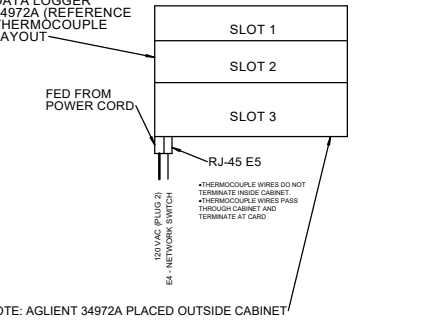
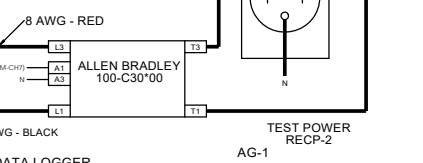
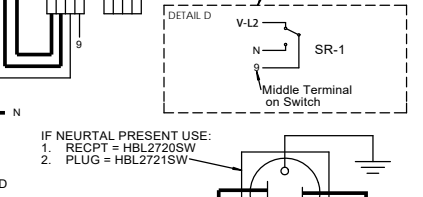
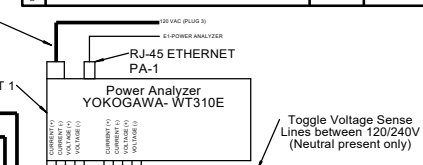


REV	DESCRIPTION	DATE	APPROVED
1	NEW RELEASE	7/18/16	CJS
2			
3			



ETHERNET PORT	DEVICE
E1	LAB NETWORK
E2	COMPUTER
E3	WT310
E4	MW100
E5	34972A
E6	LAUREL METER
E7	TEMPERATURE/HUMIDITY SENSOR
E8	ICP CON ETHERNET SERIAL CONVERTER (7188E5)

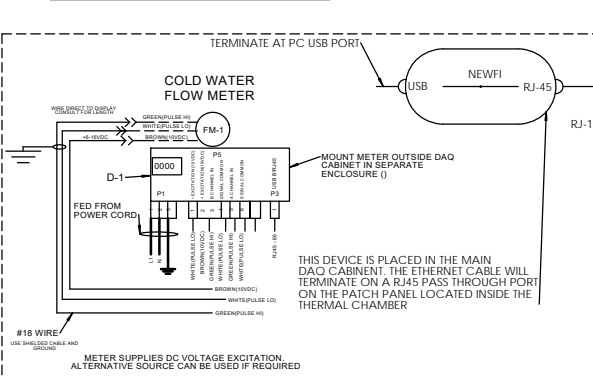
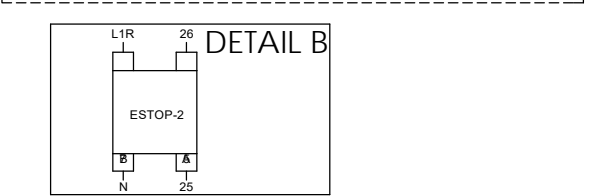
SIGNATURES	DATE	GENERAL ELECTRIC
DRAWN: COREY SWEAT	7/16/16	DEPT. LITH.
CHECKED:		
DESIGNED:		
REVIEW:		
SCALE:		
HEWH MAIN LAYOUT		
AP1 DOE DAQ.DWG		
SHEET 2 of 2		

8 7 6 5 4 3 2 1

YOKOGAWA - MODULE 5 ONLY USED FOR RL7

REFERENCE	PART NUMBER	DESCRIPTION	QTY
MODULE 5	MX125-MRC-M10	DISCRETE OUTPUT	1
MODULE 4	MX125-MRC-M10	DISCRETE OUTPUT	1
MODULE 3	MX110-VAR-M10	RTD INPUT	1
MODULE 2	MX110-UNV-M10	ANALOG INPUT	1
MODULE 1	MX110-UNV-M10	ANALOG INPUT	1
MODULE 0	MX125-VAD-M10	ANALOG OUTPUT	1

