

STORAGE RING CELL 10

FE10B FRONT END CONTROL SYSTEM

HOOK-UP DRAWING

HOOK-UP DRAWING DRAWINGS	
SHEET	DESCRIPTION
1	HOOK-UP DRAWING INDEX
2	FE10B-CS-RACK-01 230VAC / 24VDC POWER DISTRIBUTION.
3	FE10B-CS-RACK-01 24V DISTRIBUTION
4	FE10B-CS-RACK-01 NETWORK / COMMS (SERIAL)
5	FE10B-VA-ABSB-01, FE10B-VA-VALVE-01 AND FE10B-VA-VALVE-02 CONTROL
6	FE10B-VA-VALVE-03, FE10B-VA-VALVE-04 AND FE10B-VA-VALVE-05 CONTROL
7	FE10B-VA-FCTLR-01 FAST FLAP CONTROLLER 01, FE10B-VA-FVALV-01
8	GCTRLR-01 FE10B-VA-IMG-01/02, FE10B-VA-PIRG-01/02 CONTROL.
9	MPC-01 FE10B-VA-IONP-01, 02, 03 AND 04 CONTROL.
10	GCTRL-02 FE10B-VA-IMG-03/04, FE10B-VA-PIRG-03/04, CONTROL.
11	MPC-02 FE10B-VA-IONP-05 AND 06 CONTROL.
12	GCTRL-03 FE10B-VA-IMG-05/06, FE10B-VA-PIRG-05/06, CONTROL.
13	FE10B MODULE ASSEMBLY 01 & 02 WATER FLOWS & TEMPERATURE SWITCHES
14	FE10B-CS-GRIO-01 RGA RESET
15	END STATION VALVES 06, 07, 12, 13, 14, 15 AND FE10B-RS-VALVE-11
16	SLITS 01 AXIS X & Y MOTION CONTROL
17	END STATION ROOT PUMP, TURBO PUMP CONTROL AND LASER ALIGNMENT.
18	END STATION TEMPERATURE MONITORING.
19	
20	
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22	
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25	

REFERENCE DRAWINGS / DOCUMENTATION	
REFERENCE	TITLE
1149579	STORAGE RING CELL 10 FRONT END 10B CONTROL SYSTEMS SYSTEM GUIDE
1147699	STORAGE RING CELL 10 FRONT END 10B CONTROL SYSTEMS GENERAL ARRANGEMENT
1147701	STORAGE RING CELL 10 FRONT END 10B CONTROL SYSTEMS LABELS
1008560	GENERIC CONTROL EQUIPMENT DUPLEX 24VDC POWER SUPPLY UNIT WIRING DIAGRAM
1008690	CONTROL RACK EQUIPMENT RS232/422 COMMUNICATION LEADS WIRING DIAGRAM
1058899	VAT FAST FLAP VALVE CONTROLLER WIRING DIAGRAM
1008741 / 1008742	6 VALVE CONTROL CRATE
1025895	STEPPER DRIVE CRATE
1013448	STORAGE RING CELL 10 VACUUM INSTRUMENTATION & CONTROL HOOK-UP DRAWING
-	-
TDI-VAC-CTRL-031	VACUUM COATING R&D FACILITY: MULTI-PURPOSE DEVELOPMENT FRONT-END SPECIFICATION

BECKHOFF ETHERCAT MODULE					
MODULE	PART No.	FUNCTION	SEE SHEET No.	POWER REQ.	ACC. POWER
BUS COUPLER	EK 1100	24VDC SUPPLY	/08.F6	70mA	
01	ES 3702	2 X ANALOGUE 0-10V I/P	/08.F6	200mA	200mA
02	ES 3702	2 X ANALOGUE 0-10V I/P	/10.F6	200mA	400mA
03	ES 3702	2 X ANALOGUE 0-10V I/P	/12.F6	200mA	600mA

ST. 08, 10 & 12 ANALOGUE INPUTS TO
RIO-01 NOW IN M8 PIN 11.
ST.09 CABLE 1585 TO CIU-03 NOW 2
PAIR.

ST.11: CABLE 1465 MOVED IN CIU-03.

ST.14: ADDED DIAGNOSTIC CAMERA
POWER, ACTUATION AND FEEDBACK

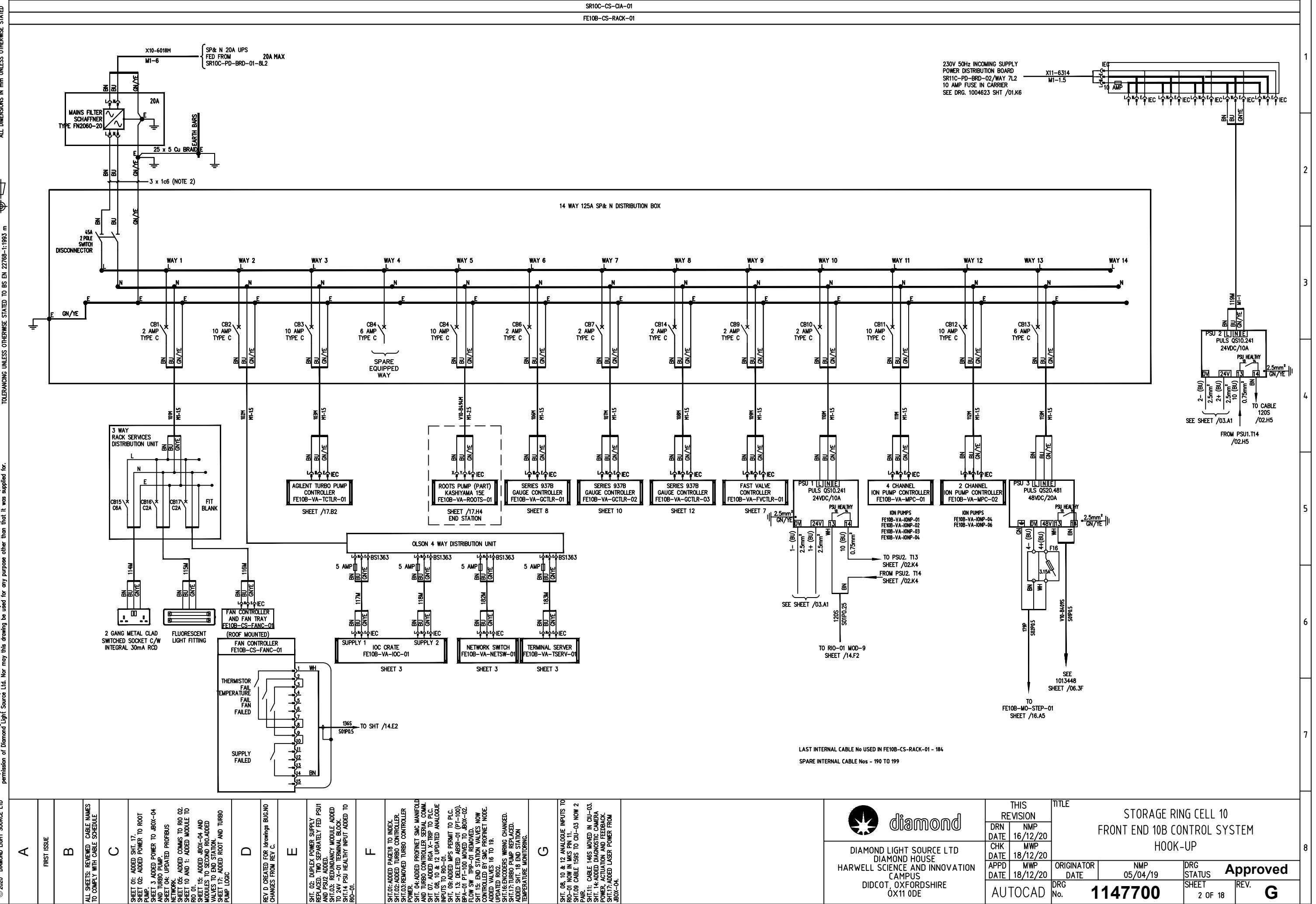
ST.17: ENCODERS WIRING CHANGED.

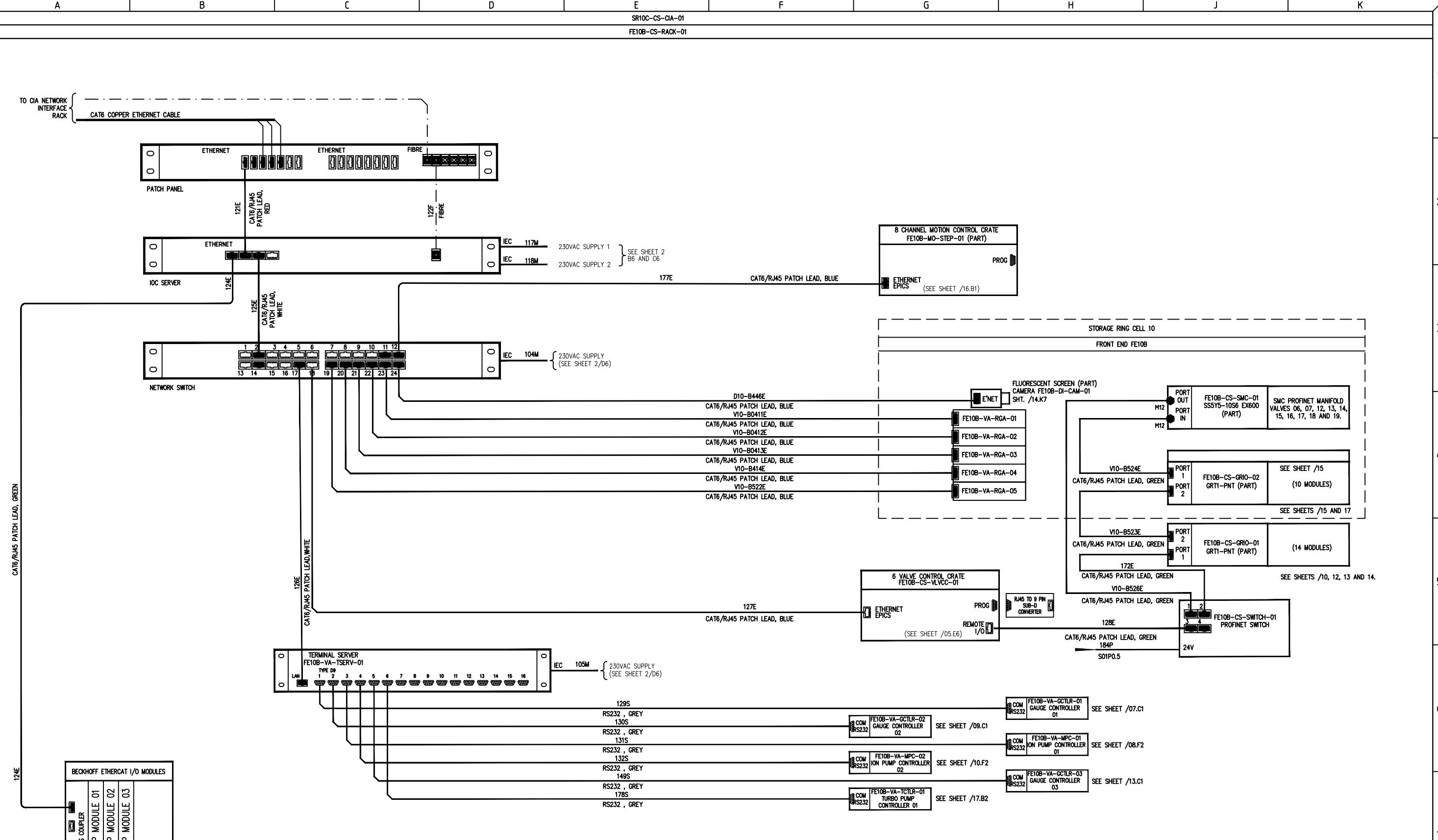
ADDED ST. 18 END STATION

TEMPERATURE MONITORING.



