

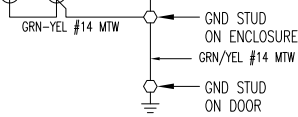
CUSTOMER SUPPLIED 115 OR 230 VAC LISTED CONTROL TRANSFORMER (WITH LISTED DISCONNECT AND OR BRANCH CIRCUIT PROTECTION) POWER SOURCE IS REQUIRED. ALL POWER SOURCES SHALL BE GROUNDED ON ONE SIDE. ISOLATED AND SEPARATED FROM OTHER INDUCTIVE LOADS SUCH AS LIGHTING CIRCUITS OR FROM FRICK SUPPLIED OR SPECIFIED STARTER - USE MIN #12AWG FOR FEED.

IF SEPARATE FEED OR VOLTAGE FOR HEATER CIRCUIT IS REQUIRED, REMOVE JUMPERS 1 TO 101 AND 2 TO 102 & CONNECT A SEPARATE 115 OR 230 VAC SOURCE TO 101 & 102 (WITH LISTED DISCONNECT AND OR BRANCH CIRCUIT PROTECTION).

IF 2nd 1KW HTR IS REQ'D MOVE WIRE #104 TO CB1A

ALL NEUTRALS ENTERING THIS ENCLOSURE SHALL BE TIED TOGETHER AT SOURCE. NOT IN THIS ENCLOSURE

EARTH BUSBAR AT POWER SOURCE

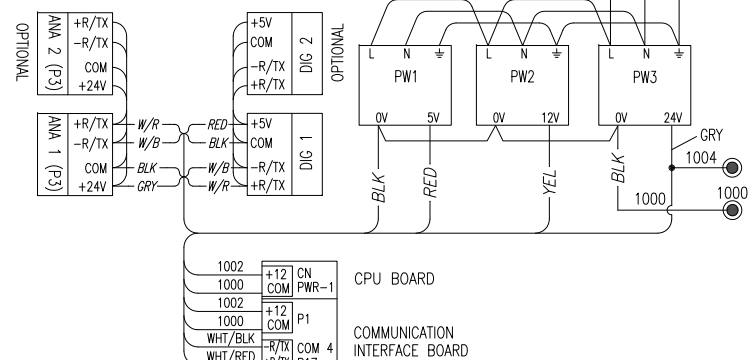
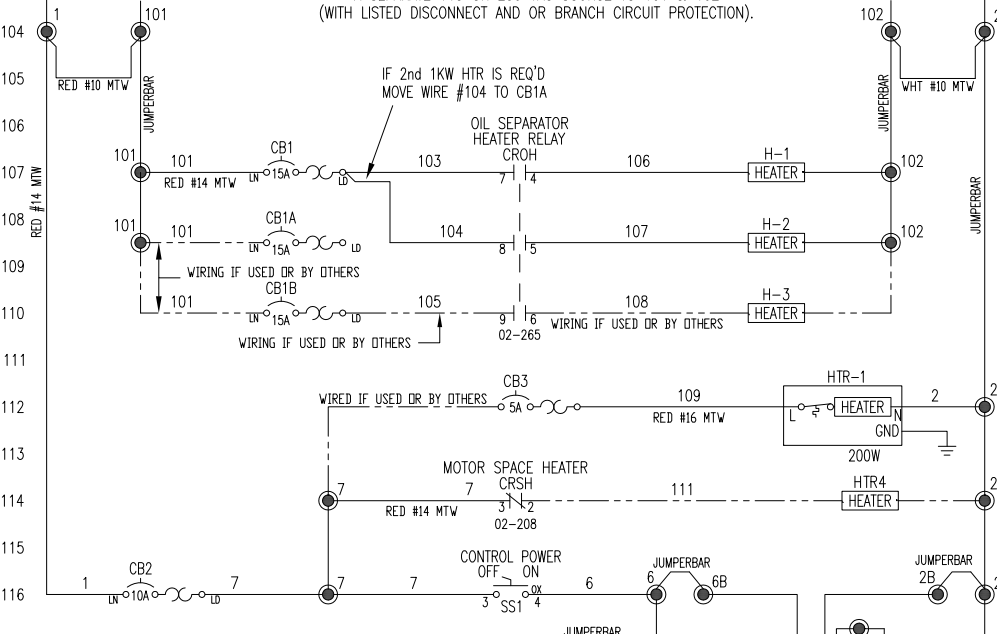


OIL SEPARATOR HEATER (S) 500W OR 1KW EACH WIRING TO BE #14 AWG

PANEL HEATER (OPTIONAL) 200W EACH

COMPRESSOR MOTOR SPACE HEATER (IF SUPPLIED) (300 WATTS MAXIMUM)

24VDC 1.75A MAX LOAD



NO THREE PHASE WIRING SHALL ENTER OR LEAVE QUANTUM PANEL OR BE RUN IN SAME CONDUIT AS ANY QUANTUM CONTROL WIRING ENTERING OR LEAVING QUANTUM CONTROL PANEL.

