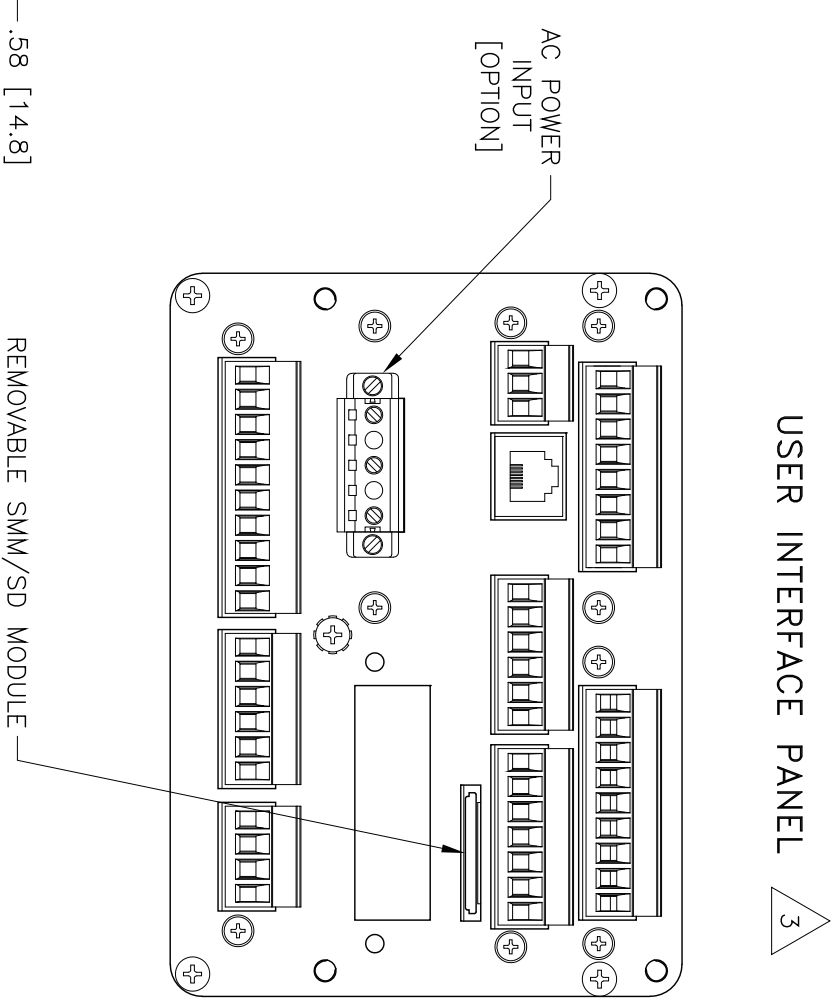
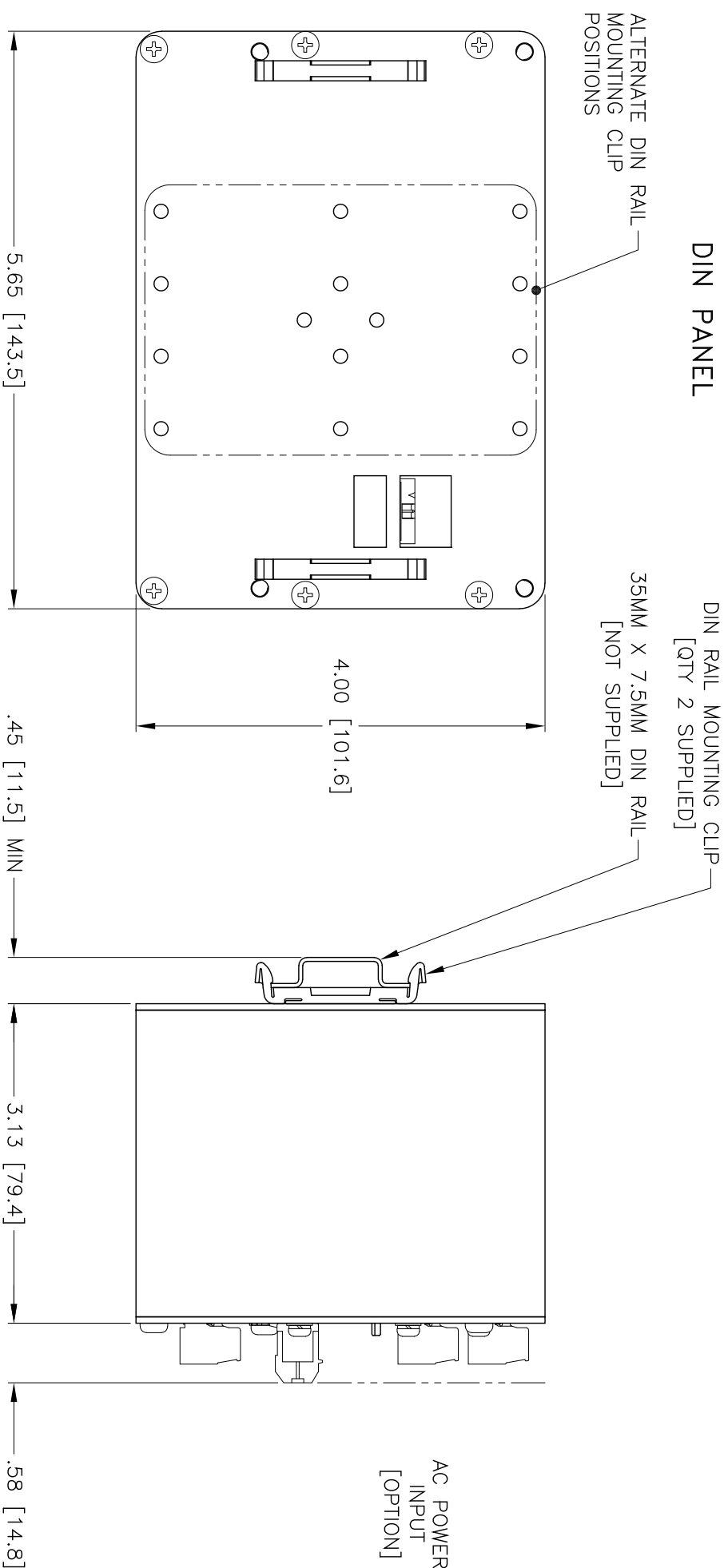


REV.	ECO/DWG	DESCRIPTION	DATE	DRAWN	CHECK	APP'D
A	----	RELEASED FOR PUBLICATION.	12-23-08	V.J.C.	D.H.	C.M.
B	10591	REVISED PER EGN.	03-02-09	V.J.C.	C.M.	V.J.C.
C	10200	REVISED PER EGN.	11-17-10	V.J.C.	G.B.	V.J.C.
D	11139	REVISED PER EGN.	08-23-13	V.J.C.	L.E.G.	V.J.C.
E	11688	REVISED PER EGN.	04-27-15	V.J.C.	L.E.G.	V.J.C.
F	11787	REVISED PER EGN.	01-11-16	V.J.C.	E.B.	V.J.C.
F2	----	DELETED ALLEN-BRADLEY NETWORK OPTION "RIO".	07-26-22	V.J.C.	J.I.	V.J.C.

# HI 4060 RATE CONTROLLER CONTROLLER MAIN UNIT



- SEE SHEET 5 FOR WALL MOUNT ENCLOSURE INTERNAL COMPONENTS.
- EXERCISE CAUTION WHEN ADDING OR ENLARGING HOLES IN WALL MOUNT ENCLOSURE. METAL PARTICLES COULD SERIOUSLY DAMAGE ELECTRONICS. COVER ELECTRONICS BEFORE DRILLING OR PUNCHING. WALL MOUNT ENCLOSURE DOOR TO REMAIN FREE OF HOLES.
- SEE SHEET 4 FOR WALL MOUNT ENCLOSURE WITH DISPLAY DIMENSIONS.
- SEE SHEET 3 FOR WALL MOUNT ENCLOSURE WITHOUT DISPLAY DIMENSIONS.