THIS REVISION		TITLE		
DRN	NMP DATE	STORAGE RING CELL 10 FRONT END 10B CONTROL SYSTEM HOOK-UP		
CHK	MWP DATE	HARWELL SCIENCE AND INNOVATION CAMPUS DIDCOT, OXFORDSHIRE OX11 0DE		
APPD	MWP DATE	ORIGINATOR DATE	NMP DATE	DRG STATUS
AUTOCAD	18/12/20	05/04/19	Approved	
DRG No.	1147700	SHEET 1 OF 18	REV.	G





FIRST ISSUE

B

C

ALL SHEETS REVISED CABLE NAMES

TO COMPLY WITH CABLE SCHEDULE

REV D CREATED FOR Drawings BUG.NO

CHANGES FROM REV C

SHEET 01: ADDED SHT.17.

SHEET 02: ADDED POWER TO ROOT

PLMP.

SHEET 03: ADDED CONNS TO RIO 02.

AND TURBO PUMP.

SHEET 04: UPDATED PROFIBUS

NETWORK.

SHEET 10 AND 11: ADDED MODULE TO

RIO 01.

SHEET 15: ADDED JBOX-04 AND

MODULES TO SECOND RIO.

ADDED VALVES TO END STATION.

SHEET 17: ADDED ROOT AND TURBO

PUMP LOGIC.

SHT. 02: DUBLEY POWER SUPPLY

REP ACED, TWO SEPARATELY FED PSU

AND PSU ADDED

ADDED REDUNDANCY MODULE ADDED

TO RIO 01.

SHT. 14: X-OF TERMINAL BLOCK

01.14 PSD HEALTHY INPUT ADDED

TO RIO 01.

REV D CREATED FOR Drawings BUG.NO

CHANGES FROM REV C

SHT. 02: DUBLEY POWER SUPPLY

REP ACED, TWO SEPARATELY FED PSU

AND PSU ADDED

ADDED REDUNDANCY

MODULE ADDED

TO RIO 01.

SHT. 15: ADDED ION PUMP

PERMIT TO PLC.

SHT. 16: ADDED ION PUMP

PERMIT TO PLC.

SHT. 17: TURBO PUMP REPLACED.

ADDED SHT. 18: END STATION

TEMPERATURE MONITORING.

SHT. 08, 10 & 12 ANALOGUE INPUTS TO
RIO-01 NOW IN MHS PIN 11.
SHT. 09 CABLE 158S TO CIU-03 NOW 2
PAIR.
SHT. 11: CABLE 148S MOVED IN CIU-03.
SHT. 14: ADDED DIAGNOSTIC CAMERA
POWER, ACTUATION AND FEEDBACK
SHT. 17: ADDED LASER POWER FROM
JBOX-04.

SHT. 08, 10 & 12 ANALOGUE INPUTS TO
RIO-01 NOW IN MHS PIN 11.
SHT. 09 CABLE 158S TO CIU-03 NOW 2
PAIR.
SHT. 11: CABLE 148S MOVED IN CIU-03.
SHT. 14: ADDED DIAGNOSTIC CAMERA
POWER, ACTUATION AND FEEDBACK
SHT. 17: ADDED LASER POWER FROM
JBOX-04.

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05/04/19

DRG STATUS

Approved

AUTOCAD

DRG No.

1147700

SHEET

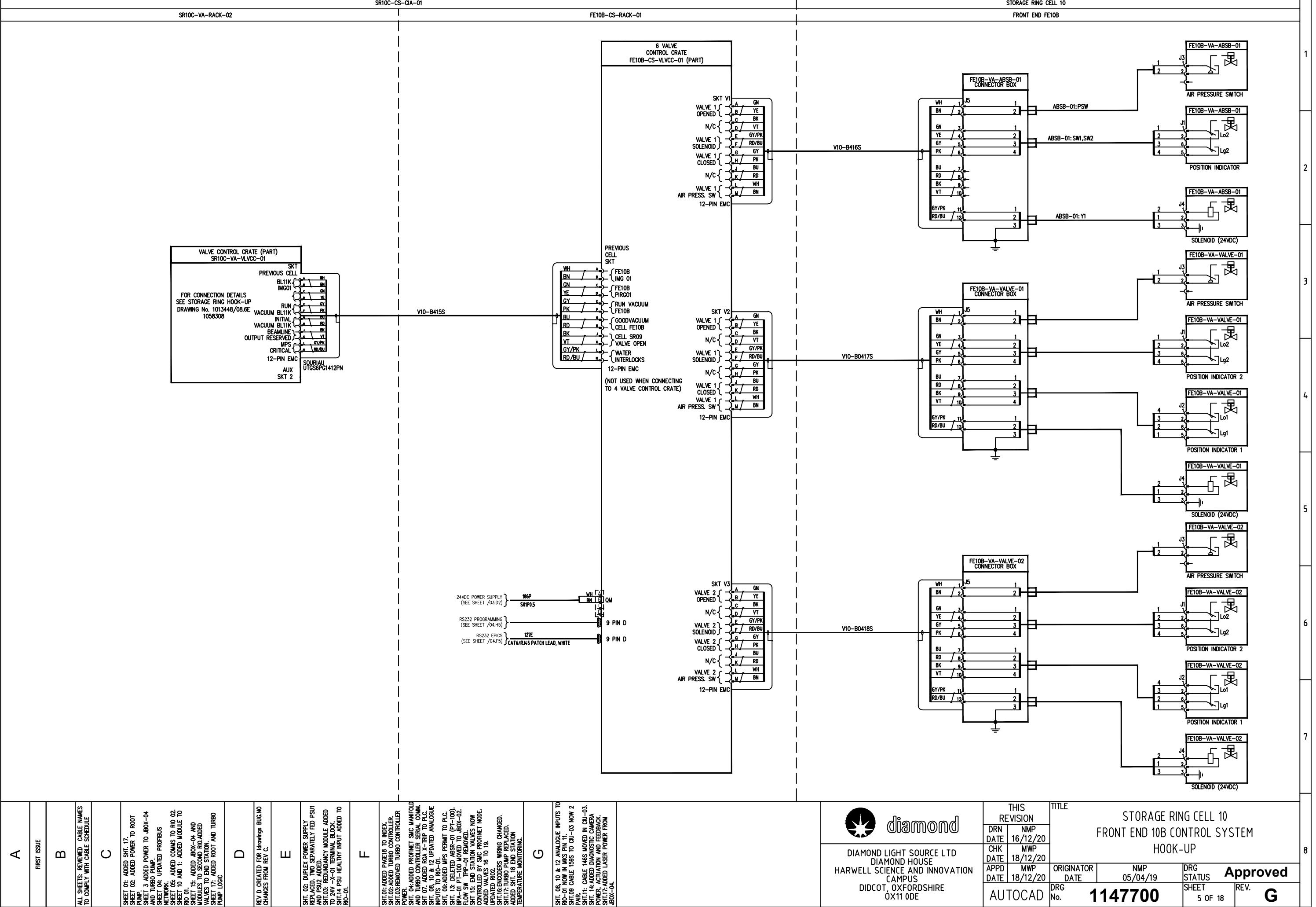
4 OF 18

REV.

G

STORAGE RING CELL 10
FRONT END 10B CONTROL SYSTEM
HOOK-UP

8



SR10C-VA-RACK-02

SR10C-CS-CIA-01

FE10B-CS-RACK-01

STORAGE RING CELL 10

FRONT END FE10B

A ALL SHEETS REVISED CABLE NAMES
TO COMPLY WITH CABLE SCHEDULE

B FIRST ISSUE

C

SHEET 01: ADDED SH1-17.
 SHEET 02: ADDED POWER TO ROOT PLMP.
 SHEET 3 ADDED POWER TO JBOX-04 AND TURBO PUMP.
 SHEET 4 ADDED PROFILER SMC MANIFOLD AND TURBO CONTROLLER SERIAL COMM.
 SHEET 05: ADDED COMMS TO RIO 02.
 SHEET 10 AND 1: ADDED MODULE TO RIO 01.
 SHEET 15: ADDED JBOX-04 AND MODULES TO SECOND RIO ADDED VALVES TO END STATION.
 SHEET 17: ADDED ROOT AND TURBO PLMP LOGIC.

D

REV D CREATED FOR Drawings BUG.NO
CHANGES FROM REV C.

