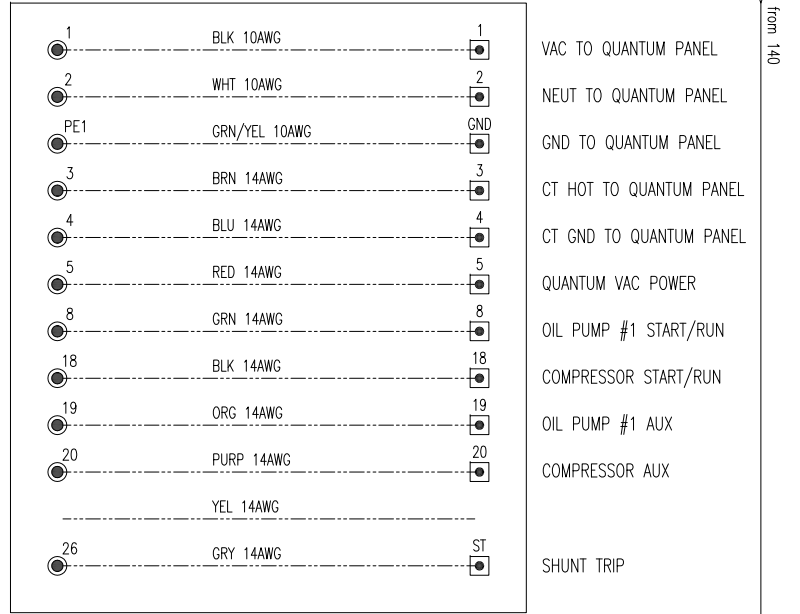
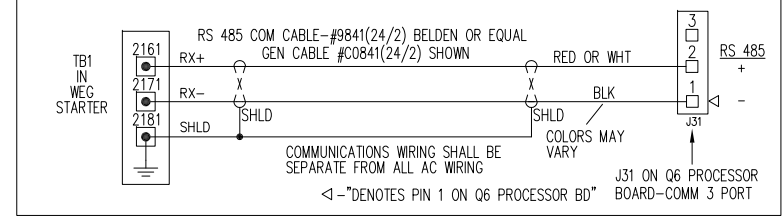


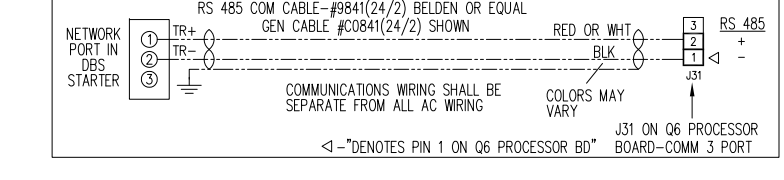
QUANTUM TO WEG SOFT STARTER STANDARD WIRING



COMMUNICATIONS WIRING WHEN WEG STARTER IS USED



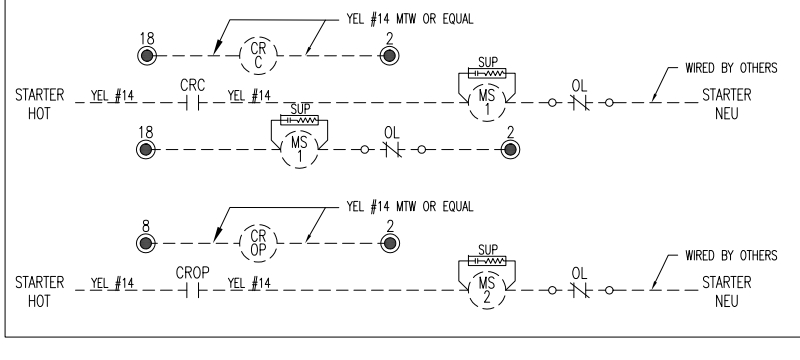
COMMUNICATIONS WIRING WHEN DBS STARTER IS USED



STARTER WIRING DIAGRAMS & INTERCONNECT

- 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



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.