3 GENERIC USER INTERFACE PANEL SHOWN ONLY. SEE SHEETS 6 THROUGH 9 FOR USER INTERFACE PANEL CONNECTIONS.

2. SEE SHEET 2 FOR FRONT PANEL DISPLAY DIMENSIONS.

1. SEE CD RESOURCE GUIDE FOR ADDITIONAL MOUNTING AND WIRING INFORMATION.

**NOTES: UNLESS OTHERWISE SPECIFIED**

**DIMENSIONS = IN [MM]**

ITEM	QTY	PART NUMBER	DESCRIPTION	COMMENTS
		0584-0065	I/O DIAGRAM, HI 4060 RATE CONTROLLER	

UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES [MM]		CONTRACT NO.	
TOLERANCES ARE: DECIMALS: .XX = N/A .XXX = N/A ANGLES: N/A	APPROVALS	DATE	DATE
DRAWN V. CHILUA		12-23-08	
CHECKED D. HOLT		12-23-08	
APPROVED C. MOYA		12-23-08	
ISSUED V. CHILUA	DATE	12-23-08	
PRODUCTION	DATE		

FINISH	SIZE	ESCM	DRAWING NO.	REV.
DO NOT SCALE DRAWING	D	21316	0584-0065	F

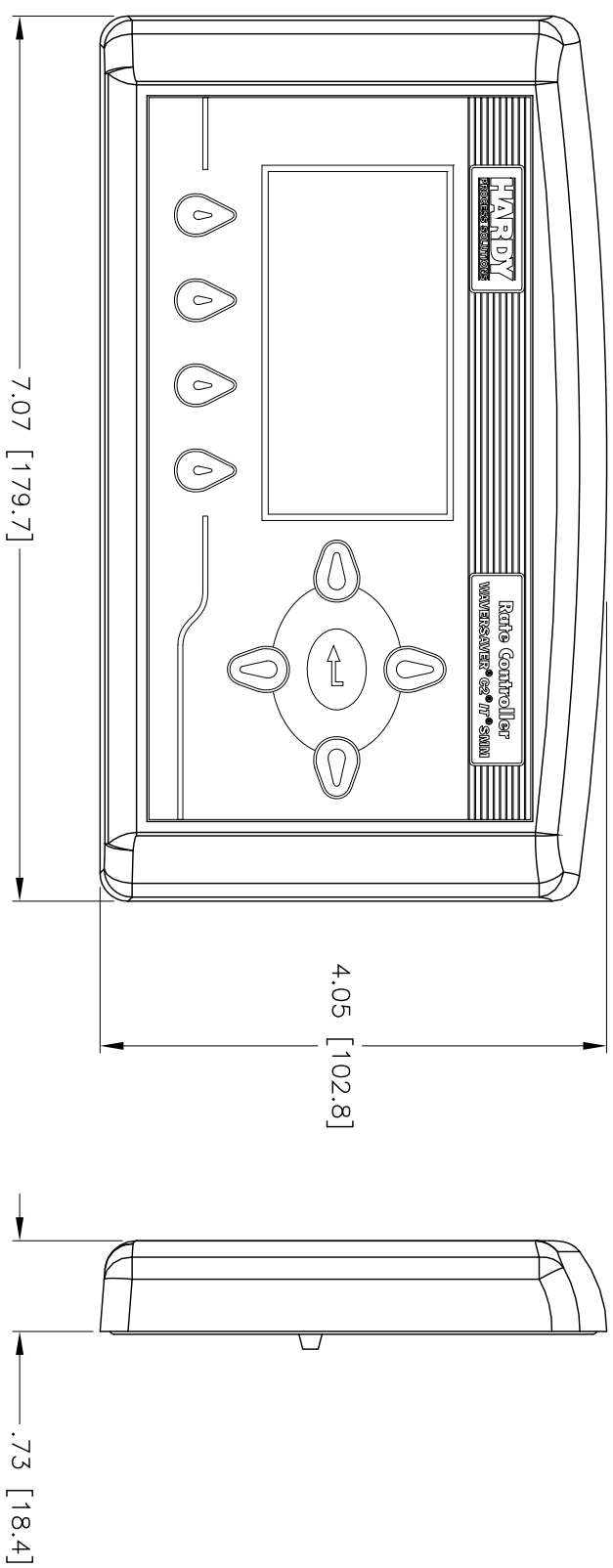
  

FILE NAME:	SCALE:	SHEET	OF
584065F2.DWG	NONE	1	10

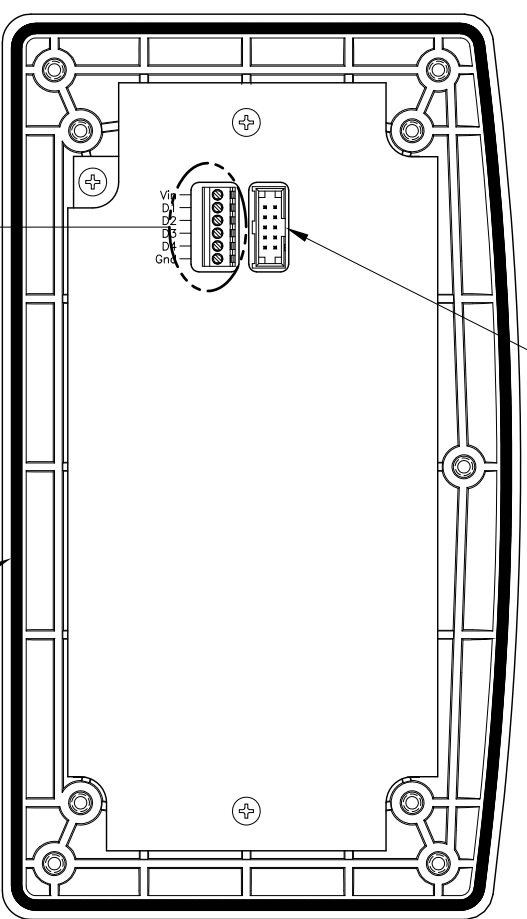
PROPRIETARY NOTICE  
ALL DATA AND INFORMATION CONTAINED IN OR DISCLOSED BY THIS DOCUMENT IS CONFIDENTIAL AND PROPRIETARY INFORMATION OF HARDY PROCESS SOLUTIONS INC. AND ALL RIGHTS THEREIN ARE EXPRESSLY RESERVED. BY ACCEPTING THIS MATERIAL THE RECIPIENT AGREES THAT THIS MATERIAL AND THE INFORMATION CONTAINED THEREIN IS HELD IN CONFIDENCE AND IN TRUST AND SHALL NOT BE USED, COPIED, REPRODUCED IN WHOLE OR IN PART, NOR ITS CONTENTS REVEALED IN ANY MANNER TO OTHERS, EXCEPT TO MEET THE SPECIFIC PURPOSE FOR WHICH IT WAS DELIVERED.

# HI 4060 RATE CONTROLLER FRONT PANEL DISPLAY

FRONT



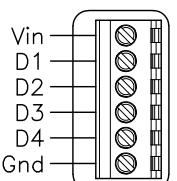
PANEL MOUNT RIBBON CABLE  
INTERFACE CONNECTOR



REAR

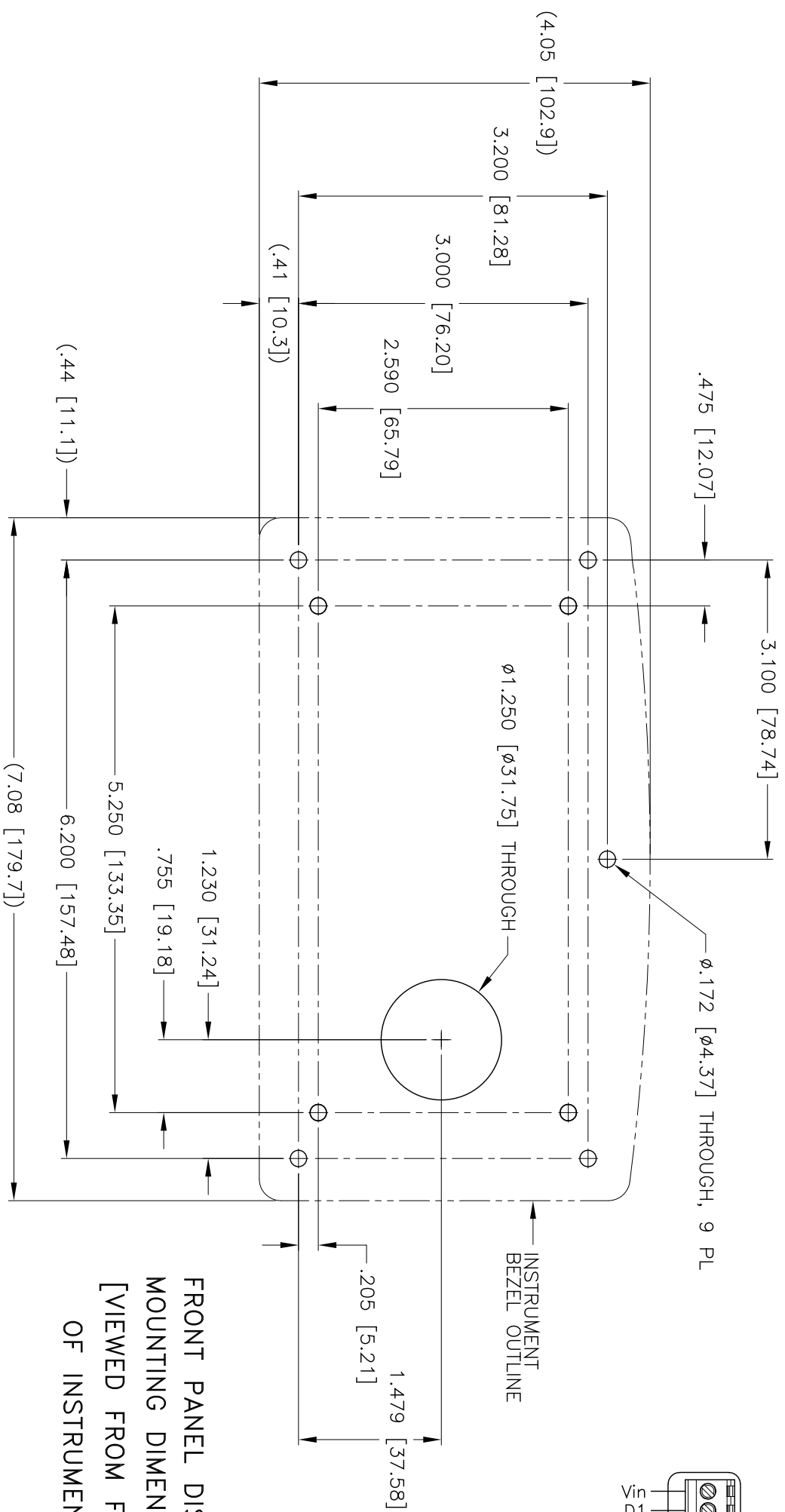
FRONT PANEL SEALING GASKET

## FRONT PANEL DISPLAY TERMINAL BLOCK



NOTES:

1. SEE USER'S GUIDE FOR ADDITIONAL INFORMATION ON REMOTE DISPLAY TERMINATIONS.
2. WIRE SIZE: 20 AWG MAXIMUM / 26 AWG MINIMUM. WIRE TIGHTENING TORQUE: 2 LB-IN MINIMUM / 4 LB-IN MAXIMUM.
3. MAXIMUM CABLE LENGTH: 100 FEET [30.48 METERS]
4. SEE SHEET 6 FOR REMOTE DISPLAY WIRE TERMINATIONS TO THE HI 4060 RATE CONTROLLER MAIN UNIT.