E

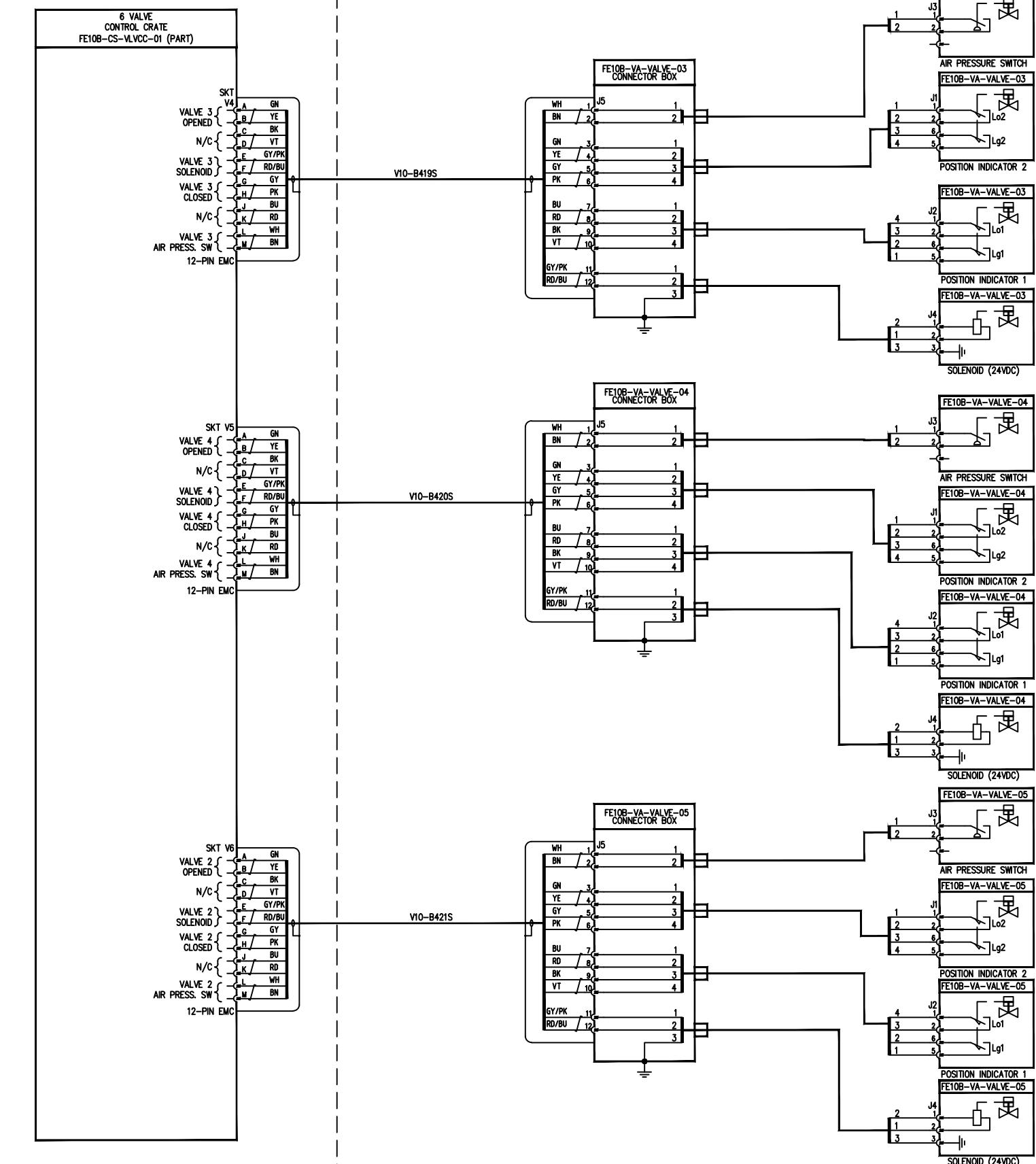
SHT. 02: DUBLEY POWER SUPPLY
REPLACED, TWO SEPARATELY FED PSU
AND PSD. ADDED TURBO CONTROLLER
POWER. ADDED PROFILER SMC MANIFOLD
AND TURBO CONTROLLER SERIAL COMM.
SHT. 03: ADDED 12V & 12V UPDATED ANALOGUE
INPUTS TO RIO-01.
SHT. 05: ADDED MPS PERMIT TO PLC.
SHT. 10: ADDED P1-100 TO JBOX-02.
SHT 15: END STATION VALVES NOW
CONTROLLED BY SMC PROFNET NODE.
ADDED VALVES 16 TO 19.
SHT. 16: ENCODERS WIRING CHANGED.
ADDED SH1-17: TURBO PUMP REPLACED.
ADDED SH1-18: END STATION
TEMPERATURE MONITORING.

F

SHT. 08: ADDED PAC810 TO INDEX
STATION. ADDED TURBO CONTROLLER
POWER. ADDED PROFILER SMC MANIFOLD
AND TURBO CONTROLLER SERIAL COMM.
SHT. 09: ADDED 12V & 12V UPDATED ANALOGUE
INPUTS TO RIO-01.
SHT. 10: ADDED MPS PERMIT TO PLC.
SHT. 11: ADDED P1-100 TO JBOX-02.
SHT. 12: ADDED INDEX SW TRIP TO PLC.
SHT. 13: DELETED ASMR-01 (P1-100).
SHT. 14: ADDED INDEX SW TRIP-01 REMOVED.
SHT 15: END STATION VALVES NOW
CONTROLLED BY SMC PROFNET NODE.
ADDED VALVES 16 TO 19.
SHT. 16: ENCODERS WIRING CHANGED.
ADDED SH1-17: TURBO PUMP REPLACED.
ADDED SH1-18: END STATION
TEMPERATURE MONITORING.

G

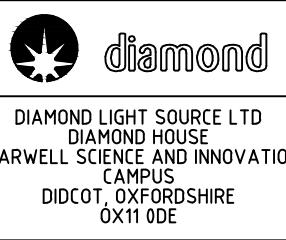
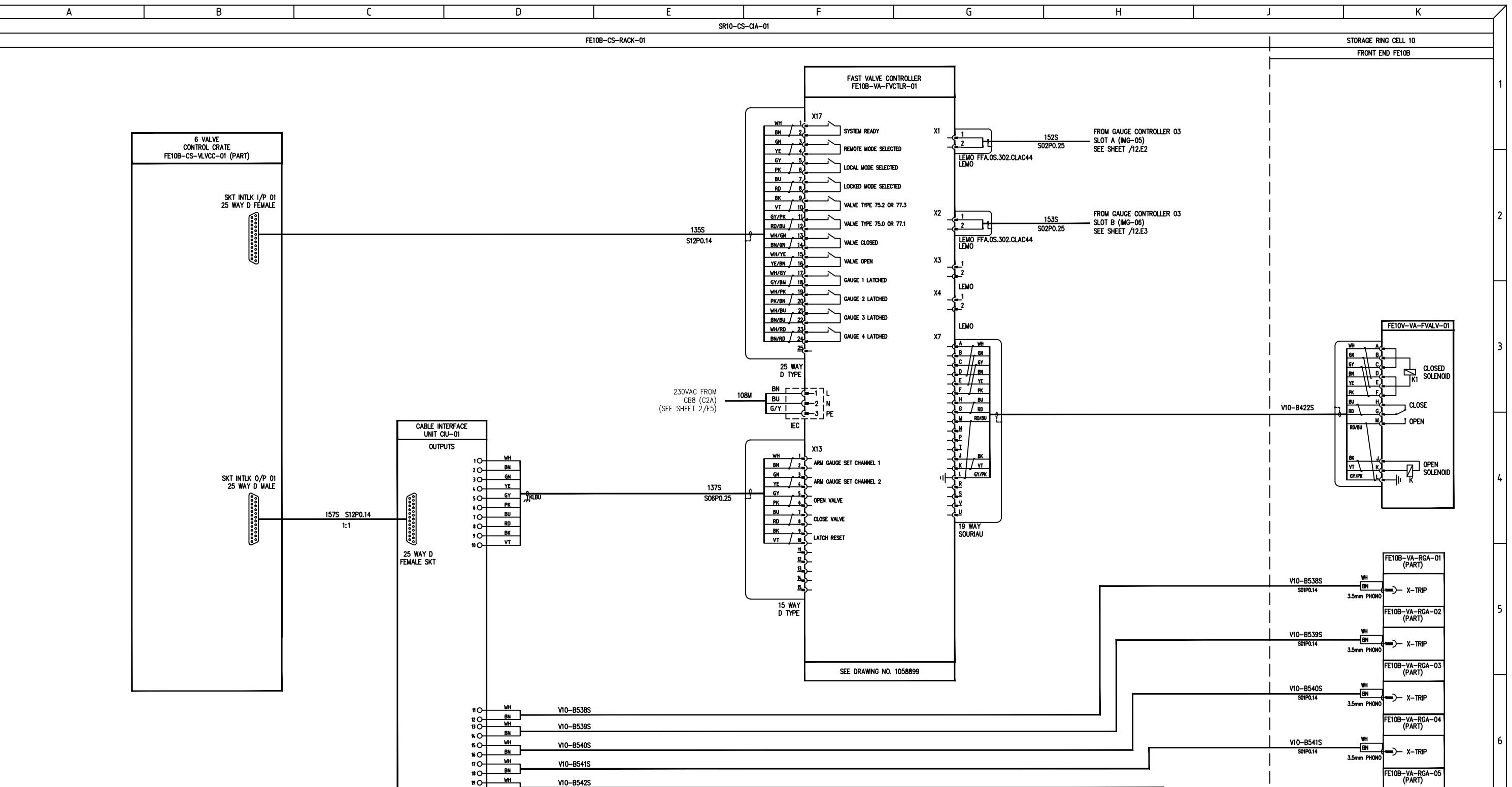
SHT. 08: 10 & 12 ANALOGUE INPUTS TO
RIO-01 NOW IN M8S PIN 11.
SHT. 09: CABLE 146S MOVED IN CU-03.
SHT. 14: ADDED DIAGNOSTIC CAMERA
POWER, ACTUATION AND FEEDBACK
SHT. 17: ADDED LASER POWER FROM
JBOX-04.



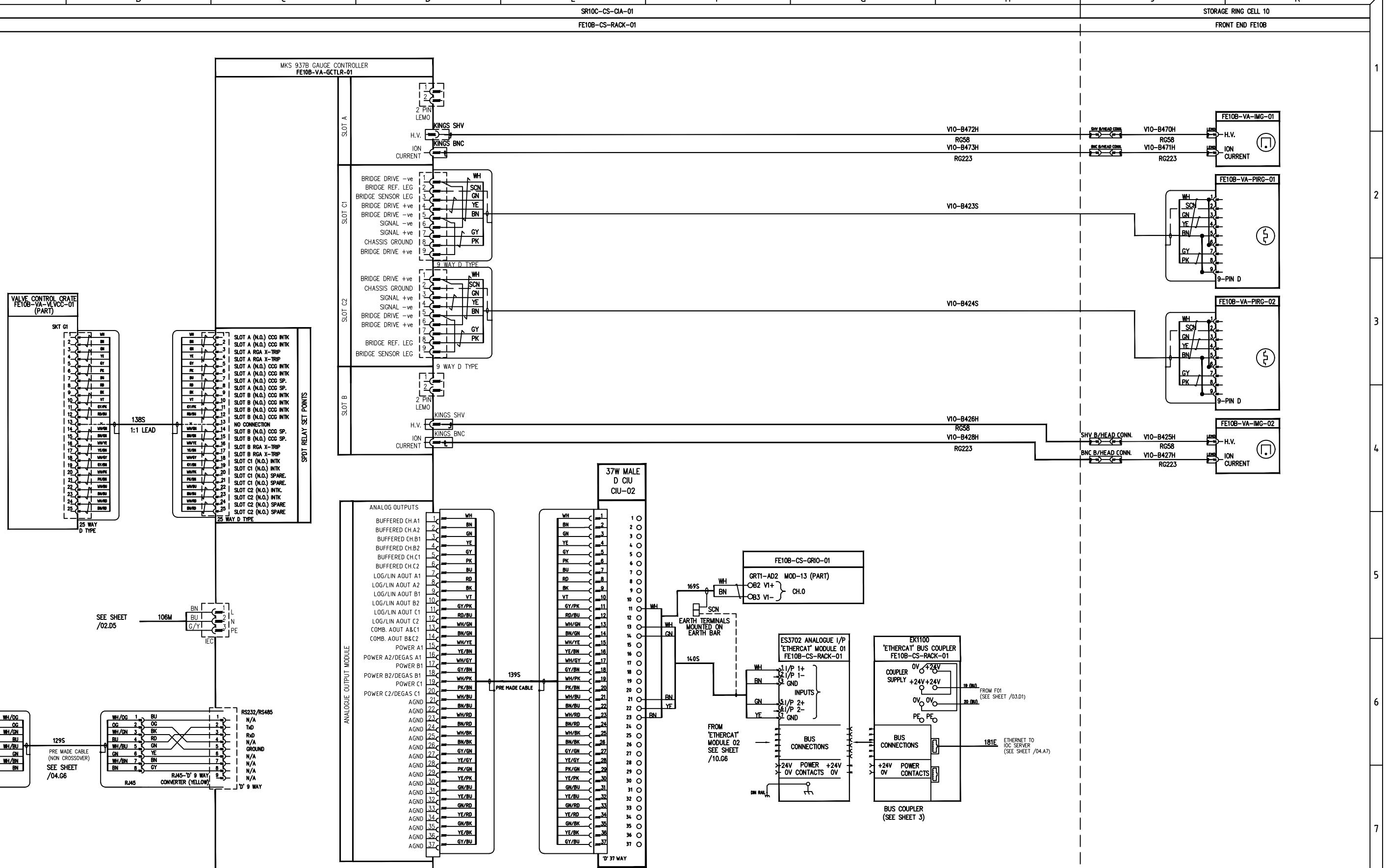
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DIDCOT, OXFORDSHIRE
OX11 0DE

