REVISION HISTORY							
ZONE	REV	ECN	DESCRIPTION	DATE	DR	CHK	APPD
.	A	.	REVISE ANALOG OUTPUTS	01-25-05	HGN	DEL	DEL
.	B	.	ADD SPACE HTR RELAY	05-27-05	HGN	DEL	HGN
.	C	.	ADD COND ANA OUT CONTROL CH'S 5 & 6	01-16-06	HGN	JML	JML

CUSTOMER SUPPLIED 115 OR 230 VAC LISTED CONTROL TRANSFORMER (WITH LISTED DISCONNECT) 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 MINIMUM #12 AWG FOR FEED

IF SEPARATE FEED OR VOLTAGE FOR HEATER CIRCUIT IS DESIRED, REMOVE JUMPERS 1 TO 101 & 2 TO 102 & CONNECT A SEPARATE 115 OR 230 VAC SOURCE TO 101 & 102

HOT — NEUTRAL — EARTH BUSBAR AT POWER SOURCE

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

TIE NEUTRAL TO GROUND AT SOURCE

PE GROUND TERM IN MICRO

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

1CB, 1ACB, 1BCB — OHCR — HEATER — WHT — IF SUPPLIED

ADD 1ACB FOR 2nd 1KW HTR

ADD 1BCB FOR 3rd HTR

SEPARATOR OIL HEATERS .5 OR 1 KW HTR'S

ALL HEATER WIRING TO BE #14 AWG

#14 RED

2CB — CONTROL POWER OFF ON — SHCR — HEATER

COMPR MTR SPACE HEATER (IF SUPPLIED) (300 W MAX.)

JUMPER

EMI FILTER — LINE — LOAD — 6A 2A — GRN/YEL OR GREEN

DC POWER SUPPLY — PS 1 — GRY 1001 — BLK 1000 — TO LNS 74,75 — 24 VDC

TO BRD 1, P6

ENCLOSURE AIR CIRCULATION FAN (OPTIONAL)

COMPR. RUN TIME METER

MTR SPACE HEATER 08

LIQUID INJECTION PRESSURE REGULATOR (ONLY ON BOOSTERS WITH LIQ INJ)

MAIN OIL INJ. FEED (FULL & CYCLING OIL PUMP– ONLY USED WITH VERT. SEP'RS.)

SEPARATOR EQUALIZING (USED ONLY WITH VERT. SEP'RS. IF REQ'D)

COMPR. AUX

COMPR START/RUN RELAY (BY OTHERS) SEE NOTE B

COMPRESSOR RUNNING

BRD 1 P1 — MOD 1 F1 OUT — MOD 2 F2 IN — MOD 3 F3 OUT — MOD 4 F4 IN

IF LOAD OF STARTER COIL IS LESS THAN 2 AMPS AS MOST OIL PUMP STARTERS WILL BE, WIRE AS SHOWN HERE.

OIL PUMP #1 AUX

OIL PUMP #1 STARTER (BY OTHERS) SEE NOTE B

* OIL PUMP #1 ON

BRD 1 P2 — MOD 5 F5 OUT — MOD 6 F6 OUT — MOD 7 F7 OUT — MOD 8 F8 OUT

SLIDE VALVE LOAD

SLIDE VALVE UNLOAD

SLIDE STOP INCREASE

SLIDE STOP DECREASE

COMPR MOTOR STARTER
IF STARTER CONTAINS MULTIPLE CONTACTORS, RELAYS, & TIMERS, ADD SUPPRESSORS OR VARISTORS AT EACH COIL (SEE NOTE A)

IF TOTAL LOAD OF STARTER COIL(S) IS MORE THAN 2 AMPS, WIRE PER LINES 34 & 35.

IF TOTAL LOAD OF STARTER COIL(S) IS LESS THAN 2 AMPS, WIRING MAY BE PER LINE 36.

* OIL PUMP #1 STARTER SUPPRESSOR OR VARISTOR INSTALLED AT OIL PUMP STARTER COIL (SEE NOTE A)

IF LOAD OF STARTER COIL IS MORE THAN 2 AMPS, INSTALL INTERPOSING RELAY IN STARTER.