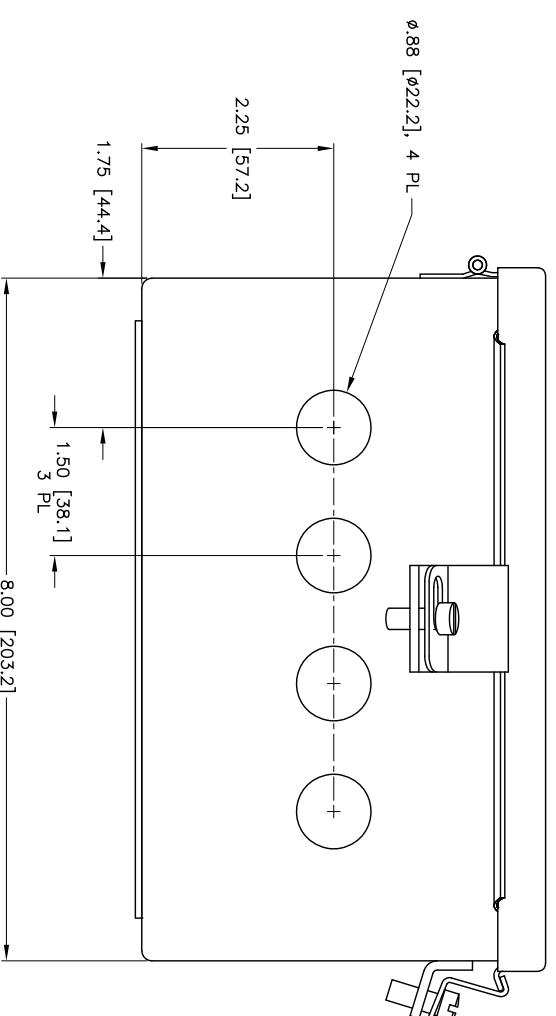
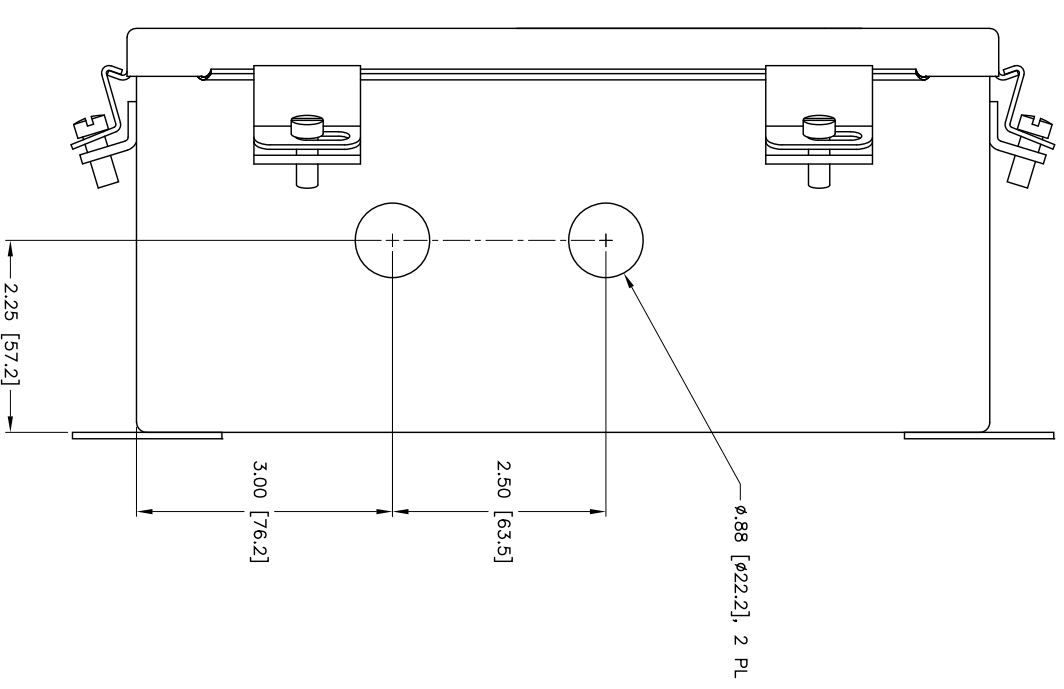
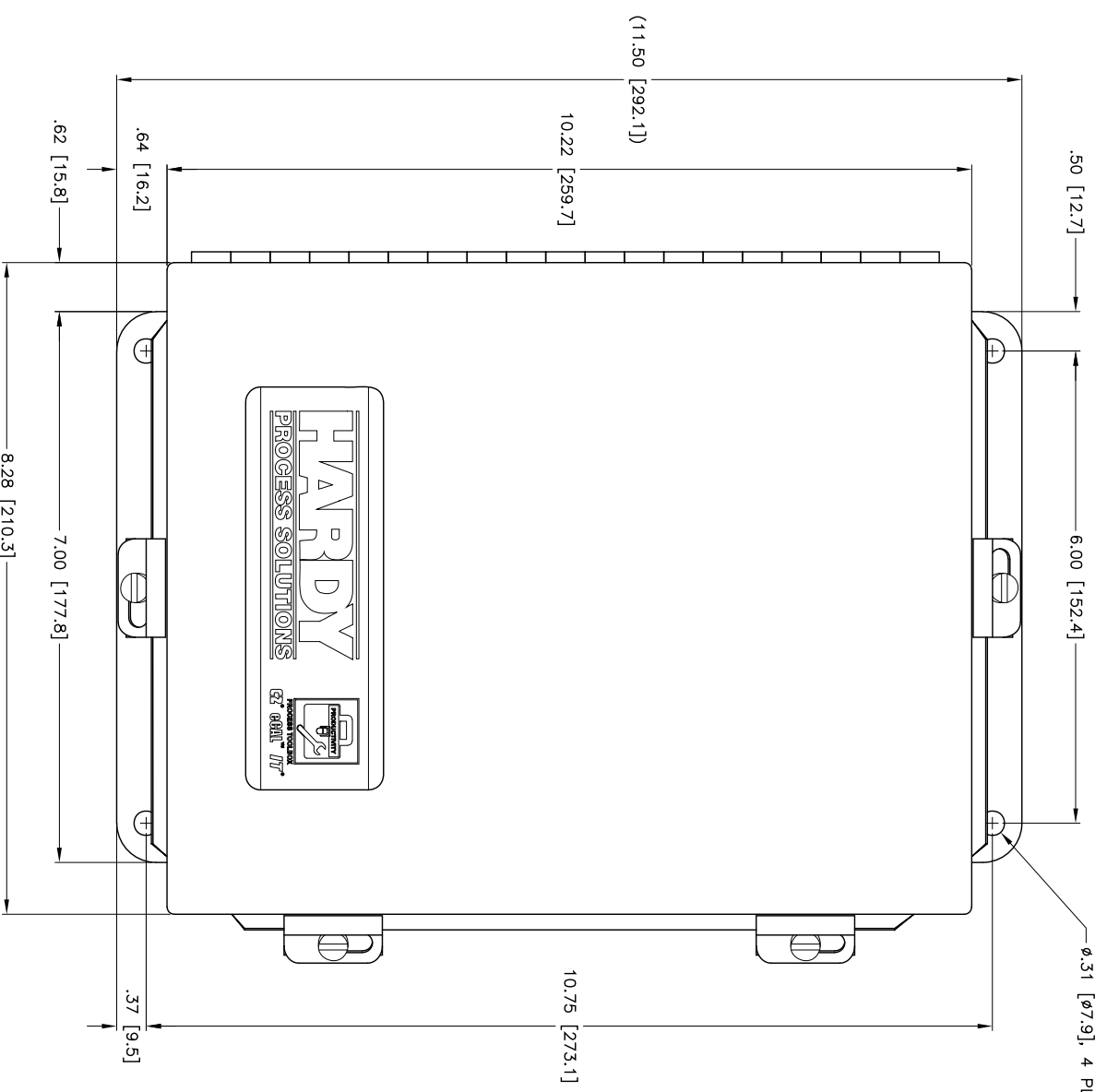
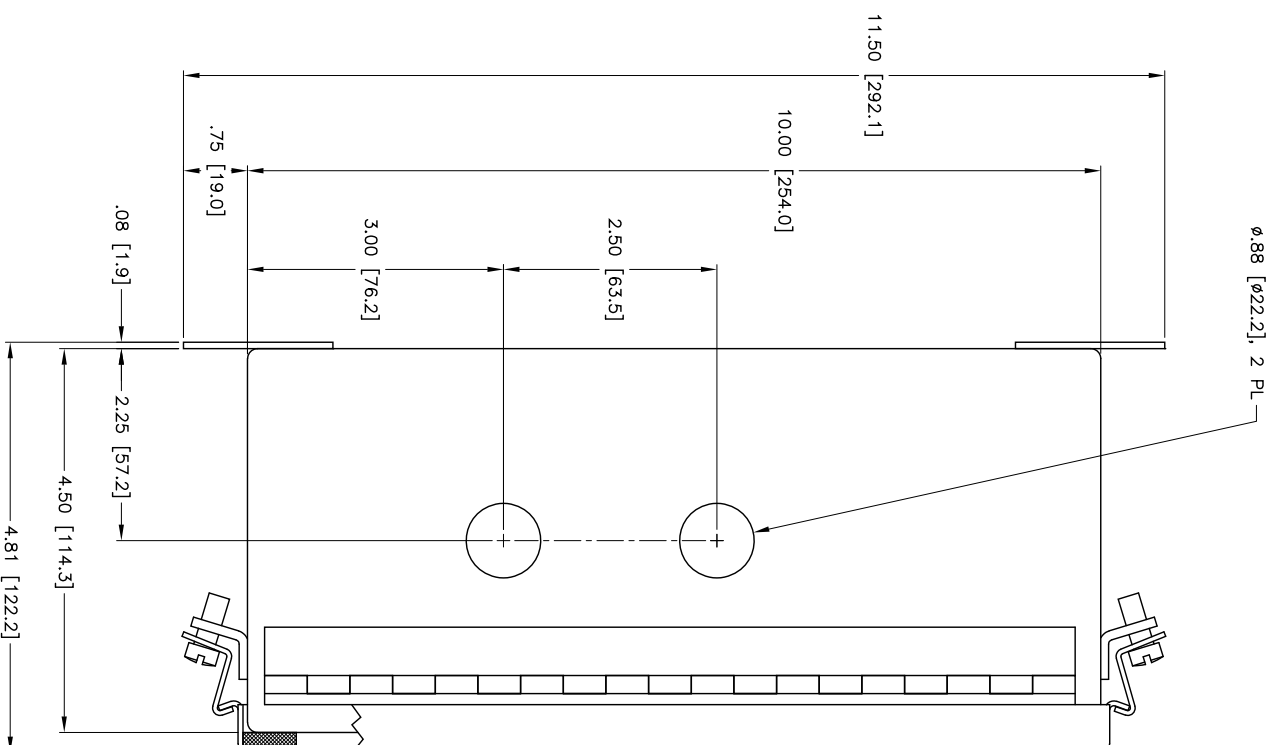


