

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

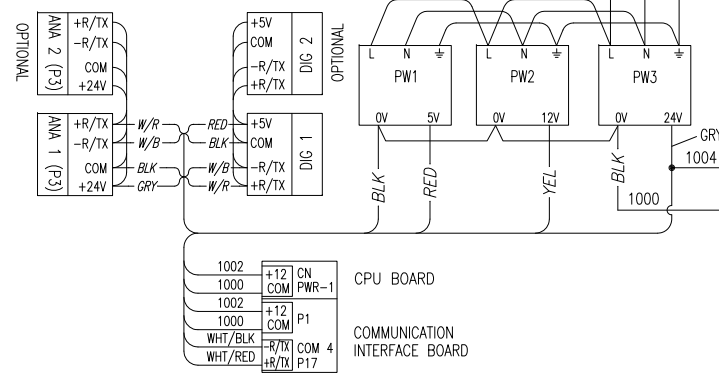
FOR HIGH POT TEST PROCEDURE SEE MMIB NO. 4.11.10.7

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.

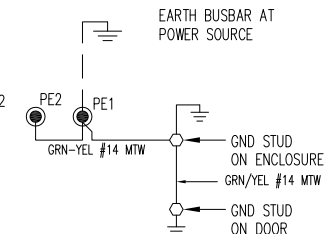


24VDC
1.75A MAX LOAD

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)

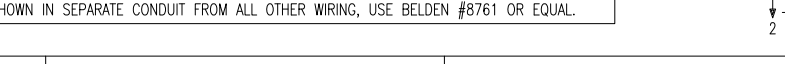
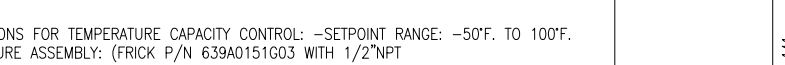
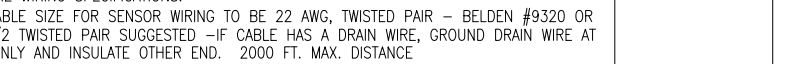
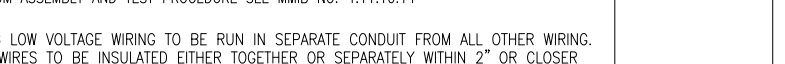
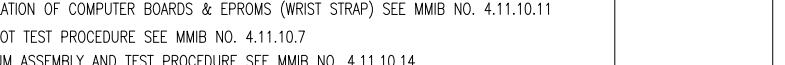
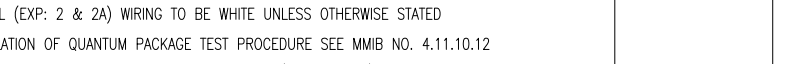
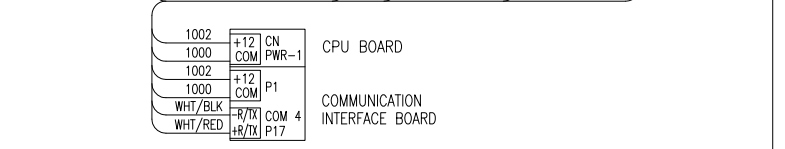
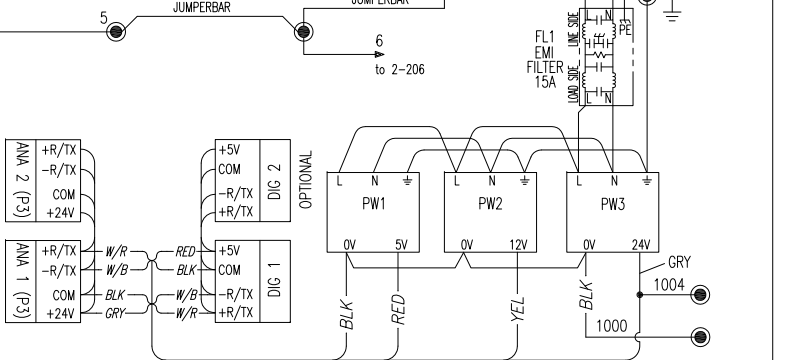
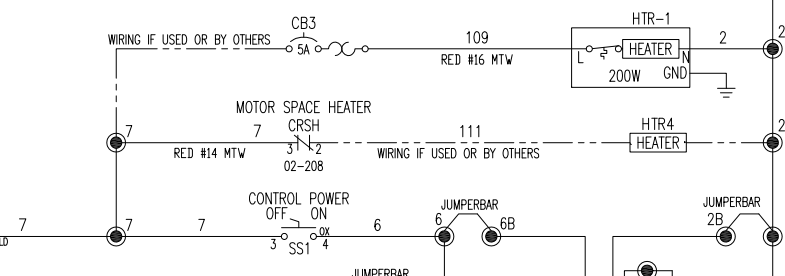
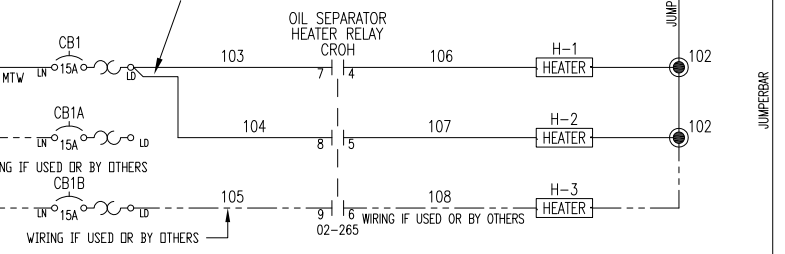


