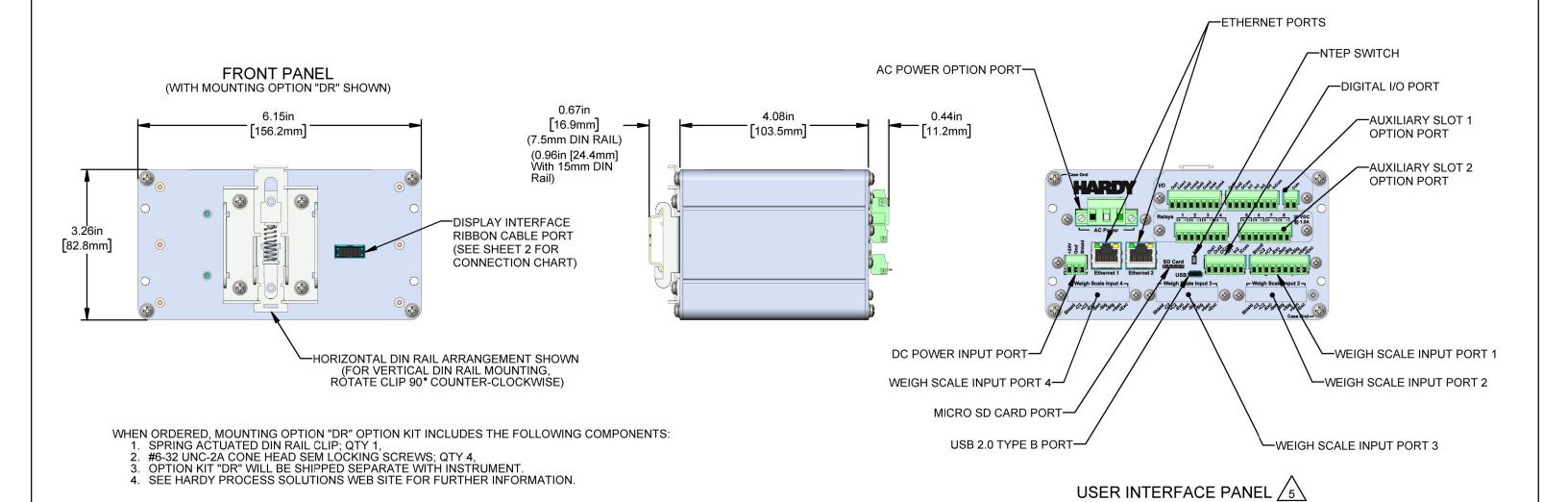
HI 6850 SERIES INSTRUMENT

REV.	ECO/DDC	DESCRIPTION	DATE	DRAFT	CHECK	APV'D
Α		RELEASED.	10-12-23	V.J.C.	L.N.	V.J.C.
В		ADDED OPTIONS PMWS1, PMWS2, NSC AND IT1.	08-28-24	V.J.C.	L.N.	V.J.C.



- OPTION CONTENT SHOWN WITHIN THIS DOCUMENT MAY NOT NECESSARILY BE AVAILABLE ON EVERY HI 6850 INSTRUMENT APPLICATION SOFTWARE VARIANT. SEE HARDY PROCESS SOLUTIONS WEB SITE FOR INSTRUMENT SPECIFIC APPLICATION SOFTWARE VARIANTS.
- 6. IF THE HI 6850 INSTRUMENT IS USED IN A MANNER NOT SPECIFIED BY HARDY PROCESS SOLUTIONS, THE PROTECTION PROVIDED BY THE INSTRUMENT MAY BE IMPAIRED.