FRONT PANEL DISPLAY  
MOUNTING DIMENSIONS  
[VIEWED FROM FRONT  
OF INSTRUMENT]

DIMENSIONS = IN [MM]

TITLE		<b>HAROLD</b> PROCESS SOLUTIONS	
I/I DIAGRAM, HI 4060 RATE CONTROLLER			
SIZE	ESCHM	DRAWING NO.	REV.
D	21316	0584-0065	F
FILE NAME: 584065F2.DWG		SCALE: NONE	SHEET 2 OF 10

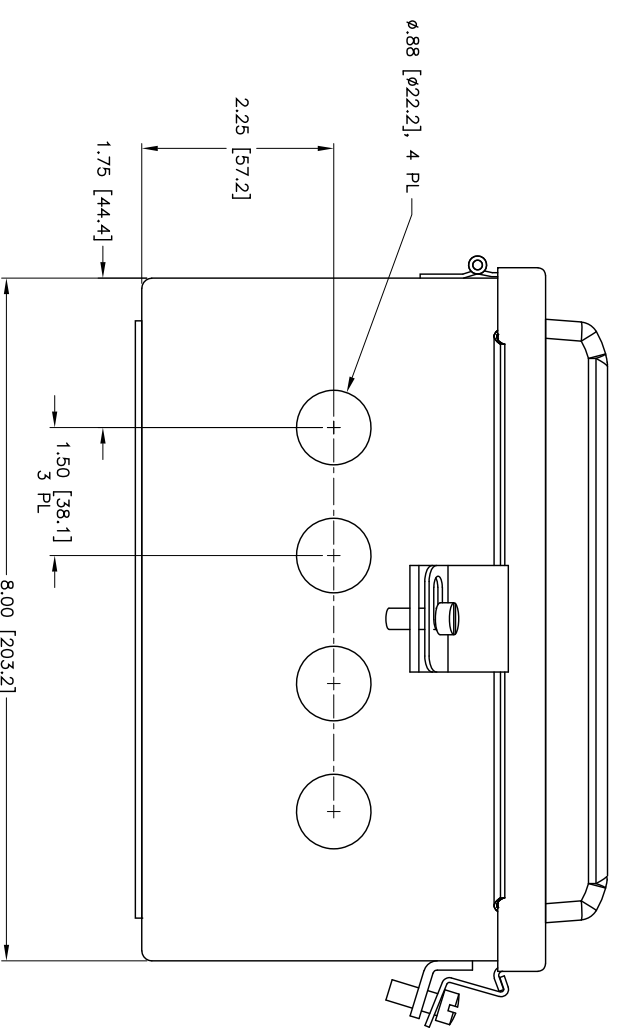
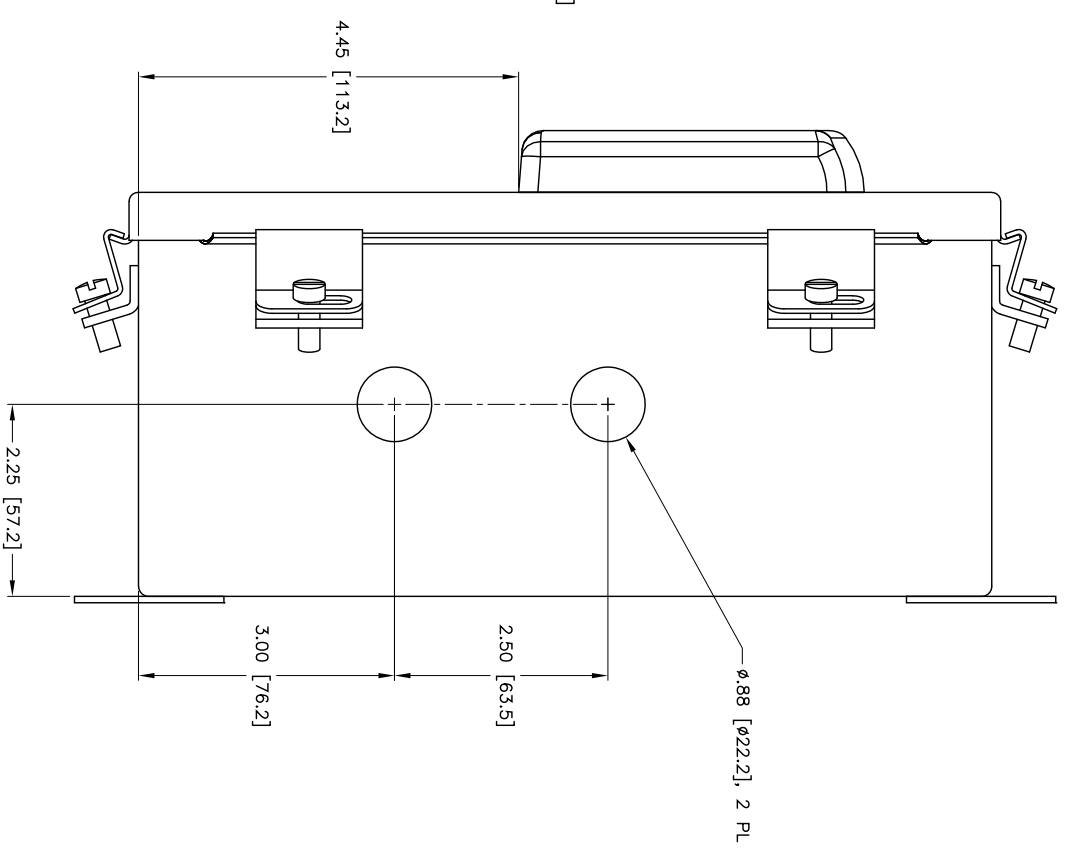
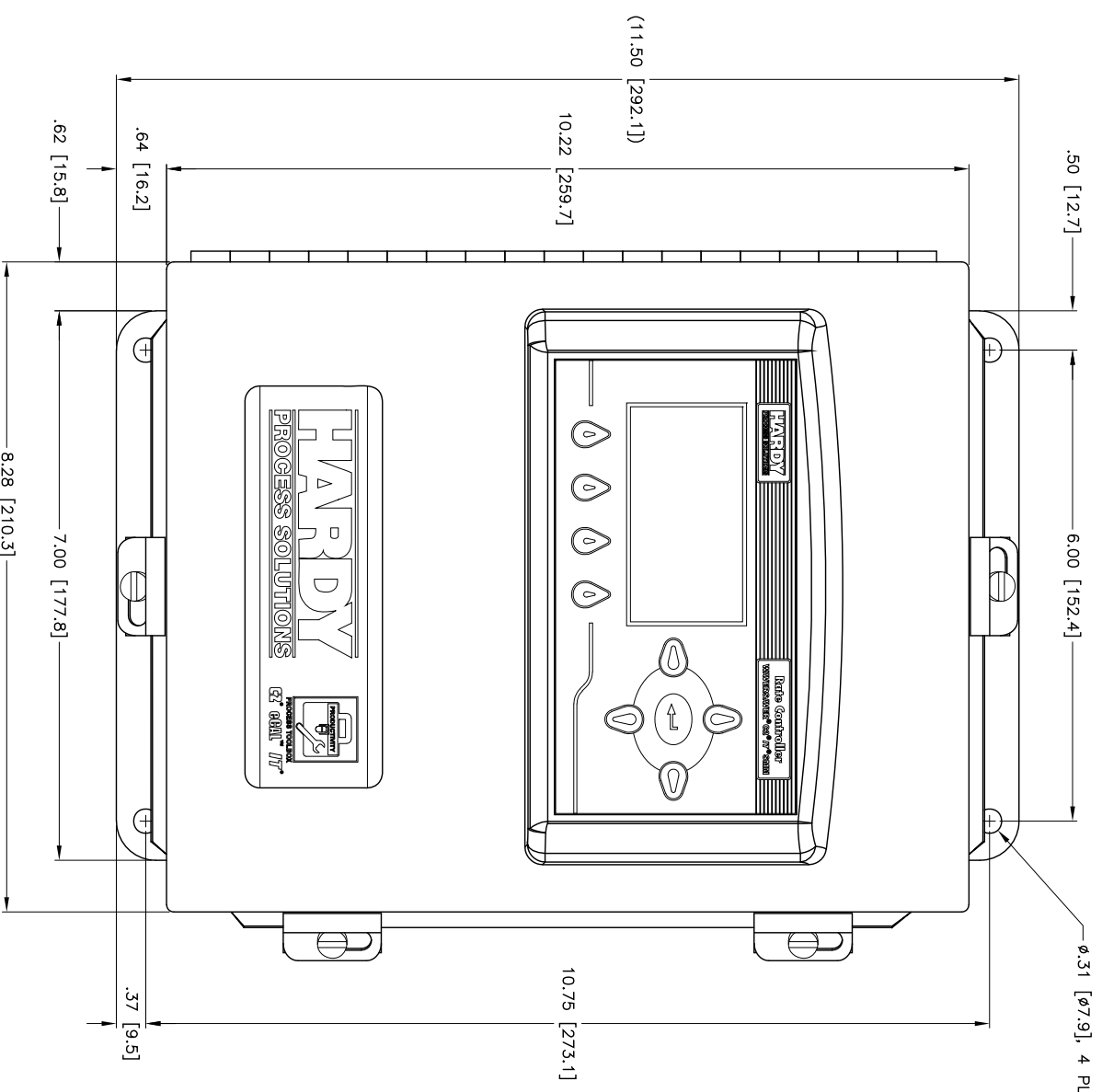