NO SINGLE PHASE OVER 300VAC SHALL ENTER OR LEAVE QUANTUM PANEL

ALL QUANTUM WIRING TO BE #16 AWG STRANDED WIRE UNLESS OTHERWISE STATED

ALL NEUTRAL (EXP: 2 & 2A) WIRING TO BE WHITE UNLESS OTHERWISE STATED

FOR INSTALLATION OF QUANTUM PACKAGE TEST PROCEDURE SEE MMIB NO. 4.11.10.12

FOR INSTALLATION OF COMPUTER BOARDS & EPROMS (WRIST STRAP) SEE MMIB NO. 4.11.10.11

FOR HIGH POT TEST PROCEDURE SEE MMIB NO. 4.11.10.7

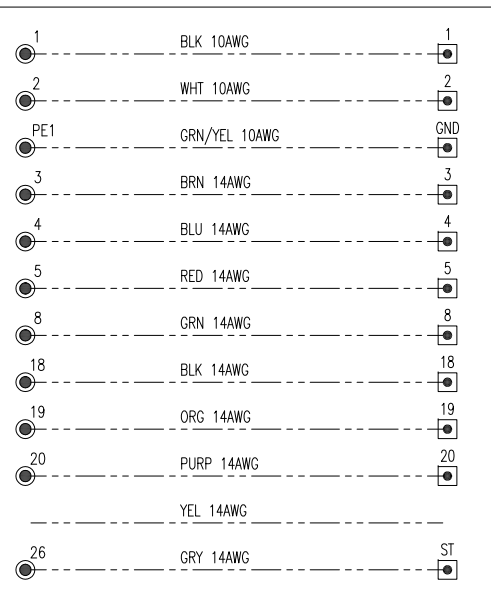
FOR QUANTUM ASSEMBLY AND TEST PROCEDURE SEE MMIB NO. 4.11.10.14

NOTE 1
ALL ANALOG LOW VOLTAGE WIRING TO BE RUN IN SEPARATE CONDUIT FROM ALL OTHER WIRING. ALL DRAIN WIRES TO BE INSULATED EITHER TOGETHER OR SEPARATELY WITHIN 2" OR CLOSER IF TERMINATION IF NOT CONFINED OTHERWISE.

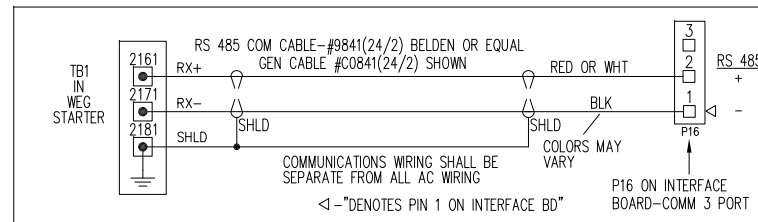
NOTE 2
TEMPERATURE WIRING SPECIFICATIONS:
MINIMUM CABLE SIZE FOR SENSOR WIRING TO BE 22 AWG, TWISTED PAIR - BELDEN #9320 OR EQUAL, 20/2 TWISTED PAIR SUGGESTED -IF CABLE HAS A DRAIN WIRE, GROUND DRAIN WIRE AT ONE END ONLY AND INSULATE OTHER END. 2000 FT. MAX. DISTANCE

NOTE 3
SPECIFICATIONS FOR TEMPERATURE CAPACITY CONTROL: -SETPOINT RANGE: -50°F. TO 100°F.
-TEMPERATURE ASSEMBLY: (FRICK P/N 639A0151G03 WITH 1/2"NPT
-WIRE AS SHOWN IN SEPARATE CONDUIT FROM ALL OTHER WIRING, USE BELDEN #8761 OR EQUAL.

