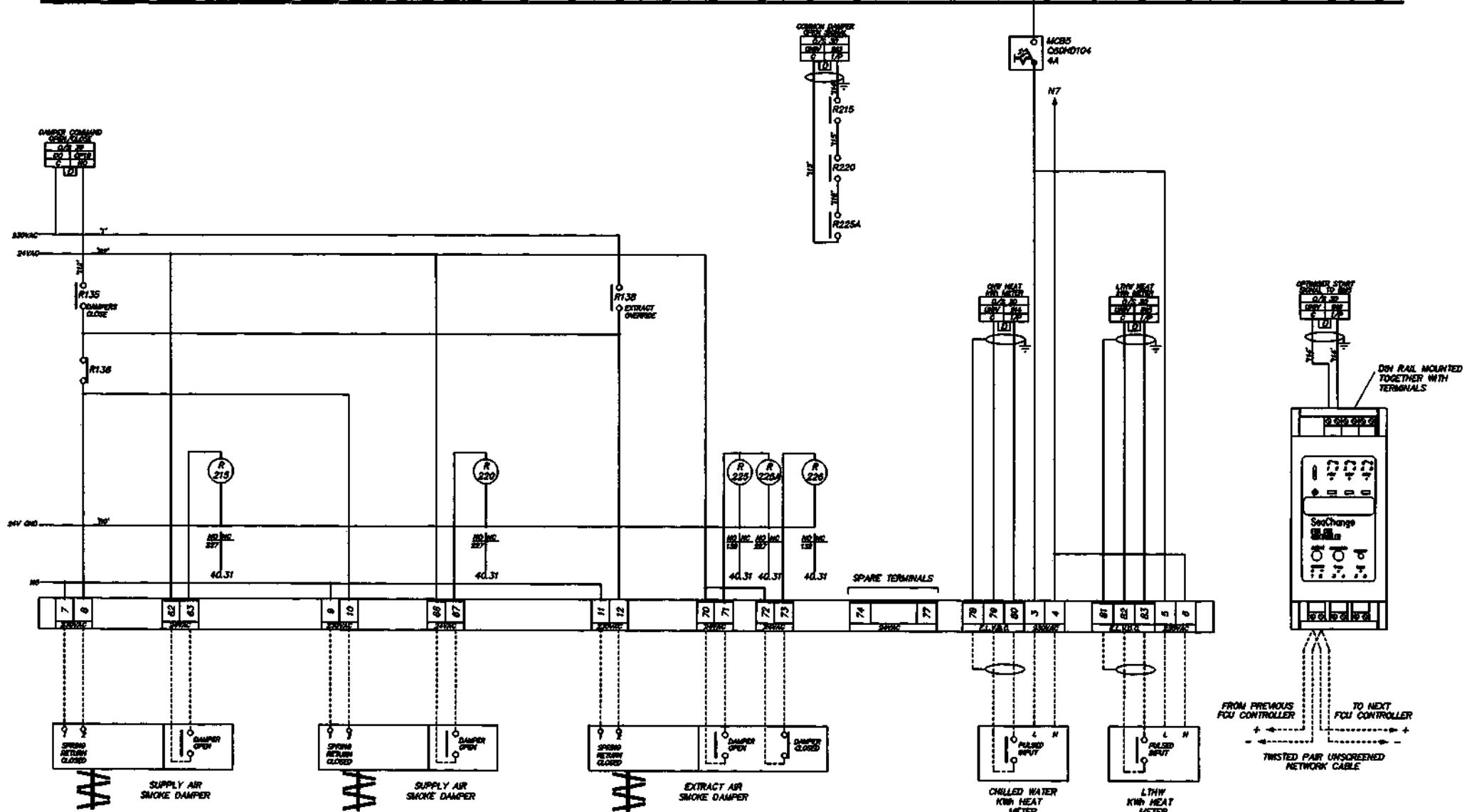
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DRG No. S98057-172



NO	DATE	ITEM	NO	DRAWN	SPC	DATE
A	25/01/98	DAMPERS CHANGED TO 230VAC	GAW	CHECKED	DATE	21/08/98
B	23/03/98	AS FITTED AND TESTED	MJW	RECHECKED	DATE	
C	13/07/98	FCU CONTROLLER ADDED FOR OPTIMISER SIGNAL	MAP	DSD	DATE	

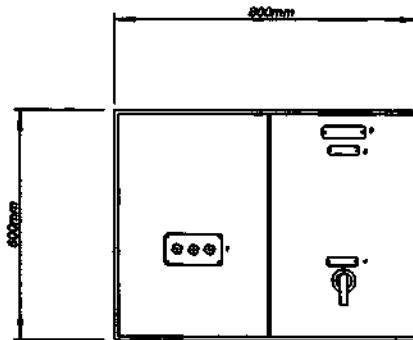
SCHEMATIC WIRING DIAGRAM  
AND EXTERNAL FIELD WIRING FOR  
SMOKE DAMPER CONTROL PANEL  
SCP/4/E  
(SHEET 2 OF 2)

**SYNCHRONISED  
SYSTEMS**

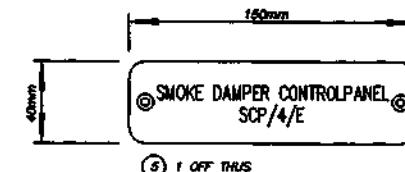
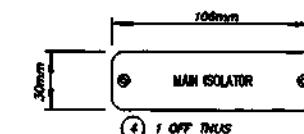
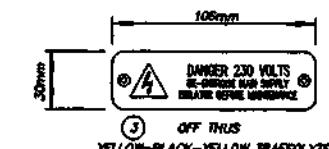
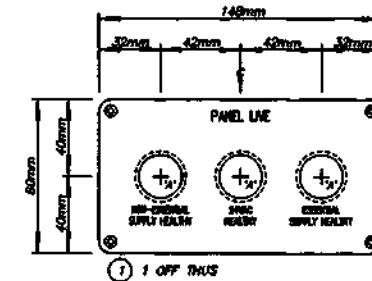
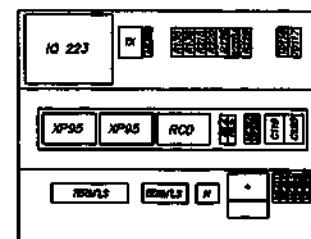
HORTON ROAD, COLNBROOK, SLOUGH, BERKSHIRE  
TEL: 01753 738000  
FAX: 01753 771001

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DRG No. S98057-174



REMOVABLE GLAND PLATES FOR CABLE ENTRY



NOTES

- MATERIAL:  
DOORS/FRAME - 2.0mm MILD STEEL  
EQUIPMENT PLATE - 2.0mm MILD STEEL  
FINISH - RAL 7002 (GREY)  
EQUIPMENT PLATES: WHITE SEMI-GLOSS
- INGRESS PROTECTION RATING - IP34

NOTES

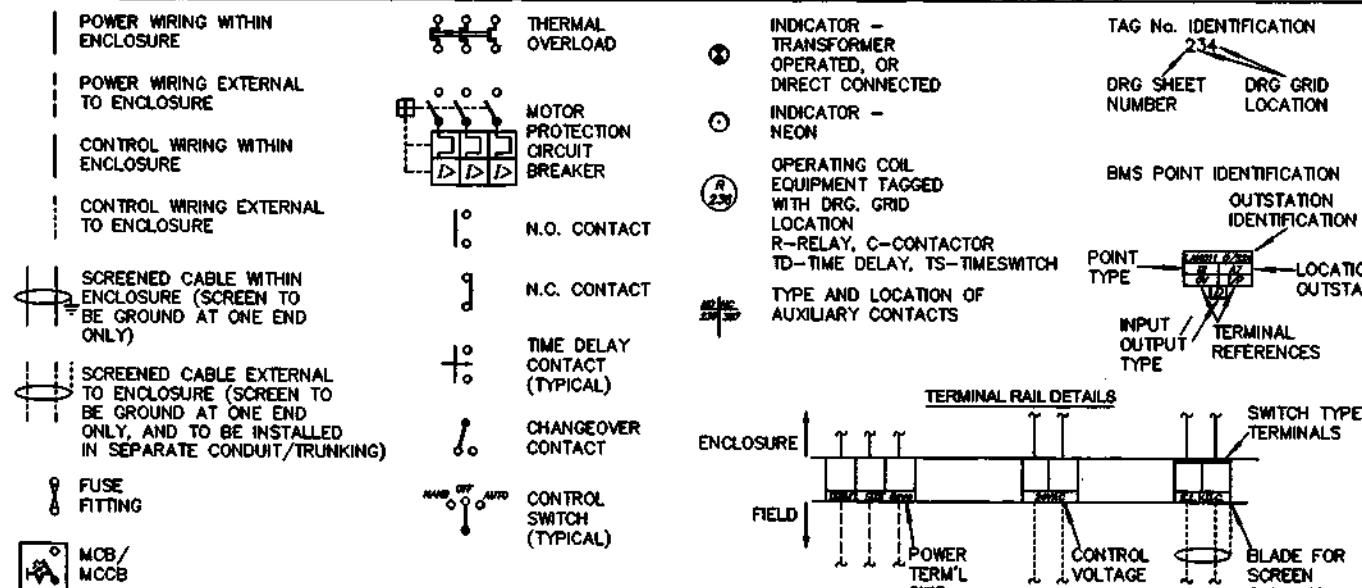
- LABELS TO BE WHITE-BLACK-WHITE TRAFFOLYTE UNLESS OTHERWISE STATED
- LABELS TO HAVE 6mm. RADIUS CORNERS
- MAIN TILES - CUTOUTS IN FLOOR HOLES
- MAIN TILES TO BE APPROX 30mm HIGH, AND SUB-TILES APPROX 30mm HIGH.
- CUTOUT DETAILS: 'A' HOLES - 22.5mm DIA. (26.5mm BEVEL)  
SW HOLES - 22.5mm DIA. (30mm BEVEL)

GENERAL ARRANGEMENT AND  
LABEL DETAILS FOR SMOKE  
DAMPER CONTROL PANEL  
SCP/4/E  
(SHEET 1 OF 1)

**SYNCHRONISED  
SYSTEMS**

HORTON ROAD, COLNBROOK, SLOUGH, BERKSHIRE  
TEL: 01753 738000  
FAX: 01753 771001

WIRING NOTES	EQUIPMENT NOTES	DRAWING No.	ISSUE	DESCRIPTION
1. MINIMUM POWER WIRING 2.5mm	1. ALL STARTERS TO BE OF TELEMECANIQUE MANUFACTURE	S98057-176	B	MAIN SUPPLIES / BMS OUTSTATION / 24VAC CCT
2. MINIMUM CONTROL WIRING 1.0mm	2. MAIN SUPPLY ISOLATORS TO BE OF SOCOMEC/TELEMECANIQUE MANUFACTURE	S98057-177	C	FOU CONTROLLER ADDED FOR OPTIMISER SIGNAL
3. POWER CABLES TO BE FITTED WITH CORD END TERMINALS, OR LUGS, DEPENDING ON SIZE, AND TYPE OF CONNECTION.	3. FUSE SWITCHES TO BE OF SOCOMEC MANUFACTURE	S98057-178		SPARE
4. CONTROL CABLES TO BE FITTED WITH CORD END TERMINALS, PIN, OR FORK, CONFIGURATION, DEPENDING ON TYPE OF CONNECTION.	4. MCB'S, AND MCCB'S TO BE OF MERLIN GERIN, OR SIEMENS MANUFACTURE.	S98057-179	A	GENERAL ARRANGEMENT AND LABEL DETAILS
5. ALL CABLES TO 16mm TO BE COLOUR CODED AS FOLLOWS:- 400 VOLTS L1:L2:L3. - RED, YELLOW, BLUE 230 VOLTS NEUTRAL - BLACK LOW VOLTAGE A.C. - BROWN EXTRA LOW VOLTAGE D.C. - GREY 115 VOLTS A.C. - ORANGE	5. ALL OUTGOING TERMINALS TO BE OF ENTRELEC MANUFACTURE.			
6. ALL CABLES ABOVE 16mm TO BE BLACK WITH ENDS HEAT SHRINK COLOUR CODED PHASE IDENTIFICATION.	6. ALL PILOT LIGHTS TO BE OF TRANILAMP MANUFACTURE.			
7. ALL CONTROL CABLES TO BE IDENTIFIED AT EACH END BY THE USE OF COLOUR CODED FERRULES. THE NUMBERS ARE SHOWN THUS ON THE DIAGRAM - '105'	7. SELECTOR SWITCHES TO BE OF TELEMECANIQUE MANUFACTURE.			
8. FINAL CABLE No. '125'	8. CONTROL RELAYS TO BE FINDER 55-34. 40.31 / IMO SY41PR			
9. WHEN A CABLE CONNECTS TO AN OUTGOING TERMINAL THE CABLE IDENTIFICATION NUMBER IS THE SAME AS THE TERMINAL NUMBER.	9. TIME DELAY RELAYS TO BE FINDER 65-34. IMO TY4			
10. FINAL TERMINAL No. POWER/230VAC - 14 FINAL TERMINAL No. ELVDC/24VAC - 87	10. WHERE HRC FUSE CARRIERS ARE INDICATED ON THE SCHEMATIC DIAGRAM THE CARRIERS ARE TO BE OF GEC MANUFACTURE.			
	FIELD WIRING NOTES			
	1. NETWORK CABLE TO BE BELDEN 9501/9502			
	2. SENSOR CABLE TO BE BELDEN 9501			



#	DRG	DETAIL	DRG	SEC	DATE	TITLE	DRAWING INDEX EQUIPMENT SCHEDULE/NOTES FOR SMOKE DAMPER CONTROL PANEL SCP/4/W	SYNCHRONISED SYSTEMS
A	28/01/99	DAMPERS CHANGED TO 230VAC	GAW	21/08/98				
B	23/03/99	AS FITTED AND TESTED	MAP					
C	13/07/99	FOU CONTROLLER ADDED FOR OPTIMISER SIGNAL	MAP	DSD				HORTON ROAD, COLNBROOK, SLOUGH, BERKSHIRE TEL: 01753 738000 FAX: 01753 771001

110

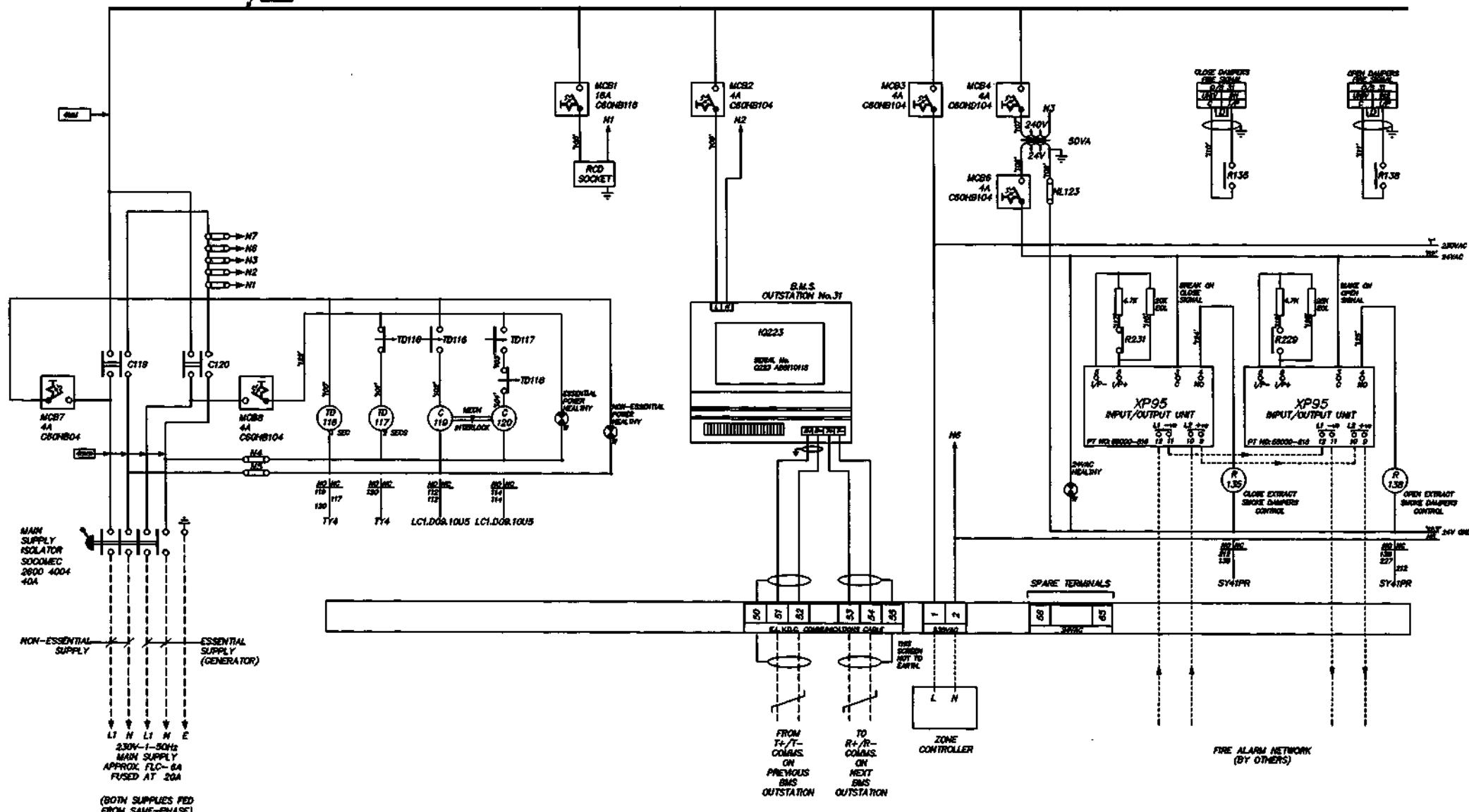
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DRG No. S98057-176



DATE	DETAILS	REMARKS
25/01/98	DAMPERS CHANGED TO 230VAC	GAIN
23/03/99	AS FITTED AND TESTED	MAR

EXAMINER DATE

**SCHEMATIC WIRING DIAGRAM  
AND EXTERNAL FIELD WIRING FOR  
SMOKE DAMPER CONTROL PANEL  
SCP/4/W  
(SHEET 1 OF 2)**



HORTON ROAD, COLNBROOK, SLOUGH, BERKSHIRE  
TEL: 01753 738000 FAX: 01753 771001

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CLIENT

BENCHMARK GROUP PLC

PROJECT

5-7 CARNATION GARDENS

DRG No.