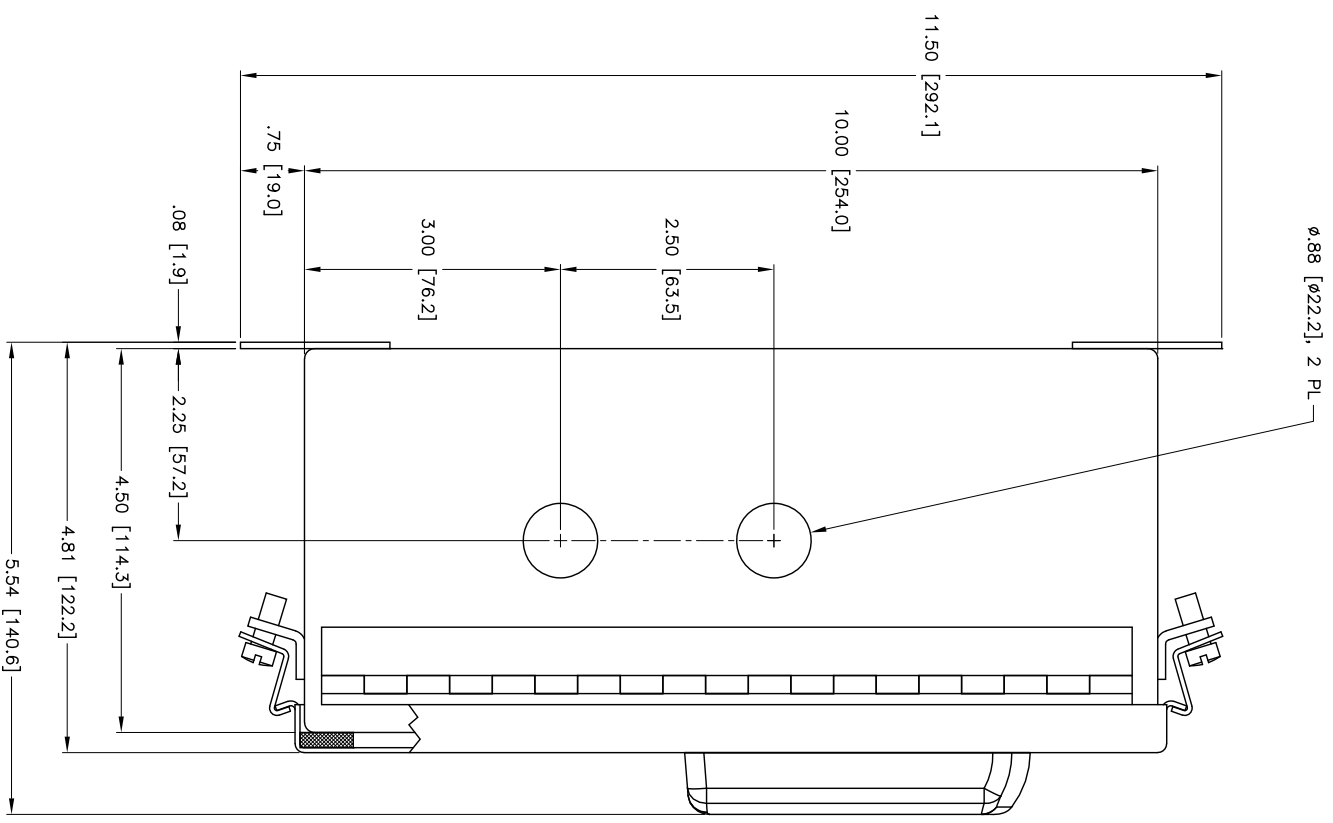
NEMA 4/4X WALL MOUNT HI 4060 RATE CONTROLLER – WITHOUT DISPLAY



DIMENSIONS = IN [MM]

		TITLE I/I DIAGRAM, HI 4060 RATE CONTROLLER	
SIZE	ESCM	DRAWING NO.	REV.
D	21316	0584-0065	F
FILE NAME: 584065F2.DWG		SCALE: NONE	SHEET 3 OF 10

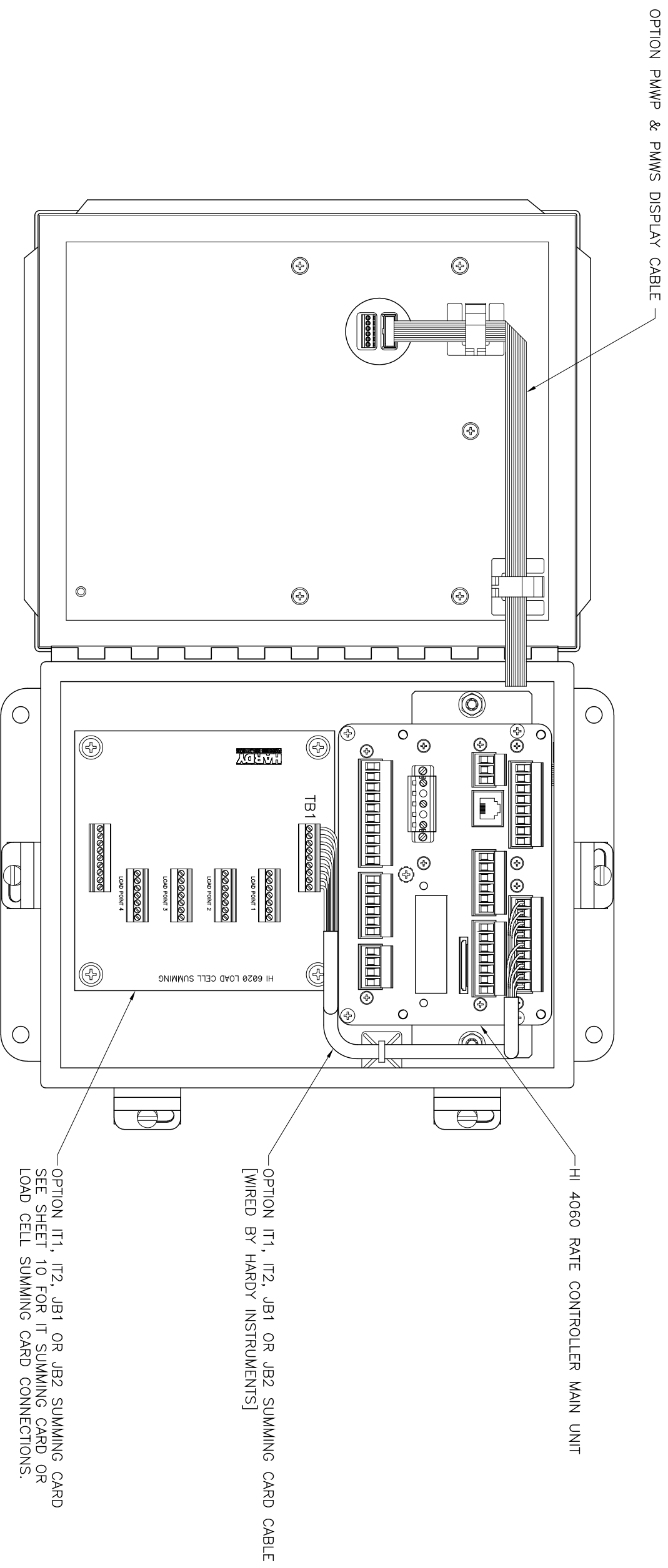
NEMA 4/4X WALL MOUNT HI 4060 RATE CONTROLLER – WITH DISPLAY



