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

HOT — NEUTRAL — EARTH BUSBAR AT POWER SOURCE

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

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

#10 — 1CB — 15 — 103 — OHCR — 106 — BLK — HEATER — WHT — #10

1ACB — 15 — 104 — OHCR — 107 — BLK — HEATER — WHT — IF SUPPLIED

ADD 1ACB FOR 2nd 1KW HTR

1BCB — 15 — 105 — OHCR — 108 — BLK — HEATER — WHT — IF SUPPLIED

ADD 1BCB FOR 3rd HTR

#14 RED — 10 — 2CB — 7

CONTROL POWER OFF ON — JUMPER 6 — SHCR — 111 — HEATER — JUMPER 2B

SEPARATOR OIL HEATERS .5 OR 1 KW HTR'S

ALL HEATER WIRING TO BE #14 AWG

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

JUMPER 5 — 6 — TO BRD 1, P6

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

ENCLOSURE AIR CIRCULATION FAN (OPTIONAL)

COMPR. RUN TIME METER

20 — SH CR — MTR SPACE HEATER 08

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

COMPR. AUX — 5 — 20 — 20 — MOD 1 F1 OUT — 18 — 18 — C CR — COMPR START/RUN RELAY (BY OTHERS) SEE NOTE B

MOD 2 F2 IN — COMPRESSOR RUNNING

BRD 1 P1 — IF LOAD OF STARTER COIL IS LESS THAN 2 AMPS AS MOST OIL PUMP STARTERS WILL BE, WIRE AS SHOWN HERE.

MOD 3 F3 OUT — 8 — 8 — * M — OL — OIL PUMP #1 STARTER (BY OTHERS) SEE NOTE B

* OIL PUMP #1 AUX — 19 — 19 — MOD 4 F4 IN — * OIL PUMP #1 ON

MOD 5 F5 OUT — 17 — FUTURE

MOD 6 F6 OUT — 16 — BLK — YY 3 — WHT — 50% CAPACITY IF AVAILABLE

BRD 1 P2

MOD 7 F7 OUT — 15 — BLK — YY 1 — WHT — 75% CAPACITY

MOD 8 F8 OUT — 14 — BLK — YY 2 — WHT — 100 % CAPACITY

CAPACITY OUTPUTS

SOL \ % CAP.	* 25	50	75	100
* 50%	OFF	ON	ON	ON
75%	OFF	OFF	ON	ON
100%	OFF	OFF	OFF	ON

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.

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

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

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

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

SEE LN 74 LL CR

IF MECHANICAL LEV SW, WIRE PER LN 47

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

1 LSLL — (NO) — 24

1 LSHH — (NC) — 25

MOD 9 F9 OUT — BLK — WHT — 13 — 2 — FOR SECOND LIQ INJ (IF REQ'D)

MOD 10 F10 OUT — 12 — LIQUID INJECTION (IF REQ'D)

BRD 1 P3 — FUTURE

MOD 11 F11 OUT — 11 — FUTURE

MOD 12 F12 OUT — 10 — FUTURE

MOD 13 F13 IN — OIL LEVEL OK (IF REQUIRED)

MOD 14 F14 IN — HIGH LIQ. LEV. FROM SYSTEM (SAFE CLOSED) JUMP 5 TO 25 IF NOT USED

BRD 1 P4

MOD 15 F15 OUT — HEATER — 26 — ENCLOSURE HEATER (OPTIONAL) 200 W SET AT MAX.

MOD 16 F16 OUT — 27 — FUTURE

AUX #1 — 28 — MOD 17 F17 IN — AUX #1 PROGRAMMABLE SHUTDOWN OR ALARM (SAFE CLOSED)

AUX #2 — 29 — MOD 18 F18 IN — AUX #2 PROGRAMMABLE SHUTDOWN OR ALARM (SAFE CLOSED)

BRD 1 P5

MODE SELECT A — 30 — MOD 19 F19 IN — MODE SELECT MODULE A SEE CHART FOR MODES

MODE SELECT B — 31 — MOD 20 F20 IN — MODE SELECT MODULE B SEE CHART FOR MODES

	MODE 1	MODE 2	MODE 3	MODE 4
MOD A	OFF	ON	OFF	ON
MOD B	OFF	OFF	ON	ON

MOD 21 F21 OUT — 9 — OH CR — OIL HEATER 04,05,06

MOD 22 F22 OUT — 21 — ALARM (ENERGIZES ON ALARM & SHUTDOWN)

FROM TERM 6 — 6 — BRD 1 P6

MOD 23 F23 OUT — 22 — SHUTDOWN (DE-ENERGIZES ON SHUTDOWN)

MOD 24 F24 OUT — BLK — 23 — WHT — SEE NOTE A — POWER ASSIST ADDED AT TIME OF MANUFACTURE IF SPECIFIED

1 LSLL — +24 VDC — FROM POWER SUPPLY LN 13 — 0 VDC — 1001 — BLK — 1000 — WHT — WHT 14 — LL CR — 13 — 1002 — 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 RDB 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

FOR QUANTUM ASSEMBLY AND TEST PROCEDURE, SEE MMIB 4.11.10.14

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	

REVISION HISTORY

ZONE	REV	ECN	DESCRIPTION	DATE	DR	CHK	APPD
.	A	·	REVISE ANALOG OUTPUTS	11–30–04	HGN	DEL	HGN
.	B	·	REVISE NOTES	01–25–05	HGN	DEL	HGN
.	C	9290	ADD SPACE HTR RELAY	05–27–05	HGN	DEL	HGN
.	D	·	ADD COND ANA OUT CONTROL CH'S 5 & 6	01–16–06	HGN	JML	JML

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

DR HG NOWELL 11–05–04
CHK JL STOCKSLAGER 11–05–04
APPD HG NOWELL 11–05–04
CODE

YORK Refrigeration — YORK INTERNATIONAL

York International Refrigeration – Frick Waynesboro, PA 17268

TITLE

WIRING DIAGRAM RDB QUANTUM LX

SIZE D — CAGE CODE 23587 — DWG NO 649D5278 — REV D

SCALE — SHEET 1 OF 2