THIS
REVISION
DRN NMP
DATE 16/12/20
CHK MWP
DATE 18/12/20
APPD MWP
DATE 18/12/20
AUTOCAD DRG No.
ORIGINATOR DATE 05/04/19
NMP 05/04/19
DRG STATUS Approved

TITLE
STORAGE RING CELL 10
FRONT END 10B CONTROL SYSTEM
HOOK-UP
SHEET 6 OF 18
REV. G
1147700



THIS REVISION		TITLE		
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CHK DATE	MWP	APPD DATE	MWP	Approved
18/12/20	18/12/20	18/12/20	05/04/19	
AUTOCAD DRG No.	1147700	SHEET 7 OF 18	REV. G	



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AUTOCAD	DRG No. 1147700	SHEET 8 OF 18	REV. G

A FIRST ISSUE

B

C ALL SHEETS REVISED CABLE NAMES
TO COMPLY WITH CABLE SCHEDULE

SHEET 01: ADDED SH17.
SHEET 02: ADDED POWER TO ROOT PLATE.
SHEET 3 ADDED POWER TO JBXK-04 AND TURBO PUMP.
SHEET 4 ADDED PROFIBUS NETWORK.
SHEET 5: ADDED COMMS TO RIO 02.
SHEET 10 AND 1: ADDED MODULE TO RIO 01.
SHEET 15: ADDED JBXK-04 AND MODULES TO SECOND RIO.
ADDED VALVES TO END STATION.
SHEET 17: ADDED ROOT AND TURBO PUMP LOGIC.

REV D CREATED FOR Drawings BUG.NO
CHANGES FROM REV C.

D

SHT. 02: DUBLEY POWER SUPPLY
REPLACED, TWO SEPARATELY FEED PSU
AND PSD ADDED.
SHT. 10: ADDED REDUNDANCY MODULE ADDED
TO TERMINAL BLOCK.
SHT. 14: PSD HEALTHY INPUT ADDED
TO RIO.

E

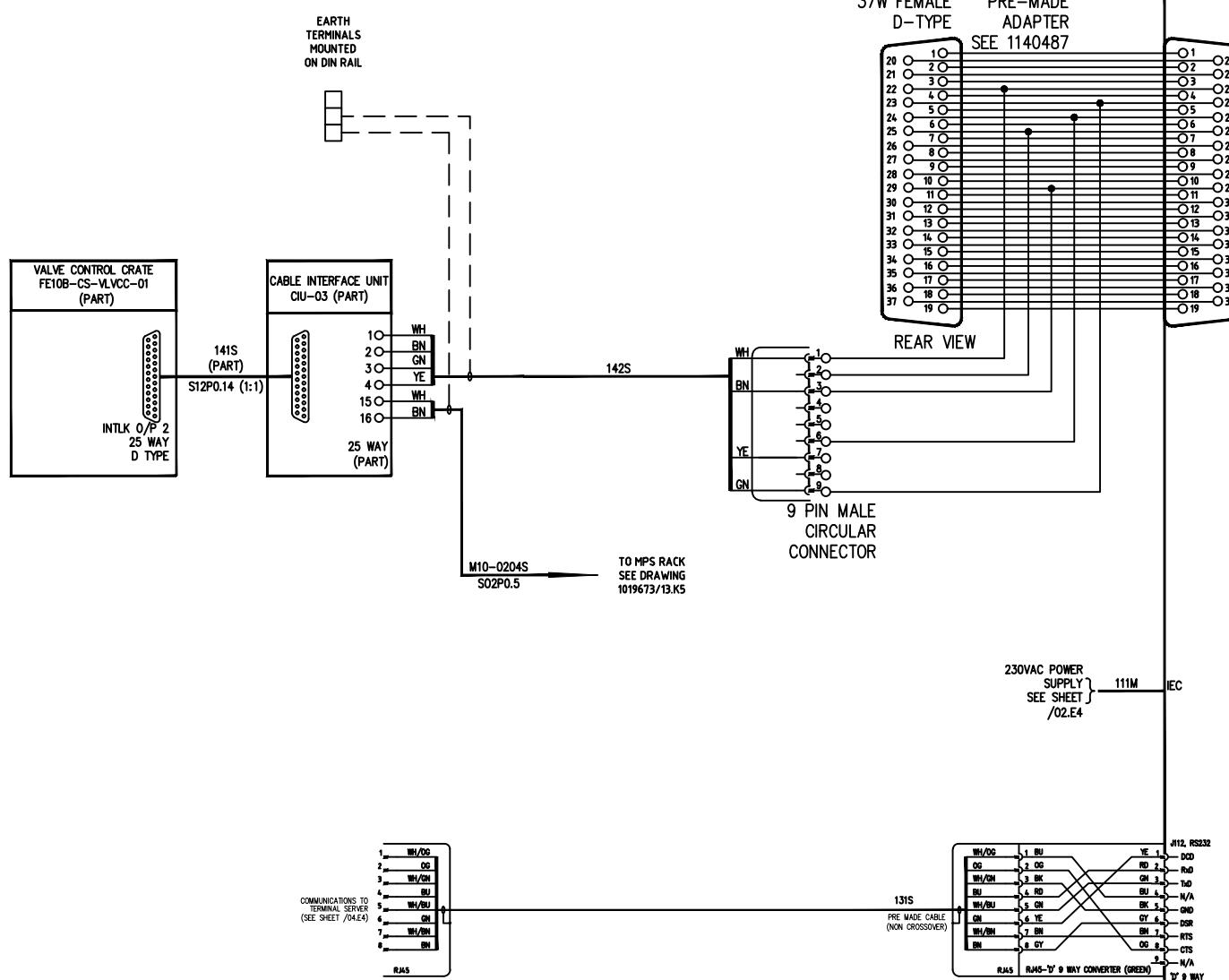
SHT. 02: DUBLEY POWER SUPPLY
REPLACED, TWO SEPARATELY FEED PSU
AND PSD ADDED.
SHT. 10: ADDED REDUNDANCY MODULE ADDED
TO TERMINAL BLOCK.
SHT. 14: PSD HEALTHY INPUT ADDED
TO RIO.

F

SHT. 02: ADDED PAC8 TO INDEX STATION.
ADDED TURBO CONTROLLER.
STATION 1: ADDED TURBO CONTROLLER.
STATION 2: ADDED PROFIBUS MANIFOLD.
STATION 3: ADDED PROFIBUS MANIFOLD.
STATION 4: ADDED PROFIBUS MANIFOLD.
STATION 5: ADDED PROFIBUS MANIFOLD.
STATION 6: ADDED PROFIBUS MANIFOLD.
STATION 7: ADDED PROFIBUS MANIFOLD.
STATION 8: ADDED PROFIBUS MANIFOLD.
STATION 9: ADDED PROFIBUS MANIFOLD.
STATION 10: ADDED PROFIBUS MANIFOLD.
STATION 11: ADDED PROFIBUS MANIFOLD.
STATION 12: ADDED PROFIBUS MANIFOLD.
STATION 13: ADDED PROFIBUS MANIFOLD.
STATION 14: ADDED PROFIBUS MANIFOLD.
STATION 15: ADDED PROFIBUS MANIFOLD.
STATION 16: ADDED PROFIBUS MANIFOLD.
STATION 17: ADDED PROFIBUS MANIFOLD.
STATION 18: ADDED PROFIBUS MANIFOLD.
STATION 19: ADDED PROFIBUS MANIFOLD.
STATION 20: ADDED PROFIBUS MANIFOLD.
STATION 21: ADDED PROFIBUS MANIFOLD.
STATION 22: ADDED PROFIBUS MANIFOLD.
STATION 23: ADDED PROFIBUS MANIFOLD.
STATION 24: ADDED PROFIBUS MANIFOLD.
STATION 25: ADDED PROFIBUS MANIFOLD.
STATION 26: ADDED PROFIBUS MANIFOLD.
STATION 27: ADDED PROFIBUS MANIFOLD.
STATION 28: ADDED PROFIBUS MANIFOLD.
STATION 29: ADDED PROFIBUS MANIFOLD.
STATION 30: ADDED PROFIBUS MANIFOLD.
STATION 31: ADDED PROFIBUS MANIFOLD.
STATION 32: ADDED PROFIBUS MANIFOLD.
STATION 33: ADDED PROFIBUS MANIFOLD.
STATION 34: ADDED PROFIBUS MANIFOLD.
STATION 35: ADDED PROFIBUS MANIFOLD.
STATION 36: ADDED PROFIBUS MANIFOLD.
STATION 37: ADDED PROFIBUS MANIFOLD.

G

SHT. 08: 10 & 12 ANALOGUE INPUTS TO RIO-01 NOW IN MARS PIN 11.
SHT. 09: CABLE 158S TO CIU-03 NOW 2 PHAR.
SHT. 11: CABLE 148S MOVED IN CIU-03.
SHT. 14: ADDED DIAGNOSTIC CAMERA POWER, ACTUATION AND FEEDBACK.
SHT. 17: ADDED LASER POWER FROM JBXK-04.

MPCq GAMMA VACUUM
ION PUMP CONTROLLER
FE10B-VA-MPC-01J104
MISC I/OCH.1.1
H.V.
SAFECONN

J401 CONN.