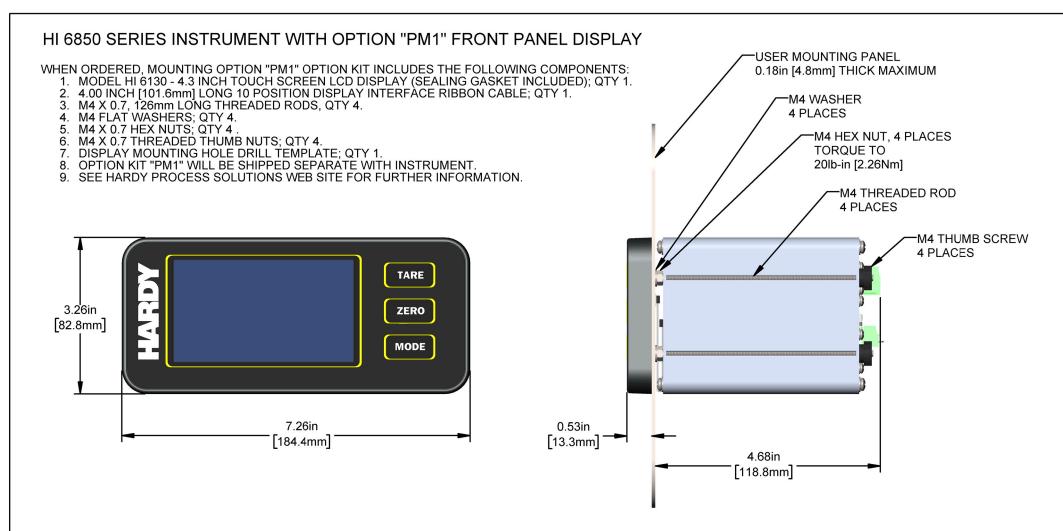
SEE SHEETS 7 THROUGH 10 FOR USER INTERFACE CONNECTIONS.

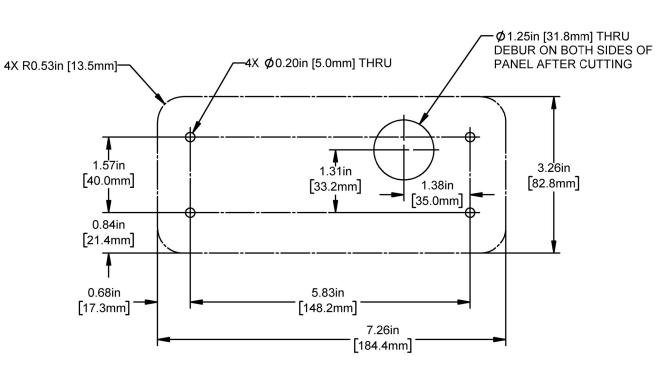
- 4. SEE SHEETS 5 AND 6 FOR TYPE 4X WALL MOUNT ENCLOSURE OPTION "PMWS2".
- 3. SEE SHEETS 4 AND 6 FOR TYPE 4X WALL MOUNT ENCLOSURE OPTION "PMWS1".
- 2. SEE SHEETS 2 AND 3 FOR PANEL MOUNT DISPLAY OPTIONS "PM1" AND PM2".
- 1. SEE HARDY PROCESS SOLUTIONS WEB SITE FOR ADDITIONAL MOUNTING AND WIRING INFORMATION.

# NOTES: UNLESS OTHERWISE SPECIFIED

PROPRIETARY NOTICE
ALL DATA AND INFORMATION CONTAINED IN OR DISCLOSED BY THIS DOCUMENT IS CONFIDENTIAL AND PROPRIETARY INFORMATION OF HARDY PROCESS SOLUTIONS 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.

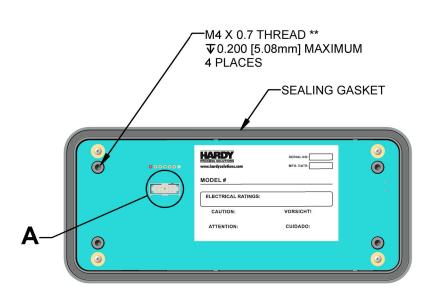
			0584-01	13	INSTALLATION/IN	TERCONNECT	TION DIAGRAM, HI 6850 SERIES			SEE NOTES		
	ITEM	QTY	PART NUM	BER			DESCRIPTION			COMMENTS		
								PARTS LIST				
	UNLESS OTHERWISE SPECIFIED DIMENSIONS			CONT	TRACT NO.				HARD	<u> </u>		
		INCHES	INSIONS		APPROVA	LS						
	TOLERANCES ARE: FRACTIONS: N/A		DRAV	٧N	DATE			PROCESS SOLUTION	<u>NS</u>			
	DECIMALS: .XX = ±.03		V. C	HULA	10-12-23	TITLE						
			CHEC L. N	CKED ICDAO	DATE 10-12-23	INSTALLATION/INTERCONNECTION						
	MATERIAL APPROVED DATE V. CHULA 10-12-23 DIAGRAM, HI 6850 SEF				SERIES							
$\overline{}$	ENUOLI			ISSU	ED	DATE	SIZE	FSCM	DRAWING NO.		REV.	
	FINISH			V. C	HULA	10-12-23	D	21316	0584-0113		В	
				PROD	DUCTION	DATE	_					
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HI 6130 SERIES FRONT PANEL DISPLAY MOUNTING DIMENSIONS
(VIEWED FROM THE FRONT OF THE INSTRUMENT)