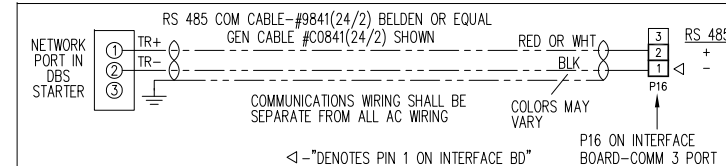
QUANTUM TO STARTER STANDARD WIRING



COMMUNICATIONS WIRING WHEN WEG STARTER IS USED



COMMUNICATIONS WIRING WHEN DBS STARTER IS USED

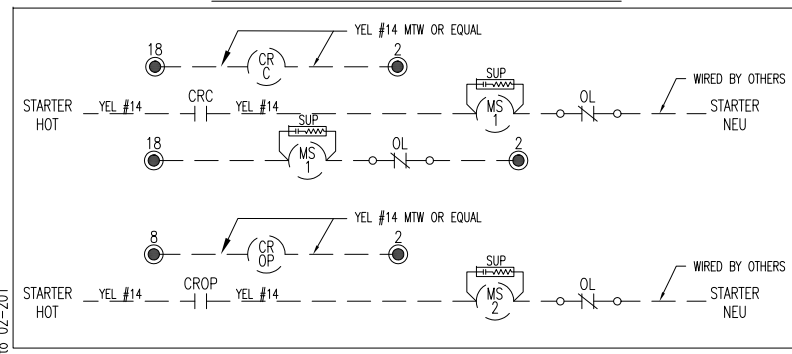


STARTER WIRING DIAGRAMS & INTERCONNECT

FOR STARTER WIRING DIAGRAMS SEE DWGS:

- 649D6002 - WIRING CONNECTIONS DIAGRAM, YORK VYPER UP TO 565 AMPS FLA, QUANTUM HD
- 649D6003 - WIRING CONNECTIONS DIAGRAM, YORK VYPER ABOVE 565 THRU 1180 AMPS, QUANTUM HD
- 649D6004 - WIRING CONNECTIONS DIAGRAM, ENHANCER, QUANTUM HD
- 649D6304 - WIRING CONNECTIONS DIAGRAM, EATON VFD, QUANTUM HD

CUSTOMER SUPPLIED STARTER IF USED



COMPRESSOR MOTOR STARTER
IF STARTER CONTAINS MULTIPLE CONTACTORS, RELAYS & TIMERS, ADD SUPPRESSORS AT EACH COIL.