STARTER HOT — (Y) CCR (Y) — FROM MICRO (Y) 18 (Y) C CR 2 FROM MICRO — MS — OL — STARTER NEU

FROM MICRO (Y) 18 (Y) MS OL 2 FROM MICRO

NOTE:
ALL NEUTRALS SHOULD BE TIED TOGETHER AT SOURCE NOT IN MICRO

STARTER HOT — (Y) OPCR (Y) — * FROM MICRO (Y) 8 (Y) OP CR 2 FROM MICRO — * MS — OL — STARTER NEU

1 LSLL N.O.–HELD CLOSED — LL CR — 24

1 LSHH (NC) — 25

IF MECHANICAL LEV SW, WIRE PER LN 47

IF ELECTRONIC LEV SW, WIRE AS SHOWN ON LNS 48 & 73–75

BRD 1 P3 — MOD 9 F9 OUT — MOD 10 F10 OUT — MOD 11 F11 OUT — MOD 12 F12 OUT

BRD 1 P4 — MOD 13 F13 IN — MOD 14 F14 IN — MOD 15 F15 OUT — MOD 16 F16 OUT

BRD 1 P5 — MOD 17 F17 IN — MOD 18 F18 IN — MOD 19 F19 IN — MOD 20 F20 IN

AUX #1 — 28

AUX #2 — 29

MODE SELECT — 30

C.C. SETPOINT MODE 2 — 31

BRD 1 P6 — MOD 21 F21 OUT — MOD 22 F22 OUT — MOD 23 F23 OUT — MOD 24 F24 OUT

FROM TERM 6

OH CR — 9

21

22

23 — SEE NOTE A

FOR SECOND LIQ INJ (IF REQUIRED) — 2

LIQUID INJECTION (IF REQUIRED) — 13

HI VI LIQ INJ (IF REQUIRED) — 12

ECONOMIZER (IF REQ'D) (PROGRAMMABLE SV SETPOINT) — 11

BALANCE PISTON (IF REQUIRED) — 10

OIL LEVEL OK

HIGH LIQ. LEV. FROM SYSTEM (SAFE CLOSED) JUMP 5 TO 25 IF NOT USED

ENCLOSURE HEATER (OPTIONAL) 200 W SET AT MAX. — 26

HOT GAS BYPASS (OPTIONAL) (PROGRAMMABLE SV SETPOINT #3) — 27

AUX #1 PROGRAMMABLE SHUTDOWN OR ALARM (SAFE CLOSED)

AUX #2 PROGRAMMABLE SHUTDOWN OR ALARM (SAFE CLOSED)

PROCESS MODE SELECT ALTERNATE MODE WHEN CLOSED

CAP CONT S.P. MODE 2 (S.P. MODE 2 WHEN CLOSED)

OIL HEATER 04,05,06

ALARM (ENERGIZES ON ALARM & SHUTDOWN)

SHUTDOWN (DE–ENERGIZES ON SHUTDOWN)

POWER ASSIST (OPTIONAL) ADDED AT TIME OF MANUFACTURE IF SPECIFIED

1 LSLL — +24 VDC — FROM POWER SUPPLY LN 13 — 0 VDC — RED 1001 — BLK 1000 — WHT 1002 — LL CR 13 14 — SEP LEV OK 48 — CABLE #16A

LIQ LEV MONITOR (IF REQUIRED)

NOTE A:
A SURGE SUPPRESSOR OR MOV TO 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 .1 MFD CAPACITOR, 600 VDC IN SERIES WITH A 47 OHM RESISTOR.
USE ELECTROCUBE #RG2031–3–6 OR EQUAL.
VARISTOR
METAL OXIDE VARISTOR (MOV) SPECIFICATIONS:
GE #V130LA10A OR EQUAL FOR 115 VOLTS
GE #V250LA10A OR EQUAL FOR 230 VOLTS

NOTE B:
STARTER CONNECTIONS ARE SHOWN IN WIRING DIAGRAM AS A FRICK SUPPLIED STARTER. SEE LINES 34–40 FOR CUSTOM STARTERS NOT SUPPLIED BY FRICK. WIRING BY FRICK IF MOUNTED STARTER.

NOTE C:
SOLENOID WIRING IF DIN CONNECTORS ARE USED — 1 HOT — 2 NEU

IF ANY OTHER DEVICES USE DIN CONNECTORS, SUCH AS OIL HEATERS, THE HOT WILL ALWAYS BE PIN 1 AND THE NEUTRAL PIN 2

– – – – INDICATES DEVICES SUPPLIED BY FRICK OR OTHERS WHEN OPTIONAL OR REQUIRED

– – – – WIRING BY OTHERS– ALL WIRING ENTERING CONTROL CENTER (INCLUDING GROUND & NEUTRAL) TO BE #14 AWG STRANDED WIRES UNLESS SPECIFIED OTHERWISE.

● REPRESENTS STARTER TERMINALS WHEN SUPPLIED BY FRICK.

◉ TERMINALS IN DIG I/O CONTROL CENTER

1 INDICATES DIN CONNECTOR IF USED ON DEVICE

* INDICATES "REQUIRED WITH OIL PUMP ONLY"

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 PANEL

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

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

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

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

FOR INSTALLATION OF COMPUTER BOARDS AND EPROMS, SEE MMIB NO. 4.11.10.11

FOR HIGH POT TEST PROCEDURE, SEE MMIB NO. 4.11.10.7

CUSTOMER'S CONNECTIONS TO CONTROL CIRCUIT (MINIMUM OPTIONS)		
LINE NO.	TERM NO.	CIRCUIT DESCRIPTION
4	1,2,GND	CONTROL POWER
25	8,2	OIL PUMP #1 STARTER *
26	5,19	OIL PUMP #1 AUX *
22	18,2	COMPR. STARTER
23	5,20	COMPRESSOR AUX
SHT.2–53,54	3,4	CURRENT TRANSFORMER

PURCHASER

FRICK ORD NO — PURCH ORD NO

NOTICE TO PURCHASER
REFER TO CONTRACT FOR MATERIAL TO BE SUPPLIED BY FRICK COMPANY. THE AMOUNT OF SUCH MATERIAL IS NOT INCREASED BY ANYTHING SHOWN UPON THIS DRAWING.

THIRD ANGLE PROJECTION

UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES DO NOT SCALE

UNLESS OTHERWISE SPECIFIED TOLERANCES PER QAP 18
DEC 2PL ± .01 — DEC 3PL ± .005 — FRACT ± 1/64 — ANGLE ± 1/2

YORK Refrigeration — YORK INTERNATIONAL

York International Refrigeration – Frick Waynesboro, PA 17268

TITLE
WIRING DIAGRAM
RWBII
QUANTUM LX

DR HG NOWELL	08-12-04	
CHK DE LEHMAN	08-12-04	
APPD DE LEHMAN	08-12-04	
CODE		

SIZE D — CAGE CODE 23587 — DWG NO 649D5155 — REV C

SCALE — SHEET 1 OF 2