J9 CONNECTION CHART				
SIGNAL NAME				
V+				
V+				
CHASSIS GND				
TXD-				
TXD+				
NO CONNECTION				
RXD+				
RXD-				
GND				
GND				
RIBBON CABLE CONNECTOR				

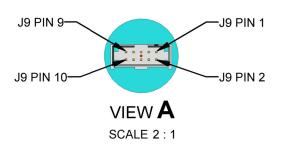


\*\* IF THE DISPLAY IS TO BE MOUNTED REMOTELY FROM THE INSTRUMENT, USE M4 X 0.7 THREADED SCREW LENGTH OF 0.300 INCH [7.62mm] MAXIMUM PLUS THE MOUNTING PANEL THICKNESS

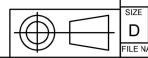
## FRONT PANEL DISPLAY TERMINATIONS

#### NOTES:

- 1. INPUT VOLTAGE RATING: 12-24 VDC. 1.4 WATTS MAXIMUM.
- 2. SEE USER'S GUIDE FOR ADDITIONAL INFORMATION ON FRONT PANEL DISPLAY TERMINATIONS. USER'S GUIDE IS LOCATED ON HARDY PROCESS SOLUTIONS WEB SITE.
- 3. CONNECTOR J9 UTILIZES A 4.00 INCH [101.6mm] LONG 10 POSITION DISPLAY INTERFACE RIBBON CABLE THAT IS SHIPPED WITH THE HI 6850 SERIES INSTRUMENT WHEN OPTION "PM1" IS ORDERED.



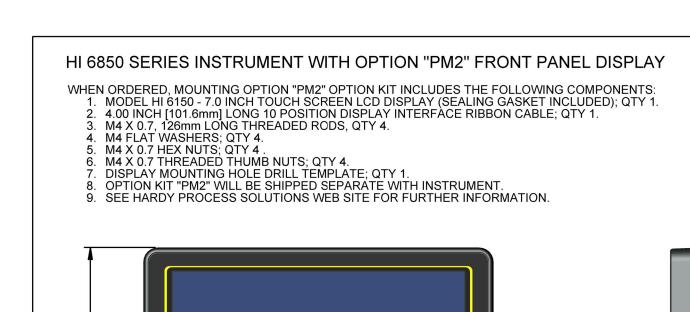
HARDY INSTALLATION/INTERCONNECTION DIAGRAM, HI 6850 SERIES



FSCM 21316 FILE NAME: 0584-0113B1.SLDDRW | SCALE: NONE

DRAWING NO. 0584-0113

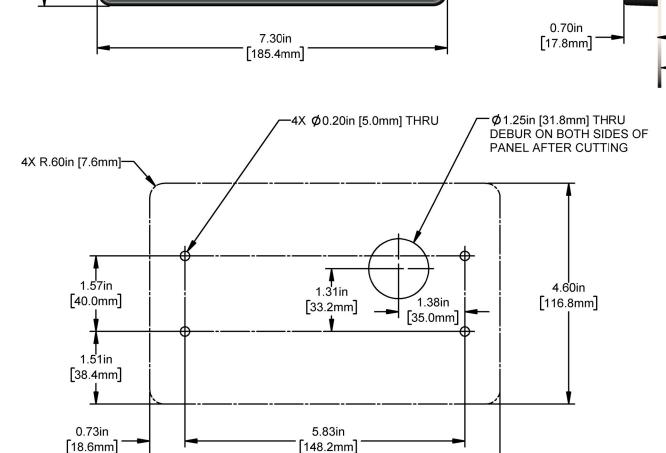
В SHEET 2 OF 10



HARDY

4.60in

[116.8mm]