S08052-176

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**ISSUE**

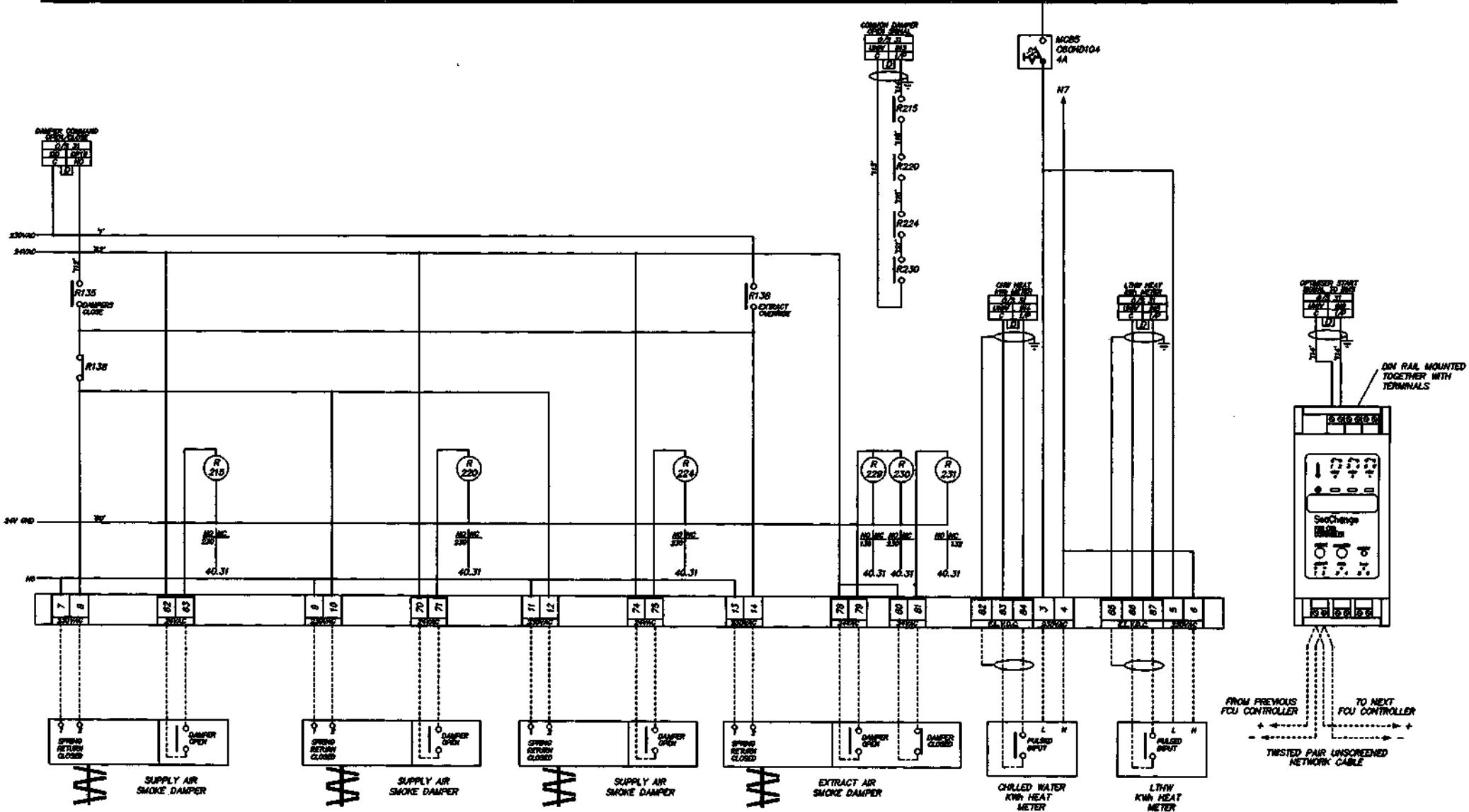
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DRG No. S98057-177



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CLIENT

BENCHMARK GROUP PLC

PROJECT

5-7 CARLTON GARDENS

DRG No.

S98057-177

ISSUE C

SCHEMATIC WIRING DIAGRAM  
AND EXTERNAL FIELD WIRING FOR  
SMOKE DAMPER CONTROL PANEL  
SCP/4/W  
(SHEET 2 OF 2)

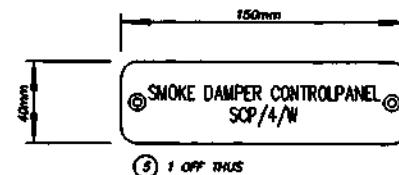
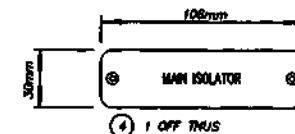
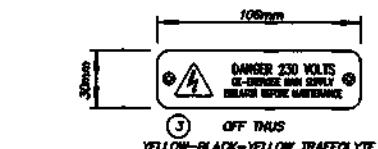
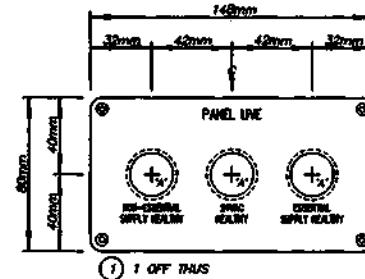
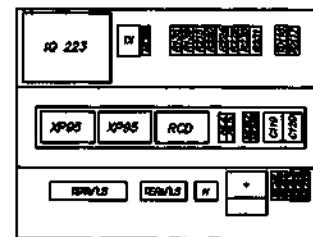
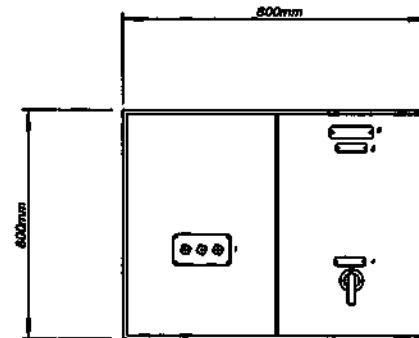


HORTON ROAD, COLNBROOK, SLOUGH, BERKSHIRE  
TEL: 01753 738000  
FAX: 01753 771001

NO	DATE	ITEM	NO	NAME	SEC	DATE
A	25/01/99	DAMPERS CHANGED TO 230VAC	GAW	CHANGED	SRC	21/08/98
B	23/03/99	AS FITTED AND TESTED	MHN	CHANGED	DATE	
C	13/07/99	FOU CONTROLLER ADDED FOR OPTIMASER SIGNAL	MAP	CHANGED	DSO	DATE

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DRG No. S98057-179



NOTES

- MATERIAL:  
DOORS/FRAME - 2.0mm MILD STEEL  
EQUIPMENT PLATE - 2.0mm MILD STEEL
- FINISH - RAL 7032 (GREY)
- EQUIPMENT PLATES: WHITE SEMI-GLOSS
- INGRESS PROTECTION RATING - IP54

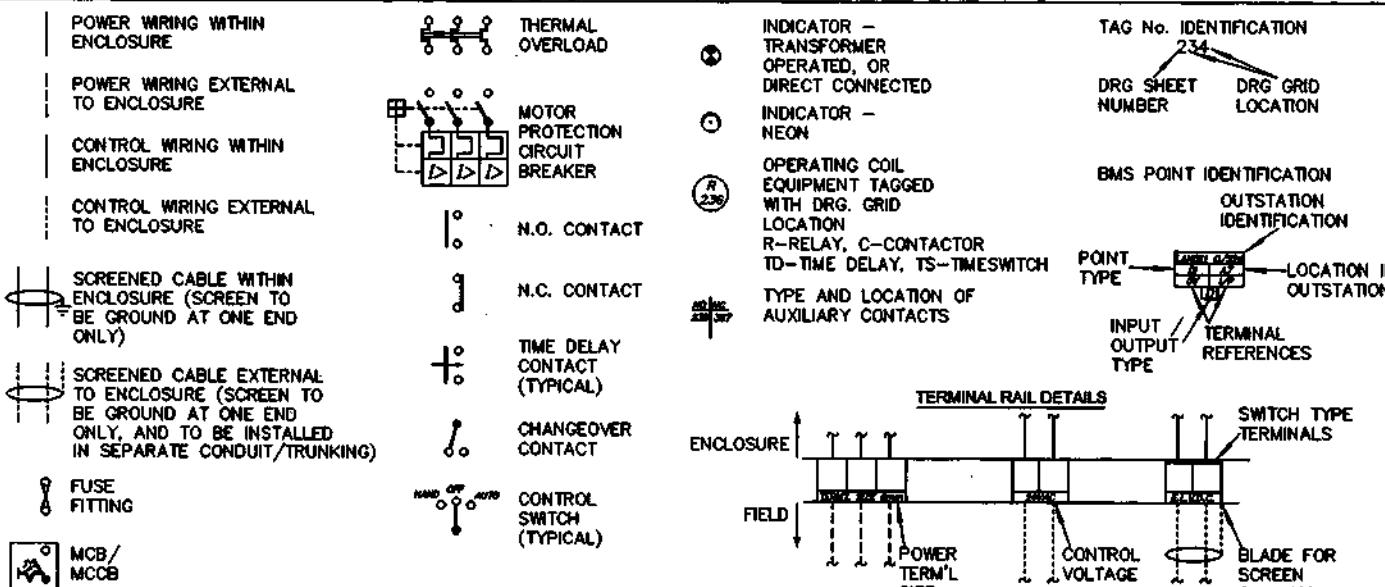
NOTES:

- LABELS TO BE WHITE-BLACK-WHITE TRAFFOLYTE UNLESS OTHERWISE STATED
- LABELS TO HAVE 8mm. RADIUS CORNERS, AND 3mm. COUNTERSUNK FIXING HOLES.
- MAIN TITLES TO BE APPROX. 8mm. HIGH, AND SUB-TITLES APPROX. 3mm. HIGH.
- CUTOUT DETAILS: 'A' HOLES - 22.5mm DIA. (28.5mm BEVEL)  
SW HOLES - 22.5mm DIA. (30mm BEVEL)

**SYNCHRONISED  
SYSTEMS**

HORTON ROAD, COLNBROOK, SLOUGH, BERKSHIRE  
TEL: 01753 738000  
FAX: 01753 771001

WIRING NOTES	EQUIPMENT NOTES	DRAWING No.	ISSUE	DESCRIPTION
1. MINIMUM POWER WIRING 2.5mm	1. ALL STARTERS TO BE OF TELEMECANIQUE MANUFACTURE	S98057-181	B	MAIN SUPPLIES / BMS OUTSTATION / 24VAC CCT
2. MINIMUM CONTROL WIRING 1.0mm	2. MAIN SUPPLY ISOLATORS TO BE OF SOCOMEC/TELEMECANIQUE MANUFACTURE	S98057-182	C	FCU CONTROLLER ADDED FOR OPTIMISER SIGNAL
3. POWER CABLES TO BE FITTED WITH CORD END TERMINALS, OR LUGS, DEPENDING ON SIZE, AND TYPE OF CONNECTION.	3. FUSE SWITCHES TO BE OF SOCOMEC MANUFACTURE	S98057-183		SPARE
4. CONTROL CABLES TO BE FITTED WITH CORD END TERMINALS, PIN, OR FORK, CONFIGURATION, DEPENDING ON TYPE OF CONNECTION.	4. MCB'S, AND MCCB'S TO BE OF MERLIN GERIN, OR SIEMENS MANUFACTURE.	S98057-184	B	GENERAL ARRANGEMENT AND LABEL DETAILS
5. ALL CABLES TO 16mm TO BE COLOUR CODED AS FOLLOWS:- 400 VOLTS L1,L2,L3. - RED, YELLOW, BLUE 230 VOLTS NEUTRAL - BLACK LOW VOLTAGE A.C. - BROWN EXTRA LOW VOLTAGE D.C. - GREY 115 VOLTS A.C. - ORANGE	5. ALL OUTGOING TERMINALS TO BE OF ENTRELEC MANUFACTURE.			
6. ALL CABLES ABOVE 16mm TO BE BLACK WITH ENDS HEAT SHRINK COLOUR CODED PHASE IDENTIFICATION.	6. ALL PILOT LIGHTS TO BE OF TRANILAMP MANUFACTURE.			
7. ALL CONTROL CABLES TO BE IDENTIFIED AT EACH END BY THE USE OF COLOUR CODED FERRULES. THE NUMBERS ARE SHOWN THUS ON THE DIAGRAM - '105'	7. SELECTOR SWITCHES TO BE OF TELEMECANIQUE MANUFACTURE.			
8. FINAL CABLE No. '125'	8. CONTROL RELAYS TO BE FINDER 55.34.			
9. WHEN A CABLE CONNECTS TO AN OUTGOING TERMINAL THE CABLE IDENTIFICATION NUMBER IS THE SAME AS THE TERMINAL NUMBER.	9. TIME DELAY RELAYS TO BE FINDER 85.34.			
10. FINAL TERMINAL No. POWER/230VAC - 12 FINAL TERMINAL No. ELVDC/24VAC - 83	10. WHERE HRC FUSE CARRIERS ARE INDICATED ON THE SCHEMATIC DIAGRAM THE CARRIERS ARE TO BE OF GEC MANUFACTURE.			
	FIELD WIRING NOTES			
	1. NETWORK CABLE TO BE BELDEN 9501/9502			
	2. SENSOR CABLE TO BE BELDEN 9501			



ID	DATE	DETAIL	UP	DRIVER	SEC	DATE	TITLE
A	25/01/90	DAMPERS CHANGED TO 230VAC SEACHANGE REPEATER MODULE ADDED	GAW	DRIVER		21/08/90	
B	23/03/90	AS FITTED AND TESTED	MAP	DRIVER			
C	15/07/90	FCU CONTROLLER ADDED FOR OPTIMISER SIGNAL	MAP	DRIVER	DSD		

DRAWING INDEX  
EQUIPMENT SCHEDULE/NOTES  
FOR  
SMOKE DAMPER CONTROL PANEL  
SCP/5/E



HORTON ROAD, COLNBROOK, SLOUGH, BERKSHIRE  
TEL: 01753 738000  
FAX: 01753 771001

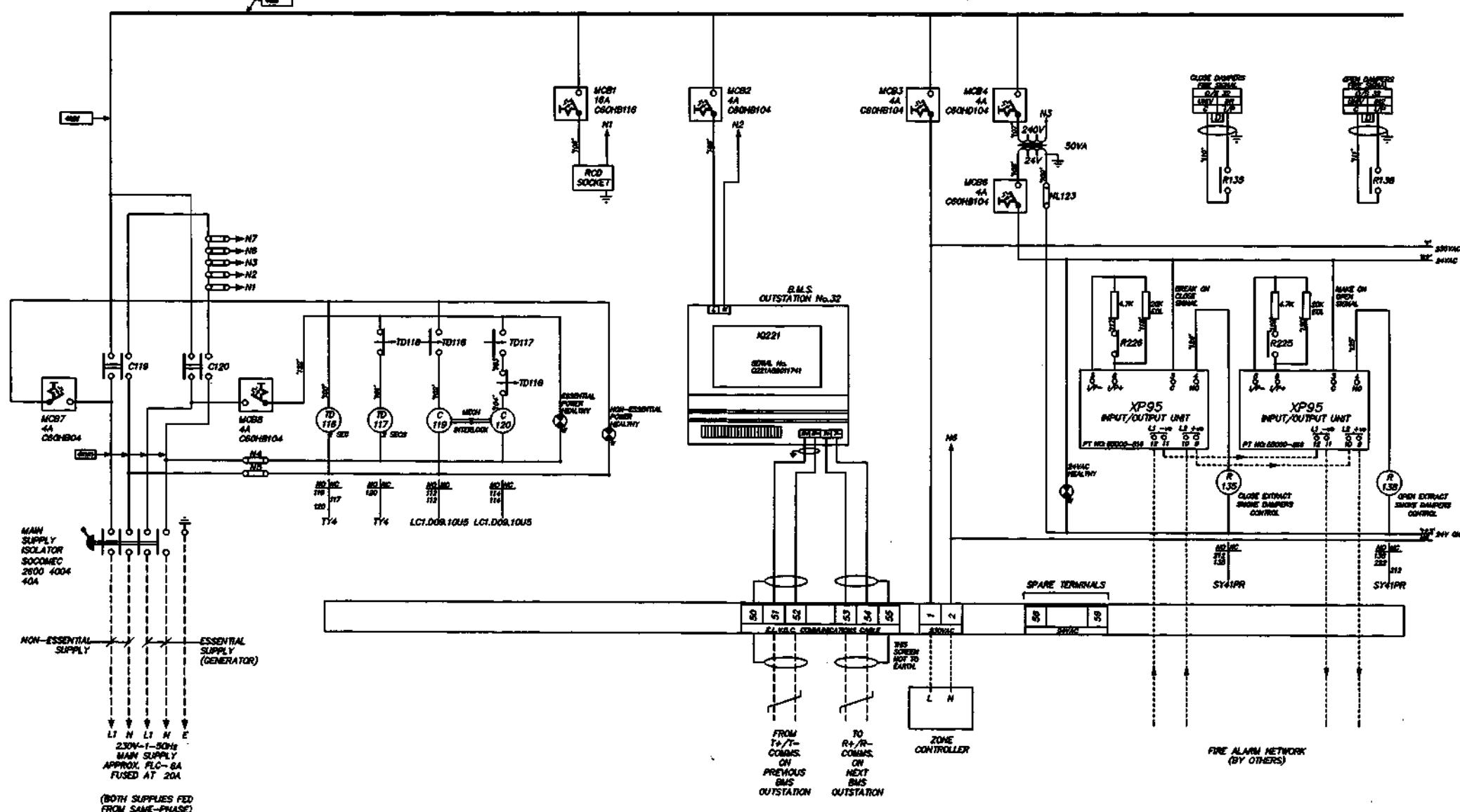
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DRG No. S98057-181



DATE	ITEM	BY	OWNER
25/01/99	DAMPERS CHANGED TO 230VAC	GAW	SBC
230398	AS FITTED AND TESTED	MJW	OWNER
			DSO

SCHEMATIC WIRING DIAGRAM  
AND EXTERNAL FIELD WIRING FOR  
SMOKE DAMPER CONTROL PANEL  
SCP/5/E  
(SHEET 1 OF 2)



