



REV.	DESCRIPTION	ECO #	DRAWN BY	DATE
00	INITIAL RELEASE			
01	CHANGE FT-F9 & F11-F13 TO 175A	6933	NSL	4/14/16

  

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 OF YASKAWA AMERICA INC. N. LAWS

DATE: 11/23/15  
 TITLE: SCHEMATIC DIAGRAM  
 DRAWN BY: N. LAWS  
 CHECKED BY: D.R. CMELAK  
 DATE: 11/24/15  
 TITLE: IQPUMP1000 CONFIGURED  
 DRAWING #:  
 DATE: 11/23/15  
 TITLE: 01C3J240SP-11

\* - INDICATES COMPONENTS NOT SUPPLIED BY YASKAWA.  
 - - INDICATES CUSTOMER WIRING.  
 SEE SHEET 2 FOR NOTES AND TABLES.

PARAMETER	DATA	UNIT	DESCRIPTION/REMARKS
b1-01	SEE TABLE 2	N/A	AUTO SET-POINT SELECTION
b1-02	SEE TABLE 2	N/A	RUN COMMAND SELECTION
E1-01	480	VOLTS	STANDARD INPUT VOLTAGE SETTING
E1-05	460	VOLTS	STANDARD MAXIMUM OUTPUT VOLTAGE SETTING
E2-01	----	AMPS	MOTOR FULL LOAD CURRENT (TO BE SET BY USER)
H1-03	25	N/A	TERMINAL S3 = EXTERNAL FAULT (NORMALLY CLOSED)
H1-05	SEE TABLE 2	N/A	TERMINAL S5 FUNCTION SELECTION
H1-07	24	N/A	TERMINAL S7 = EXTERNAL FAULT (NORMALLY OPEN)
H1-27	5.00	SEC	TERMINAL S7 EXTERNAL FAULT (EF7) DELAY TIME
H3-02	SEE TABLE 2	N/A	TERMINAL A1 FUNCTION SELECTION
H3-06	SEE TABLE 2	N/A	TERMINAL A3 FUNCTION SELECTION
H3-09	SEE TABLE 2	N/A	TERMINAL A2 FEEDBACK SIGNAL LEVEL SELECTION
Q2-03	1	N/A	USER INITIALIZATION FACTORY SET PARAMETER DEFAULT VALUES (FOUND IN A1-03="1110")
Q3-02	1	N/A	COPY ALLOWED SELECTION ENABLED
P1-02	1	N/A	SYSTEM UNITS (WHERE 1 = POUNDS PER SQUARE INCH (PSI))
P1-03	00145	SYSTEM UNITS	FEEDBACK DEVICE SCALING (TO BE SET BY USER)
P5-01	SEE TABLE 2	N/A	HAND MODE FREQUENCY REFERENCE SELECTION
P5-02	----	HZ	HAND MODE FREQUENCY REFERENCE (TO BE SET BY USER) - SEE TABLE 2
P5-04	SEE TABLE 2	N/A	DRIVE KEYPAD HAND KEY ENABLE/DISABLE
Q1-01	----	SYSTEM UNITS	AUTO MODE SET-POINT REFERENCE (TO BE SET BY USER)

▪ = FACTORY 2-WIRE INITIALIZATION/DEFAULT SETTING

NOTES:

- CONNECTED TO THE CABINET. CUSTOMER TO CONNECT THE CABINET GROUND LUGS TO EARTH GROUND AND UTILITY GROUND.
- THE CUSTOMER MUST USE TYPE 3R RATED HUBS OR FITTINGS (OR EQUIVALENT) TO MAINTAIN THE ENCLOSURE RATING.
- N/A
- N/A
- INSULATED TWISTED SHIELDED WIRE IS REQUIRED. 2 OR 3 CONDUCTOR #18GA (BULDEN NO. 8760 OR 8770, OR EQUIVALENT). SHIELD TO CONNECT TO PROPER TERMINAL AS SHOWN. CONNECT THE SHIELD ONLY AT THIS END. STUB AND ISOLATE THE OTHER END. DO NOT RUN THESE WIRES IN THE SAME CONDUIT AS THE AC POWER AND AC CONTROL WIRES.
- CUSTOMER TO ADJUST THE THERMOSTAT ON THE SPACE HEATER HRT FOR THE MINIMUM DESIRED TEMPERATURE INSIDE THE DRIVE CABINET. THIS SET TEMPERATURE IS NORMALLY SELECTED TO BE SLIGHTLY HIGHER THAN THE MINIMUM AMBIENT TEMPERATURE OF THE AIR SURROUNDING THE CABINET, AND IS THE TEMPERATURE AT WHICH THE SPACE HEATER HRT WILL SHUT OFF.
- SERIAL COMMUNICATIONS OPTIONS T2, T6, T8, T9, T10, OR T11 (SEE TABLE 2):  
OPTION T2 = ETHERNET/IP, OPTION T6 = DEVICENET, OPTION T8 = PROFINET, OPTION T9 = LONWORKS,  
OPTION T10 = ETHERNET MODBUS TCP/IP AND OPTION T11 = DRIVE EMBEDDED MODBUS PROTOCOL.  
THE DRIVE KEYPAD MUST BE IN "AUTO" MODE, IF SERIAL COMMUNICATIONS IS TO BE USED TO CONTROL THE DRIVE.
- WHEN OPTION T1 IS ORDERED, A JUMPER IS REQUIRED FROM DRIVE TERMINALS (S1) TO (SN), SO THAT THE LONWORKS SERIAL COMMUNICATIONS CAN BE USED TO CONTROL THE DRIVE.  
CUSTOMER TO REPLACE THE JUMPER WITH NORMALLY CLOSED SAFETY INTERLOCKS, IF APPLICABLE.

TABLE 2 FACTORY SET IQPUMP1000 CONFIGURED DRIVE PARAMETERS

CONTROL OPTION PRESENT	PARAMETER						DRIVE CONTROL BOARD SWITCH S1(A2)	AUTO MODE			HAND MODE			
	b1-01	b1-02	H1-05	H3-02	H3-06	H3-09		P5-01	P5-04	SET-POINT	FEEDBACK	SPEED COMMAND	DRIVE RUN COMMAND	
NONE	0	0	8D	0	20	2	1	1	YES	4-20 MADC	0-10 VDC	DRIVE RUN COMMAND	DRIVE KEYPAD IN THE "AUTO" MODE	DRIVE KEYPAD IN THE "HAND" MODE
NONE	0	0	8D	0	20	0	1	1	YES	YES	YES	DRIVE KEYPAD IN THE "AUTO" MODE	DRIVE KEYPAD IN THE "HAND" MODE	DRIVE KEYPAD IN THE "HAND" MODE
NONE	0	1	8D	0	20	2	1	1	YES	YES	YES	DRIVE KEYPAD IN THE "AUTO" MODE AND AUTO MODE RUN/STOP CONTACT	DRIVE KEYPAD IN THE "HAND" MODE	DRIVE KEYPAD IN THE "HAND" MODE

▪ = FACTORY 2-WIRE INITIALIZATION/DEFAULT SETTING



FIELD WIRING PRESSURE WIRE CONNECTOR WIRE TYPE RANGE AND TIGHTENING TORQUE SPECIFICATIONS

FOR 0 TO 100 AMPS, USE 60-75°C COPPER WIRE AND ABOVE 100 AMPS, USE 75°C COPPER WIRE.

CIRCUIT BREAKER (CB1)	WIRE SIZE RANGE (AWG)	TIGHTENING TORQUE (LB-IN)
AC MOTOR (A1-T1,T2,T3)	(1-2) x (2/0-500MCM)	(1-2) x 442
GROUND LUGS	6 - 250MCM	275
NEUTRAL (TBN1)	6 - 350MCM	275
CONTROL (TBT1)	22 - 10	16 - 20

<b>YASKAWA</b>		DATE	11/23/15	TITLE	SCHMATIC DIAGRAM
DESIGNED BY	N. LAWS	DATE	11/24/15	REVISED BY	IQPUMP1000 CONFIGURED
CHECKED BY	D.R. CMEIAK	DATE	11/23/15	REVISION #	12-PULSE
APPROVED BY	N. LAWS	DATE	11/24/15	SIZE	D
ORIGINAL DESIGNED BY	N. LAWS	DATE	11/23/15	REVISION	R01
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