J9 CONNECTION CHART				
PIN NUMBER	SIGNAL NAME			
1	V+			
2	V+			
3	CHASSIS GND			
4	TXD-			
5	TXD+			
6	NO CONNECTION			
7	RXD+			
8	RXD-			
9	GND			
10	GND			
RIBBON CABLE CONNECTOR				

-USER MOUNTING PANEL 0.18in [4.8mm] THICK MAXIMUM

-M4 WASHER

M4 HEX NUT, 4 PLACES

4 PLACES

-M4 THREADED ROD

M4 THUMB SCREW

**4 PLACES** 

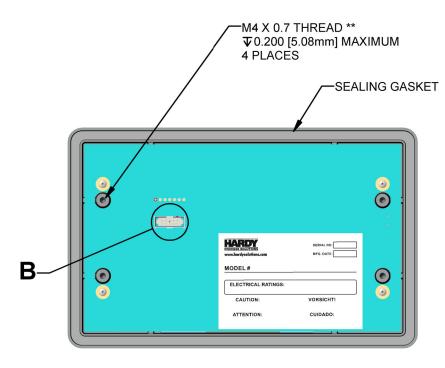
TORQUE TO

20lb-in [2.26Nm]

4 PLACES

4.68in

[118.8mm]

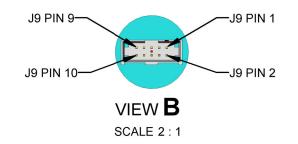


\*\* IF THE DISPLAY IS TO BE MOUNTED REMOTELY FROM THE INSTRUMENT, USE M4 X 0.7 THREADED SCREW LENGTH OF 0.300 INCH [7.62mm] MAXIMUM PLUS THE MOUNTING PANEL THICKNESS

#### FRONT PANEL DISPLAY TERMINATIONS

#### NOTES:

- 1. INPUT VOLTAGE RATING: 12-24 VDC, 2.4 WATTS MAXIMUM.
- 2. SEE USER'S GUIDE FOR ADDITIONAL INFORMATION ON FRONT PANEL DISPLAY TERMINATIONS. USER'S GUIDE IS LOCATED ON HARDY PROCESS SOLUTIONS WEB SITE.
- 3. CONNECTOR J9 UTILIZES A 4.00 INCH [101.6mm] LONG 10 POSITION DISPLAY INTERFACE RIBBON CABLE THAT IS SHIPPED WITH THE HI 6850 SERIES INSTRUMENT WHEN OPTION "PM2" IS ORDERED.