HORTON ROAD, COLNBROOK, SLOUGH, BERKSHIRE  
TEL: 01753 738000 FAX: 01753 771001

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CLIENT

BENCHMARK GROUP PL

PROJECT

5-7 CABLETON GARDEN

DEG 1

D. 508057-18

ISSUE

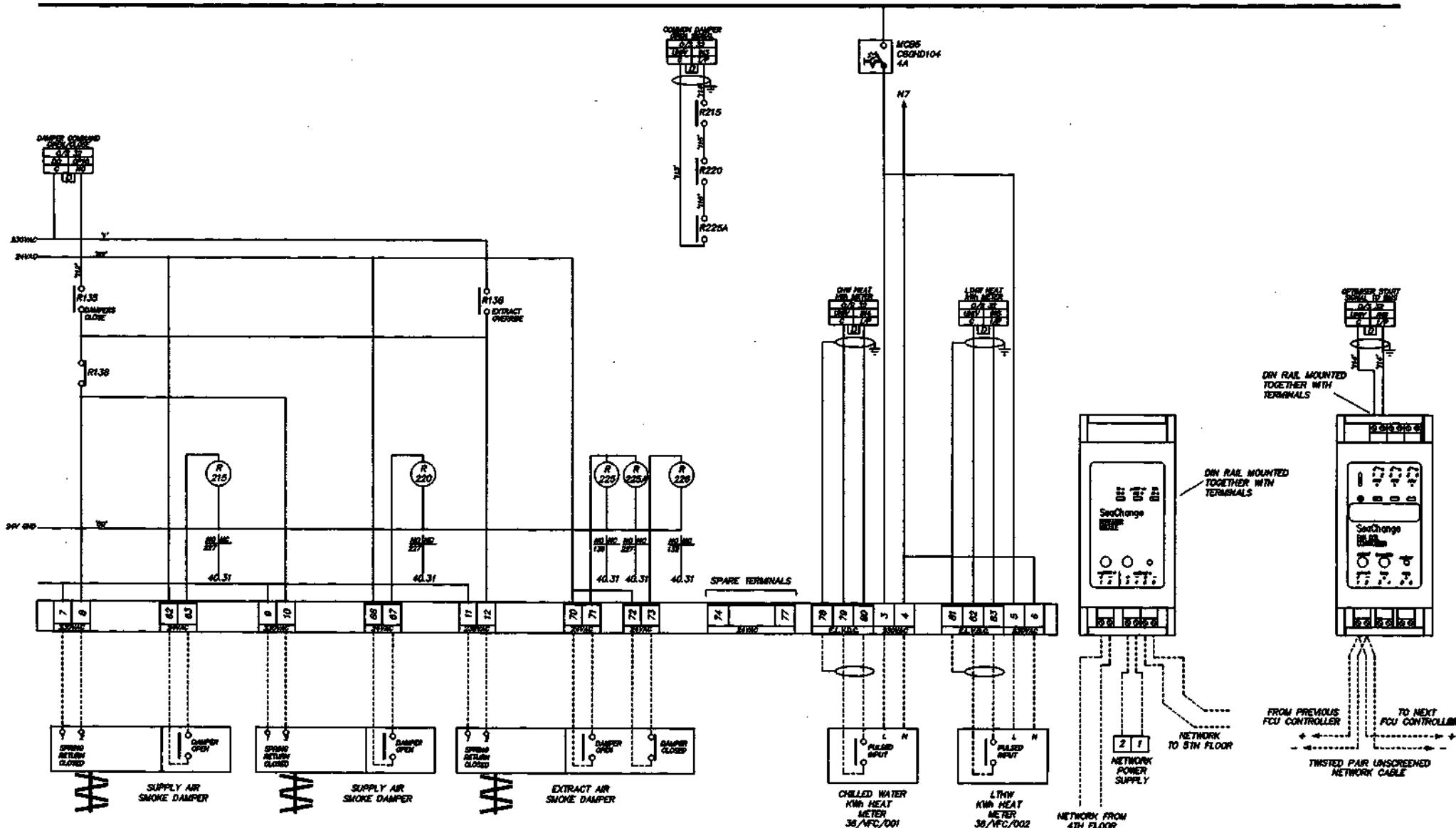
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DRG No. S98057-182



NO	DATE	ITEM	BY	DRIVEN	SPEC	DATE
A	25/01/99	DAMPERS CHANGED TO 230VAC SEACHANGE REPEATER MODULE ADDED	GAW	CHECKED		
B	23/03/99	AS FITTED AND TESTED	MAW	ENGINEER	SCALE	
C	13/07/99	FCU CONTROLLER ADDED FOR OPTIMASER SIGNAL	MAP	DSD		

**SCHEMATIC WIRING DIAGRAM  
AND EXTERNAL FIELD WIRING FOR  
SMOKE DAMPER CONTROL PANEL  
SCP/5/E  
(SHEET 2 OF 2)**

**SYNCHRONISED  
SYSTEMS**

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CLIENT

BENCHMARK GROUP PLC

PROJECT

5-7 CARLTON GARDEN

TORG No

SAB057-182

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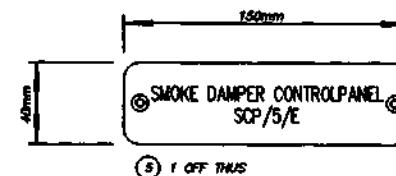
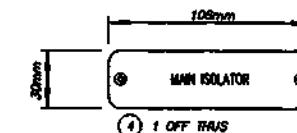
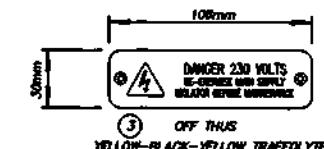
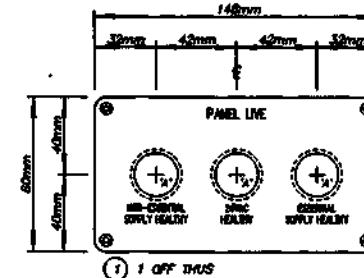
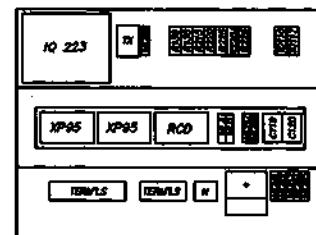
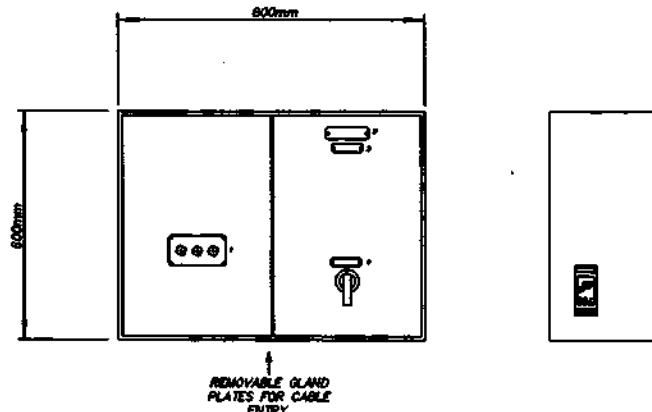
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DRG No. S98057-184



NOTES

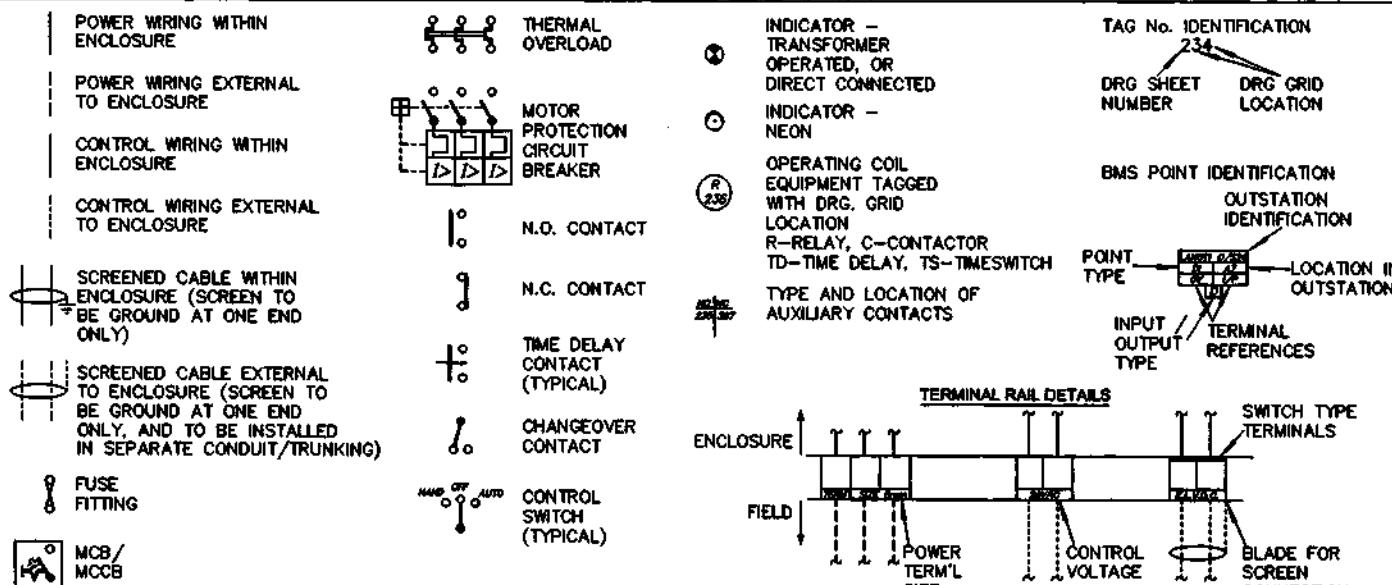
1. MATERIAL:  
DOORS/FRAME - 2.0mm MILD STEEL  
EQUIPMENT PLATE - 2.5mm MILD STEEL
2. PAINT:  
RAL 7002 (GREY)  
EQUIPMENT PLATES: WHITE SEMI-GLOSS
3. ADDRESS PROPOSITION HEATING - IP54

**NOTES:**

1. LABELS TO BE WHITE-BLACK-WHITE TRAFFICLYTE UNLESS OTHERWISE STATED.
2. LABELS TO HAVE 6mm. RADIUS CORNERS, AND 3mm. COUNTERSUNK FIXING HOLES.
3. MAIN TITLES TO BE APPROX 3mm HIGH AND SUB-TITLES APPROX 3mm HIGH.
4. CUTOUT DETAILS 'A' HOLES - 22.5mm DIA. (28.5mm BEZEL)  
'B' HOLES - 22.5mm DIA. (30mm BEZEL)

ID	DATE	DETAILS	BY	DRAWN SEC	DATE 21/08/00	TITLE	SYNCHRONISED SYSTEMS
A	23/01/99	SEACHANGE REPEATER MODULE ADDED	DO	CHECKED	DATE	GENERAL ARRANGEMENT AND LABEL DETAILS FOR SMOKE DAMPER CONTROL PANEL	HORTON ROAD, COLNBROOK, SLOUGH, BUCKINGHAMSHIRE
B	23.03.99	AS FITTED AND TESTED	MW	CHECKED	DATE	SOP/5/E (SHEET 1 OF 1)	TEL: 01753 738000
				DSO			FAX: 01753 771001
THIS DRAWING IS THE PROPERTY OF SYNCHRONISED SYSTEMS LTD AND SHOULD NOT BE REPRODUCED OR ALTERED IN WHOLE OR PART WITHOUT THE PRIOR PERMISSION OF THAT COMPANY				CLIENT	BENCHMARK GROUP PLC	PROJECT	5-7 CARLTON GARDENS
				DRG No.	S98057-184	ISSUE	B

WIRING NOTES	EQUIPMENT NOTES	DRAWING No.	ISSUE	DESCRIPTION
1. MINIMUM POWER WIRING 2.5mm	1. ALL STARTERS TO BE OF TELEMECANIQUE MANUFACTURE	S98057-186	B	MAIN SUPPLIES / BMS OUTSTATION / 24VAC CCT
2. MINIMUM CONTROL WIRING 1.0mm	2. MAIN SUPPLY ISOLATORS TO BE OF SOCOMEC/TELEMECANIQUE MANUFACTURE	S98057-187	C	FCU CONTROLLER ADDED FOR OPTIMISER SIGNAL
3. POWER CABLES TO BE FITTED WITH CORD END TERMINALS, OR LUGS, DEPENDING ON SIZE, AND TYPE OF CONNECTION.	3. FUSE SWITCHES TO BE OF SOCOMEC MANUFACTURE	S98057-188		SPARE
4. CONTROL CABLES TO BE FITTED WITH CORD END TERMINALS, PIN, OR FORK, CONFIGURATION, DEPENDING ON TYPE OF CONNECTION.	4. MCB'S, AND MCCB'S TO BE OF MERLIN GERIN, OR SIEMENS MANUFACTURE.	S98057-189	B	GENERAL ARRANGEMENT AND LABEL DETAILS
5. ALL CABLES TO 16mm TO BE COLOUR CODED AS FOLLOWS:- 400 VOLTS L1,L2,L3. - RED, YELLOW, BLUE 230 VOLTS NEUTRAL - BLACK LOW VOLTAGE A.C. - BROWN EXTRA LOW VOLTAGE D.C. - GREY 115 VOLTS A.C. - ORANGE	5. ALL OUTGOING TERMINALS TO BE OF ENTRELEC MANUFACTURE.			
6. ALL CABLES ABOVE 16mm TO BE BLACK WITH ENDS HEAT SHRINK COLOUR CODED PHASE IDENTIFICATION.	6. ALL PILOT LIGHTS TO BE OF TRANILAMP MANUFACTURE.			
7. ALL CONTROL CABLES TO BE IDENTIFIED AT EACH END BY THE USE OF COLOUR CODED FERRULES. THE NUMBERS ARE SHOWN THUS ON THE DIAGRAM - '105'	7. SELECTOR SWITCHES TO BE OF TELEMECANIQUE MANUFACTURE.			
8. FINAL CABLE No. '125'	8. CONTROL RELAYS TO BE FINDER 55-34. 40.31 / IMO SY41PR			
9. WHEN A CABLE CONNECTS TO AN OUTGOING TERMINAL THE CABLE IDENTIFICATION NUMBER IS THE SAME AS THE TERMINAL NUMBER.	9. TIME DELAY RELAYS TO BE FINDER 55-34. IMO TY4			
10. FINAL TERMINAL No. POWER/230VAC - 14 FINAL TERMINAL No. ELVDC/24VAC - 87	10. WHERE HRC FUSE CARRIERS ARE INDICATED ON THE SCHEMATIC DIAGRAM THE CARRIERS ARE TO BE OF GEC MANUFACTURE.			
	FIELD WIRING NOTES			
	1. NETWORK CABLE TO BE BELDEN 9501/9502			
	2. SENSOR CABLE TO BE BELDEN 9501			



	REV	DATE	REV	DRG No.	ISSUE
A	25/01/98	DAMPERS CHANGED TO 230VAC SEACHANGE REPEATER MODULE ADDED	GAW	S98	21/08/98
B	25/01/98	AS FITTED AND TESTED	M.W		
C	13/07/98	FCU CONTROLLER ADDED FOR OPTIMISER SIGNAL	M.P	D50	

DRAWING INDEX  
EQUIPMENT SCHEDULE/NOTES  
FOR  
SMOKE DAMPER CONTROL PANEL  
SCP/5/W

HORTON ROAD, COLNBROOK, SLOUGH, BERKSHIRE  
TEL: 01753 738000  
FAX: 01753 771001



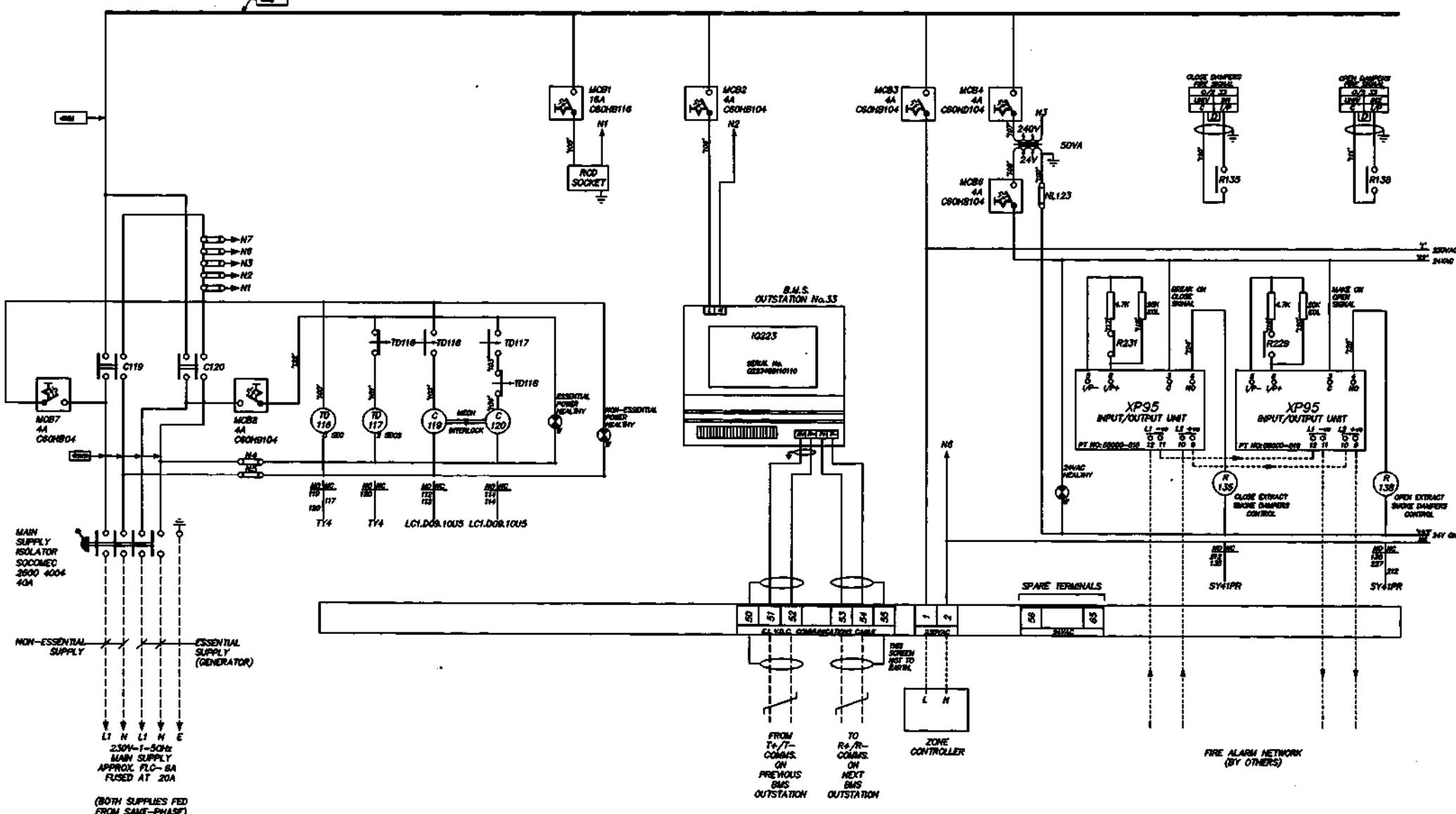
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ORG No. S98057-186