CH.1.2
H.V.
SAFECONN

J402 CONN.

CH.2.1
H.V.
SAFECONN

J403 CONN.

CH.2.2
H.V.
SAFECONN

J404 CONN.

SAFETY GROUND Φ 111M
IEC230VAC POWER
SUPPLY
SEE SHEET
/02.E4131S
PRE MADE CABLE
(NON CROSSOVER)J12, RS232
RJ45-12 9 WAY CONVERTER (GREEN)

1' 9 WAY

V10-B475H

V10-B431H

V10-B434H

V10-B437H

V10-B433H

V10-B435H

V10-B436H

V10-B438H

V10-B474H

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THIS
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DATE Approved

AUTOCAD DRG No. 1147700
SHEET 9 OF 18 REV. G

STORAGE RING CELL 10
FRONT END 10B CONTROL SYSTEM
HOOK-UP

FRONT END FE10B

A FIRST ISSUE

B

C ALL SHEETS REVISED CABLE NAMES
TO COMPLY WITH CABLE SCHEDULE

D

E

F

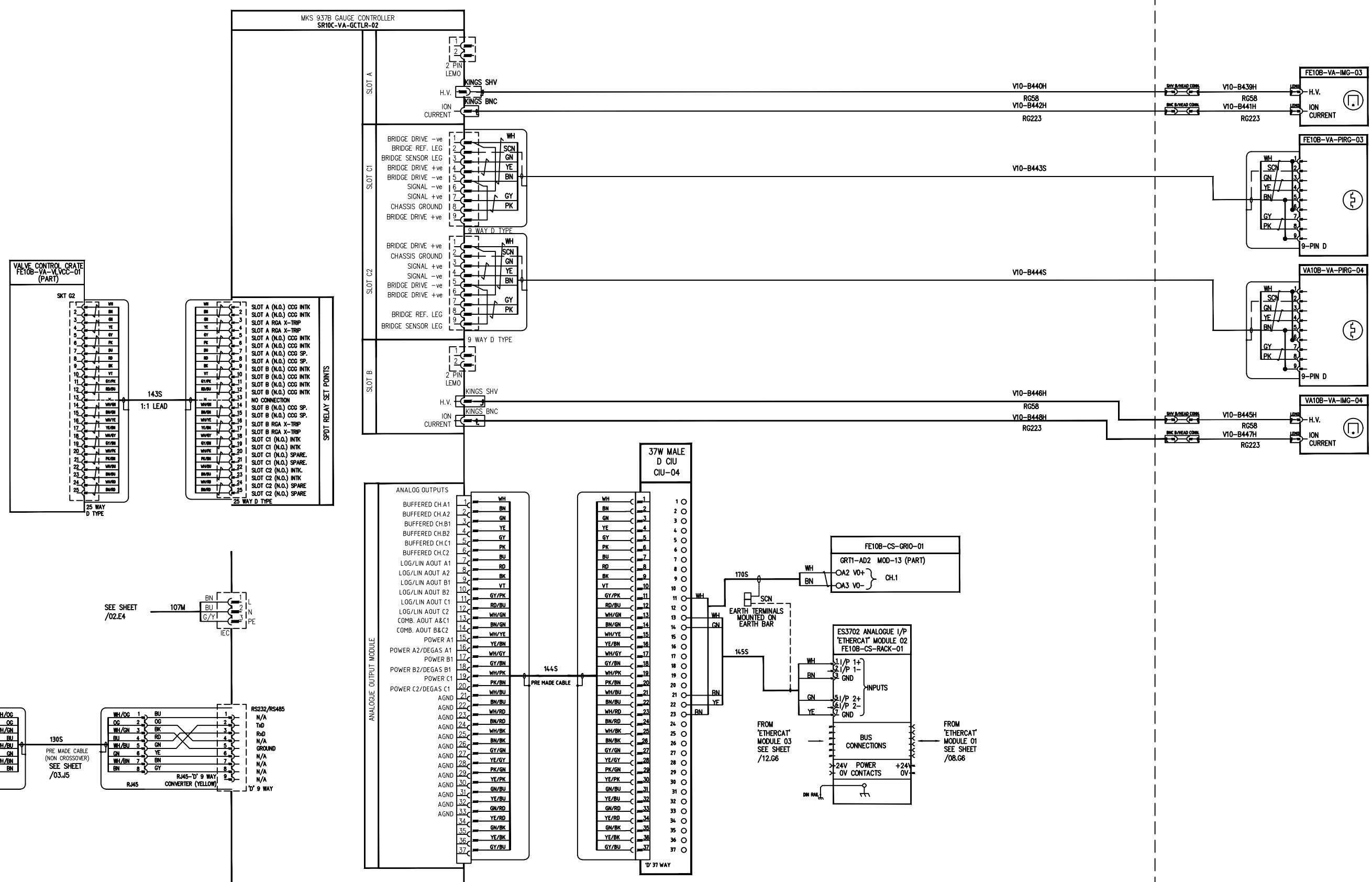
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CHK	MWP DATE 16/12/20	Approved	G
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AUTOCAD	DRG No. 1147700	SHEET 10 OF 18	

A
FIRST ISSUE

B

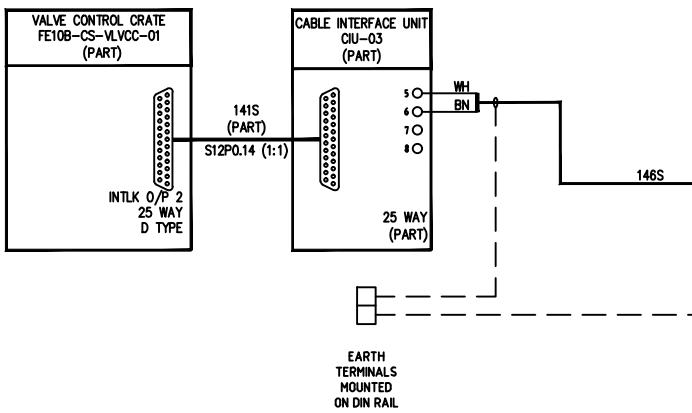
C
ALL SHEETS REVISED CABLE NAMES
TO COMPLY WITH CABLE SCHEDULE

D
REV D CREATED FOR Drawings BUG.NO
CHANGES FROM REV C.

E

F
REV F CREATED FOR Drawings BUG.NO
CHANGES FROM REV E.

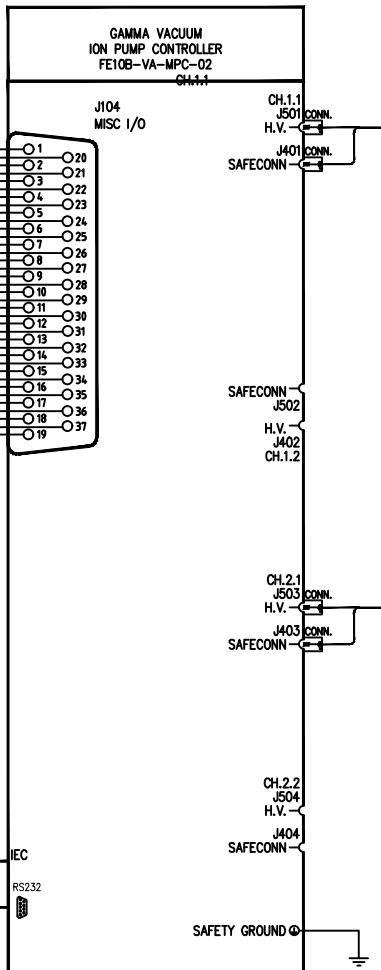
G
REV G CREATED FOR Drawings BUG.NO
CHANGES FROM REV F.



37W FEMALE
D-TYPE
PRE-MADE
ADAPTER
SEE 1140487

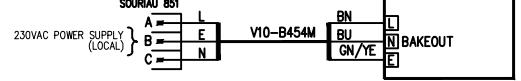
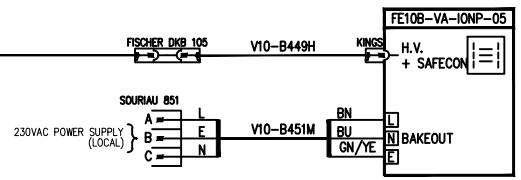
9 PIN MALE
CIRCULAR
CONNECTOR