120VAC (PLUG 1) E4: MW100



Laurel P5 Jumper Settings

B1	B1
B2	B2
B3	B3
B4	B4
B5	B5
B6	B6
B7	B7
B8	B8

REFERENCE	PART NUMBER	DESCRIPTION	QTY
FM-1	FTB4605	OMEGA FLOW METER	1
D-1	L80007FR	LAUREL ELECTRONICS COUNTER/RATE INDICATOR (RJ45)	1
RECPT-2	HBL2620SW	HUBBELL DUPLEX RECEPTICAL 30A 250V	1
RECPT-1	HBLM1L	HUBBELL MECHANICAL INTERLOCK	1
RECPT-2	HBL2621SW	HUBBELL WATERIGHT SAFETY SHROUD TWIST LOCK PLUG	1
PS-1	DP550-24	TDK LAMBDA DP550-24 AC/DC POWER SUPPLY 50W	1
LT-1	10500C3	CML AMBER NEON LIGHT	2
CB-1	FAZ-810/1-SP	EATON CUTLER HAMMER 10A BREAKER	1
TB-1	CT52 5U-N & 251120/1M	ALTECH TERMINAL W/ DIN RAIL	62
	MT5	ALTECH MARKING STRIP TMT & END PLATE	1&1
	2020.0	ALTECH 6 POLE JUMPER	2
	2021.0	ALTECH 4 POLE JUMPER	1
	CA702	ALTECH 3 POLE JUMPER	4
	CA701	ALTECH END STOP	2
TB-2	CT56U & 251120/1M	ALTECH TERMINAL W/ DIN RAIL	12
		ALTECH 2 POLE JUMPER	4
ESTOP-1	AVW401-R	INDUSTRIAL PUSHBUTTON SWITCH SPST-NC 10A	1
ESTOP-2	KUP-SA15-120	POTTER & BRUMFIELD POWER RELAY	1
ESTOP-2	27E893	POTTER & BRUMFIELD RELAY SOCKET	1
MO-1	KHAL-17A11N-120	POTTER & BRUMFIELD 4PDT 5A RELAY	1
MO-1	27E894	POTTER & BRUMFIELD 5A SOCKET	1
PA-1	WT310E-C1-D/US/C7/G5	YOKOGAWA WT310 DIGITAL POWER METER	1
AG-1	34972A	AGILENT 34972A DATA ACQUISITION/ SWITCH UNIT	1
	34901A		3
TS1-4	11T515-1	HONEYWELL TOGGLE SWITCH	4
CB-2	FAZ-832/2	EATON CUTLER HAMMER 32A THERMAL MAGNETIC BREAKER	1
NEWFI	NEWFI	RJ45 CONNECTOR, PASS-THROUGH JACK	1
RJ-1	1546413-3	RJ45 CONNECTOR, PASS-THROUGH JACK	2
SR-1	2FB53-73-1ABS-XN	TOGGLE SWITCH SPDT 15A 125V	1

8 7 6 5 4 3 2 1

- NOTES:
1. PC WITH WINDOWS 7 AND MINIMUM 4GB OF MEMORY MOUNTED OUTSIDE DAQ BOX
  2. HIGHER VERSIONS OF WINDOWS WILL WORK (NOT TESTED COMPLETELY)
  3. USE RJ-45 PASSTHROUGH JACK (ON DAQ PANEL) TO CONNECT ALL EQUIPMENT TO ETHERNET HUB

87

76

65

54

43

32

SIZE D

REV

DATE

APPROVED

DESCRIPTION

REV

TC JACK PANEL 1-34901A SLOT 1

Channel	Channel Label	DEVICE	Color	Description
CH021	CH1-1	MW100	BLUE	T1
	CH1-2		RED	
CH022	CH2-4	MW100	BLUE	T2
	CH2-5		RED	
CH023	CH3-7	MW100	BLUE	T3
	CH3-8		RED	
CH024	CH4-10	MW100	BLUE	T4
	CH4-11		RED	
CH025	CH5-13	MW100	BLUE	T5
	CH5-14		RED	
CH026	CH6-1	MW100	BLUE	T6
	CH6-2		RED	
CH017	CH7-4	MW100	BLUE	T7
	CH7-5		RED	
CH028	CH8-7	MW100	BLUE	T8
	CH8-8		RED	
CH029	CH9-10	MW100	BLUE	T9
	CH9-11		RED	
CH030	CH10-13	MW100	BLUE	T10
	CH10-14		RED	
111	H	34972A	BLUE	T1-11
	L		RED	
112	H	34972A	BLUE	T1-12
	L		RED	
113	H	34972A	BLUE	T1-13
	L		RED	
114	H	34972A	BLUE	T1-14
	L		RED	
115	H	34972A	BLUE	T1-15
	L		RED	
116	H	34972A	BLUE	T1-16
	L		RED	
109	H	34972A	BLUE	T1-17
	L		RED	
110	H	34972A	BLUE	T1-18
	L		RED	