DATE	DETAIL	BY	REMARKS
25/01/99	DAMPERS CHANGED TO 230VAC	GAW	CHANGED
230399	AS FITTED AND TESTED	MOW	INSPECTED

— 1 —

**SCHEMATIC WIRING DIAGRAM  
AND EXTERNAL FIELD WIRING FOR  
SMOKE DAMPER CONTROL PANEL  
SCP/5/W  
(SHEET 1 OF 2)**



HORTON ROAD, COLNBROOK, SLOUGH, BERKSHIRE  
TEL: 01753 738000 FAX: 01753 771001

BENCHMARK GROUP PLC

**PROJECT** 5-7 CARLTON GARDEN

DRG No. S98057-186

ISSUE

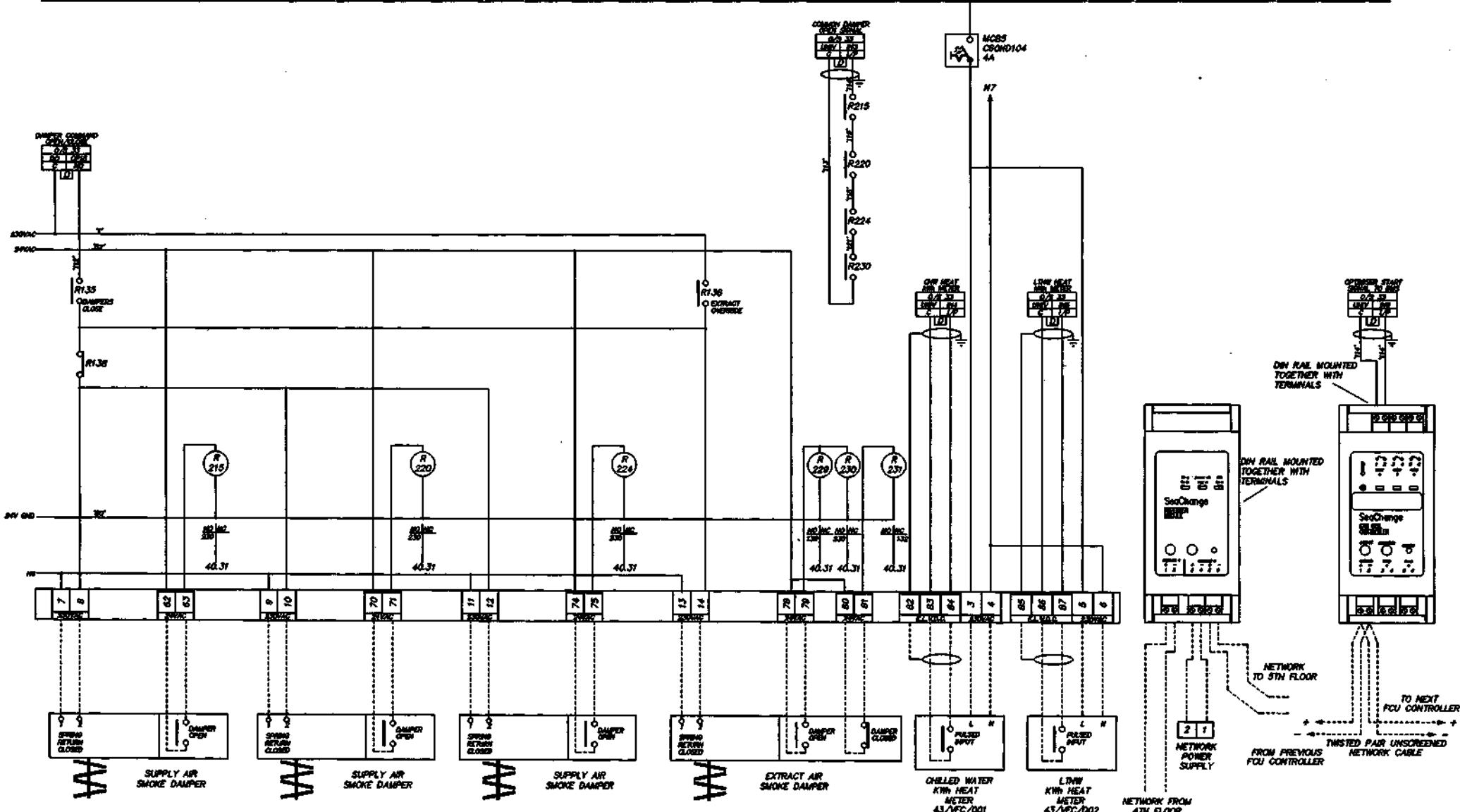
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230.

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DRG No. S98057-187



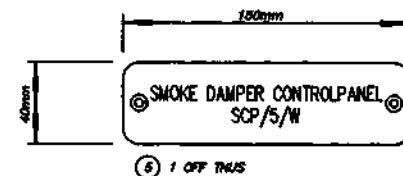
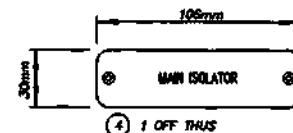
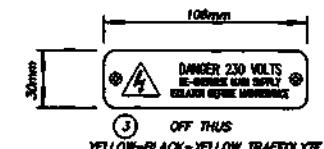
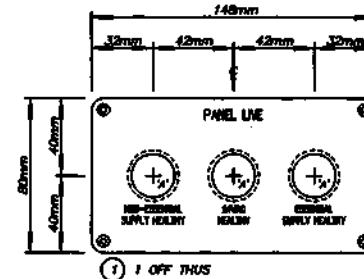
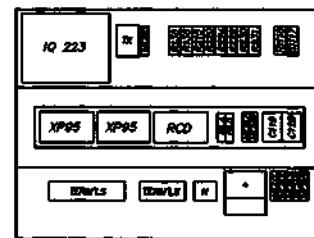
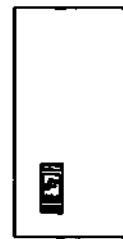
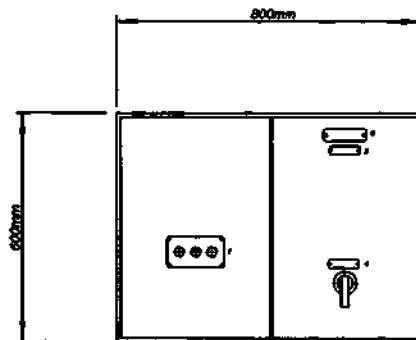
IN	NAME	NOTES	IN	NAME	NOTES
A	25/01/98	DAMPERS CHANGED TO 230VAC SEACHANGE REPEATER MODULE ADDED	GAW	SEC	DATE 21/08/98
B	25/03/98	AS FITTED AND TESTED	MJW	CHANGED	DATE
C	13/07/98	FCU CONTROLLER ADDED FOR OPTIMISER SIGNAL	MAP	DISP	DATE

TITLE  
SCHEMATIC WIRING DIAGRAM  
AND EXTERNAL FIELD WIRING FOR  
SMOKE DAMPER CONTROL PANEL  
SCP/5/W  
(SHEET 2 OF 2)

SYNCHRONISED SYSTEMS  
HORTON ROAD, COLNBROOK, SLOUGH, BERKSHIRE  
TEL: 01753 738000  
FAX: 01753 771001

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DRG No. S98057-189



NOTES  
 1. MATERIAL:  
 DOORS/FRAME - 2.0mm MILD STEEL  
 EQUIPMENT PLATE - 2.5mm MILD STEEL  
 2. FINISH:  
 RAL 7035 (GRET)  
 EQUIPMENT PLATES: WHITE SEMI-GLOSS  
 3. INGRESS PROTECTION RATING - IP54

NOTES:  
 1. LABELS TO BE WHITE-BLACK-WHITE TRAFFOLITE UNLESS OTHERWISE STATED  
 2. LABELS TO HAVE 6mm. RADIUS CORNERS AND 3mm. COUNTERSUNK FIXING HOLES  
 3. MAIN TITLES TO BE APPROX. 5mm. HIGH, AND SUB-TITLES APPROX. 3mm. HIGH  
 4. CUTOUT DETAILS: 'A' HOLES - 22.5mm DIA. (26.5mm BEVEL)  
 SW HOLES - 22.5mm DIA. (30mm BEVEL)

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CLIENT

BENCHMARK GROUP PLC

PROJECT

5-7 CARLTON GARDENS

DRG No.

S98057-189

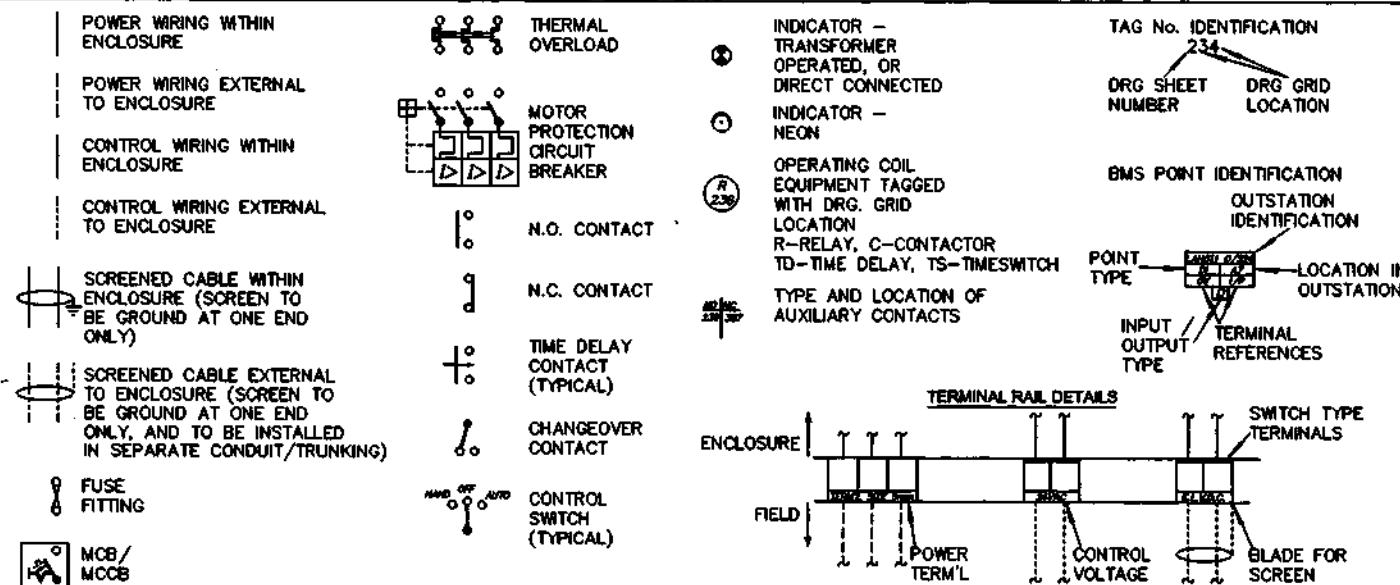
ISSUE

B

TITLE  
 GENERAL ARRANGEMENT AND  
 LABEL DETAILS FOR SMOKE  
 DAMPER CONTROL PANEL  
 SCP/5/W  
 (SHEET 1 OF 1)

**SYNCHRONISED  
SYSTEMS**

HORTON ROAD, COLNBROOK, SLOUGH, BERKSHIRE  
 TEL: 01753 738000 FAX: 01753 771001



HR	DATE	DETAIL	00	DRAWN BY G. HARRIS	DATE 18/06/98	TITLE	SYNCHRONISED SYSTEMS
A	27/11/98	DAP COMMENTS	00			DRAWING INDEX EQUIPMENT SCHEDULE/NOTES FOR MCP4	HORTON ROAD, COLNBROOK, SLOUGH, BUCKSHIRE TEL: 01753 738000 FAX: 01753 771001
B	10/12/98	EWS INPUT ADDED	00				
C	14/02/99	AS FITTED AND TESTED	M/W				
D	14/04/98	SITE MODIFICATIONS	00				

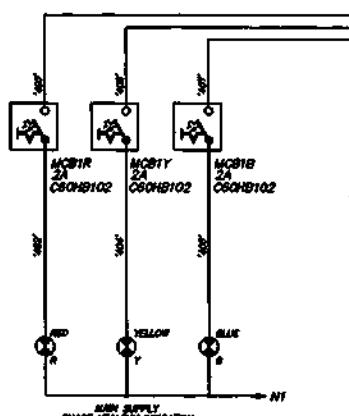
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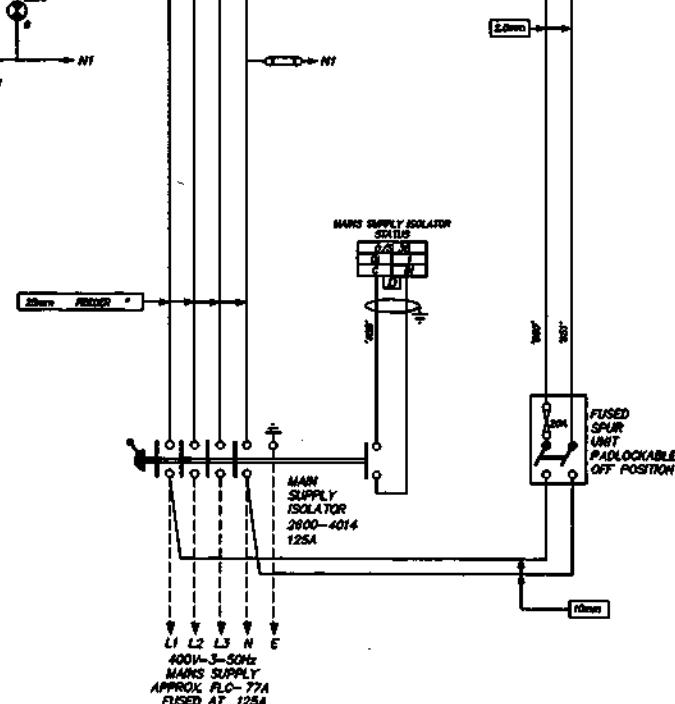
120

130

DRG No. S98057-201



20ms SELECT  
20ms CAPACITY  
20A / 1 second



L1 L2 L3 N E  
400V-3~50Hz  
MAINS SUPPLY  
APPROX FLO-77A  
FUSED AT 125A

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	DATE	GEOL	RE	DRW	REV/B	DATE
A	16/02/99	AS FITTED AND TESTED	MAN	00000	DATE	18/03/99
B	14/04/99	SITE MODIFICATION	DO	00000	DATE	

	RE	DRW	REV/B	DATE
			DSO	DATE

TITLE  
SCHEMATIC WIRING DIAGRAM  
AND EXTERNAL FIELD WIRING FOR  
MOTOR CONTROL PANEL  
MPC4  
(SHEET 1 OF 9)

SYNCHRONISED  
SYSTEMS  
HORTON ROAD, COLNBROOK, SLOUGH, BERKSHIRE  
TEL: 01753 738000  
FAX: 01753 771001

CLIENT

BENCHMARK GROUP PLC

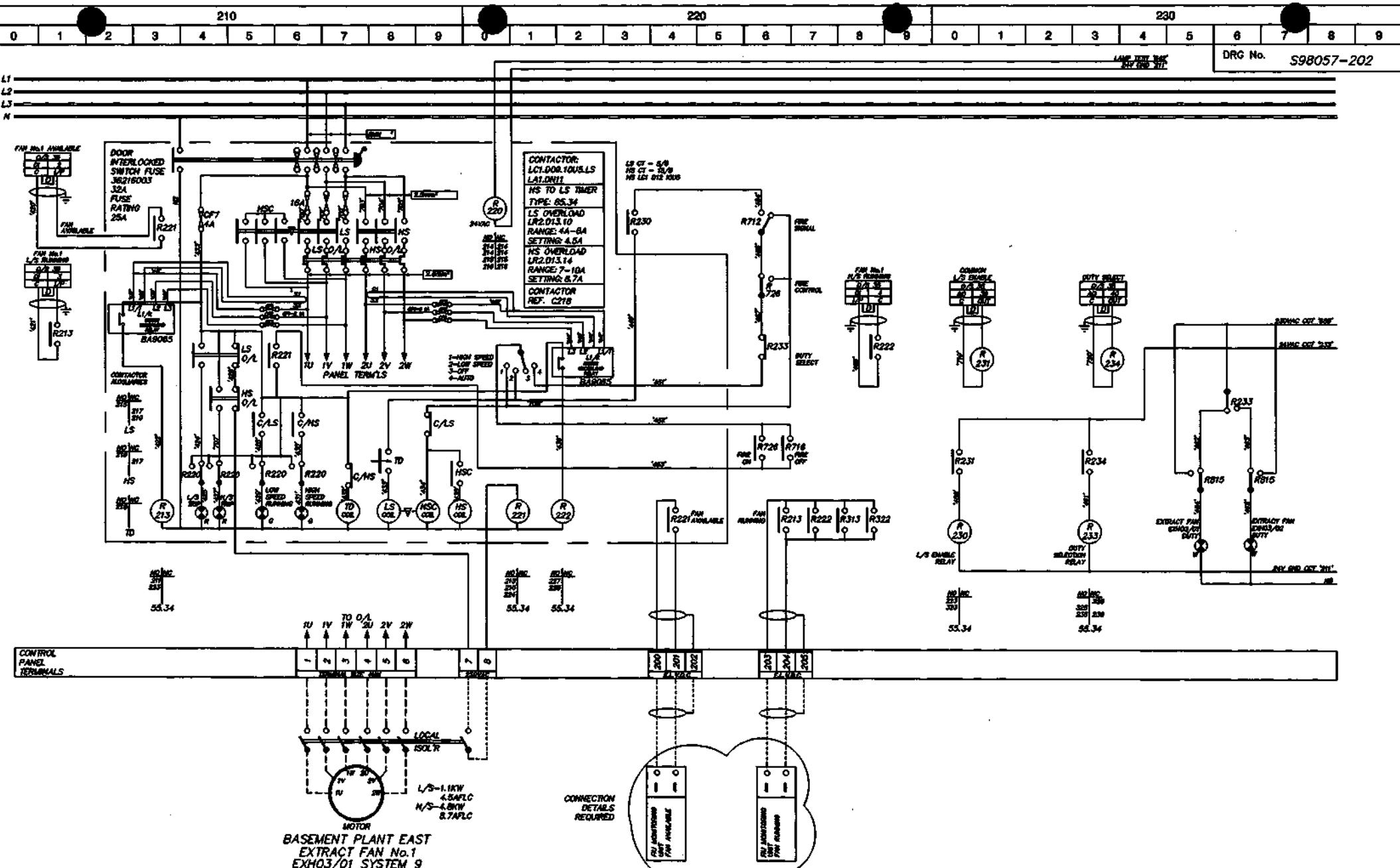
PROJECT

5 - 7 CARLTON GARDENS

DRG No.