230VAC POWER
SUPPLY
SEE SHEET
/02.E4
COMMUNICATIONS
SEE SHEET /03.E4
CONVERTER
REQUIRED



V10-B450H

V10-B453H



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		SHEET	11 OF 18
		REV.	G

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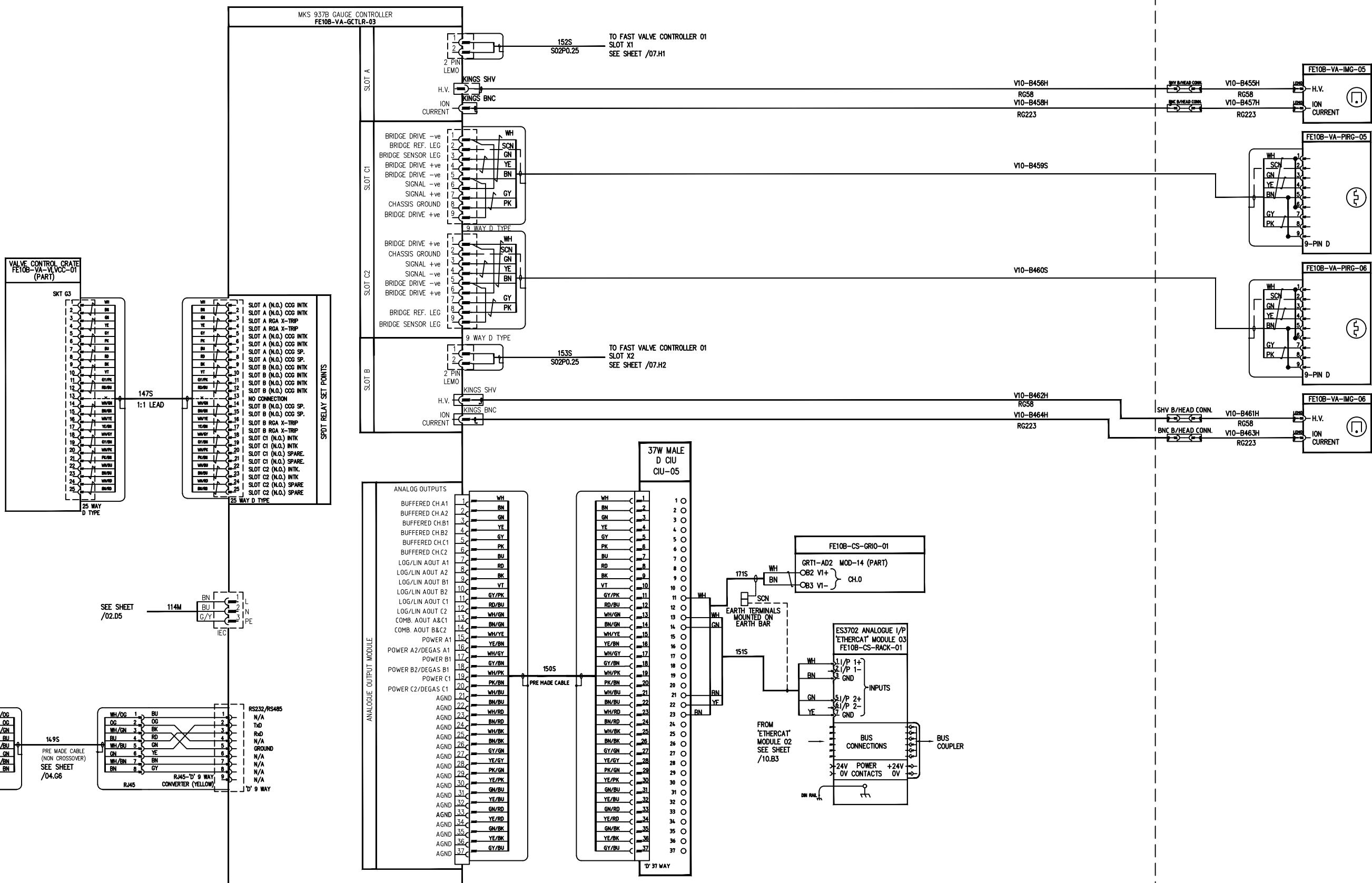
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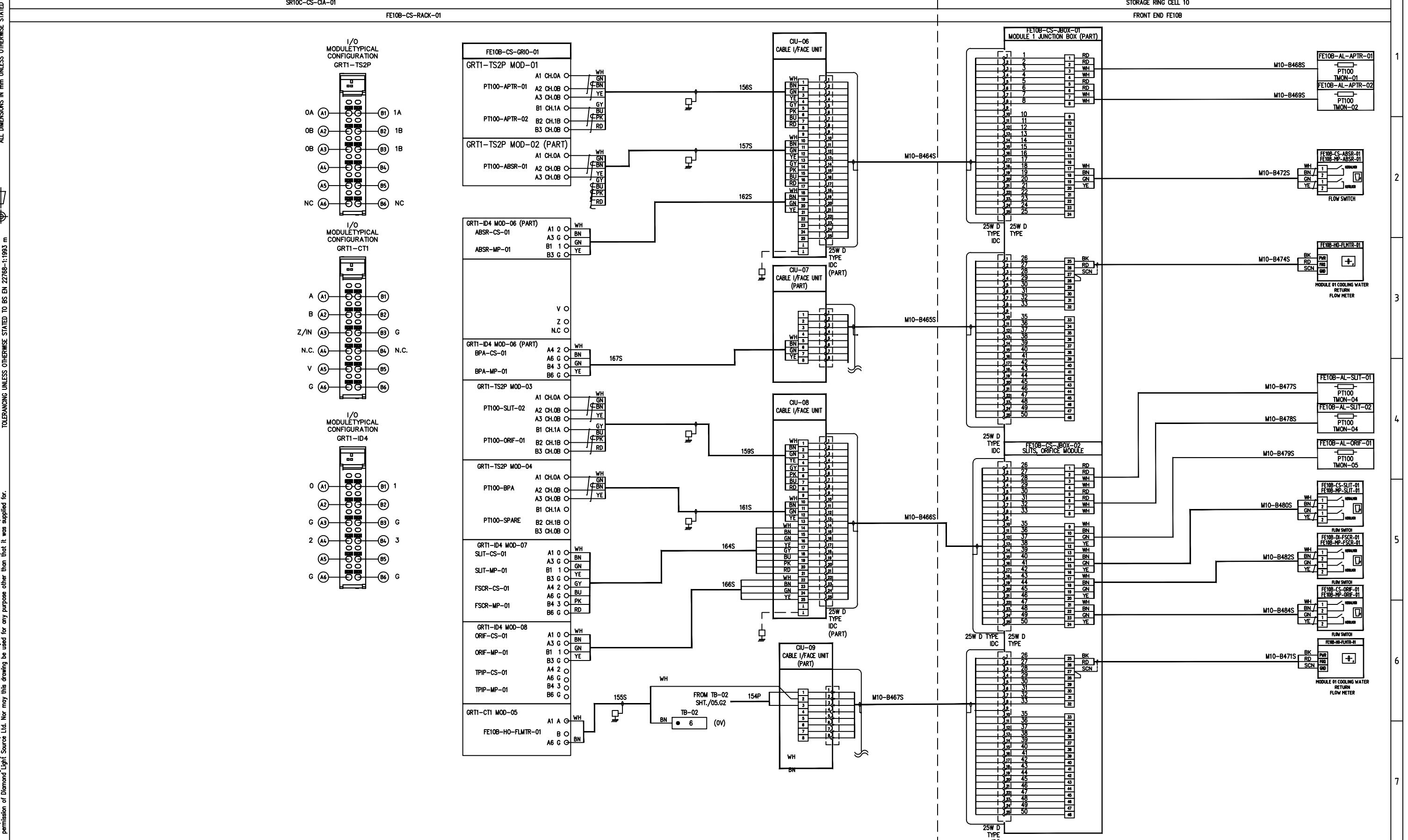
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AUTOCAD DRG No.	1147700	SHEET	12 OF 18
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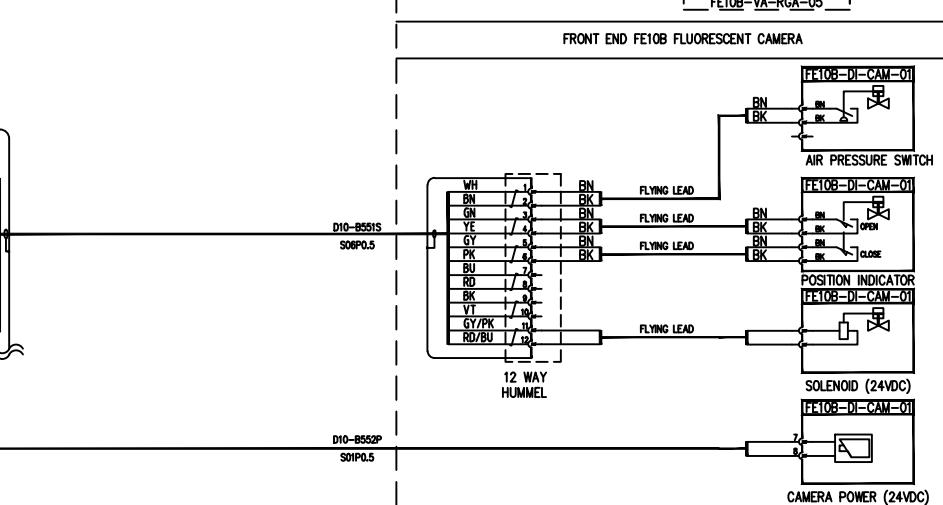
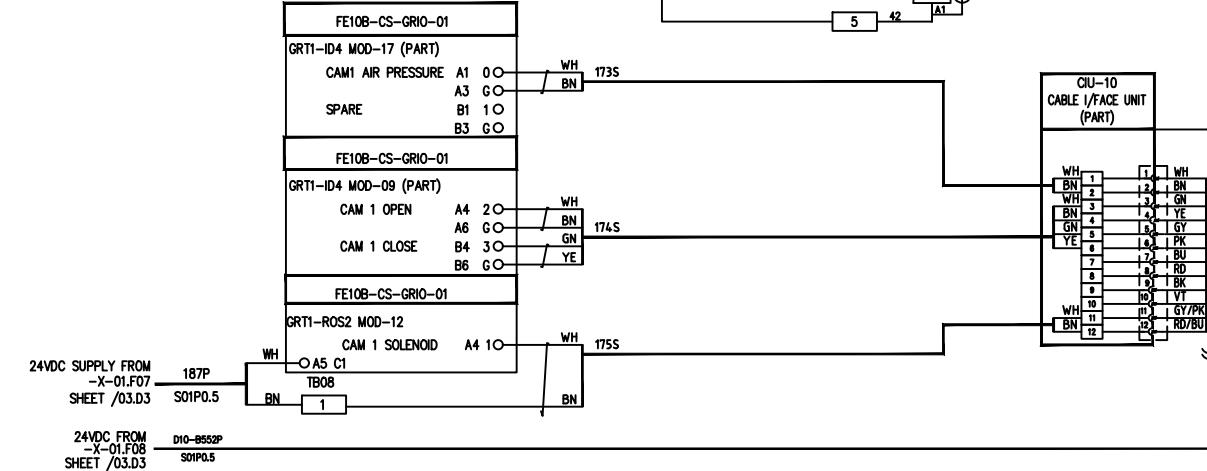
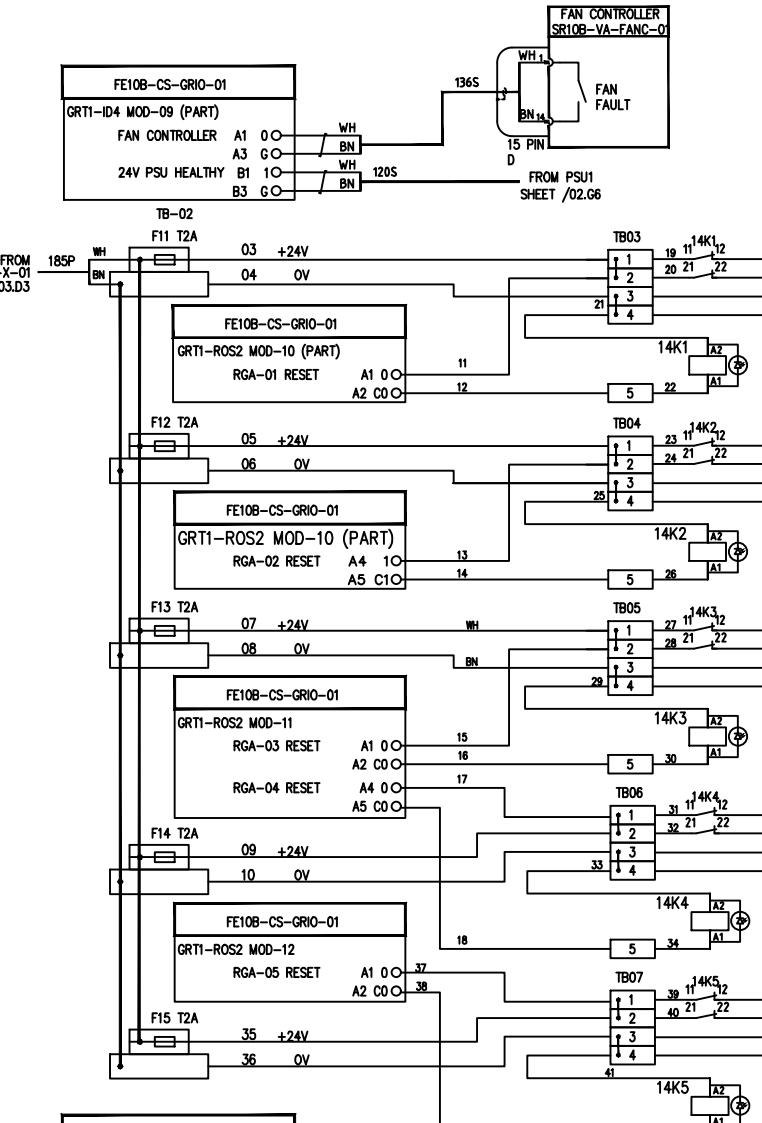
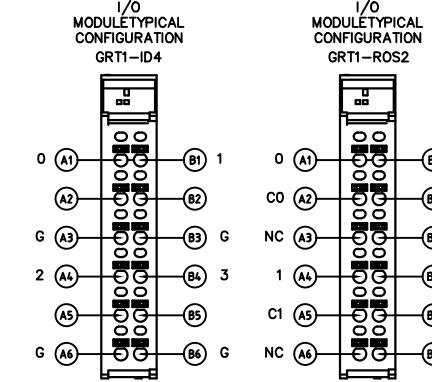
SHEET 01: ADDED SH17.
SHEET 02: ADDED POWER TO ROOT
PLMP.
SHEET 3 ADDED POWER TO JBOX-04
AND TURBO PUMP.
SHEET 04: ADDED COMMS TO RIO 02.
SHEET 10 AND 1: ADDED MODULE TO
RIO 01.
SHEET 15: ADDED ABSR-04 AND
MODULES TO SECOND RIO ADDED
VALVES TO END STATION.
SHEET 17: ADDED ROOT AND TURBO
PUMP LOGIC.