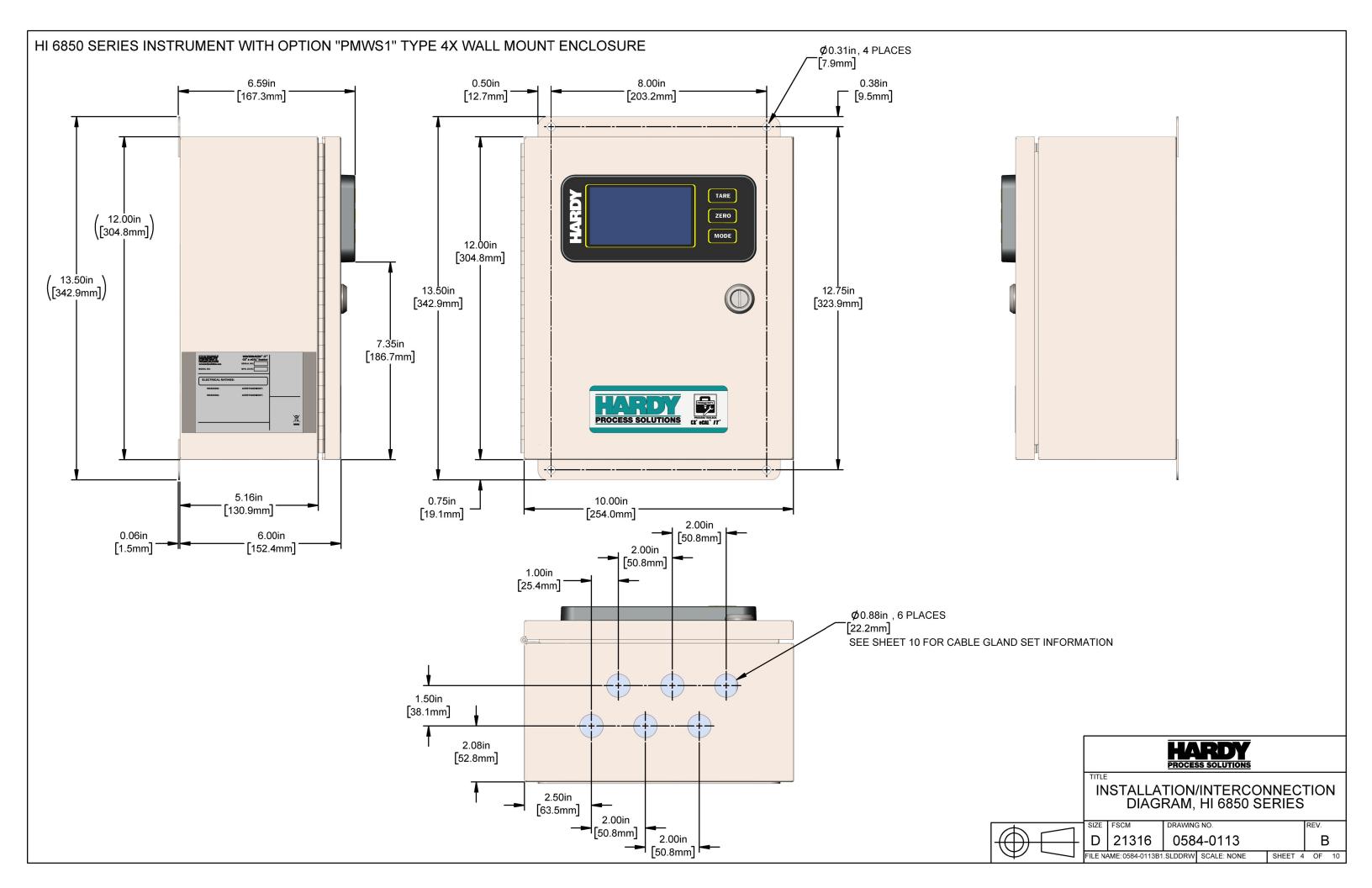
SHEET 3 OF 10

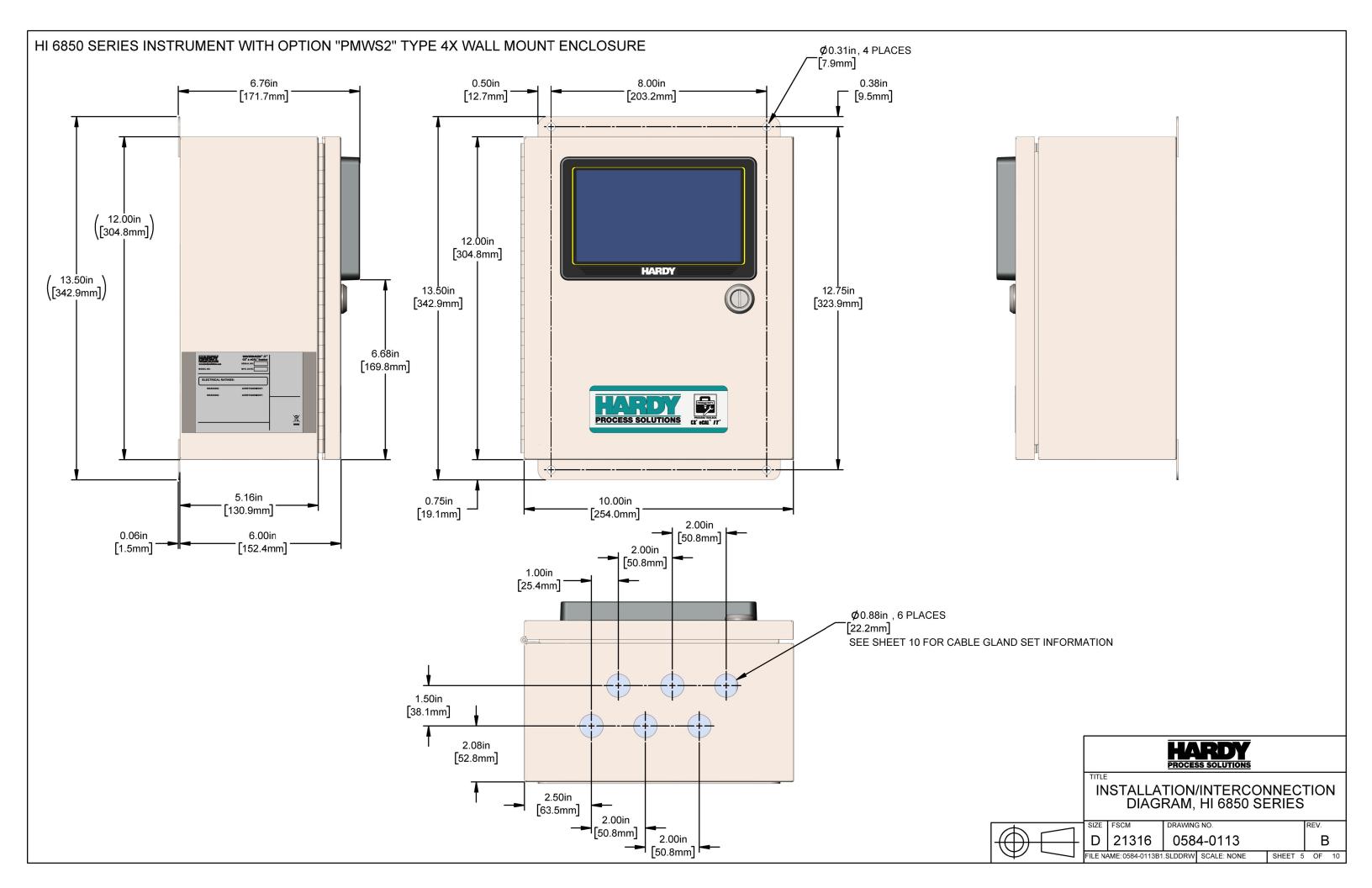
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