TC JACK PANEL 2-34901A SLOT 2

Channel	Channel Label	DEVICE	Color	Description
201	H	34972A	BLUE	T2-1
	L		RED	
202	H	34972A	BLUE	T2-2
	L		RED	
203	H	34972A	BLUE	T2-3
	L		RED	
204	H	34972A	BLUE	T2-4
	L		RED	
205	H	34972A	BLUE	T2-5
	L		RED	
206	H	34972A	BLUE	T2-6
	L		RED	
207	H	34972A	BLUE	T2-7
	L		RED	
208	H	34972A	BLUE	T2-8
	L		RED	
209	H	34972A	BLUE	T2-9
	L		RED	
210	H	34972A	BLUE	T2-10
	L		RED	
211	H	34972A	BLUE	T2-11
	L		RED	
212	H	34972A	BLUE	T2-12
	L		RED	
213	H	34972A	BLUE	T2-13
	L		RED	
214	H	34972A	BLUE	T2-14
	L		RED	
215	H	34972A	BLUE	T2-15
	L		RED	
216	H	34972A	BLUE	T2-16
	L		RED	
107	H	34972A	BLUE	T2-17
	L		RED	
108	H	34972A	BLUE	T2-18
	L		RED	

TC JACK PANEL 3-34901A SLOT 3

Channel	Channel Label	DEVICE	Color	Description
301	H	34972A	BLUE	T3-1
	L		RED	
302	H	34972A	BLUE	T3-2
	L		RED	
303	H	34972A	BLUE	T3-3
	L		RED	
304	H	34972A	BLUE	T3-4
	L		RED	
305	H	34972A	BLUE	T3-5
	L		RED	
306	H	34972A	BLUE	T3-6
	L		RED	
307	H	34972A	BLUE	T3-7
	L		RED	
308	H	34972A	BLUE	T3-8
	L		RED	
309	H	34972A	BLUE	T3-9
	L		RED	
310	H	34972A	BLUE	T3-10
	L		RED	
311	H	34972A	BLUE	T3-11
	L		RED	
312	H	34972A	BLUE	T3-12
	L		RED	
313	H	34972A	BLUE	T3-13
	L		RED	
314	H	34972A	BLUE	T3-14
	L		RED	
315	H	34972A	BLUE	T3-15
	L		RED	
316	H	34972A	BLUE	T3-16
	L		RED	
105	H	34972A	BLUE	T3-17
	L		RED	
106	H	34972A	BLUE	T3-18
	L		RED	

PATCH PANEL BILL OF MATERIALS

MANUFACTURER	PART NUMBER	DESCRIPTION	QTY
NEWPORT	ITHX-D3	Temperature and Humidity Virtual Chart Recorder	1
HOFFMAN	CSD241 668	Enclosure for sensor interface	1
HOFFMAN	CP2416	Mounting Plate	1
HOFFMAN	CMFK	Mounting Kits	1
MCMaster CARR	6755K21	Female Mini Turnlock for heater 240 VAC	3
MCMaster CARR	6755K22	Male Mini Turnlock Recept. 240 VAC	3
OMEGA	SJP3-18-T	Thermocouple Jack Panel	3
TE CONNECTIVITY	1544413-3	RJ45 CONNECTOR, PASS-THROUGH JACK	3
NEUTRIK	NC5FP-1	XLR AUDIO CONNECTOR JACK, 5 CONTACTS, PANEL MOUNT (RTD)	3
NEUTRIK	NC5MX	XLR AUDIO CONNECTOR PLUG, 5 CONTACTS (RTD)	3
NEUTRIK	NC6FP-1	XLR AUDIO CONNECTOR, 6 CONTACTS (COM PORTS)	5
NEUTRIK	NC6MX	XLR AUDIO CONNECTOR PLUG, 6 CONTACTS (COM PORTS)	5
NEUTRIK	NC4FP-1	XLR AUDIO CONNECTOR, JACK, 4 CONTACTS (PRESSURE SENSOR)	3
NEUTRIK	NC4MX	XLR AUDIO CONNECTOR PLUG, 4 CONTACTS (PRESSURE SENSOR)	3
OPTO 22	IAC24A	INPUT MODULE AC/DC 24VDC LOGIC	3
POTTER & BRUMFIELD	2IO4A	SOLID STATE RELAY BOARD	1