S98057-201

ISSUE B

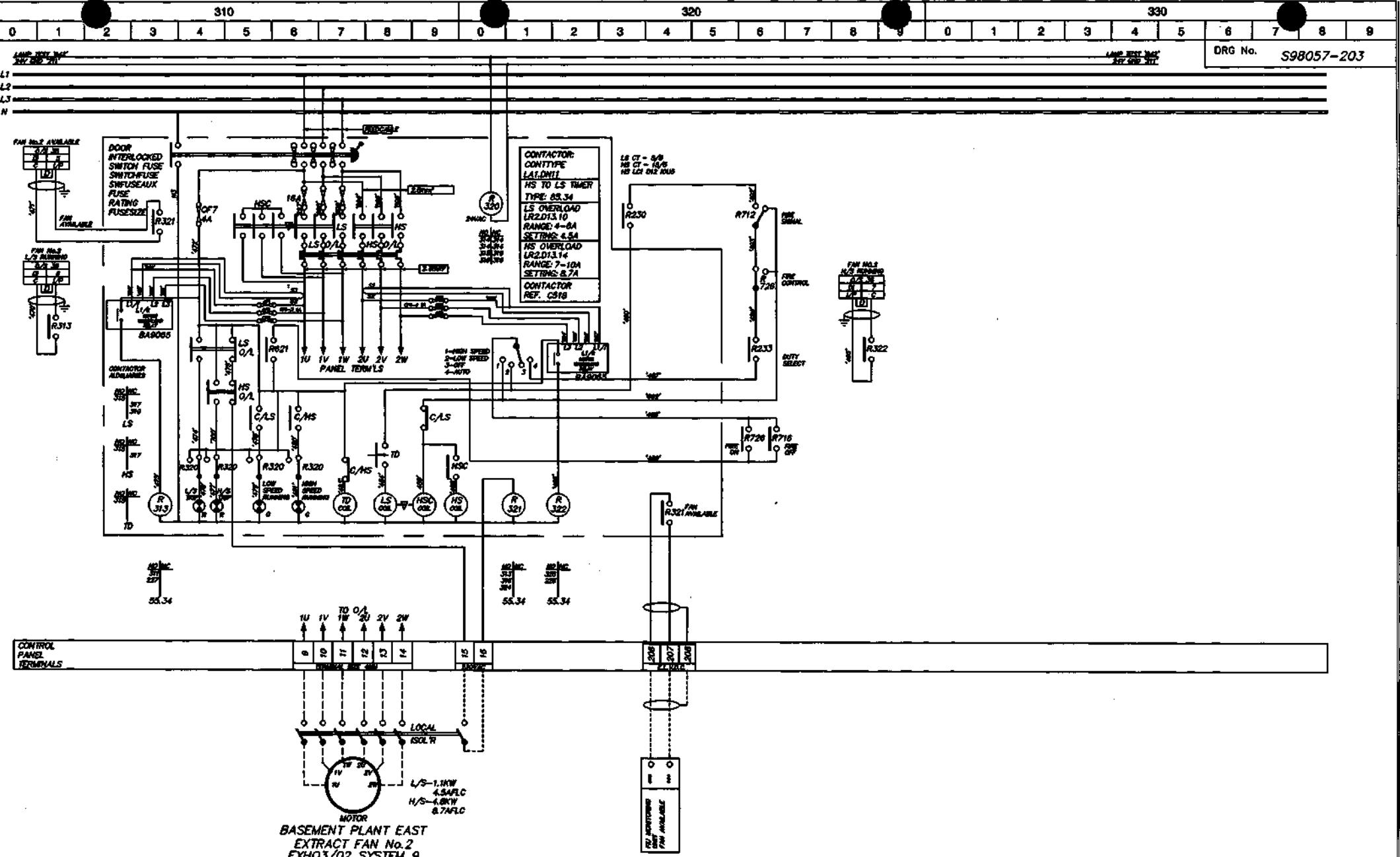


DATE	DETAIL	EE	OWNER
27/11/98	OAP COMMENTS	DO	MANAGER
14/02/99	AS FITTED AND TESTED	MAR	MANAGER
14/04/99	OVER LOADS CHANGED	DO	DSO

**SCHEMATIC WIRING DIAGRAM  
AND EXTERNAL FIELD WIRING FOR  
MOTOR CONTROL PANEL  
MCP4  
(SHEET 2 OF 9)**



HORTON ROAD, COLNBROOK, SLOUGH, BERKSHIRE  
TEL: 01753 738000 FAX: 01753 771001

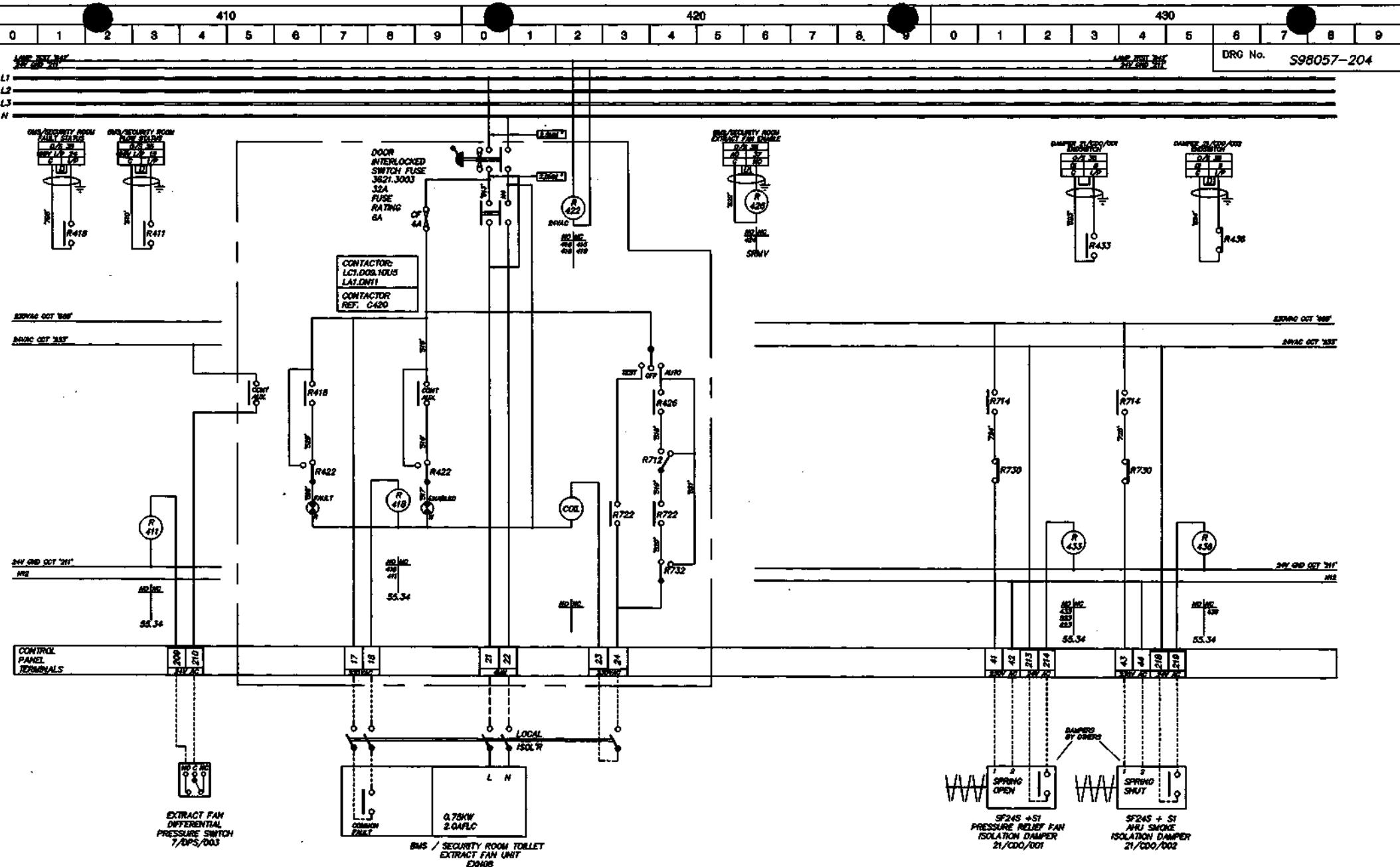


NO	DATE	REVISION	NO	DATE	REVISION
A	27/11/98	OAP COMMENTS	DSO	09/08	OAP
B	14/02/99	AS FITTED AND TESTED	M/N	09/08	OAP
C	14/04/99	OVERLOADS CHANGED	DO	DSO	OAP

SCHEMATIC WIRING DIAGRAM  
AND EXTERNAL FIELD WIRING FOR  
MOTOR CONTROL PANEL  
MCP4  
(SHEET 3 OF 9)

HORTON ROAD, COLNBROOK, SLOUGH, BERKSHIRE  
TEL: 01753 738000  
FAX: 01753 771001





NO	DATE	DETAIL	BY	REASON	ADS	DATE
A	27/11/98	CAP COMMENTS	DO	SHIPPED		18/12/98
B	10/12/98	BMS INPUT ADDED	DO	CHANGED		
C	14/02/99	AS FITTED AND TESTED	MAR	DSO		
D	14/04/99	SITE MODIFICATIONS	DO			

**SCHEMATIC WIRING DIAGRAM  
AND EXTERNAL FIELD WIRING FOR  
MOTOR CONTROL PANEL  
MCP4  
(SHEET 4 OF 9)**

HORTON ROAD, COLNBROOK, SLOUGH, BERKSHIRE  
TEL: 01753 738000 FAX: 01753 771001

*SYNCHRONISED  
SYSTEMS*

THE SCAFFOLD IS THE SUPPORT OF ASSISTED SUICIDE AND SUICIDE ASSISTANCE

CLIENT

BENCHMARK GROUP PI C

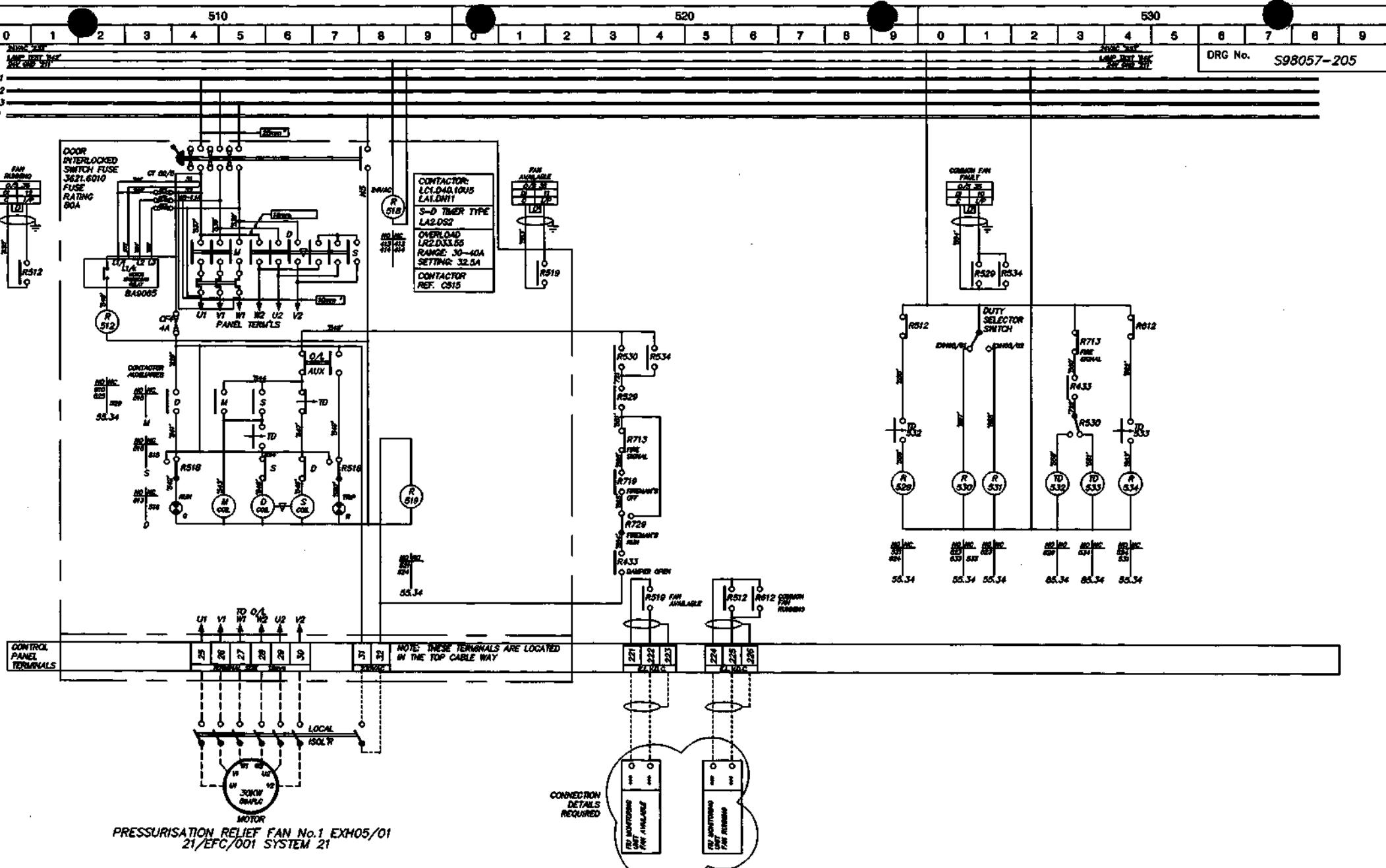
PROJECT

5-7 CARLTON GARDEN

PRG N

S98057-20

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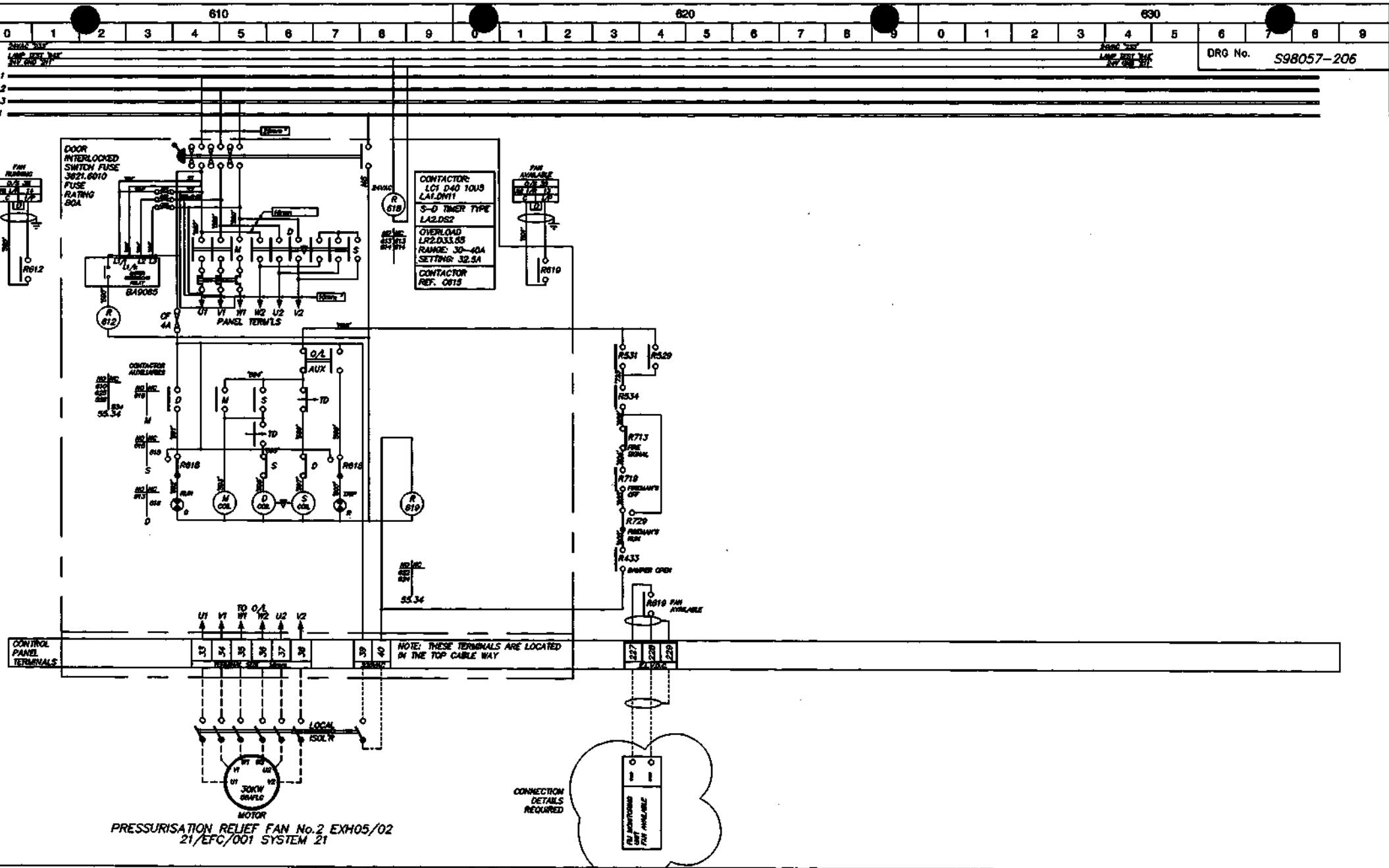


IN	DATE	ITEM	IN	DRIVEN	DATE
A	27/11/98	DAP COMMENTS	DO	CHEMIST	21/12/98
B	14/02/99	AS FITTED AND TESTED	M/W	CHIEF	21/12/98
C	31/03/99	MOTOR AND STARTER RATING UPGRADED	M/W	DSO	21/12/98

**SCHEMATIC WIRING DIAGRAM  
AND EXTERNAL FIELD WIRING FOR  
MOTOR CONTROL PANEL  
MCP4  
(SHEET 5 OF 9)**



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DATE ISSUED DATE APPROVED DATE

21/9/98

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21/9/98

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DATE

TITLE

SCHEMATIC WIRING DIAGRAM  
AND EXTERNAL FIELD WIRING FOR  
MOTOR CONTROL PANEL  
MCP4  
(SHEET 6 OF 9)

**SYNCHRONISED SYSTEMS**  
HORTON ROAD, COLNBROOK, SLOUGH, BERKSHIRE  
TEL: 01753 738000 FAX: 01753 771001

CLIENT

BENCHMARK GROUP PLC

PROJECT

5-7 CARLTON GARDENS

DRG. No.