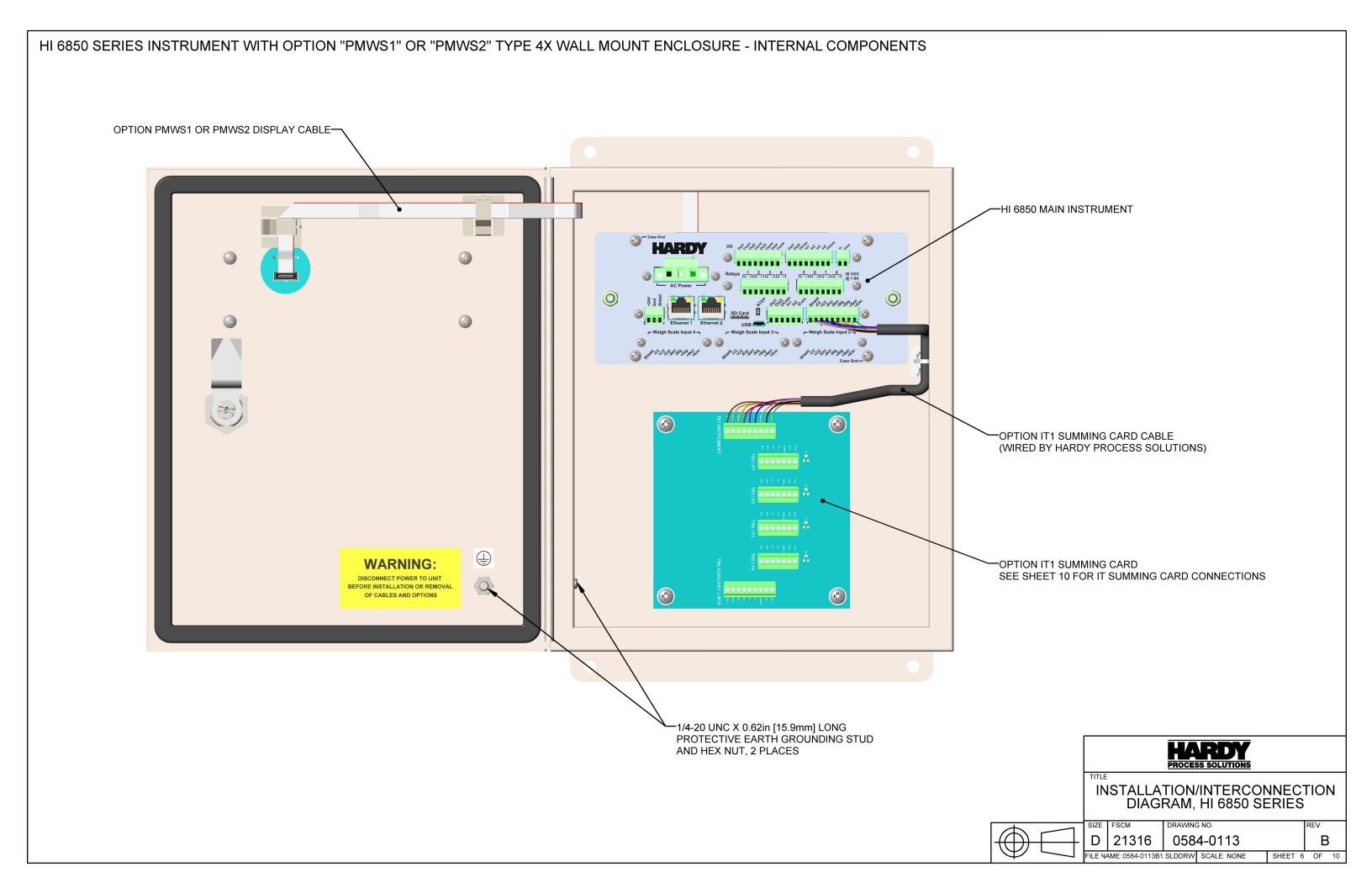
HI 6150 SERIES FRONT PANEL DISPLAY MOUNTING DIMENSIONS (VIEWED FROM THE FRONT OF THE INSTRUMENT)