REV D CREATED FOR Drawings BUG.NO
CHANGES FROM REV C.

SHT. 02: DUBLEY POWER SUPPLY
REPLACED, TWO SEPARATELY FED PSU
AND PSD. ADDED TURBO CONTROLLER
NETWORK.

SHT. 04: ADDED PAC816 TO INDEX
STATION. ADDED TURBO CONTROLLER
SERIAL COMM. AND TURBO CONTROLLER SERIAL COMM.
SHT. 05: ADDED PROFINET SMC MANIFOLD.
SHT. 06: ADDED TURBO X-TIP TO PLC.
SHT. 07: ADDED TURBO X-TIP TO PLC.
SHT. 08: ADDED TURBO X-TIP TO PLC.
SHT. 09: ADDED MPS PERMIT TO PLC.
SHT. 10: ADDED TURBO X-TIP TO PLC.
SHT. 11: ADDED MPS PERMIT TO PLC.
SHT. 12: ADDED TURBO X-TIP TO PLC.
SHT. 13: DELETED ABSR-01 (P1-100).
SHT. 14: TURBO PUMP TIP-100 REMOVED.
SHT. 15: END STATION VALVES NOW
CONTROLLED BY SMC PROFNET NODE.
ADDED VALVES 16 TO 19.
SHT. 16: ENCODERS WIRING CHANGED.
SHT. 17: TURBO PUMP REPLACED.
ADDED SH17. END STATION
TEMPERATURE MONITORING.

SHT. 08: 10 & 12 ANALOGUE INPUTS TO
RIO-01 NOW IN MWS PIN 11.
SHT. 09: CABLE 158S TO CIU-03 NOW 2
PAIR.



SHT. 01: ADDED SH17.
SHEET 02: ADDED POWER TO ROOT PUMP.
SHEET 3 ADDED POWER TO JBXK-04 AND TURBO PUMP.
SHEET 4: ADDED COMMS TO RIO 02.
SHEET 5: ADDED MODULE TO PRO 01.
SHEET 15: ADDED JBXK-04 AND MODULES TO SECOND RIO.
ADDED VALVES TO PING STATION.
SHEET 17: ADDED ROOT AND TURBO AMP LOGIC.

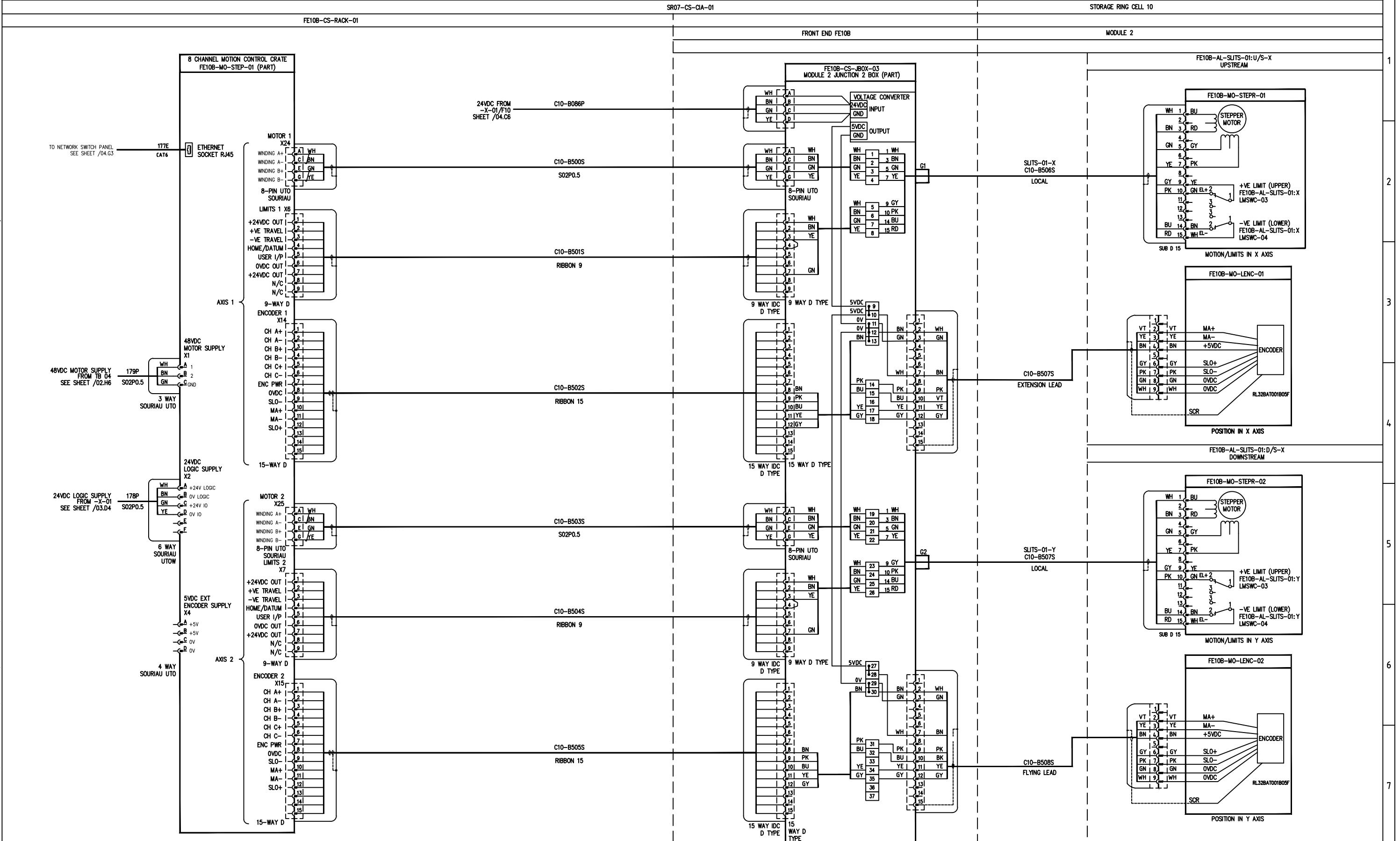
SHT. 02: DUBLEY POWER SUPPLY
REPLACED, TWO SEPARATELY FED PSU
AND SOLENOID ADDED.
SHEET 10: ADDED REDUNDANCY MODULE ADDED
SHEET 14: X-01 TERMINAL BLOCK
SHEET 14: PSU HEALTHY INPUT ADDED
TO O-01.

SHT. 03: INDEX
STATION ADDED PAGE 8 TO INDEX.
STATION ADDED TURBO CONTROLLER
POWER.
SHT. 04: ADDED PROFINET SMC MANIFOLD
AND TURBO CONTROLLER SERIAL COMM.
SHT. 05: ADDED 12VDC X-TRIP TO PLC.
SHT. 06: 10 & 12 UPDATED ANALOGUE
INPUTS TO RIO-01.
SHT. 07: ADDED WPS PERMIT TO PLC.
SHT. 08: DELETED ASMR-01 (P1-100).
SHT. 09: P1-100 MOVED TO JBXK-02.
SHT. 10: SW TRIP-01 REMOVED.
SHT. 11: END STATION VALVES NOW
CONTROLLED BY SMC PROFILE.
ADDED VALVES 16 TO 19.
SHT. 16: ENCODERS WIRING CHANGED.
SHT. 17: TURBO PUMP REPLACED.
ADDED SHT. 18: END STATION
TEMPERATURE MONITORING.

SHT. 08: 10 & 12 ANALOGUE INPUTS TO
RIO-01 NOW IN MWS PIN 11.
SHT. 09: CABLE 158S TO CIU-03 NOW 2
PAIR.
SHT. 11: CABLE 148S MOVED IN CIU-03.
SHT. 14: ADDED DIAGNOSTIC CAMERA
POWER, ACTUATION AND FEEDBACK.
SHT. 17: ADDED LASER POWER FROM
JBOX-04.

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THIS REVISION		TITLE		
DRN DATE	NMP DATE	STORAGE RING CELL 10 FRONT END 10B CONTROL SYSTEM HOOK-UP		
CHK DATE	MWP DATE			
APPD DATE	MWP DATE	ORIGINATOR DATE	NMP DATE	DRG STATUS Approved
AUTOCAD DRG No.	1147700	SHEET 14 OF 18	REV. G	



A

B

C

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F

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H

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J

K

ALL SHEETS REVISED CABLE NAMES
TO COMPLY WITH CABLE SCHEDULE

SHEET 01: ADDED SH17.
SHEET 02: ADDED POWER TO ROOT
PLMP.
SHEET 3 ADDED POWER TO JBXK-04
AND TURBO PUMP.
SHEET 4: ADDED PROFIBUS
NETWORK.
SHEET 5: ADDED CONNS TO RIO 02.
RIO 01 AND 1.
SHEET 15: ADDED JBXK-04 AND
MOTOR MODULES TO SECOND RIO.
ADDED VALVES TO END STATION.
SHEET 17: ADDED ROOT AND TURBO
PUMP LOGIC.

REV D CREATED FOR Drawings BUG.NO
CHANGES FROM REV C.