IF TOTAL LOAD OF STARTER COIL(S) IS MORE THAN 2 AMPS, WIRE PER LINES 142 & 143

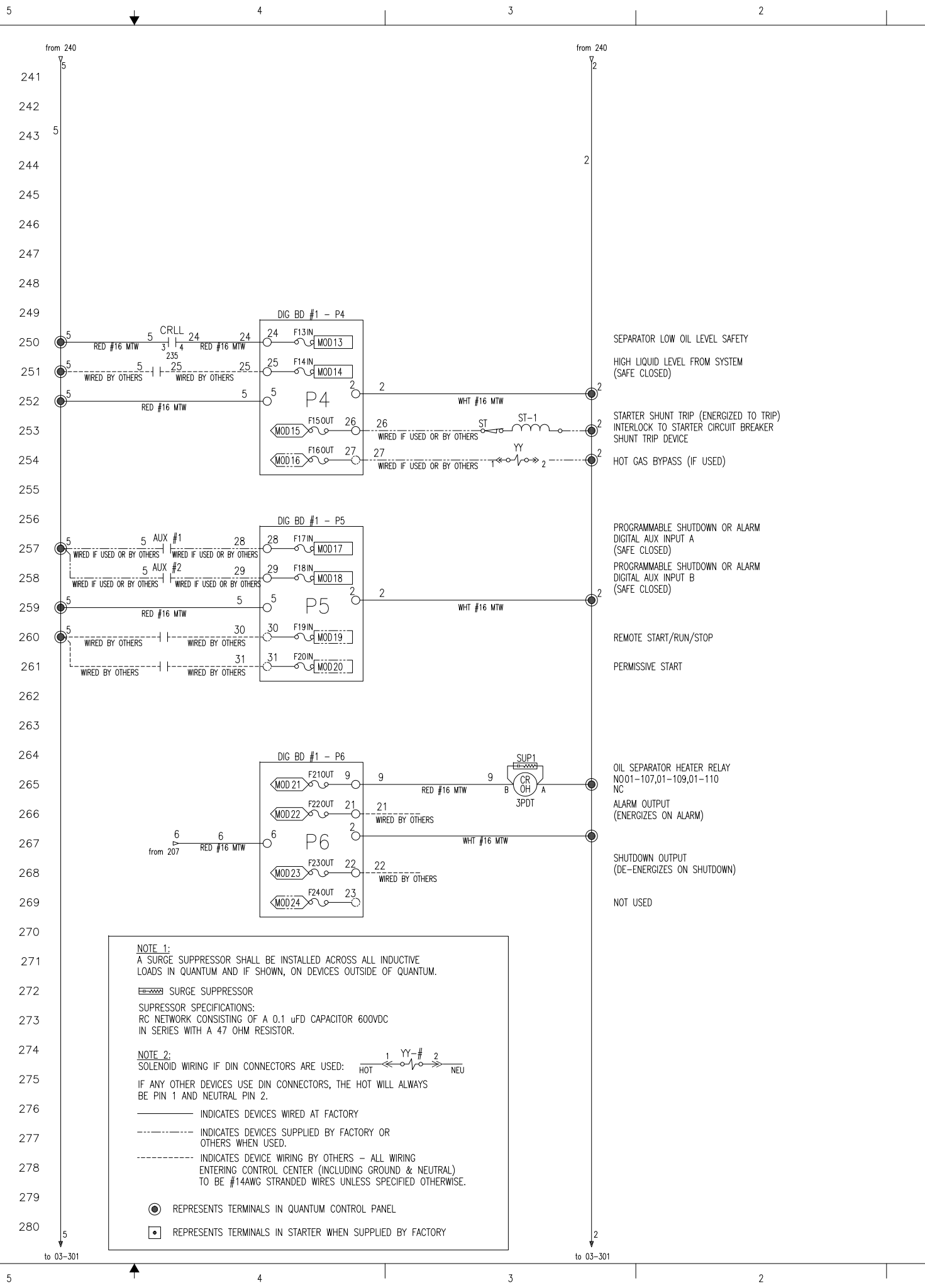
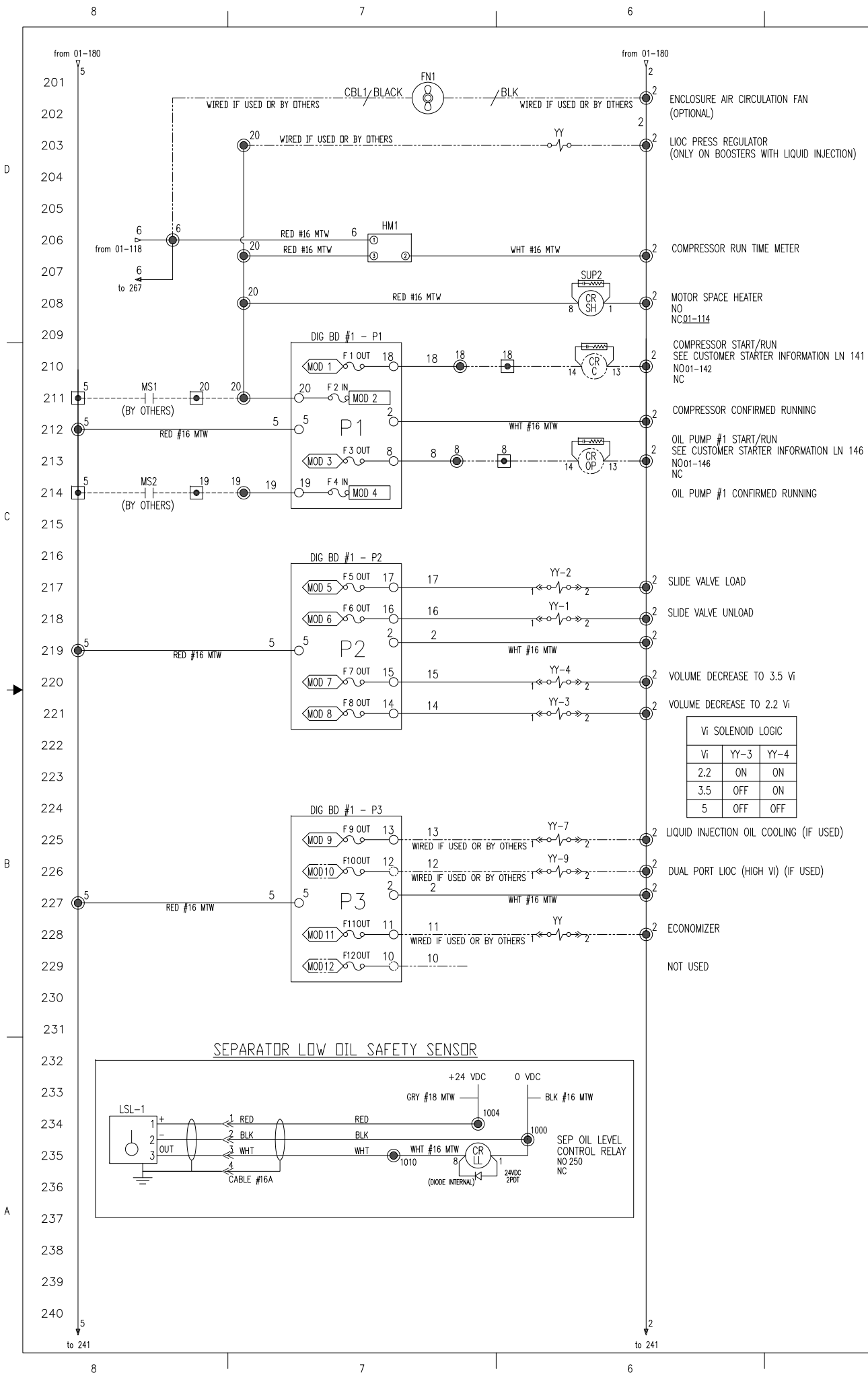
IF TOTAL LOAD OF STARTER COIL(S) IS LESS THAN 2 AMPS, WIRING MAY BE PER LINE 144.