GENERAL NON-DAQ COMPONENTS

MANUFACTURER	PART NUMBER	DESCRIPTION	QTY
HOFFMAN	CSD302410	Main Test Enclosure	1
HOFFMAN	CP30P24	Mounting Plate	1
HOFFMAN	CMFK	Mounting Kits	1
DATA PRO	1598-02C	USB A Bulkhead	1
DATA PRO	1152-02C	HD15 Bulkhead VGA Panel-Mount Ext. CL2 PVC 2 ft	1
DATA PRO	70302A	VGA & USB Wall Plate	1
MCMaster CARR	7196K31	120 VAC Plug	1
MCMaster CARR	8035K55	250 VAC 30 A Plug 3 terminal NEMA 90 degree	1
ANY		ACER V173 DJB 17" Monitor	1
ANY		USB Keyboard	1
ANY		Optical Mouse	1
MANHATTAN	161718	Manhattan 28 Port USB Hub	1
MULTICOMP	SPC21423	MULTICOMP SPC21423 CONNECTOR, XLR, JACK, 5 POSITION (RTD QUICK DISCONNECT)	3

NOTES:

1. PC WITH WINDOWS 7 AND MINIMUM 4GB OF MEMORY MOUNTED OUTSIDE DAQ BOX

2. HIGHER VERSIONS OF WINDOWS WILL WORK. (NOT TESTED COMPLETELY)

3. USE RJ-45 PASS-THROUGH JACK (ON DAQ PANEL) TO CONNECT ALL EQUIPMENT TO ETHERNET HUB

4. IF USING GAS MASS FLOW METERS PLACE METER BEFORE REGULATOR.

5. REFERENCE RANGE GAS FLOW METER DRAWING

SIGNATURES

DATE

5/16/10

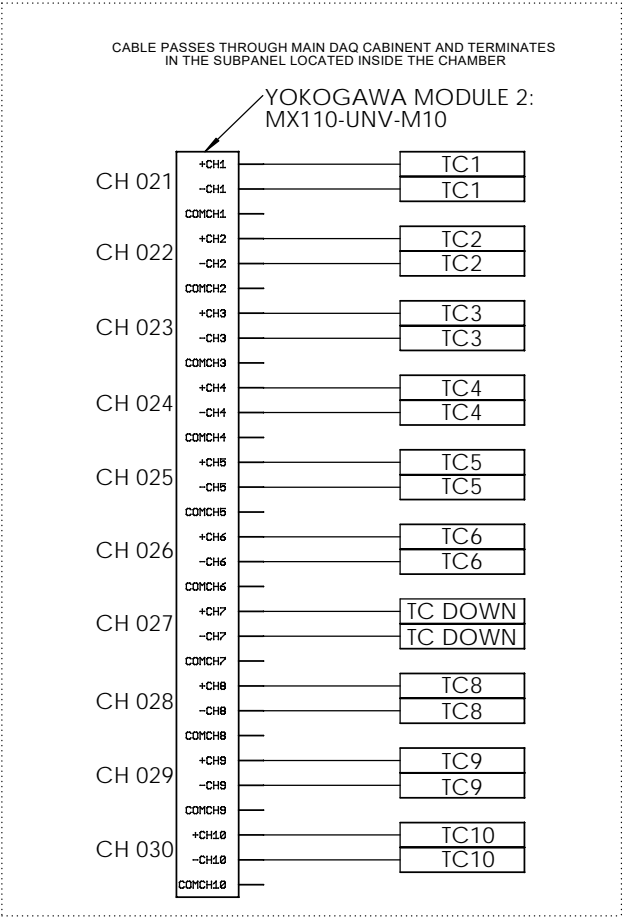
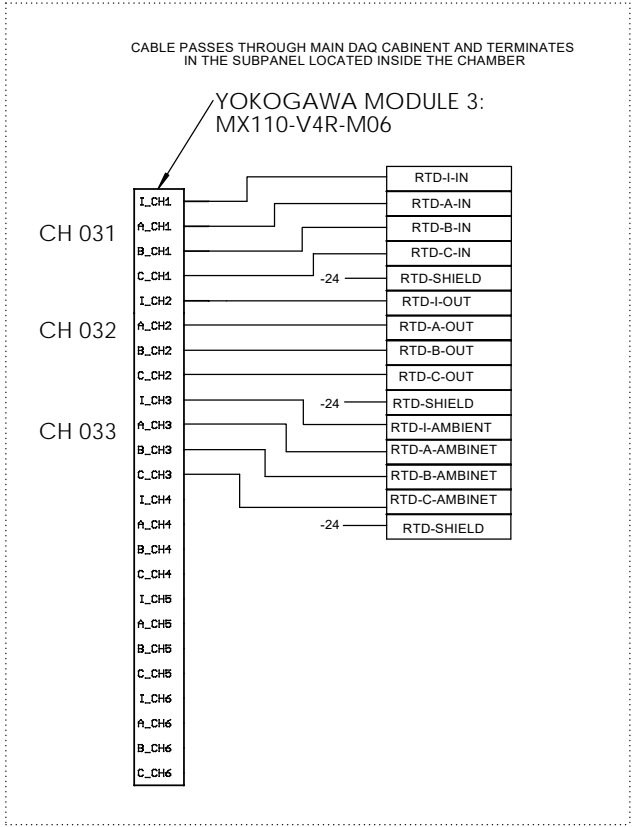
GENERAL ELECTRIC