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

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**Frick**  
INDUSTRIAL REFRIGERATION

**Johnson Controls**

REV	ECN	DESCRIPTION	DATE	DR	APP

REVISIONS

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

PURCHASER: YORK ORD NO

WIRING DIAGRAM  
RWFII W/CAPACITY SLIDE TRANSMITTER  
QUANTUM HD

CONTROL POWER, HEATERS & OPTS

DWG NO 649D6335

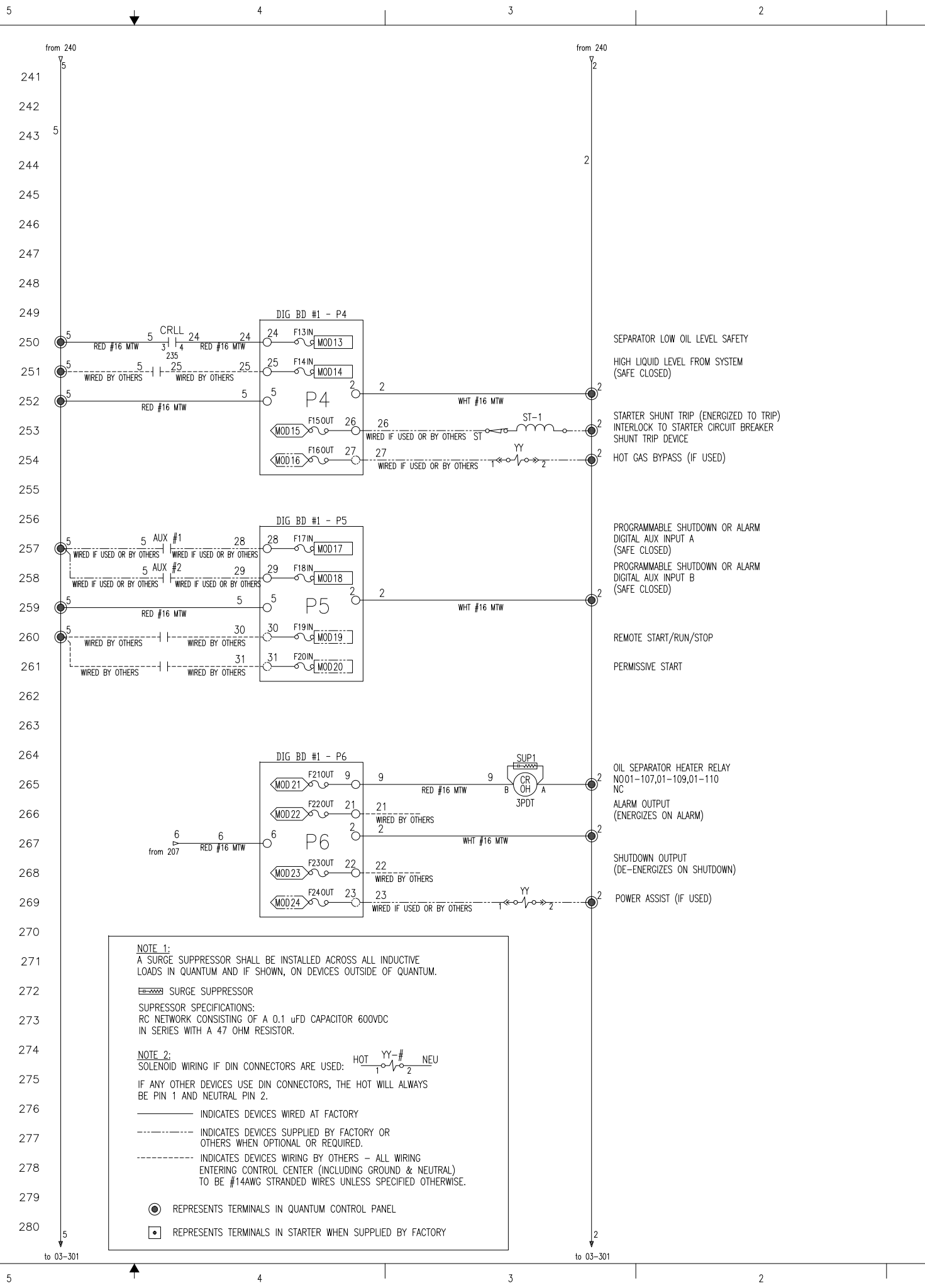
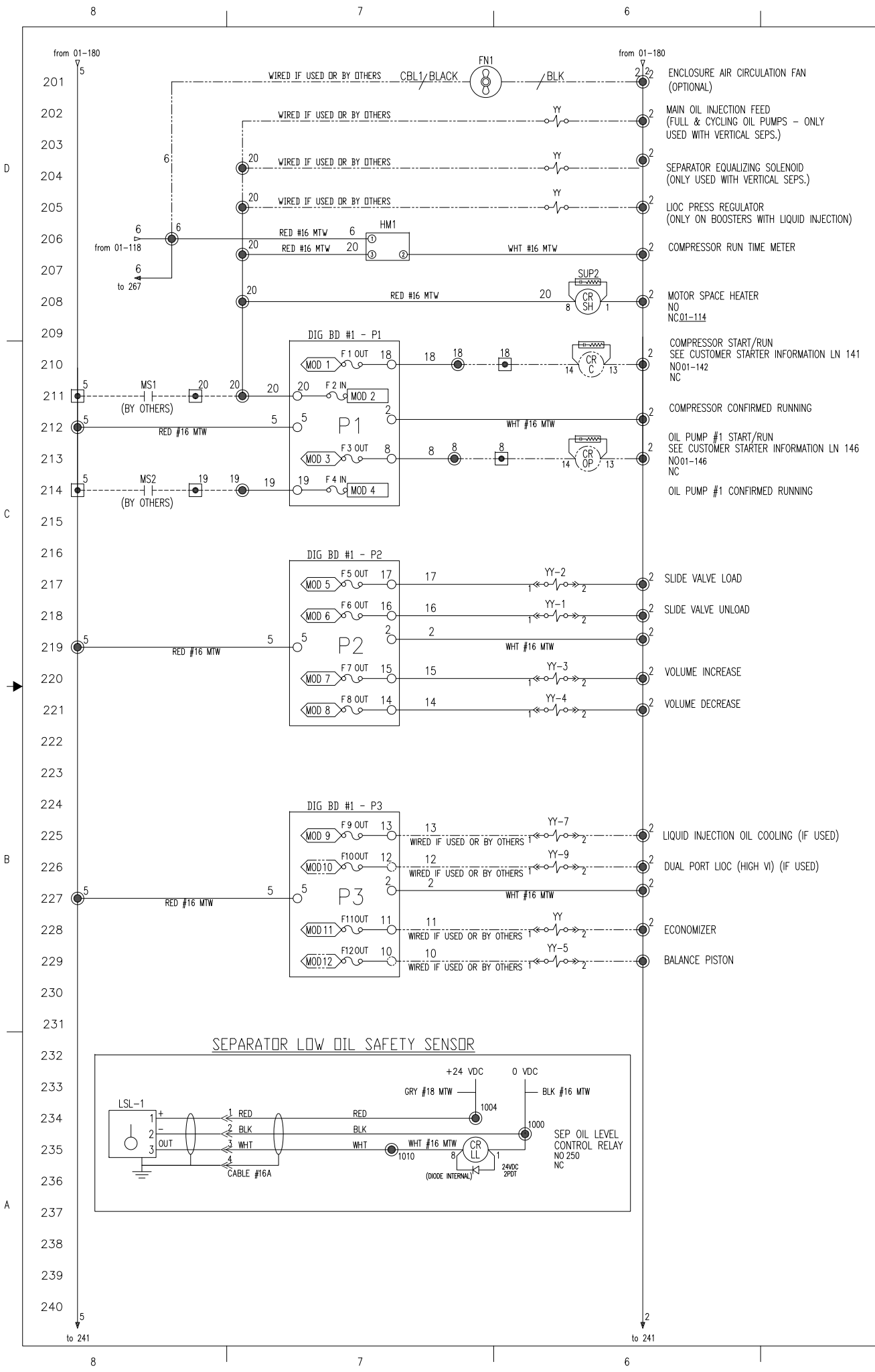
SCALE SHEET 01 OF 03

UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES DO NOT SCALE

UNLESS OTHERWISE SPECIFIED DIMENSIONS FOR P/F ARE IN INCHES

DEC 2PL	DEC 2PL	DEC 2PL	DEC 2PL	DEC 2PL	DEC 2PL
DR	B. HESS	01/29/17			
CHK	G. STANS	02/09/18			
APP'D	B. HESS	02/09/18			
CODE					

CASE CODE 23587



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

**NOTE 2:**  
 SOLENOID WIRING IF DIN CONNECTORS ARE USED: HOT YY-# NEU

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 OPTIONAL OR REQUIRED.  
 - - - - - INDICATES DEVICES 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

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**Johnson Controls**

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UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES DO NOT SCALE

DEC 2018 DR B. HESS  
 DEC 2018 CHK C. STANS  
 DEC 2018 APP'D B. HESS

04/29/17  
 02/09/18  
 02/09/18

SCALE

DR B. HESS  
 CHK C. STANS  
 APP'D B. HESS

SIZE D  
 CASE CODE 23587  
 DWG NO 649D6335

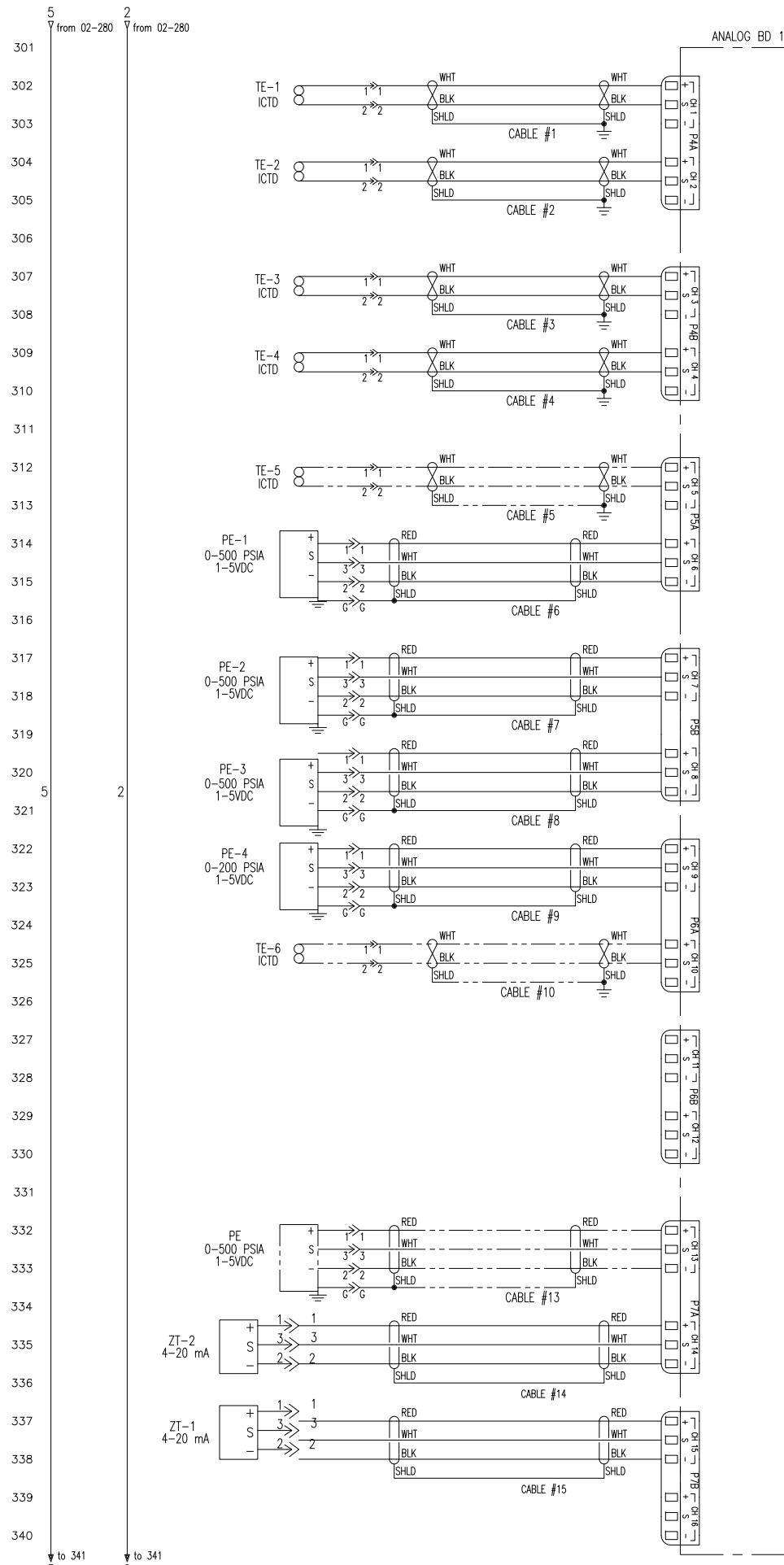
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SHEET 02 OF 03