S98057-206

ISSUE

C

REF	DATE	NOTES	SP	DRWNR	PBG	REV	14/8/98	TITLE	SYNCHRONISED SYSTEMS			
A	27/11/98	DAP COMMENTS	DO	CHIEF	DATA			SCHEMATIC WIRING DIAGRAM AND EXTERNAL FIELD WIRING FOR MOTOR CONTROL PANEL MCP4 (SHEET 7 OF 9)				
B	14/02/99	AS FITTED AND TESTED	M&W	ENGINER	DATA							
C	14/04/98	SITE MODIFICATIONS	DO	DSO	DATA							
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CLIENT			PROJECT			DRG No.		S98057-207		ISSUE C		
BENCHMARK GROUP PLC			5-7 CARLTON GARDENS									

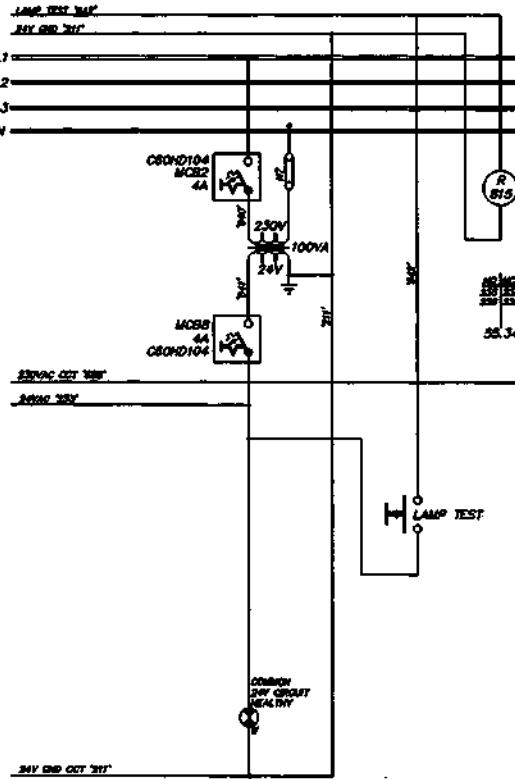
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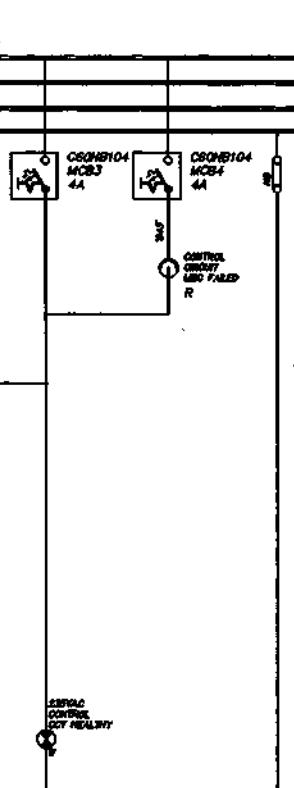
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DRG No. S98057-208



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DETAIL

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DRAWN

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DATE

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DATE

APPROVED

DATE

DSO

DATE

TITLE

SCHEMATIC WIRING DIAGRAM  
AND EXTERNAL FIELD WIRING FOR  
MOTOR CONTROL PANEL  
MCP4  
(SHEET 8 OF 9)

SYNCHRONISED SYSTEMS  
HORTON ROAD, COLNBROOK, SLOUGH, BERKSHIRE  
TEL: 01753 738000 FAX: 01753 771001

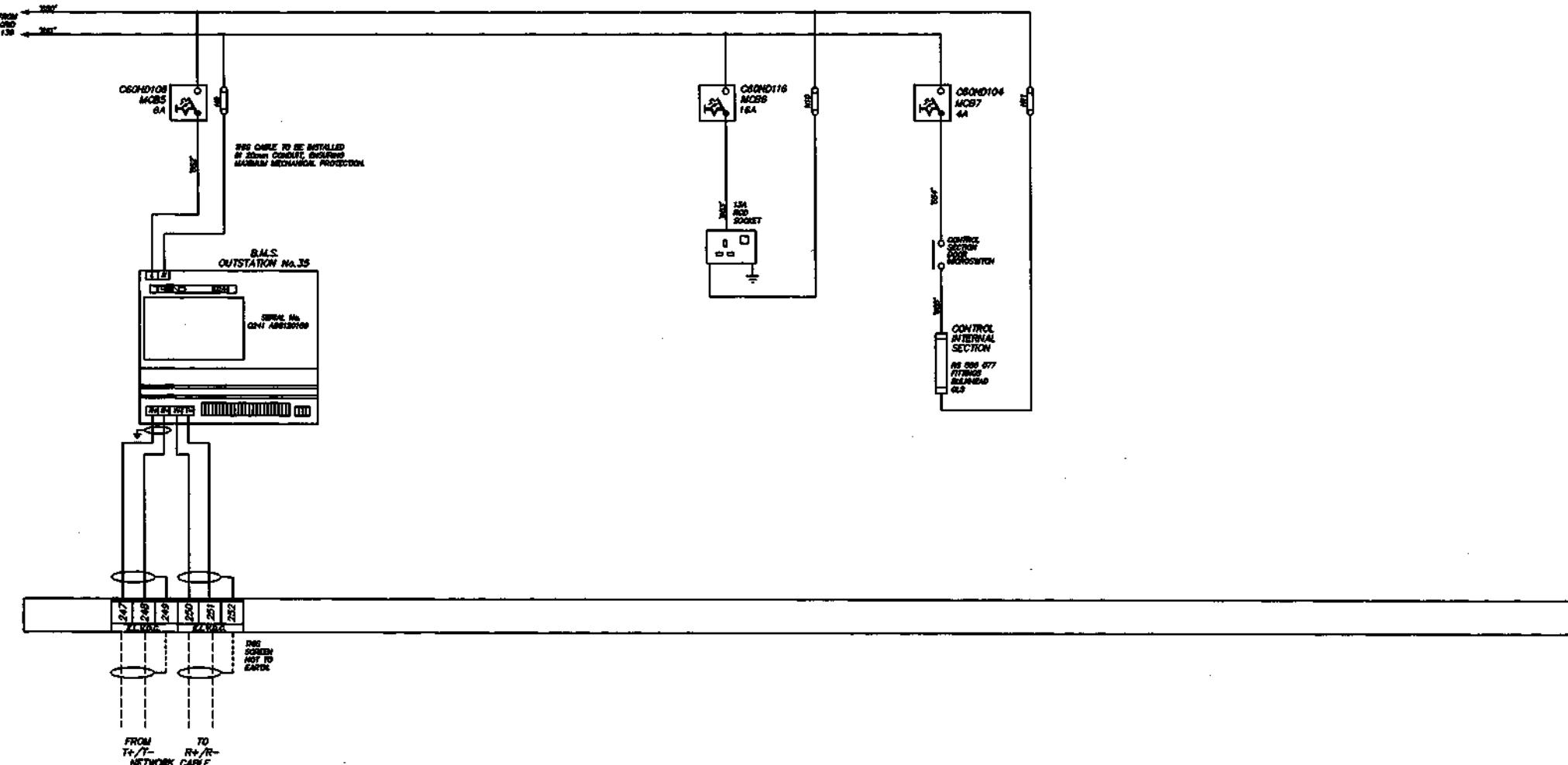
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DRG No. S98057-209



REVISION

DATE

DETAIL

REV

DRAWN

JAB

DATE

CHECKED

DATE

DESIGNER

DSO

DATE

TITLE

SCHEMATIC WIRING DIAGRAM  
AND EXTERNAL FIELD WIRING FOR  
MOTOR CONTROL PANEL  
MCP4  
(SHEET 9 OF 9)



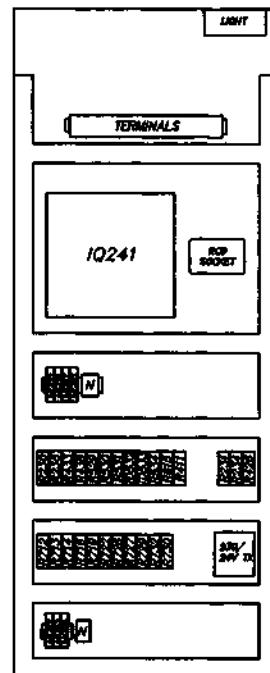
HORTON ROAD, COLNBROOK, SLOUGH, BERKSHIRE  
TEL: 01753 738000  
FAX: 01753 771001

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DRG No. S98057-211



INTERNAL LAYOUT

IN	DATE	DESCRIPTION	IN	DRAWN BY	DATE
A	14/02/99	AS FITTED AND TESTED	MAN	JMB	17/02/99
B	14/04/99	SITE MODIFICATIONS	DO	CHANGED BY	DATE

IN	DATE	DRAWN BY	DATE
		CHANGED BY	DATE
		DSO	DATE

TITLE

INTERNAL LAYOUT FOR  
MOTOR CONTROL PANEL  
MCP4



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CLIENT

BENCHMARK GROUP PLC

PROJECT

5-7 CARLTON GARDENS

DRG No.

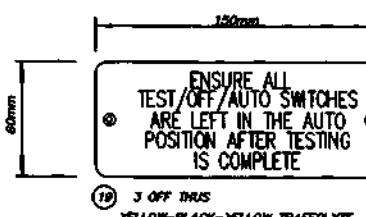
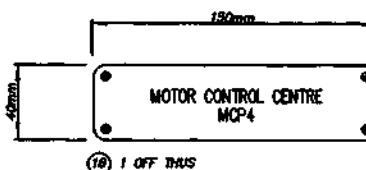
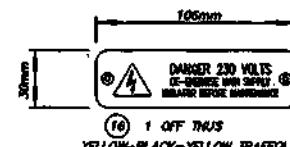
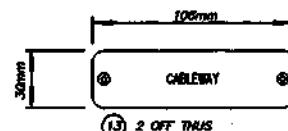
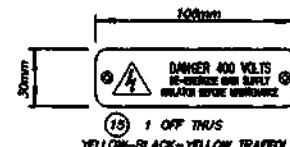
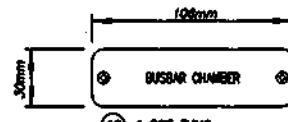
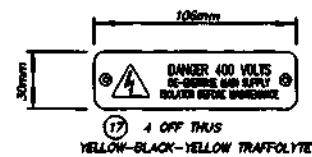
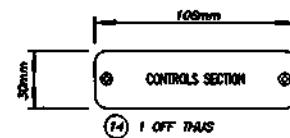
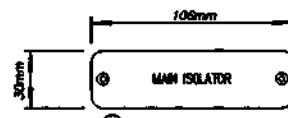
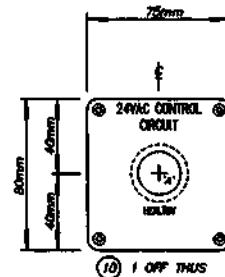
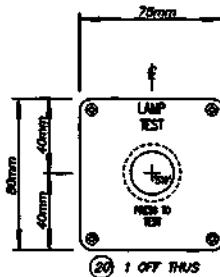
S98057-211

ISSUE B



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DRG No. S98057-213



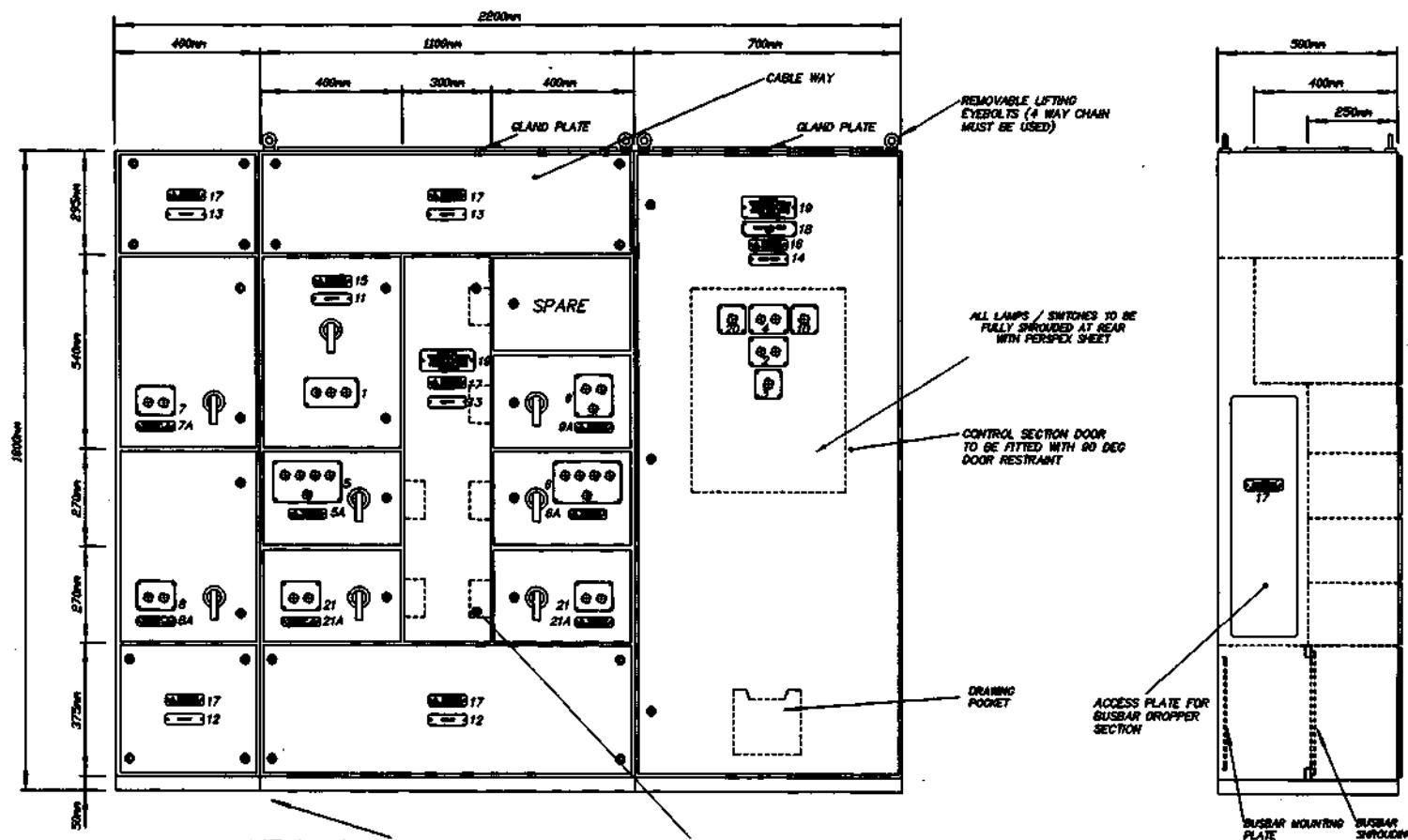
NOTES:  
 1. LABELS TO BE WHITE-BLACK-WHITE TRAFFOLYTE UNLESS OTHERWISE STATED.  
 2. LABELS TO HAVE 6mm. RADIUS CORNERS AND 3mm. COUNTERSUNK FIXING HOLES.  
 3. MAIN TITLES TO BE APPROX. 5mm HIGH, AND SUB-TITLES APPROX. 3mm HIGH.  
 4. CUTOUT DETAILS: 'A' HOLES - 22.5mm DIA. (26.5mm BEZEL)  
 'B' HOLES - 10.0mm DIA.  
 'SW' HOLES - 22.5mm DIA. (30mm BEZEL)



HORTON ROAD, COLNBROOK, SLOUGH, BERKSHIRE  
TEL: 01753 738000 FAX: 01753 771001

0	1	2	3	4	5	6	7	8	9	0	1	2	3	4	5	6	7	8	9
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DRG No. S98057-214

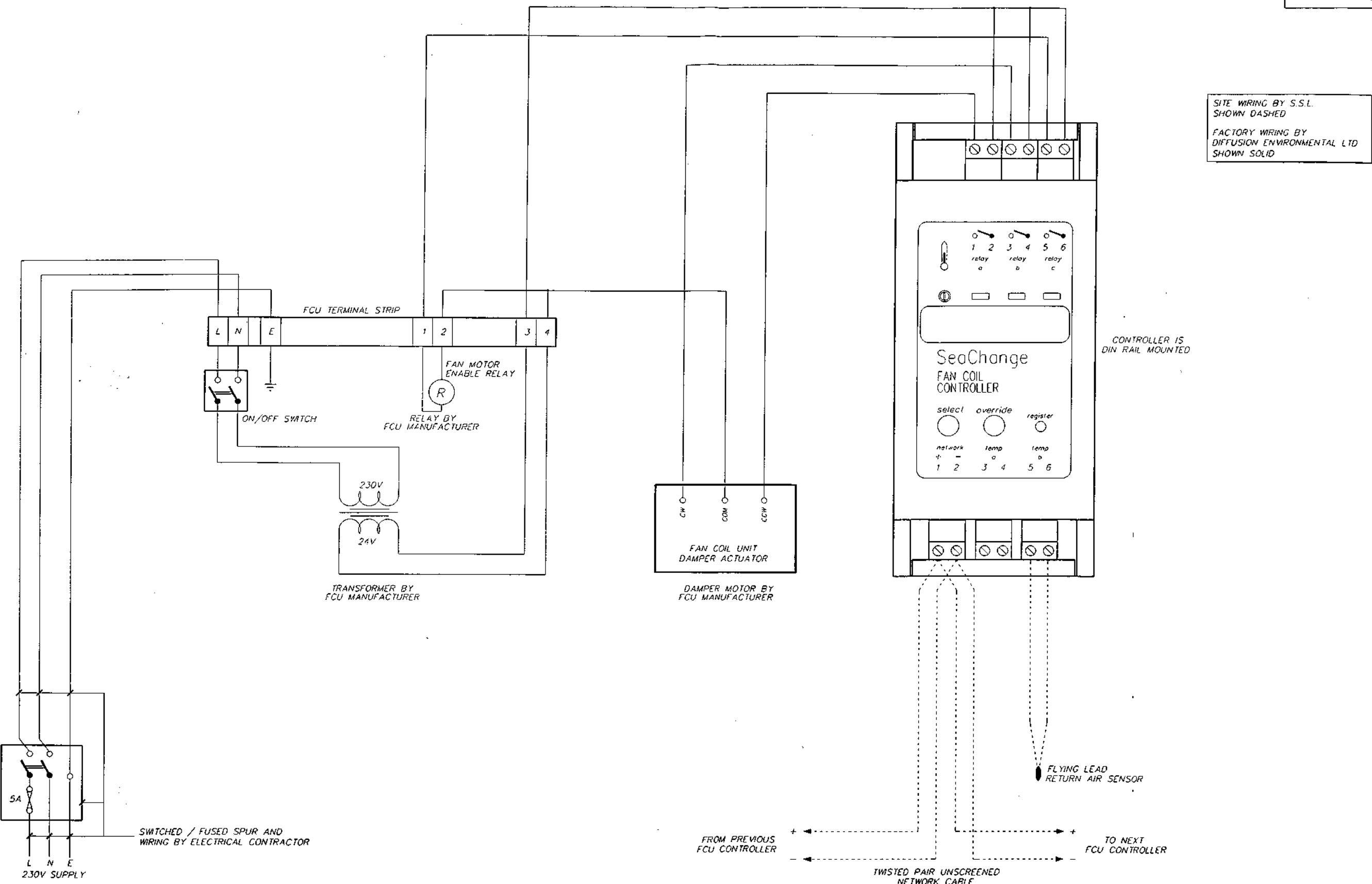


<b>NOTES</b>
1. MATERIAL: DOORS/FRAME - 2.0mm MILD STEEL EQUIPMENT PLATE - 2.5mm MILD STEEL
2. FINISH: DOORS: BS3810-112 (ANTIQUE BLUE) FRAMEWORK: BS3810-113 (DEEP SAFF) EQUIPMENT PLATES: WHITE SEMI-GLOSS PLUNGE: BLACK GLOSS
3. DOOR STAYS REQUIRED TO PREVENT OPENING MORE THAN 90 DEGREES
4. CONCEALED HINGES
5. INGRESS PROTECTION RATING - IP64
6. GLAND PLATE SIZE - WIDTH LESS 150mm DEPTH LESS 80mm

ITEM	DATE	REF	DRAWN BY	PBG	DATE	TITLE	SYNCHRONISED SYSTEMS	
							DESIGNER	REVIEWED
							MAN	MAN
							MAN	MAN
A	27/11/98	OAP COMMENTS	DD	040000	17/8/98	GENERAL ARRANGEMENT FOR MOTOR CONTROL PANEL MCP4	 HORTON ROAD, COLNBROOK, SLOUGH, BERKSHIRE TEL: 01753 738000 FAX: 01753 771001	
B	14/02/99	AS FITTED AND TESTED	MAN	040000	04/03/99			
C	31/03/99	LEFT HAND SECTION ADDED	JHW	050000	04/04/99			
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0	1	2	3	4	5	6	7	8	9	0	1	2	3	4	5	6	7	8	9
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DRG No. S98057-220