DIMENSIONS = IN [MM]

		TITLE I/I DIAGRAM, HI 4060 RATE CONTROLLER	
SIZE	ESCM	DRAWING NO.	REV.
D	21316	0584-0065	F
FILE NAME: 584065F2.DWG		SCALE: NONE	SHEET 4 OF 10

NEMA 4/4X WALL MOUNT HI 4060 RATE CONTROLLER – INTERNAL COMPONENTS



DIMENSIONS = IN [MM]

CABLE GLAND FITTINGS AND/OR HOLE PLUG SEALS ARE PACKED SEPARATELY INSIDE ENCLOSURE

OPTION IT1, IT2, JB1 OR JB2 SUMMING CARD  
SEE SHEET 10 FOR IT SUMMING CARD OR  
LOAD CELL SUMMING CARD CONNECTIONS.

OPTION IT1, IT2, JB1 OR JB2 SUMMING CARD CABLE  
[WIRED BY HARDY INSTRUMENTS]

HI 4060 RATE CONTROLLER MAIN UNIT

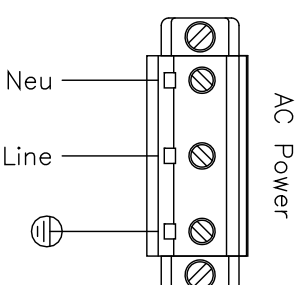
		TITLE	
		I/1 DIAGRAM, HI 4060 RATE CONTROLLER	
SIZE	ESCH	DRAWING NO.	REV.
D	21316	0584-0065	F
FILE NAME: 584065F2.DWG		SCALE: NONE	SHEET 5 OF 10

## POWER INPUT TERMINATIONS

### OPTION CODE AC

NOTES:

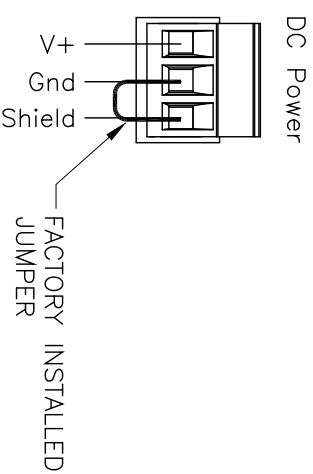
1. INPUT VOLTAGE: 100–240 VAC, 50–60 Hz, 0.5 AMP, 10 WATT.
2. OPTION AC OPERATING TEMPERATURE: –10°C TO + 40°C.
3. WIRE SIZE: 14 AWG MAXIMUM / 18 AWG MINIMUM.  
WIRE TIGHTENING TORQUE: 2 LB-IN MINIMUM / 4 LB-IN MAXIMUM.



### OPTION CODE DC

NOTES:

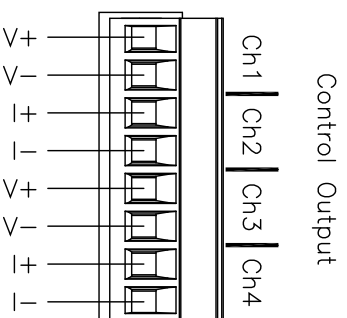
1. INPUT VOLTAGE: 24 VDC, 0.42 AMP, 10 WATT.
2. OPTION DC OPERATING TEMPERATURE: –10°C TO +60°C.
3. WIRE SIZE: 12 AWG MAXIMUM / 22 AWG MINIMUM.  
WIRE TIGHTENING TORQUE: 2 LB-IN MINIMUM / 4 LB-IN MAXIMUM.



## CONTROL OUTPUT TERMINATIONS

NOTES:

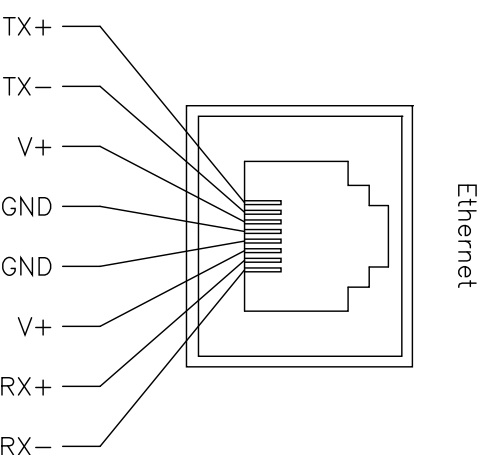
1. SEE USER'S GUIDE FOR ADDITIONAL INFORMATION ON CONTROL OUTPUT TERMINATIONS.
2. CONTROL OUTPUTS ARE SOFTWARE CONFIGURABLE. SEE USER'S GUIDE FOR ADDITIONAL SETTING CONFIGURATIONS. FACTORY DEFAULT SETTINGS:  
CURRENT & VOLTAGE: 4–20mA OUTPUT, 0–10 VDC  
SOFTWARE CONFIGURATION [FOR ALL CHANNELS]: MOTOR CONTROL
3. WIRE SIZE: 12 AWG MAXIMUM / 22 AWG MINIMUM.  
WIRE TIGHTENING TORQUE: 2 LB-IN MINIMUM / 4 LB-IN MAXIMUM.



## ETHERNET TERMINATION

NOTES:

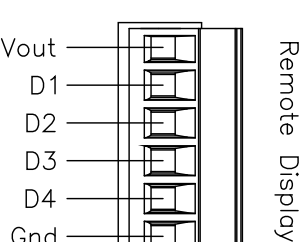
1. SEE USER'S GUIDE FOR ADDITIONAL INFORMATION ON ETHERNET TERMINATIONS.
2. CONNECTOR TYPE: RJ-45, 8 PIN
3. N.C. = NOT CONNECTED.



## REMOTE DISPLAY TERMINATIONS

NOTES:

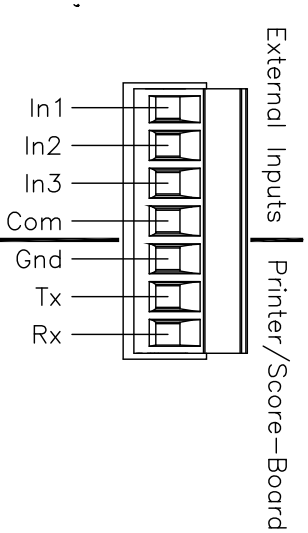
1. SEE USER'S GUIDE FOR ADDITIONAL INFORMATION ON REMOTE DISPLAY TERMINATIONS.
2. WIRE SIZE: 20 AWG MAXIMUM / 26 AWG MINIMUM.  
WIRE TIGHTENING TORQUE: 2 LB-IN MINIMUM / 4 LB-IN MAXIMUM.
3. SEE SHEET 2 FOR FRONT PANEL DISPLAY WIRE TERMINATIONS.
4. MAXIMUM CABLE LENGTH: 100 FEET [30.48 METERS]



## EXTERNAL INPUT & PRINTER/SCOREBOARD TERMINATIONS

NOTES:

1. SEE USER'S GUIDE FOR ADDITIONAL INFORMATION ON EXTERNAL INPUT AND PRINTER/SCOREBOARD TERMINATIONS.
2. EXTERNAL INPUTS ARE NON-ISOLATED, ACTIVE LOW AND REFERENCED TO COMMON [COM].
3. DO NOT BUNDLE ANALOG INPUT WIRING WITH POWER WIRING, RELAY CABLE OR ANY OTHER HIGH ENERGY CABLES.
4. EXTERNAL INPUTS CAN BE CONFIGURED IN THE MAPPING SECTION OF THE INSTRUMENT'S WEB PAGE.  
FACTORY DEFAULT EXTERNAL INPUT MAPPINGS: NONE
5. PRINTER/SCORE-BOARD TRANSMIT DATA [Tx] AND RECEIVE DATA [Rx] USE RS-232 SERIAL INTERFACE COMMUNICATION PROTOCOL.
6. WIRE SIZE: 12 AWG MAXIMUM / 22 AWG MINIMUM.  
WIRE TIGHTENING TORQUE: 2 LB-IN MINIMUM / 4 LB-IN MAXIMUM.