OIL PUMP #1 STARTER
IF STARTER CONTAINS MULTIPLE CONTACTORS, RELAYS & TIMERS, ADD SUPPRESSORS AT EACH COIL.

IF TOTAL LOAD OF STARTER COIL(S) IS MORE THAN 2 AMPS, WIRE PER LINES 146 & 147

<p>THIS DRAWING AND THE SUBJECT MATTER IT CONTAINS ARE PROPERTY OF FRICK JOHNSON CONTROLS COMPANY. IT MAY NOT BE REPRODUCED, COPIED, OR DISTRIBUTED WITHOUT THE WRITTEN PERMISSION OF THE PROJECT ENGINEER. © COPYRIGHT 08/03/11, FRICK/JO, ALL RIGHTS RESERVED</p>		<p>NOTICE TO PURCHASER: REFER TO CONTRACT FOR MATERIAL SPECIFICATIONS. MATERIAL IS NOT TO BE USED UNLESS SHOWN UPON THIS DRAWING.</p>	
REV	ECN	DESCRIPTION	DATE
A		UPDATED ANALOG BD FOR NEW JUMPER SETTINGS	03/25/14
B		REVISED STARTER WIRING TO SHOW NEW EATON WIRING	08/19/16
<p>WIRING DIAGRAM RXF W/CAPACITY SLIDE TRANSMITTER QUANTUM HD</p>		<p>CONTROL POWER, HEATERS & OPTS</p>	
<p>UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES DO NOT SCALE</p>		<p>UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES DO NOT SCALE</p>	
DR	B. HESS	DATE	08/03/11
CHK	H. NOWELL	DATE	08/03/11
APP'D	B. HESS	DATE	08/03/11
CODE		SCALE	
<p>PURCHASER</p>		<p>YORK ORD NO</p>	
<p>649D5943</p>		<p>SHEET 01 OF 03</p>	





NOTE 1:
 A SURGE SUPPRESSOR SHALL BE INSTALLED ACROSS ALL INDUCTIVE LOADS IN QUANTUM AND IF SHOWN, ON DEVICES OUTSIDE OF QUANTUM.

SURGE SUPPRESSOR
 SUPPRESSOR SPECIFICATIONS:
 RC NETWORK CONSISTING OF A 0.1 uFD CAPACITOR 600VDC IN SERIES WITH A 47 OHM RESISTOR.

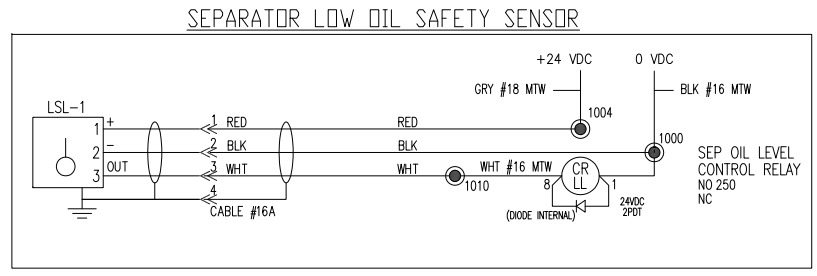
NOTE 2:
 SOLENOID WIRING IF DIN CONNECTORS ARE USED:

IF ANY OTHER DEVICES USE DIN CONNECTORS, THE HOT WILL ALWAYS BE PIN 1 AND NEUTRAL PIN 2.