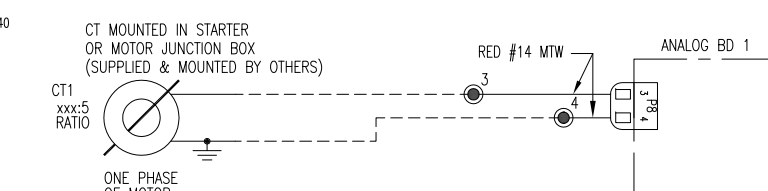
PURCHASER YORK ORD NO PURCH ORD NO

WIRING DIAGRAM  
 RWFI W/CAPACITY SLIDE TRANSMITTER  
 QUANTUM HD  
 DIGITAL BOARD #1

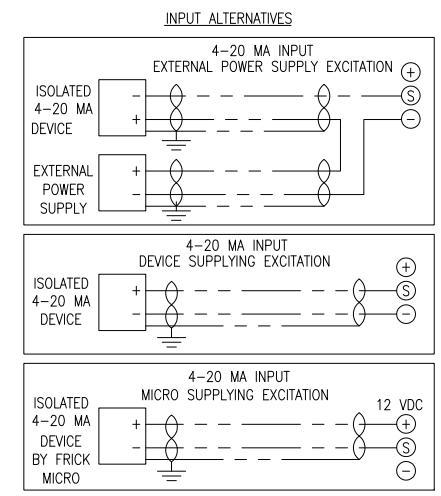
JUMPERS J\*\* & JC\*\* ARE FOR 640D0195H\*\* ANALOG BOARDS.



- 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  
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  
VOLUME SLIDE POSITION  
LINEAR TRANSMITTER
- CHANNEL 16  
MOTOR AMPS  
ALTERNATE METHOD USING  
4-20mA LK2 (OUT) (BD 640D0193H\*\*)  
J16 PINS 1-2 (BD 640D0195H\*\*)