7.30in

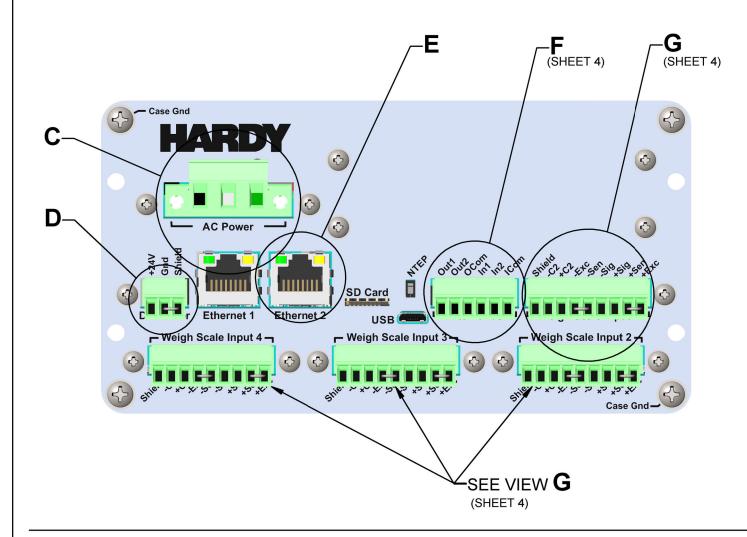
[185.4mm]







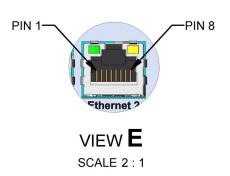
# HI 6850 SERIES INSTRUMENT USER INTERFACE PANEL CONNECTIONS



# ETHERNET TERMINATIONS (BOTH PORTS)

#### NOTES:

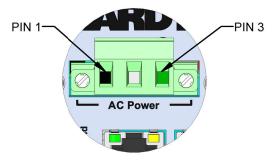
- 1. SEE USER'S GUIDE FOR ADDITIONAL INFORMATION ON ETHERNET TERMINATIONS. USER'S GUIDE IS LOCATED ON HARDY PROCESS SOLUTIONS WEB
- 2. CONNECTOR TYPE: RJ-45, 8 PIN; QTY 2.