CUSTOMER SUPPLIED 115 OR 230 VAC LISTED CONTROL TRANSFORMER (WITH LISTED DISCONNECT AND OR BRANCH CIRCUIT PROTECTION) POWER SOURCE IS REQUIRED. ALL POWER SOURCES SHALL BE GROUNDED ON ONE SIDE. ISOLATED AND SEPARATED FROM OTHER INDUCTIVE LOADS SUCH AS LIGHTING CIRCUITS OR FROM FRICK SUPPLIED OR SPECIFIED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

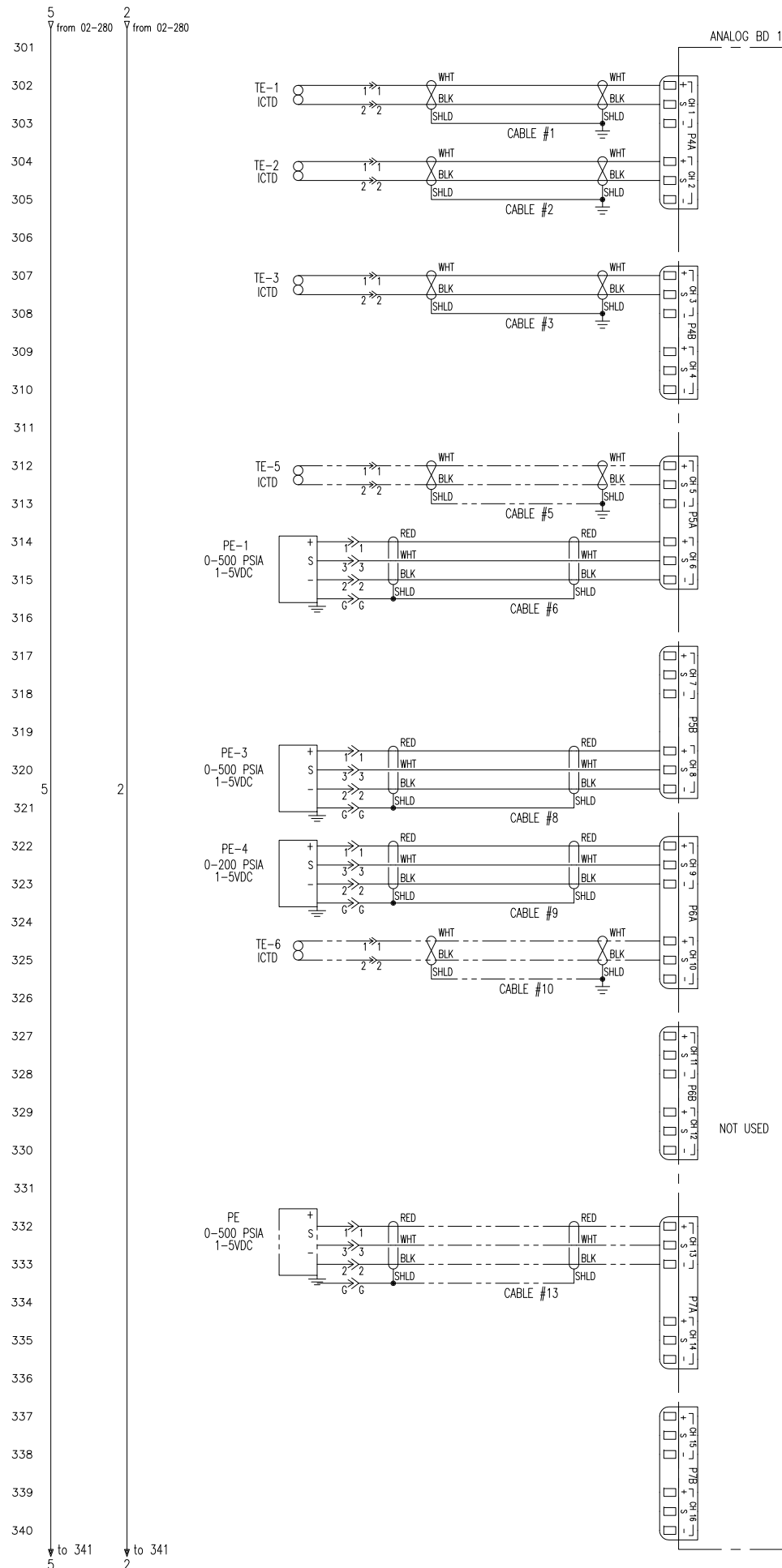
IF SEPARATE FEED OR VOLTAGE FOR HEATER CIRCUIT IS REQUIRED, REMOVE JUMPERS 1 TO 101 AND 2 TO 102 & CONNECT A SEPARATE 115 OR 230 VAC SOURCE TO 101 & 102 (WITH LISTED DISCONNECT AND OR BRANCH CIRCUIT PROTECTION).