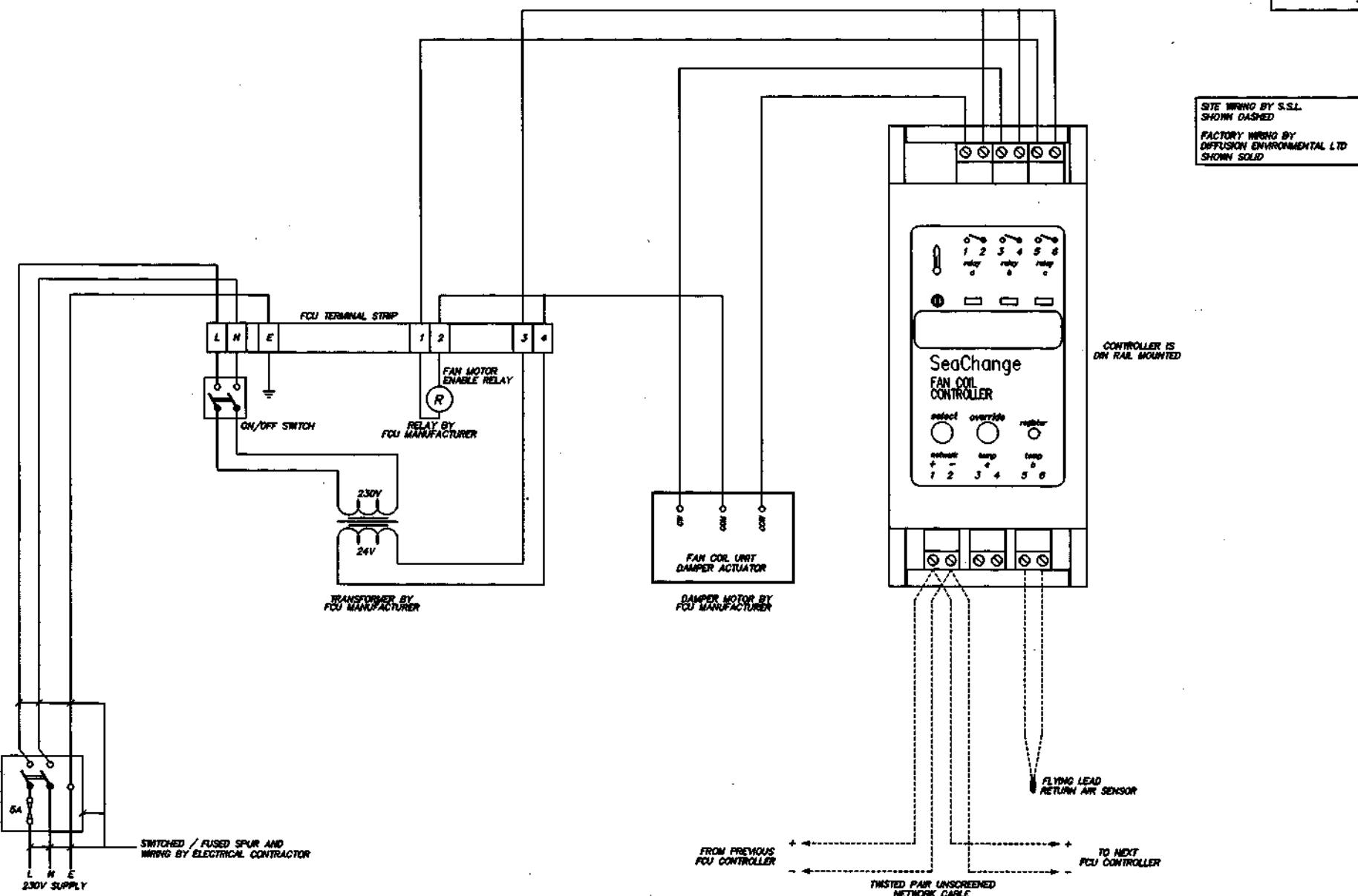


**SYNCHRONISED  
SYSTEMS**

HORTON ROAD, COLNBROOK, SLOUGH, BERKSHIRE  
TEL: 01753 738000  
FAX: 01753 771001

0	1	2	3	4	5	6	7	8	9	0	1	2	3	4	5	6	7	8	9
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DRG No. S98057-220



TITLE

SCHEMATIC WIRING DIAGRAM  
FOR FAN COIL UNIT  
B.M.S. CONTROLLER

**SYNCHRONISED SYSTEMS**

HORTON ROAD, COLNBROOK, SLOUGH, BERKSHIRE  
TEL: 01753 738000  
FAX: 01753 771001

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CLIENT

BENCHMARK GROUP LTD

PROJECT

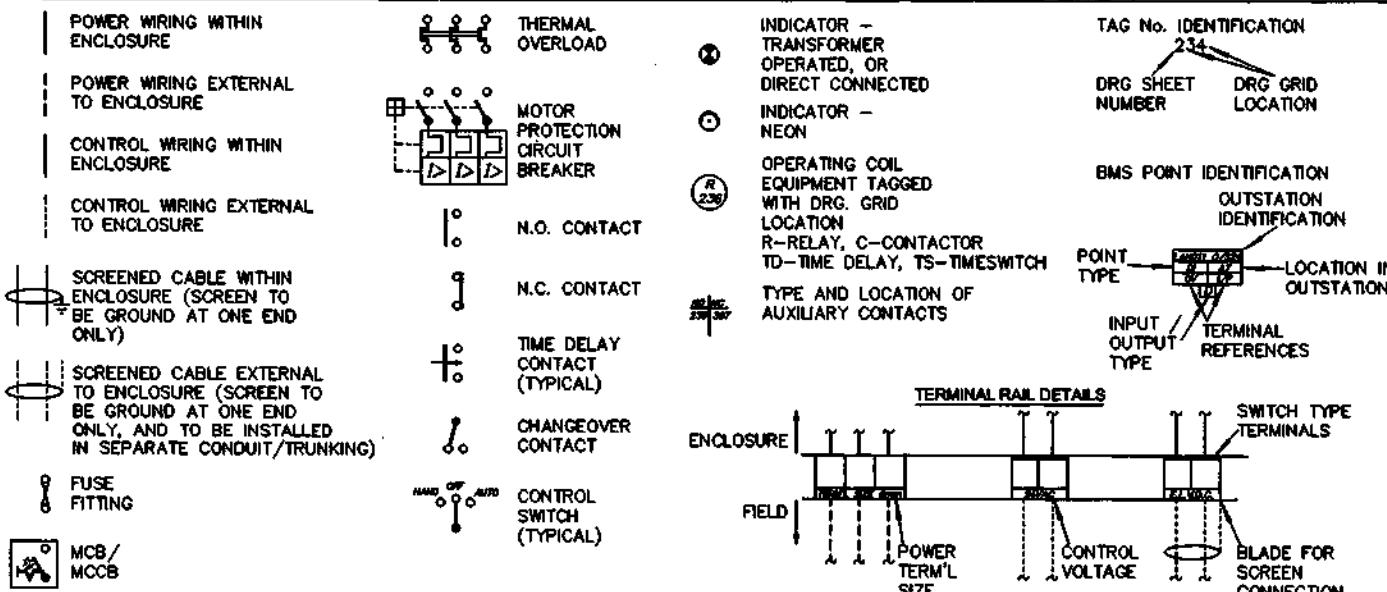
5 - 7 CARLTON GARDENS

DRG No.

S98057-220

ISSUE

0



ID	DATE	DETAIL	ID
A	15/02/99	ELECTRICAL DETAILS ADDED	DSO
B	13/04/99	CLIENTS COMMENTS	DSO
C	08/06/99	AS FITTED AND TESTED	DFF

DRAWING INDEX  
EQUIPMENT SCHEDULE/NOTES  
FOR  
RESIDENTIAL CONTROL'S  
TYPICAL PANEL



HORTON ROAD, COLNBROOK, SLOUGH, BERKSHIRE  
TEL: 01753 738000 FAX: 01753 771001

110

0

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2

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4

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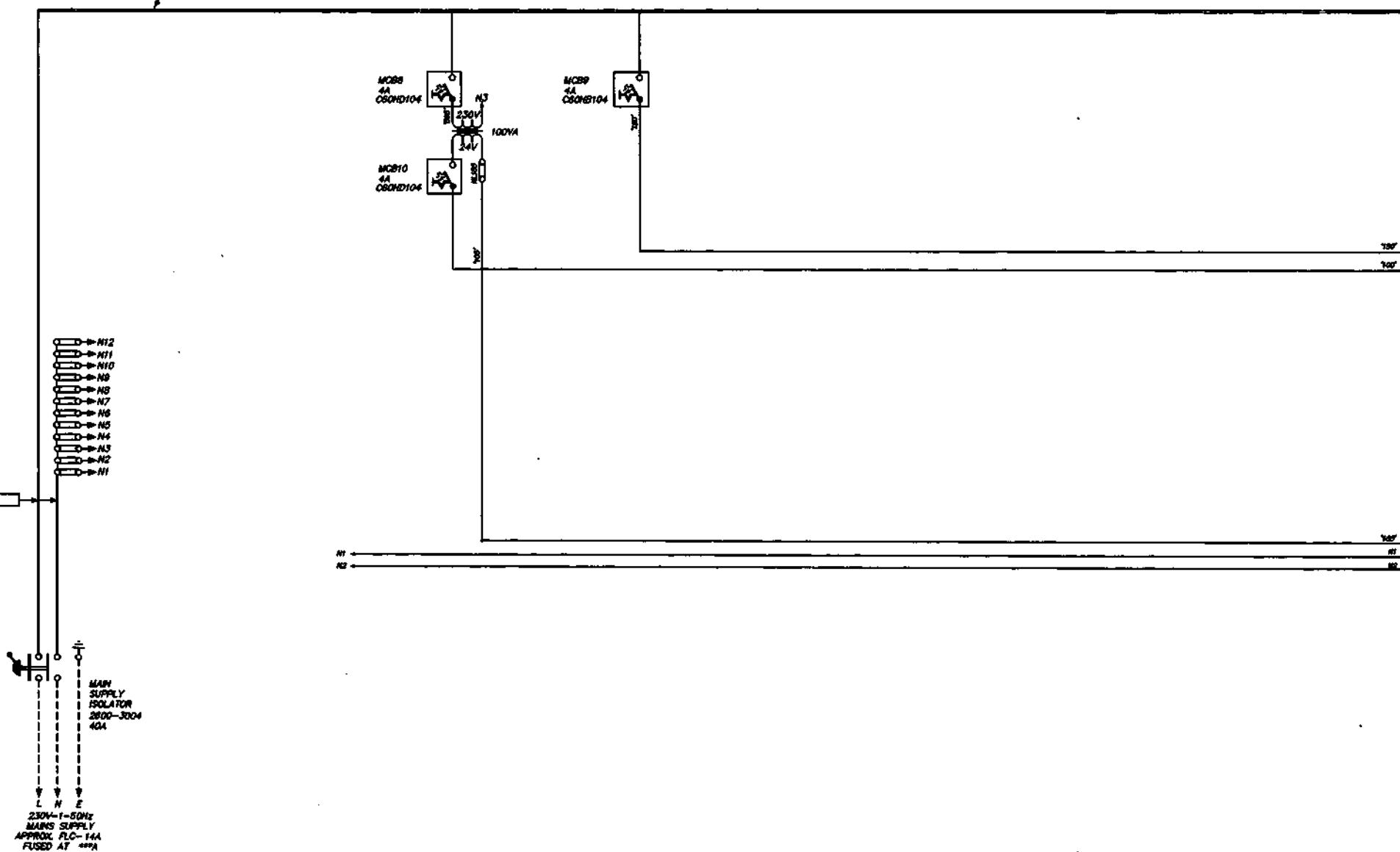
8

9

130

DRG No. S98057-231

## M&amp;G COMB ASSEMBLY



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CLIENT

BENCHMARK GROUP PLC

PROJECT

5-7 CARLTON GARDENS

DRG No.

S98057-231

ISSUE C

TITLE  
SCHEMATIC WIRING DIAGRAM  
AND EXTERNAL FIELD WIRING FOR  
RESIDENTIAL CONTROLS  
TYPICAL PANEL  
(SHEET 1 OF 4)



HORTON ROAD, COLNBROOK, SLOUGH, BERKSHIRE  
TEL: 01753 738000  
FAX: 01753 771001

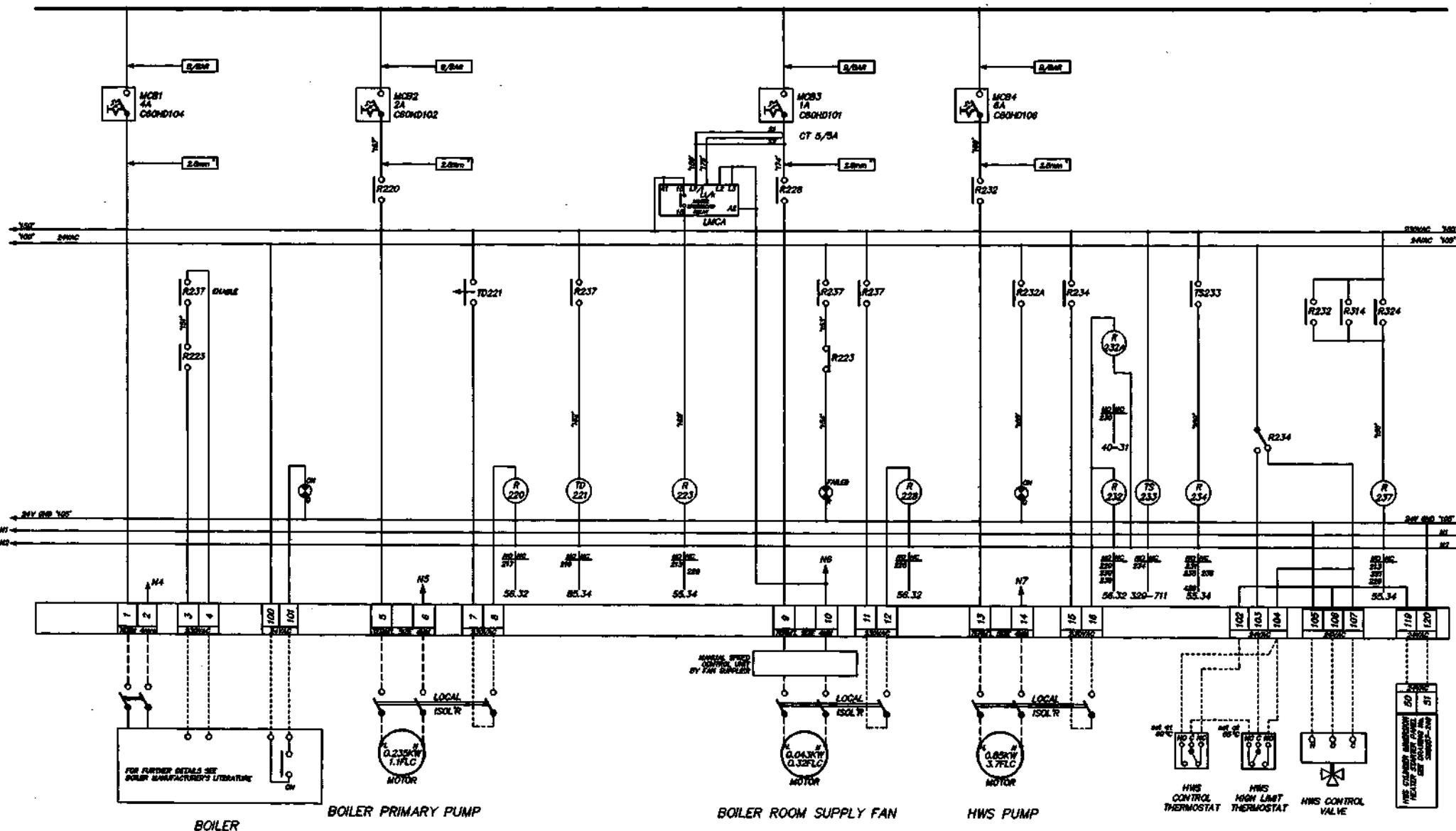
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221

28

0 1 2 3 4 5 6 7 8 9 0 1 2 3 4 5 6 7 8 9 0 1 2 3 4 5 6 7 8 9

DRG No. S98057-232



REF	DATE	DETAILS
A	15/02/99	ELECTRICAL DETAILS ADDED
B	13/04/99	CLIENTS COMMENTS
C	08/06/99	AS FITTED AND TESTED
D	12/11/99	HWS HUMIDIFIER HEATER MOUNTED ON

DSO

**SCHEMATIC WIRING DIAGRAM  
AND EXTERNAL FIELD WIRING FOR  
RESIDENTIAL CONTROL'S  
TYPICAL PANEL  
(SHEET 2 OF 4)**



HORTON ROAD, COLNBROOK, SLOUGH, BERKSHIRE  
TEL: 01753 738000 FAX: 01753 771001

DOES AN INVESTMENT IN INNOVATION PAY OFF? THE CHILEAN CASE

BENCHMARK GROUP INC.

PROJECT

T 5-7 CARLTON GARDENS

DRG No

S98057-232

ISSUE

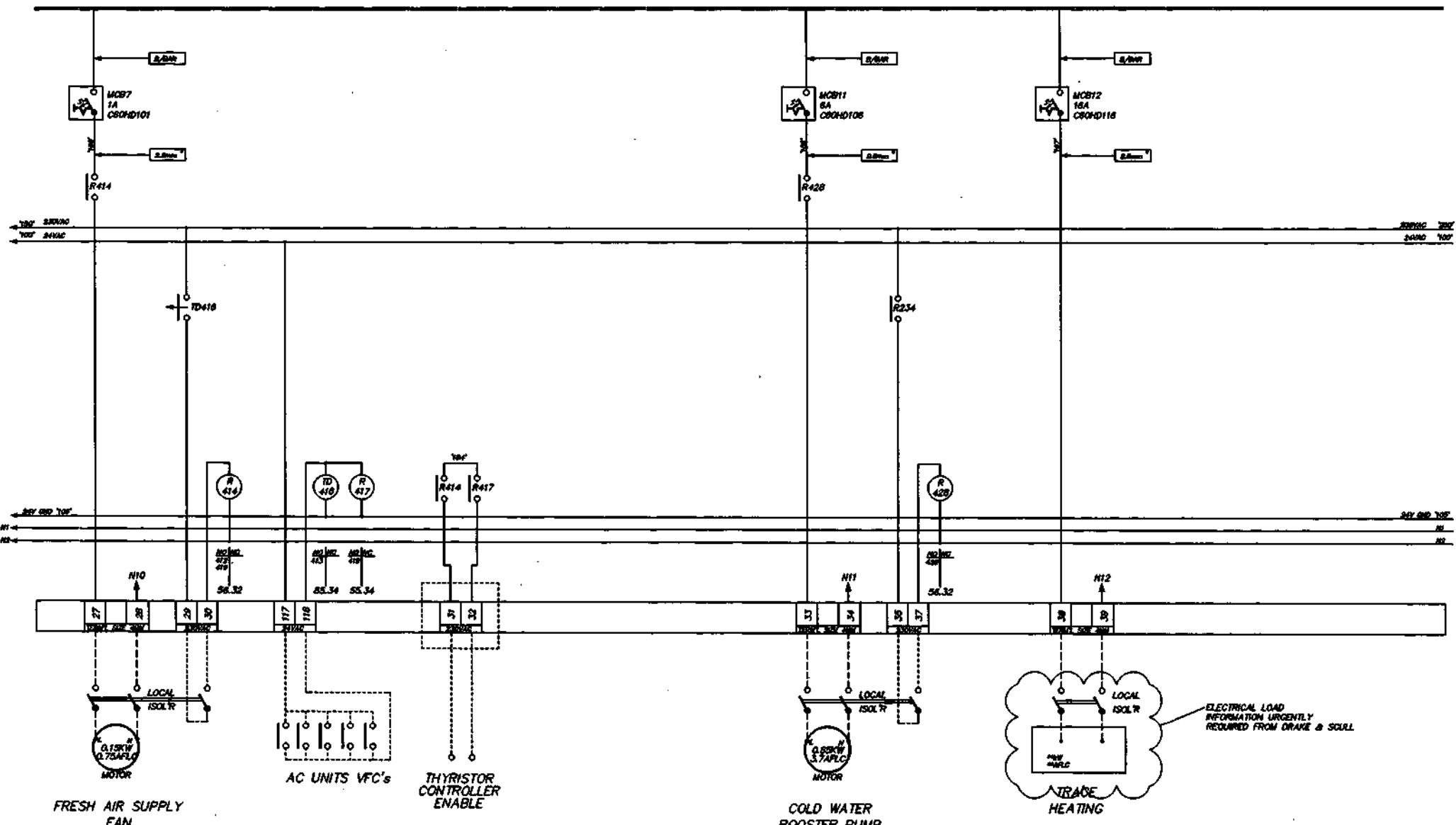
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410 420 430