### I/I DIAGRAM,

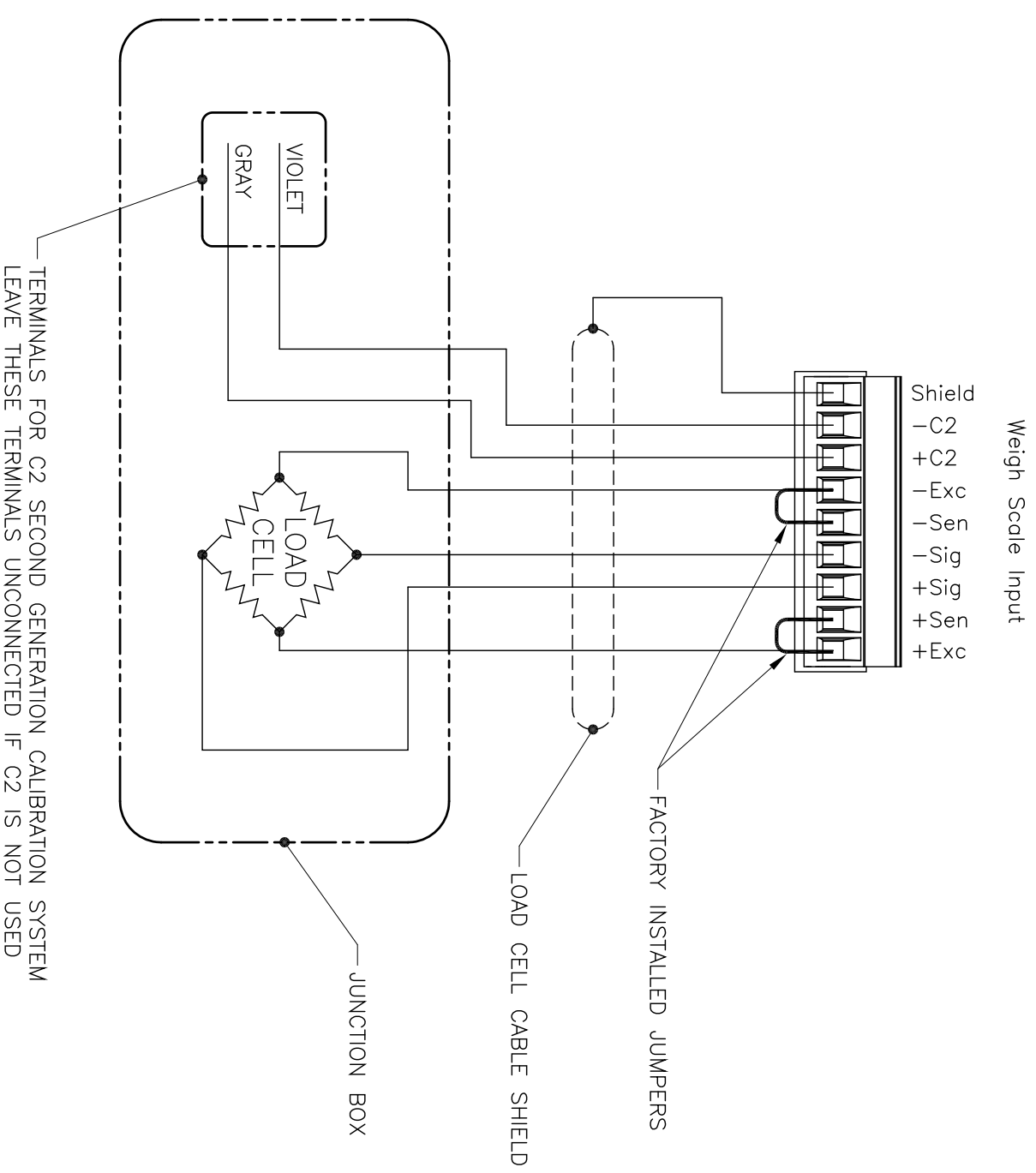
### HI 4060 RATE CONTROLLER

TITLE	HI 4060 RATE CONTROLLER		
SIZE	ESCM	DRAWING NO.	REV.
D	21316	0584-0065	F
FILE NAME:	584065F2.DWG	SCALE:	NONE
SHEET	6	OF	10

## WEIGH SCALE INPUT TERMINATIONS

### NOTES:

1. DO NOT RUN LOAD CELL CABLE PARALLEL TO, OR IN THE SAME CONDUIT WITH POWER WIRING, RELAY CABLE OR OTHER HIGH ENERGY CABLES.
2. FACTORY INSTALLED JUMPERS TO REMAIN IN PLACE FOR FOUR WIRE LOAD CELL CONNECTION. JUMPERS TO BE REMOVED FOR SIX WIRE OR EIGHT WIRE [C2] LOAD CELL CONNECTIONS. EXCITATION AND SENSE WIRES TO BE CONNECTED TOGETHER IN JUNCTION BOX.
3. REQUIRED LOAD CELL CABLE FOR C2 SECOND GENERATION CALIBRATION SYSTEM: HARDY INSTRUMENTS PART NUMBER 6020-0001-0.
4. SEE USER'S GUIDE FOR ADDITIONAL INFORMATION ON ANALOG WEIGH SCALE INPUT CONNECTIONS.
5. C2 WIRE PAIR MUST BE CONNECTED WHEN USING THE HARDY INTEGRATED TECHNICIAN SUMMING CARDS.
6. WIRE SIZE: 12 AWG MAXIMUM / 22 AWG MINIMUM.  
WIRE TIGHTENING TORQUE: 2 LB-IN MINIMUM / 4 LB-IN MAXIMUM.

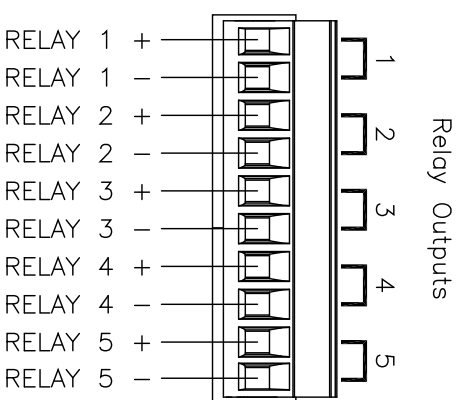


<b>HARDY</b> PROCESS SOLUTIONS		TITLE	
I/1 DIAGRAM, HI 4060 RATE CONTROLLER		FILE NAME: 584065F2.DWG	
SIZE	ESCM	DRAWING NO.	REV.
D	21316	0584-0065	F
SCALE: NONE		SHEET 7 OF 10	

## RELAY OUTPUT TERMINATIONS

### NOTES:

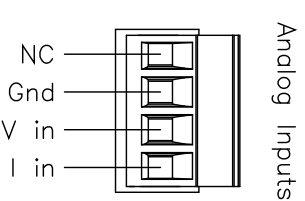
1. RELAY CONTACT RATINGS:  
AC: 240 VAC, 4 AMP NOMINAL  
DC: 30 VDC, 2 AMP NOMINAL [RESISTIVE LOAD]
2. RELAY TYPE: MECHANICAL, NORMALLY OPEN, ALL MAPPABLE.  
FACTORY DEFAULT RELAY MAPPING:  
RELAY 1 – ON  
RELAY 2 – SHUTOFF  
RELAY 3 – REC. [RATE EXCEPTION CONTROL]  
RELAY 4 – ALARM  
RELAY 5 – REFILL  
ALTERNATE RELAY CONFIGURATIONS MAY BE OBTAINED IN THE MAPPING SECTION OF INSTRUMENT'S WEB PAGE.
3. SEE USER'S GUIDE FOR ADDITIONAL INFORMATION ON RELAY OUTPUT TERMINATIONS.
4. WIRE SIZE: 12 AWG MAXIMUM / 22 AWG MINIMUM.  
WIRE TIGHTENING TORQUE: 2 LB-IN MINIMUM / 4 LB-IN MAXIMUM.



## ANALOG INPUT TERMINATIONS

### NOTES:

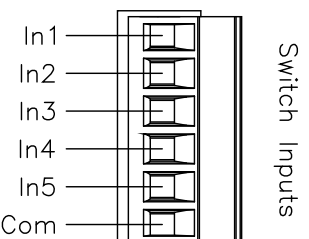
1. SEE USER'S GUIDE FOR ADDITIONAL INFORMATION ON ANALOG INPUT TERMINATIONS.
2. ANALOG INPUTS ARE NON-ISOLATED.  
DO NOT BUNDLE ANALOG INPUT WIRING WITH POWER WIRING, RELAY CABLE OR ANY OTHER HIGH ENERGY CABLES.
3. ANALOG INPUTS ACCEPT ONLY 1 OF THE 2 SIGNALS; EITHER VOLTAGE OR CURRENT, WHICH MUST BE CONFIGURED IN THE REMOTE SETPOINT SECTION IN THE INGREDIENT MENU. THIS INPUT IS NOT MAPPABLE AND CAN ONLY BE CONFIGURED THROUGH THE INSTRUMENT'S REMOTE SETPOINT FEATURE.
4. SELECTABLE ANALOG INPUT RANGES:  
ANY VOLTAGE RANGE WITHIN 0-10 VOLTS  
– OR –  
ANY CURRENT RANGE WITHIN 0-20 mA
5. WIRE SIZE: 12 AWG MAXIMUM / 22 AWG MINIMUM.  
WIRE TIGHTENING TORQUE: 2 LB-IN MINIMUM / 4 LB-IN MAXIMUM.