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

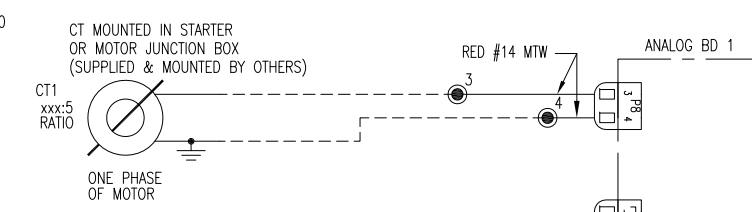
TIE NEUTRAL TO GROUND AT SOURCE



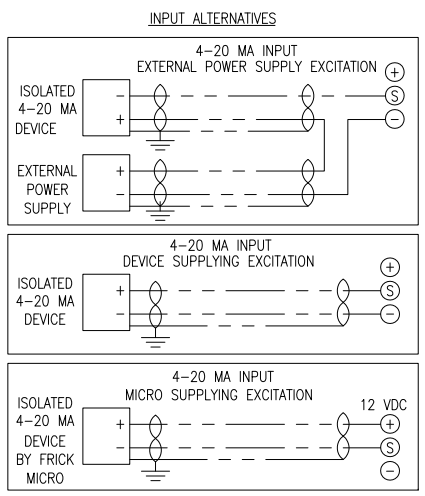
JUMPERS J** & JC** ARE FOR 640D0195H** ANALOG BOARDS.



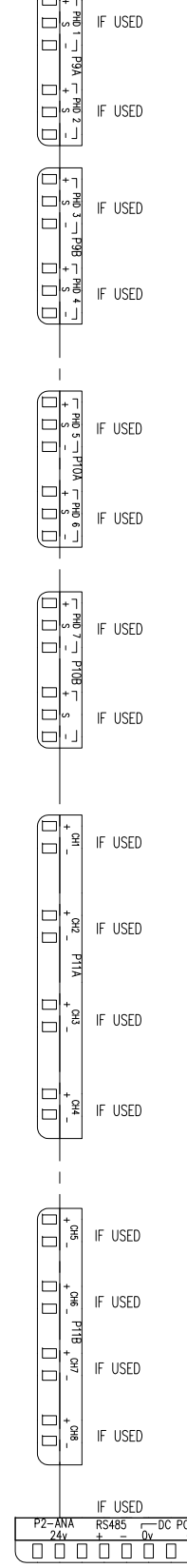
- CHANNEL 1
SUCTION TEMPERATURE
J1 PINS 1-2
- CHANNEL 2
DISCHARGE TEMPERATURE
J2 PINS 1-2
- CHANNEL 3
OIL TEMPERATURE
J3 PINS 1-2
- CHANNEL 4
NOT USED
J4 PINS 1-2
- CHANNEL 5
LEAVING PROCESS TEMPERATURE
CAPACITY CONTROL
WIRED IF USED BY OTHERS
J5 PINS 1-2
- CHANNEL 6
OIL PRESSURE
J6 PINS 1-2
- CHANNEL 7
NOT USED
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
NOT USED
- 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



- MOTOR AMPS
SEE QUANTUM IOM MANUAL
FOR C.T. WIRE SIZING
C.T. LK2 (IN) (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
- 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
FUTURE
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
PROGRAM SELECTABLE OUTPUT OR TO RE-TRANSMIT ANALOG INPUT
4-20mA
- CHANNEL 4
PROGRAM SELECTABLE OUTPUT OR TO RE-TRANSMIT ANALOG INPUT
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
P/I LOOP OR PROGRAM SELECTABLE OUTPUT
TO RE-TRANSMIT ANALOG INPUT
- CHANNEL 8
P/I LOOP OR PROGRAM SELECTABLE OUTPUT
TO RE-TRANSMIT ANALOG INPUT

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

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DEC 2016
DR B. HESS
CHK J. LONG
APP'D B. HESS
CODE

01/28/16
01/28/16
01/28/16

SCALE NONE

SHEET 03 OF 03

PURCHASER YORK ORD NO

REV *

DWG NO 649D6070

SIZE D

23587

ANALOG BD #1

QUANTUM HD

RECIP, 0 - 3 STAGES

WIRING DIAGRAM

DEC 2016
DEC 2016
DEC 2016

P2-ANA 24v
RS485
DC POWER
+ - 0v +12

WIRE HARNESS
CONNECTOR