HEWH - THERMOCOUPLE LAYOUT

AP1 DOE DAQ.DWG

3 of

DISTR TO



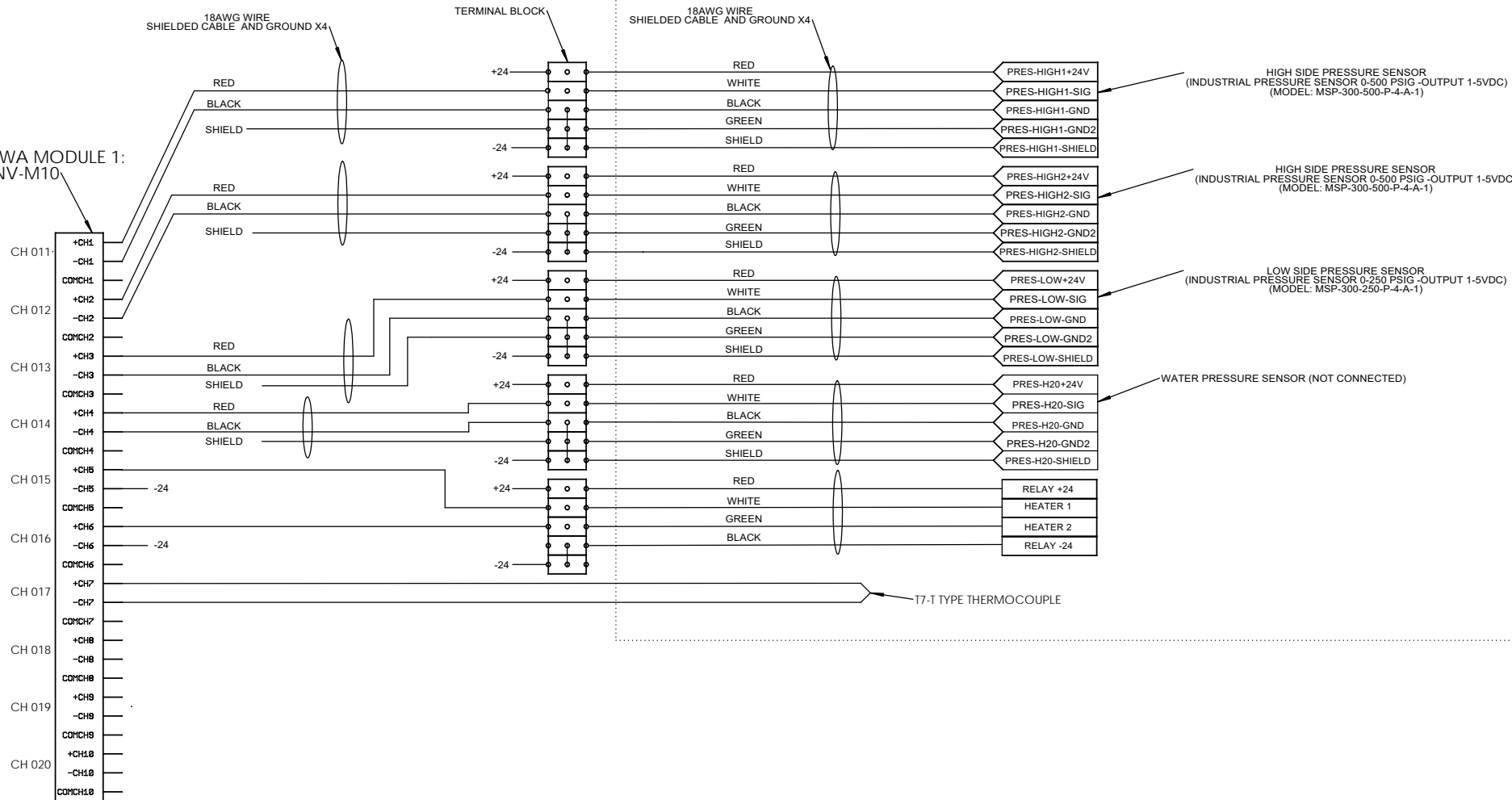
NOTES:

1. THERMOCOUPLE WIRE TYPE T (+BLUE, -RED)

2. REFER TO HEWH WIRING DIAGRAM FOR CABLE LAYOUT

DWG.NO.	HEWH-CB1	GENERAL ELECTRIC
TITLE:	HEWH - CONTROL BOX	REV. 2
DATE:	05/19/2011	PAGE: 4 OF 5
		AUTH: CJS

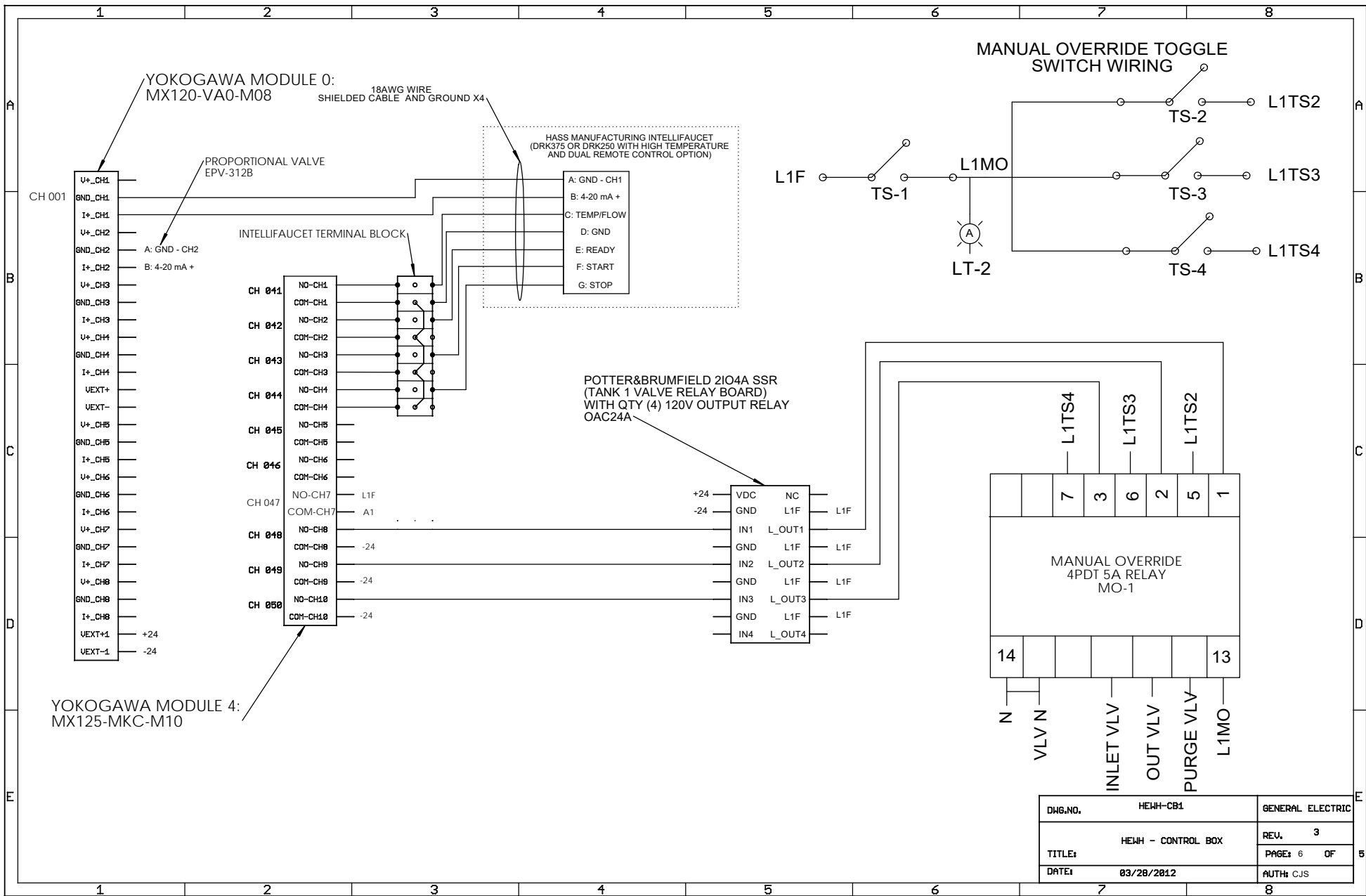
YOKOGAWA MODULE 1:  
MX110-UNV-M10



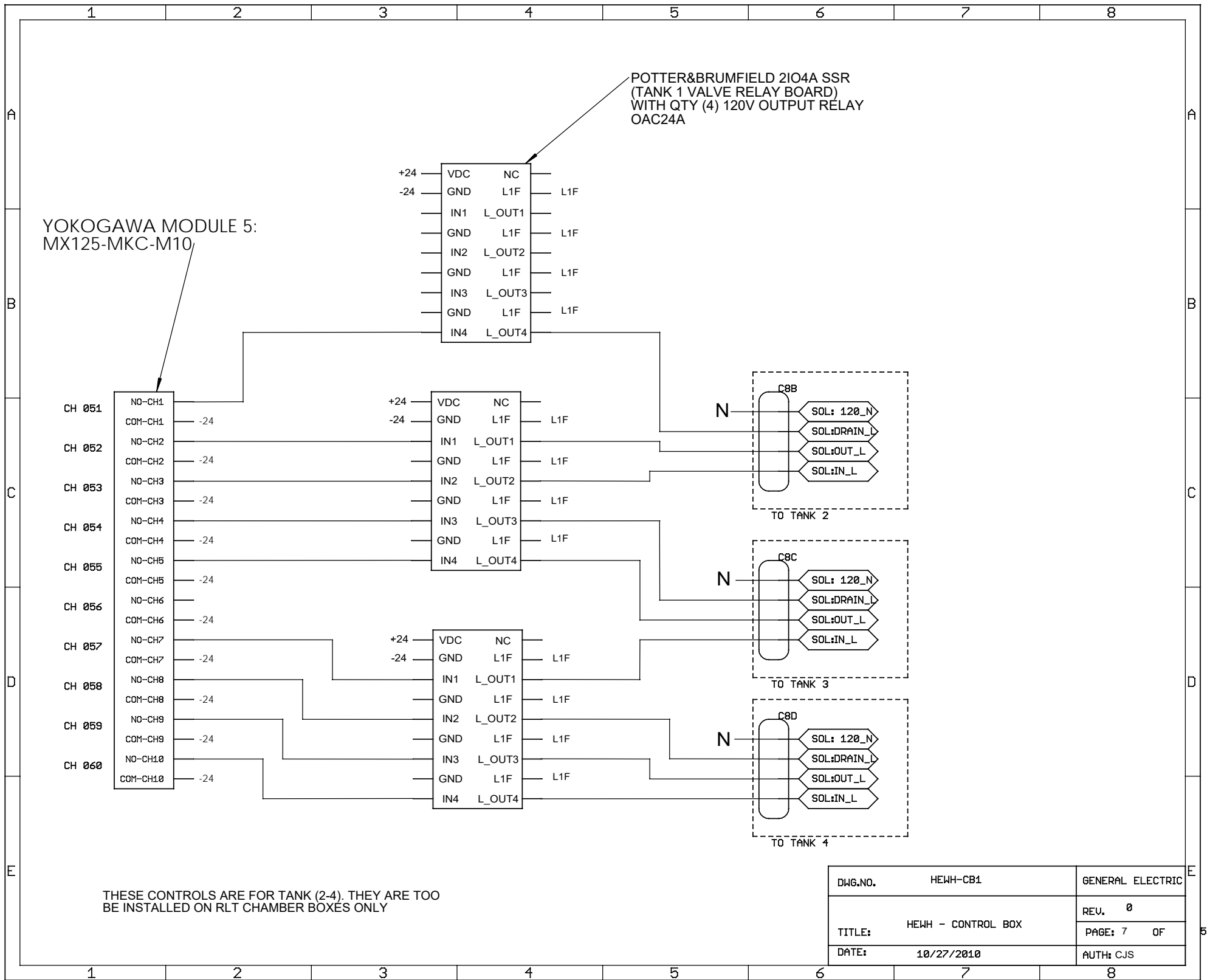
NOTES:

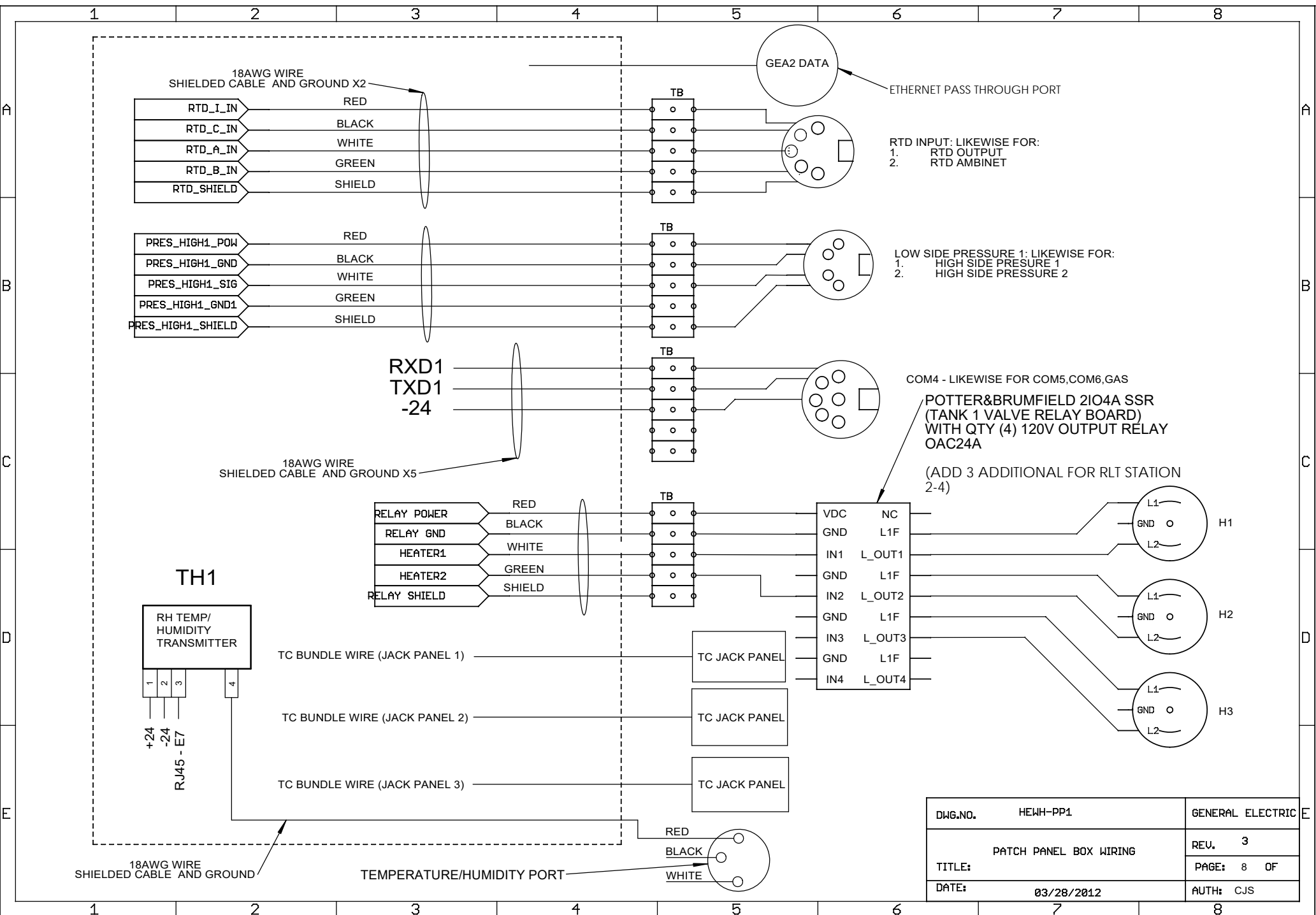
1. CURRENT CARRYING 240VAC WIRING 8AWG
2. RESISTORS ARE ONLY NECESSARY FOR CURRENT LOOP PRESSURE SENSORS

DWG.NO.	HEWH-CB1	GENERAL ELECTRIC
TITLE:	HEWH - CONTROL BOX	REV. 5
DATE:	05/19/2011	PAGE: 5 OF 5
		AUTH: CJS



DWG.NO.	HEWH-CB1	GENERAL ELECTRIC
TITLE:	HEWH - CONTROL BOX	REV. 3
DATE:	03/28/2012	PAGE: 6 OF 5
		AUTH: CJS





DWG.NO.	HEWH-PP1	GENERAL ELECTRIC
TITLE: PATCH PANEL BOX WIRING		REV. 3
DATE:	03/28/2012	PAGE: 8 OF
		AUTH: CJS