SHT. 02: DUBLEY POWER SUPPLY
REPLACED, TWO SEPARATELY FED PSU1
AND PSU2 ADDED.
SHT. 10: ADDED 144X4 TERMINAL BLOCK
TO RIO 02.
SHT. 11: ADDED 144X4 TERMINAL BLOCK
TO RIO 02.
SHT. 14: ADDED PSU1 ADDED
TO RIO 02.

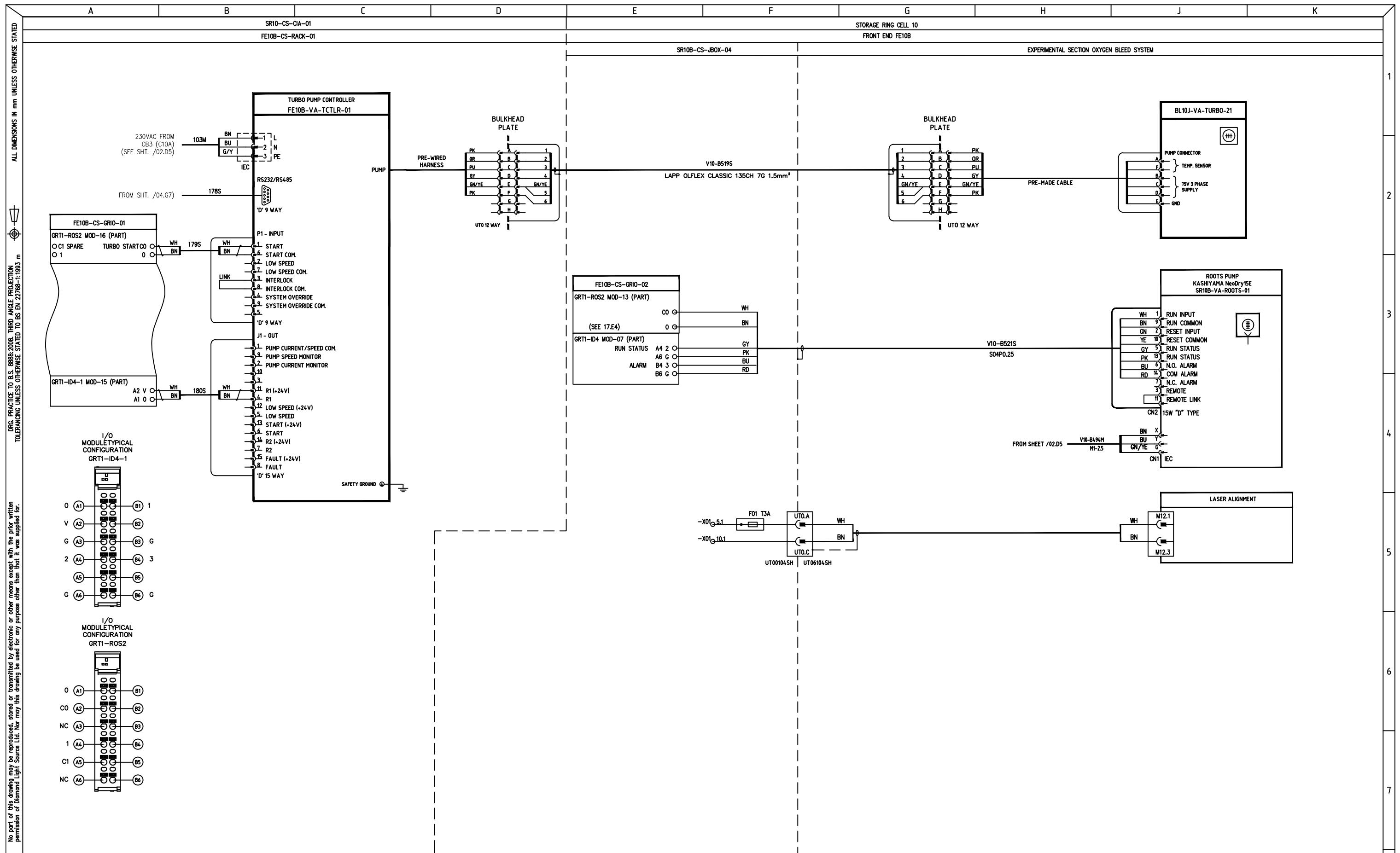
SHT. 15: ADDED INDEX
VALVE TO INDEX
STATION.
SHT. 16: ADDED TURBO
CONTROLLER
POWER.
SHT. 17: ADDED
PROFINET SMC MANIFOLD.
SHT. 18: ADDED TURBO
CONTROLLER SERIAL COMM.
SHT. 19: ADDED 12VDC
POWER TO RIO-01.
SHT. 20: ADDED 12VDC
POWER TO RIO-01.
SHT. 21: ADDED 12VDC
POWER TO RIO-01.
SHT. 22: ADDED 12VDC
POWER TO RIO-01.
SHT. 23: ADDED 12VDC
POWER TO RIO-01.
SHT. 24: ADDED 12VDC
POWER TO RIO-01.
SHT. 25: ADDED 12VDC
POWER TO RIO-01.
SHT. 26: ADDED 12VDC
POWER TO RIO-01.
SHT. 27: ADDED 12VDC
POWER TO RIO-01.
SHT. 28: ADDED 12VDC
POWER TO RIO-01.
SHT. 29: ADDED 12VDC
POWER TO RIO-01.
SHT. 30: ADDED 12VDC
POWER TO RIO-01.

SHT. 08: 10 & 12 ANALOGUE INPUTS TO
RIO-01 NOW IN M8S PIN 11.
SHT.09: CABLE 158S TO C11-03 NOW 2
PAIR.
SHT.11: CABLE 148S MOVED IN C11-03.
SHT.14: ADDED DIAGNOSTIC CAMERA
POWER, ACTUATION AND FEEDBACK
CABLE.
SHT.17: ADDED LASER POWER FROM
JBXK-04.

SHT. 08, 10 & 12 ANALOGUE INPUTS TO
RIO-01 NOW IN M8S PIN 11.
SHT.09: CABLE 158S TO C11-03 NOW 2
PAIR.
SHT.11: CABLE 148S MOVED IN C11-03.
SHT.14: ADDED DIAGNOSTIC CAMERA
POWER, ACTUATION AND FEEDBACK
CABLE.
SHT.17: ADDED LASER POWER FROM
JBXK-04.

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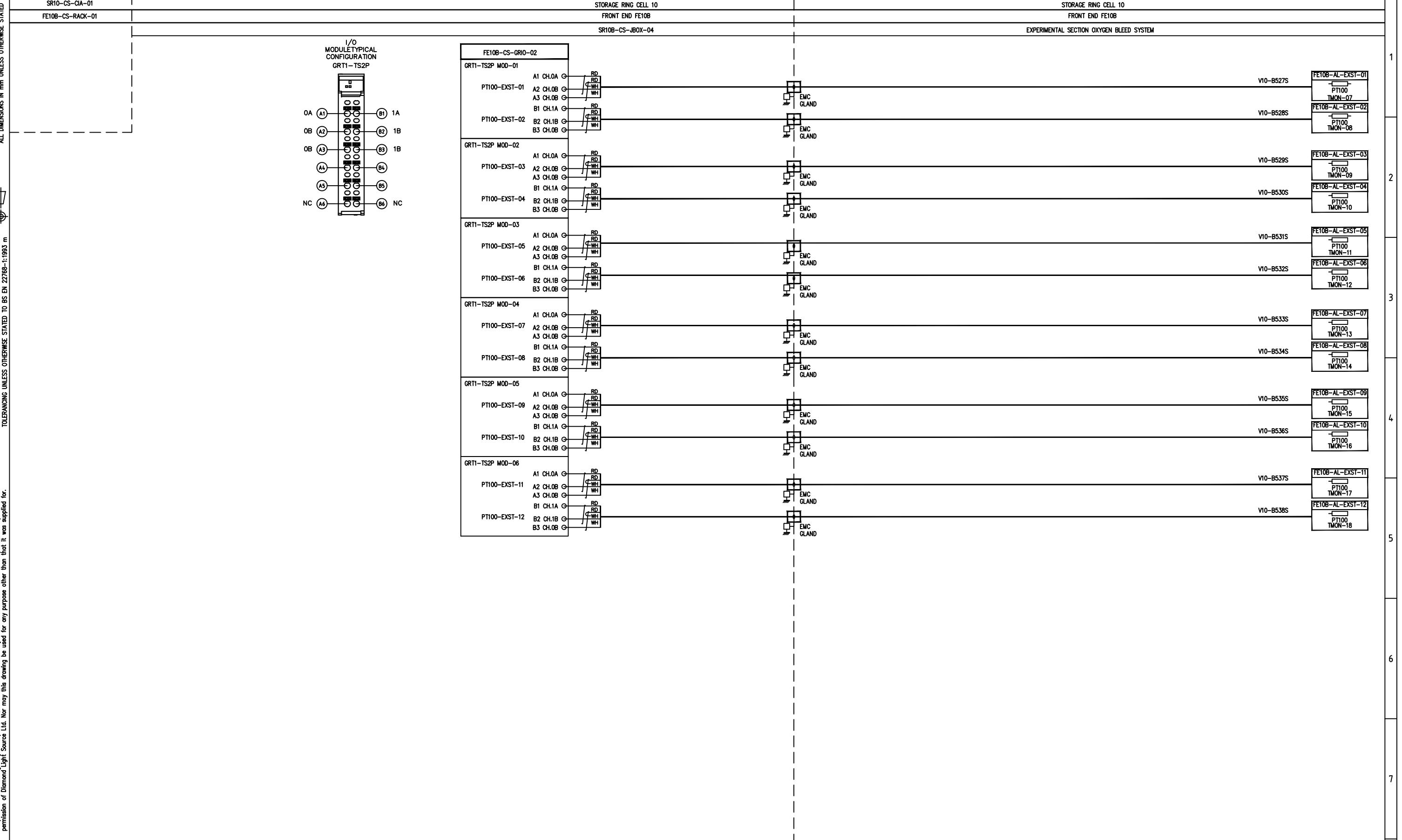
**THIS
REVISION**
DRN NMP
DATE 16/12/20
**CHK
DATE** 18/12/20
**APPD
DATE** 18/12/20
**ORIGINATOR
DATE** 05/04/19
DRG STATUS Approved
DRG No. 1147700
SHEET 16 OF 18
REV. G



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THIS REVISION		TITLE		
DRN DATE	NMP 16/12/20	STORAGE RING CELL 10 FRONT END 10B CONTROL SYSTEM HOOK-UP		
CHK DATE	MWP 18/12/20			
APPD DATE	MWP 18/12/20	ORIGINATOR	NMP 05/04/19	DRG STATUS Approved
AUTOCAD DRG No.	1147700	SHEET	17 OF 18	REV. G



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TITLE

STORAGE RING CELL 10
FRONT END 10B CONTROL SYSTEM
HOOK-UP

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