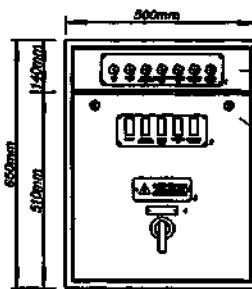
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DRG No. S98057-234

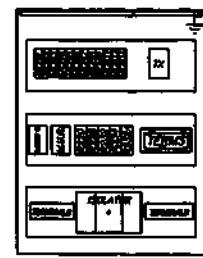


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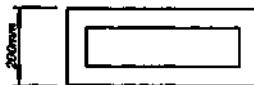
DRG No. S98057-235



FRONT VIEW

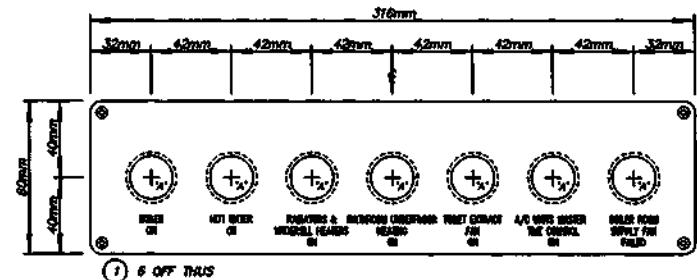


INTERNAL LAYOUT

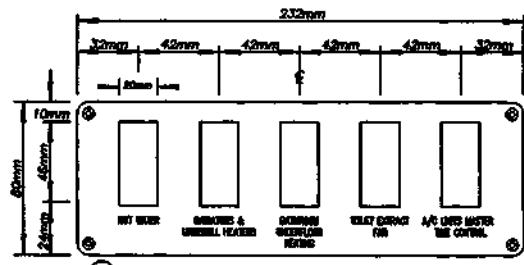


BOTTOM VIEW

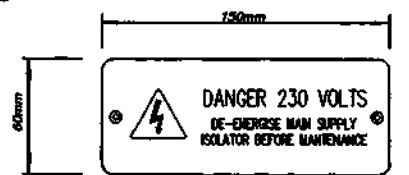
- NOTES:
- MATERIAL:  
DOORS/FRAME - 2.0mm MILD STEEL  
EQUIPMENT PLATE - 2.5mm MILD STEEL
  - PAINT:  
DOORS: BS381C-112 (ANTIC BLUE)  
FRAMEWORK: BS381C-113 (DEEP SAFF)  
EQUIPMENT PLATES: WHITE SEMI-GLOSS
  - INGRESS PROTECTION RATING - IP34



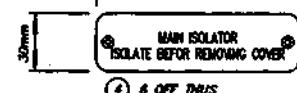
(1) 8 OFF THUS



(2) 8 OFF THUS



(3) 8 OFF THUS  
YELLOW-BLACK-YELLOW TRAPOLYTE  
100mm



(4) 8 OFF THUS

- NOTES:
- LABELS TO BE WHITE-BLACK-WHITE TRAPOLYTE UNLESS OTHERWISE STATED
  - LABELS TO HAVE 8MM RADIUS CORNERS AND 3MM COUNTERSUNK FIXING HOLES
  - MAIN TILES TO BE APPROX 3MM HIGH, AND SUB-TILES APPROX 1MM HIGH
  - CUTOUT DETAILS: 'A' HOLES - 22.5mm DIA. (26.5mm BEZEL)  
SW HOLES - 22.5mm DIA. (30mm BEZEL)

WEEK	DATE	DETAIL	DRAWN BY	CHECKED BY	DRAFTED BY	DATE	TITLE	GENERAL ARRANGEMENT AND LABEL DETAILS FOR RESIDENTIAL CONTROL'S TYPICAL PANEL (SHEET 1 OF 1)		SYNCHRONISED SYSTEMS	HORTON ROAD, COLNBROOK, SLOUGH, BERKSHIRE TEL: 01753 738000 FAX: 01753 771001
								NAME	JOB		
								NAME	JOB		
								NAME	JOB		
A	15/02/99	ELECTRICAL DETAILS ADDED	DSD	ORDERED	DSD	30/10/98					
B	13/04/99	CLIENTS COMMENTS	DSD	RECEIVED	DSD						
C	19/05/99	AS FITTED AND TESTED	DVS	RECEIVED	DSD						

110

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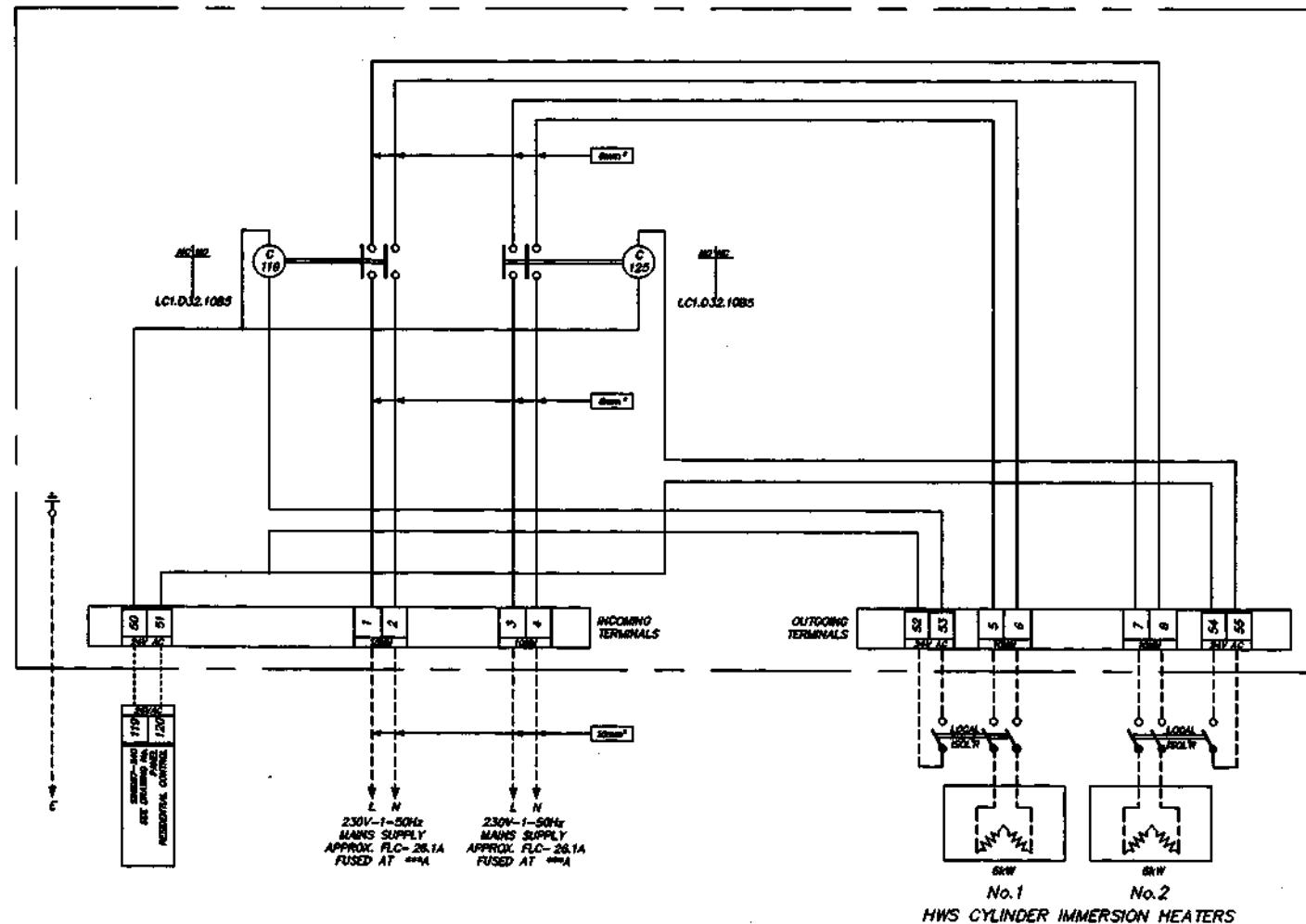
120

0 1 2 3 4 5 6 7 8 9

130

0 1 2 3 4 5 6 7 8 9

DRG No. S98057-240



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REF	DATE	DETAIL	REF	DRAWN BY	DATE
A	11/08/98	AS FITTED AND TESTED	MJW	000000	12/07/98

REF	DRAWN BY	DATE
DSO	DSO	DSO

SCHEMATIC WIRING DIAGRAM  
AND EXTERNAL FIELD WIRING FOR  
HWS CYLINDER IMMERSION HEATER  
TYPICAL STARTER PANEL  
(SHEET 1 OF 1)

SYNCHRONISED  
SYSTEMS

HORTON ROAD, COLNBROOK, SLOUGH, BERKSHIRE  
TEL: 01753 736000  
FAX: 01753 771001

CLIENT

BENCHMARK GROUP PLC

PROJECT

5-7 CARLTON GARDENS

DRG No.

S98057-240

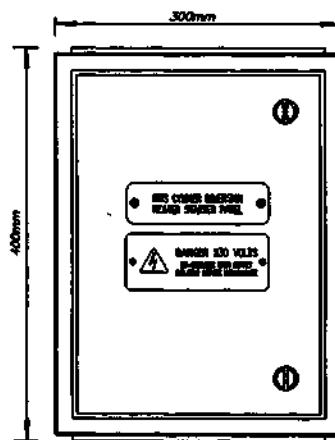
ISSUE A

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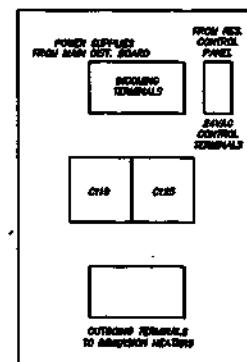
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0 1 2 3 4 5 6 7 8 9

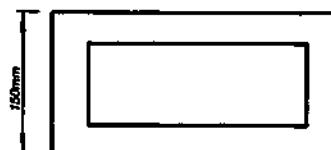
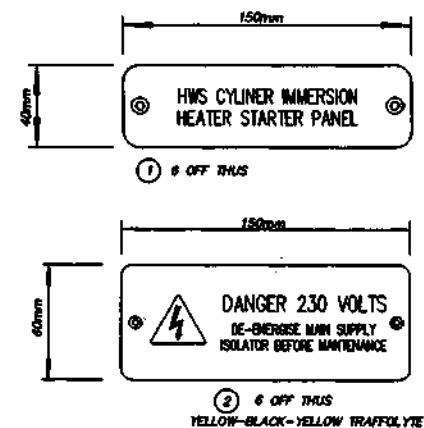
DRG No. S98057-241



FRONT VIEW



INTERNAL LAYOUT



TOP/BOTTOM VIEW

**NOTES**

1. MATERIAL:  
DOORS, FRAME - 2.0mm MILD STEEL  
EQUIPMENT PLATE - 2.5mm MILD STEEL
2. DESIGN:  
DOORS: BS3910-112 (MILD STEEL)  
FRAMING: BS3910-113 (DEEP SAW)  
EQUIPMENT PLATES: WHITE SEMI-GLOSS
3. INGRESS PROTECTION RATING - IP54

**NOTES**

1. LABELS TO BE WHITE-BLACK-WHITE TRAFFOLYTE UNLESS OTHERWISE STATED
2. LABELS TO HAVE 5mm. RADIUS CORNERS AND 3mm. COUNTERSUNK FIXING HOLES.
3. MAIN TITLES TO BE APPROX. 5mm. HIGH AND SUB-TITLES APPROX. 3mm. HIGH.
4. CUTOUT DETAILS: 'A' HOLES - 22.5mm DIA. (26.5mm BEZEL)  
'B' HOLES - 22.5mm DIA. (30mm BEZEL)

REF	REV	DESCRIPTION	SD	ISSUED	DATE
A	11/08/98	AS FITTED AND TESTED	M/N	050	12/07/98
				050	
				050	

## TITLE

TYPICAL GENERAL ARRANGEMENT AND  
LABEL DETAILS FOR  
RESIDENTIAL HWS CYLINDER IMMERSION  
HEATERS STARTER PANEL  
(SHEET 1 OF 1)

**SYNCHRONISED SYSTEMS**  
HORTON ROAD, COLNBROOK, SLOUGH, BERKSHIRE  
TEL: 01753 738000 FAX: 01753 771001

0	1	2	3	4	5	6	7	8	9	0	1	2	3	4	5	6	7	8	9
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DRG No. S98057-NW

FOR SCHEMATIC USE ONLY

## CORE X RISER

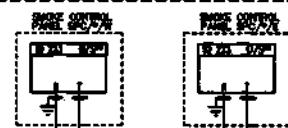
ROOF LEVEL



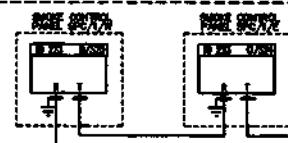
SEVENTH FLOOR

SIXTH FLOOR

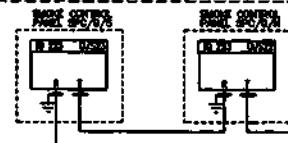
PANEL SPC/2/E 0/325  
PANEL SPC/3/E 0/326  
PANEL SPC/4/E 0/320  
PANEL SPC/5/E 0/322  
PANEL SPC/6/E 0/327  
PANEL SPC/7/E 0/328  
PANEL SPC/8/E 0/329  
PANEL SPC/9/E 0/333



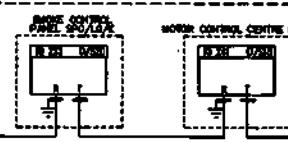
TYPICAL FOR SECOND TO FIFTH FLOORS



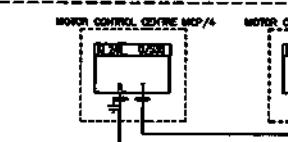
FIRST FLOOR



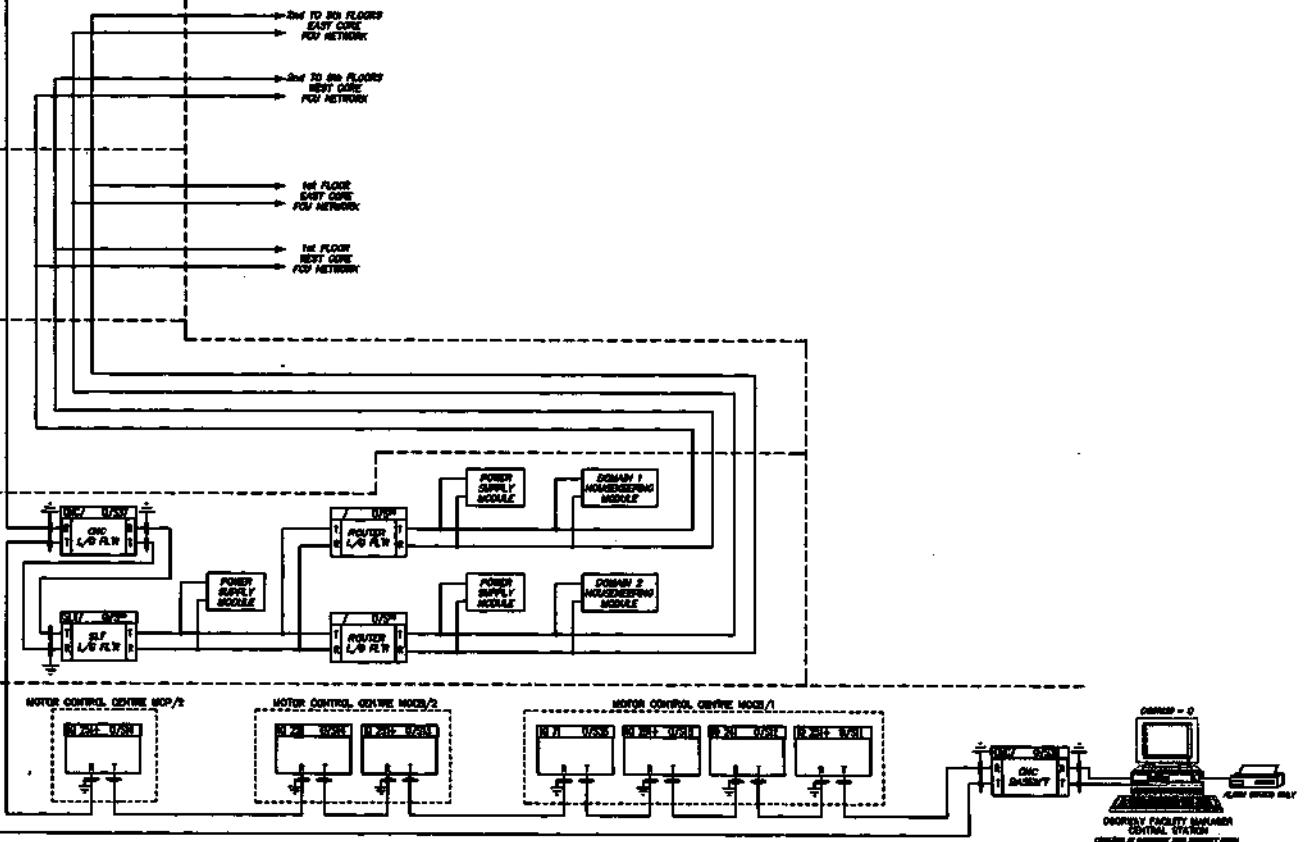
GROUND FLOOR



LOWER GROUND FLOOR



BASEMENT LEVEL



NOTES

NO	DATE	ITEM	NO	OWNER	DSO	DATE
A	23-10-98	0/S38 ADDED TO MCC/82	A	OWNER	DSO	23-09-98
B	03-11-98	0/S38 MOVED TO MCC/81	B	OWNER	DSO	03-10-98

TITLE  
BEMS COMMUNICATIONS NETWORK  
SCHEMATIC LAYOUT

**SYNCHRONISED SYSTEMS**

HORTON ROAD, COLNBROOK, SLOUGH, BERKSHIRE  
TEL: 01753 738000  
FAX: 01753 771001

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CLIENT

BENCHMARK GROUP LTD

PROJECT

5 - 7 CARLTON GARDENS

DRG No. S98057-NW

ISSUE B