- INDICATES DEVICES WIRED AT FACTORY
- INDICATES DEVICES SUPPLIED BY FACTORY OR OTHERS WHEN USED.
- - - - - INDICATES DEVICE WIRING BY OTHERS - ALL WIRING ENTERING CONTROL CENTER (INCLUDING GROUND & NEUTRAL) TO BE #14AWG STRANDED WIRES UNLESS SPECIFIED OTHERWISE.

- REPRESENTS TERMINALS IN QUANTUM CONTROL PANEL
- REPRESENTS TERMINALS IN STARTER WHEN SUPPLIED BY FACTORY

Vi SOLENOID LOGIC			
Vi	YY-3	YY-4	
2.2	ON	ON	
3.5	OFF	ON	
5	OFF	OFF	



THIS DRAWING AND THE SUBJECT MATTER IT CONTAINS ARE PROPERTY OF FRICK JOHNSON CONTROLS COMPANY. IT MAY NOT BE REPRODUCED, COPIED, FOR DISTRIBUTION, BEYOND THE REQUIREMENTS OF THE PROJECT REFERENCED ON THIS DRAWING.

© COPYRIGHT 08/03/11, FRICK/JCI, ALL RIGHTS RESERVED

Johnson Controls
 BY JOHNSON CONTROLS

UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES DO NOT SCALE

UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES DO NOT SCALE

DEC 2011 DEC 2011 DEC 2011

DR B. HESS CHK H. NOWELL APP'D B. HESS

DATE 09/20/11 08/03/11 08/03/11

SCALE NONE

SHEET 02 OF 03

PURCHASER YORK ORD NO

REV B

CASE CODE 23587

DWG NO 649D5943

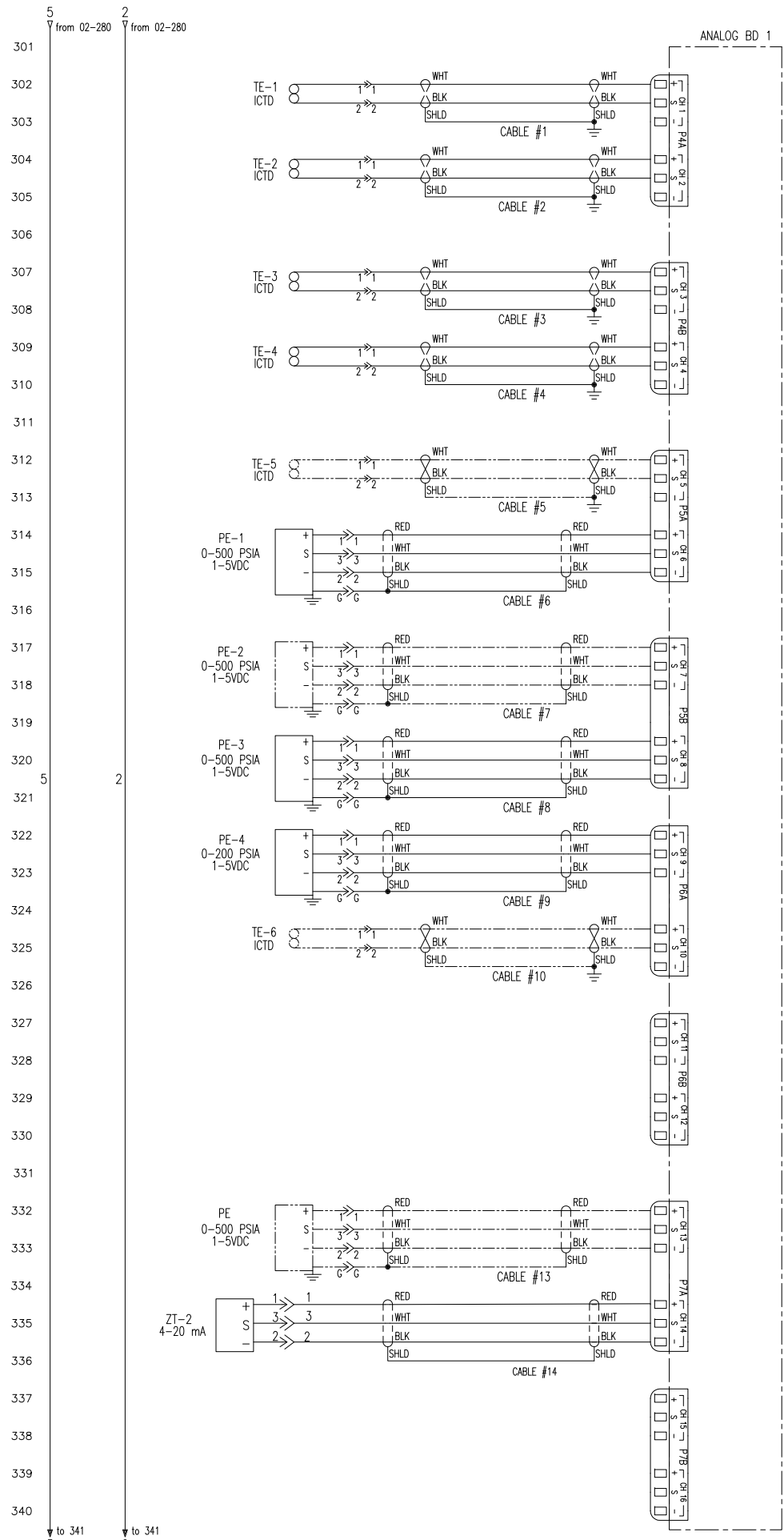
DIGITAL BD #1