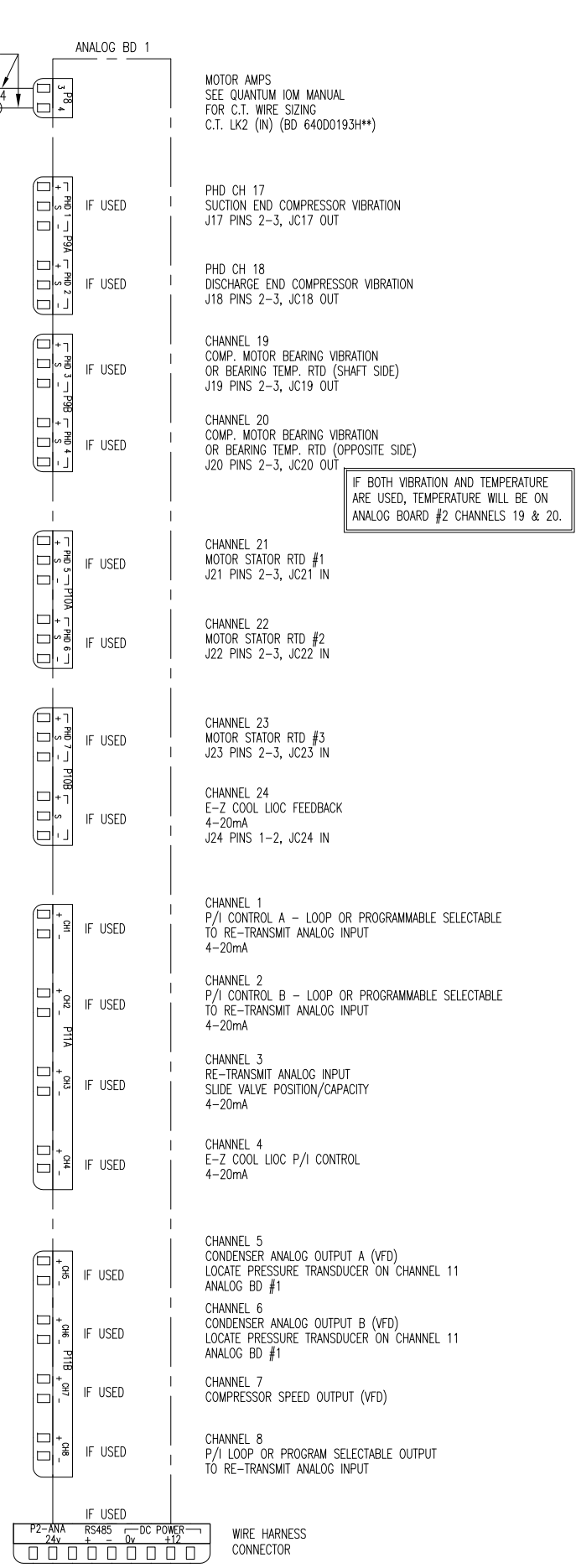


PHD CHANNELS ARE REFERRED TO AS PHD CH1 THRU PHD CH7 SEE DRAWING 649D5997



ANALOG OUTPUTS

SEE DWG 649B0935 FOR EZ-COOL INSTALLATION



MOTOR AMPS  
SEE QUANTUM IOM MANUAL  
FOR C.T. WIRE SIZING  
C.T. LK2 (N) (BD 640D0193H\*\*)

PHD CH 17  
SUCTION END COMPRESSOR VIBRATION  
J17 PINS 2-3, JC17 OUT

PHD CH 18  
DISCHARGE END COMPRESSOR VIBRATION  
J18 PINS 2-3, JC18 OUT

CHANNEL 19  
COMP. MOTOR BEARING VIBRATION  
OR BEARING TEMP. RTD (SHAFT SIDE)  
J19 PINS 2-3, JC19 OUT

CHANNEL 20  
COMP. MOTOR BEARING VIBRATION  
OR BEARING TEMP. RTD (OPPOSITE SIDE)  
J20 PINS 2-3, JC20 OUT

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

CHANNEL 21  
MOTOR STATOR RTD #1  
J21 PINS 2-3, JC21 IN

CHANNEL 22  
MOTOR STATOR RTD #2  
J22 PINS 2-3, JC22 IN

CHANNEL 23  
MOTOR STATOR RTD #3  
J23 PINS 2-3, JC23 IN

CHANNEL 24  
E-Z COOL LIQC FEEDBACK  
4-20mA  
J24 PINS 1-2, JC24 IN

CHANNEL 1  
P/I CONTROL A - LOOP OR PROGRAMMABLE SELECTABLE  
TO RE-TRANSMIT ANALOG INPUT  
4-20mA

CHANNEL 2  
P/I CONTROL B - LOOP OR PROGRAMMABLE SELECTABLE  
TO RE-TRANSMIT ANALOG INPUT  
4-20mA

CHANNEL 3  
RE-TRANSMIT ANALOG INPUT  
SLIDE VALVE POSITION/CAPACITY  
4-20mA

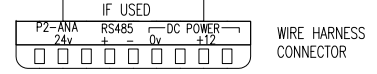
CHANNEL 4  
E-Z COOL LIQC P/I CONTROL  
4-20mA

CHANNEL 5  
CONDENSER ANALOG OUTPUT A (VFD)  
LOCATE PRESSURE TRANSDUCER ON CHANNEL 11  
ANALOG BD #1

CHANNEL 6  
CONDENSER ANALOG OUTPUT B (VFD)  
LOCATE PRESSURE TRANSDUCER ON CHANNEL 11  
ANALOG BD #1

CHANNEL 7  
COMPRESSOR SPEED OUTPUT (VFD)

CHANNEL 8  
P/I LOOP OR PROGRAM SELECTABLE OUTPUT  
TO RE-TRANSMIT ANALOG INPUT



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UNLESS OTHERWISE SPECIFIED DIMENSIONS TO 1/16"

DEC 2018  
DR B. HESS  
CHK C. STANS  
APP'D B. HESS  
CODE

04/29/17  
02/09/18  
02/09/18

SCALE

REV \*

CASE CODE  
D 23587

ANALOG BOARD #1  
DWG NO 649D6335

SHEET 03 OF 03

PURCHASER  
YORK ORD NO

PURCH ORD NO

WIRING DIAGRAM  
RWF11 W/CAPACITY SLIDE TRANSMITTER  
QUANTUM HD  
ANALOG BOARD #1