## SWITCH INPUT TERMINATIONS

### NOTES:

1. SEE USER'S GUIDE FOR ADDITIONAL INFORMATION ON SWITCH INPUT TERMINATIONS.
2. SWITCH INPUTS ARE NON-ISOLATED, ACTIVE LOW AND REFERENCED TO COMMON [COM].
3. DO NOT BUNDLE SWITCH INPUT WIRING WITH POWER WIRING, RELAY CABLE OR ANY OTHER HIGHENERGY CABLES.
4. SWITCH INPUTS ARE MAPPABLE.  
FACTORY DEFAULT SWITCH INPUT MAPPING:  
INPUT 1 – START  
INPUT 2 – STOP  
INPUT 3 – ESTOP  
INPUT 4 – FORCE REFILL  
INPUT 5 – CLEAR TOTAL  
ALTERNATE SWITCH INPUT CONFIGURATIONS MAY BE OBTAINED IN THE MAPPING SECTION OF INSTRUMENT'S WEB PAGE.
5. WIRE SIZE: 12 AWG MAXIMUM / 22 AWG MINIMUM.  
WIRE TIGHTENING TORQUE: 2 LB-IN MINIMUM / 4 LB-IN MAXIMUM.



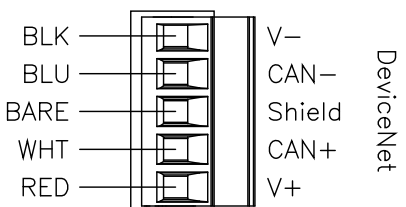
		TITLE	
		I/1 DIAGRAM, HI 4060 RATE CONTROLLER	
SIZE	ESCM	DRAWING NO.	REV.
D	21316	0584-0065	F
FILE NAME: 584065F2.DWG		SCALE: NONE	SHEET 8 OF 10



## OPTION CODE DN – DEVICENET COMMUNICATIONS

### NOTES:

1. SEE USER'S GUIDE FOR ADDITIONAL INFORMATION ON DEVICENET TERMINATIONS.
2. OPTION DN IS LOCATED IN THE NETWORK OPTION SLOT, WHEN ORDERED.
3. WIRE SIZE: 12 AWG MAXIMUM / 22 AWG MINIMUM.  
WIRE TIGHTENING TORQUE: 2 LB-IN MINIMUM / 4 LB-IN MAXIMUM.

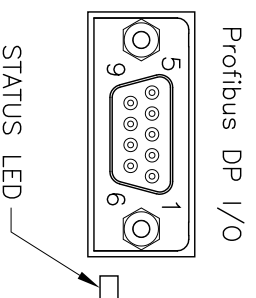


## OPTION CODE PB – PROFIBUS DP I/O

### NOTES:

1. SEE USER'S GUIDE FOR ADDITIONAL INFORMATION ON PROFIBUS DP I/O INTERFACE TERMINATIONS.
2. OPTION PB IS LOCATED IN THE NETWORK OPTION SLOT, WHEN ORDERED.
3. INTERFACE CONNECTOR TYPE ON THE INSTRUMENT:  
9 PIN D-SUBMINIATURE [DE-9], FEMALE CONTACTS.

PIN	SIGNAL
1	NO CONNECT
2	NO CONNECT
3	RXD/TXD +
4	RTS
5	GND BUS
6	+5V BUS
7	NO CONNECT
8	RXD/TXD -
9	NO CONNECT



TITLE  
I/I DIAGRAM,  
HI 4060 RATE CONTROLLER

SIZE	ESCM	DRAWING NO.	REV.
D	21316	0584-0065	F

FILE NAME: 584065F2.DWG SCALE: NONE SHEET 9 OF 10

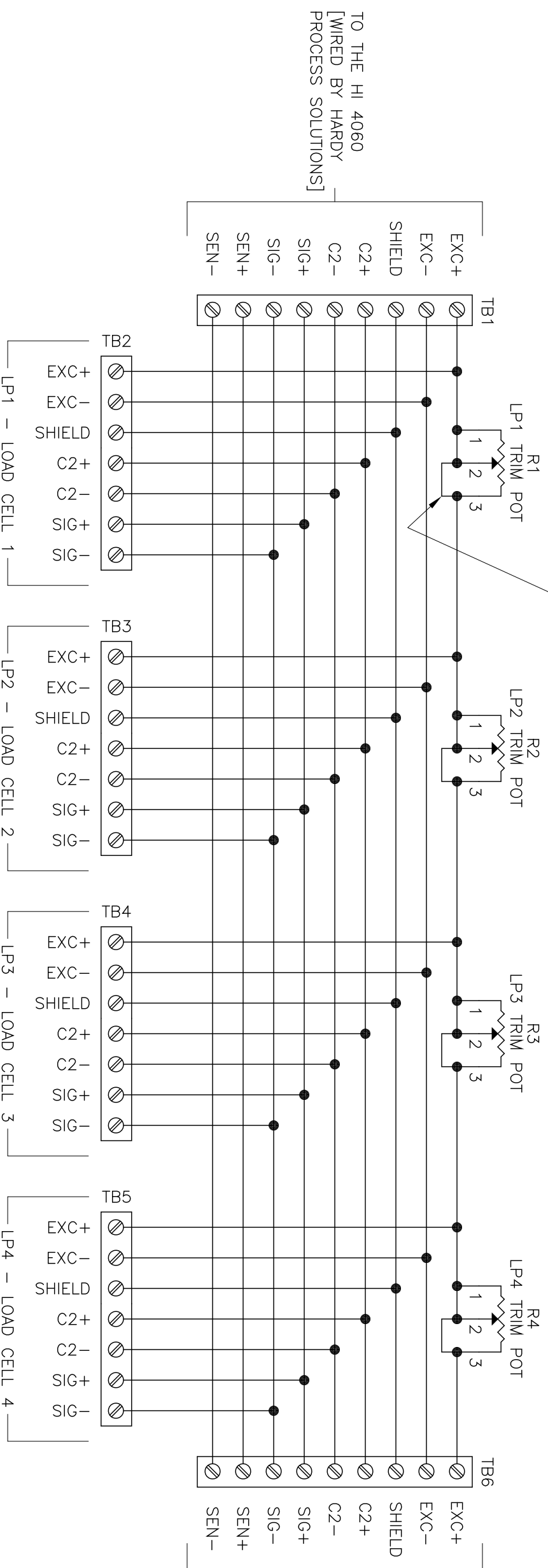
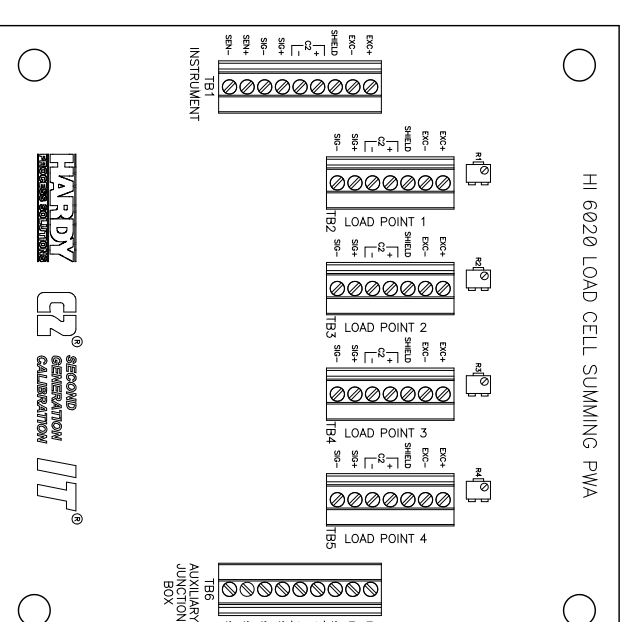
OPTION CODES IT1 & IT2 – IT SUMMING CARD  
 OPTION CODES JB1 & JB2 – LOAD CELL SUMMING CARD

IT SUMMING/LOAD CELL SUMMING CARD

NOTES:

1. DO NOT RUN LOAD CELL CABLES PARALLEL TO, OR IN THE SAME CONDUIT WITH POWER WIRING, RELAY CABLE OR OTHER HIGH ENERGY CABLES.
2. REQUIRED LOAD CELL CABLE FOR C2 SECOND GENERATION CALIBRATION SYSTEM: HARDY PROCESS SOLUTIONS PART NUMBER 6020-0001-0.
3. SEE USER'S GUIDE FOR ADDITIONAL INFORMATION ON IT SUMMING/LOAD CELL SUMMING CARD CONNECTIONS.
4. WIRE SIZE: 12 AWG MAXIMUM / 22 AWG MINIMUM.  
 WIRE TIGHTENING TORQUE: 2 LB-IN MINIMUM / 4 LB-IN MAXIMUM.

ZERO OHM JUMPER REMOVED WHEN SUMMING CARD IS EQUIPPED WITH TRIM POTS, 4 PLACES APPLIES TO OPTION CODES IT2 & JB2 ONLY  
 NOTE: THE USE OF TRIM POTS WILL INVALIDATE C2 CALIBRATION DATA WHEN USED WITH C2 LOAD CELLS



TO THE HI 4060  
 [WIRED BY HARDY  
 PROCESS SOLUTIONS]

TO AUXILIARY JUNCTION BOX  
 FOR 5 OR MORE LOAD CELLS,  
 OR TO A 5TH LOAD CELL

IT SUMMING/LOAD CELL SUMMING CARD WIRING DIAGRAM

TITLE		I/I DIAGRAM, HI 4060 RATE CONTROLLER	
SIZE	ESCM	DRAWING NO.	REV.
D	21316	0584-0065	F
FILE NAME:	584065F2.DWG	SCALE:	NONE
			SHEET 10 OF 10