QUANTUM HD

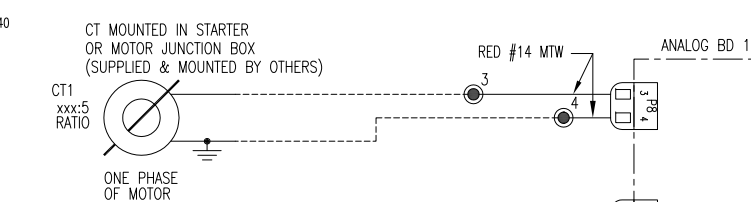
RXF W/CAPACITY SLIDE TRANSMITTER

WIRING DIAGRAM

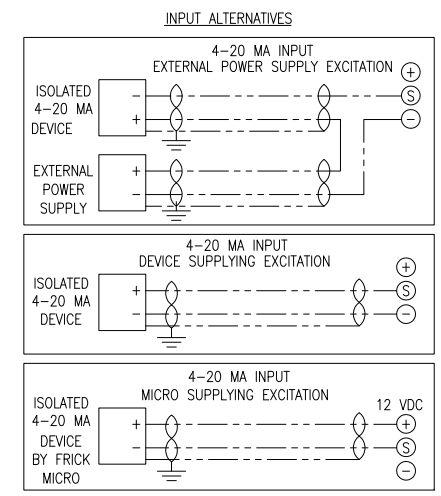
JUMPERS J** & JC** ARE FOR 640D0195H** ANALOG BOARDS.



- CHANNEL 1
SUCTION TEMPERATURE
J1 PINS 1-2
- CHANNEL 2
DISCHARGE TEMPERATURE
J2 PINS 1-2
- CHANNEL 3
OIL TEMPERATURE
J3 PINS 1-2
- CHANNEL 4
SEPARATOR TEMPERATURE
J4 PINS 1-2
- CHANNEL 5
LEAVING PROCESS TEMPERATURE
CAPACITY CONTROL
WIRED IF USED BY OTHERS
J5 PINS 1-2
- CHANNEL 6
OIL PRESSURE
J6 PINS 1-2
- CHANNEL 7
FILTER PRESSURE (OPTIONAL)
J7 PINS 1-2
- CHANNEL 8
DISCHARGE PRESSURE
J8 PINS 1-2
- CHANNEL 9
SUCTION PRESSURE
J9 PINS 1-2
- CHANNEL 10
ENTERING PROCESS TEMPERATURE
WIRED IF USED BY OTHERS
J10 PINS 1-2
- CHANNEL 11
SYSTEM DISCHARGE PRESS
1-5 VDC PRESS SHOWN
USE WITH CONDENSER CONTROL
J11 PINS 1-2
- CHANNEL 12
DRIVE SPEED (RPM)
(VSD, TURBINE, ETC)
4-20mA
J12 PINS 1-2
- CHANNEL 13
ECONOMIZER MONITORING PRESSURE
(OPTIONAL)
J13 PINS 1-2
- CHANNEL 14
CAPACITY SLIDE POSITION
LINEAR TRANSMITTER
- CHANNEL 15
NOT USED
- CHANNEL 16
MOTOR AMPS
ALTERNATE METHOD USING
4-20mA LK2 (OUT) (BD 640D0193H**)
J16 PINS 1-2 (BD 640D0195H**)



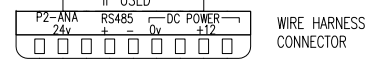
PHD CHANNELS ARE REFERRED TO AS PHD CH1 THRU PHD CH7 SEE DRAWING 649D5997



ANALOG OUTPUTS

SEE DWG 649B0935 FOR EZ-COOL INSTALLATION

- IF USED PHD CH 17
SUCTION END COMPRESSOR VIBRATION
J17 PINS 2-3, JC17 OUT
- IF USED PHD CH 18
DISCHARGE END COMPRESSOR VIBRATION
J18 PINS 2-3, JC18 OUT
- IF USED CHANNEL 19
COMP. MOTOR BEARING VIBRATION
OR BEARING TEMP. RTD (SHAFT SIDE)
J19 PINS 2-3, JC19 OUT
- IF USED CHANNEL 20
COMP. MOTOR BEARING VIBRATION
OR BEARING TEMP. RTD (OPPOSITE SIDE)
J20 PINS 2-3, JC20 OUT
- IF USED CHANNEL 21
MOTOR STATOR RTD #1
J21 PINS 2-3, JC21 IN
- IF USED CHANNEL 22
MOTOR STATOR RTD #2
J22 PINS 2-3, JC22 IN
- IF USED CHANNEL 23
MOTOR STATOR RTD #3
J23 PINS 2-3, JC23 IN
- IF USED CHANNEL 24
E-Z COOL LIQC FEEDBACK
4-20mA
J24 PINS 1-2, JC24 IN
- IF USED CHANNEL 1
P/I CONTROL A - LOOP OR PROGRAMMABLE SELECTABLE
TO RE-TRANSMIT ANALOG INPUT
4-20mA
- IF USED CHANNEL 2
P/I CONTROL B - LOOP OR PROGRAM SELECTABLE
TO RE-TRANSMIT ANALOG INPUT
4-20mA
- IF USED CHANNEL 3
RE-TRANSMIT ANALOG INPUT
SLIDE VALVE POSITION/CAPACITY
4-20mA
- IF USED CHANNEL 4
E-Z COOL LIQC P/I CONTROL
4-20mA
- IF USED CHANNEL 5
CONDENSER ANALOG OUTPUT A (VFD)
LOCATE PRESSURE TRANSDUCER ON CHANNEL 11
ANALOG BD #1
- IF USED CHANNEL 6
CONDENSER ANALOG OUTPUT B (VFD)
LOCATE PRESSURE TRANSDUCER ON CHANNEL 11
ANALOG BD #1
- IF USED CHANNEL 7
COMPRESSOR SPEED OUTPUT (VFD)
- IF USED CHANNEL 8
P/I LOOP OR PROGRAMMABLE SELECTABLE OUTPUT
TO RE-TRANSMIT ANALOG INPUT



IF BOTH VIBRATION AND TEMPERATURE ARE USED, TEMPERATURE WILL BE ON ANALOG BOARD #2 CHANNELS 19 & 20.

THIS DRAWING AND THE SUBJECT MATTER IT CONTAINS ARE PROPERTY OF FRICK JOHNSON CONTROLS COMPANY. IT MAY NOT BE REPRODUCED, COPIED, FOR DISTRIBUTION, BEYOND THE REQUIREMENTS OF THE PROJECT REFERENCED ON THIS DRAWING.

© COPYRIGHT 08/03/11, FRICK/JCI, ALL RIGHTS RESERVED

Frick
BY JOHNSON CONTROLS

NOTICE TO PURCHASER
REFER TO CONTRACT FOR MATERIAL SPECIFICATIONS. MATERIALS TO BE SUPPLIED BY MATERIALS IS NOT INCREASED BY ANYTHING SHOWN UPON THIS DRAWING.

UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES DO NOT SCALE

UNLESS OTHERWISE SPECIFIED DIMENSIONS TO SHOWN

DEC 2011 DEC 2011 DEC 2011 DEC 2011

DR B. HESS
CHK H. NOWELL
APP'D B. HESS

DATE 08/03/11
DATE 08/03/11
DATE 08/03/11

SCALE NONE

SHEET 03 OF 03

PURCHASER YORK ORD NO

REV B

DWG NO 649D5943

CASE CODE 23587

SIZE D

ANALOG BD #1

QUNTUM HD

WIRING DIAGRAM
RXF W/CAPACITY SLIDE TRANSMITTER

FRICK JOHNSON CONTROLS