CONNECTION CHART				
SIGNAL NAME				
TX+				
TX-				
V+				
GND				
GND				
V+				
RX+				
RX-				

#### OPTION "AC" POWER INPUT TERMINATIONS

- 1. INPUT VOLTAGE RANGE: 100-240 VAC, 50/60 Hz, 0.75-0.50 AMP.
- 2. TERMINAL BLOCK WIRE SIZE RANGE: 12 AWG MAXIMUM / 24 AWG MINIMUM.
- 3. WIRE TEMPERATURE RATING TO BE 90°C.
- 4. WIRE TIGHTENING TORQUE: 5.0 LB-IN / 7.0 LB-IN [0.56 Nm / 0.79 Nm].
- 5. USE COPPER CONDUCTORS ONLY.

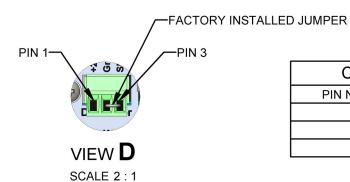


CONNECTION CHART					
PIN NUMBER	SIGNAL NAME				
1	LINE				
2	NEUTRAL				
3	EARTH				

VIEW C SCALE 2:1

### OPTION "DC" POWER INPUT TERMINATIONS

- 1. CLASS 2 INPUT VOLTAGE RANGE [24VDC NOMINAL]: 12-24 VDC, 3 WATTS NOMINAL.
- 2. TERMINAL BLOCK WIRE SIZE RANGE: 16 AWG MAXIMUM / 28 AWG MINIMUM.
- 3. WIRE TEMPERATURE RATING TO BE 90° C.
- 4. WIRE TIGHTENING TORQUE: 2.0 LB-IN / 2.2 LB-IN [0.23 Nm / 0.25 Nm].
- 5. USE COPPER CONDUCTORS ONLY.



CONNECTION CHART				
PIN NUMBER	SIGNAL NAME			
1	+24V IN			
2	GND			
3	SHIELD			





SIZE	FSCM	DRAWING NO.	REV.
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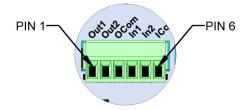
SHEET 7 OF 10

#### HI 6850 SERIES INSTRUMENT USER INTERFACE PANEL CONNECTIONS

## **DIGITAL I/O TERMINATIONS**

#### NOTES:

- 1. SEE USER'S GUIDE FOR ADDITIONAL INFORMATION ON DIGITAL I/O TERMINATIONS. USER'S GUIDE IS LOCATED ON HARDY PROCESS SOLUTIONS WEB SITE.
- 2. DO NOT BUNDLE DIGITAL I/O WIRING WITH POWER WIRING, RELAY CABLE OR ANY OTHER HIGH ENERGY CABLES.
- 3. TERMINAL BLOCK WIRE SIZE RANGE: 16 AWG MAXIMUM / 28 AWG MINIMUM.
- 4. WIRE TEMPERATURE RATING TO BE 90° C.
- 5. WIRE TIGHTENING TORQUE: 2.0 LB-IN / 2.2 LB-IN [0.23 Nm / 0.25 Nm].
- 6. USE COPPER CONDUCTORS ONLY.



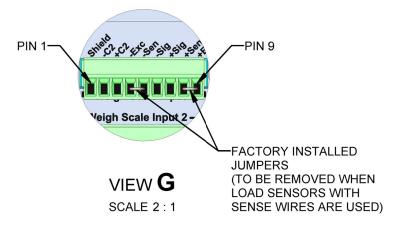
VIEW **F SCALE 2:1** 

CONNECTION CHART				
PIN NUMBER	SIGNAL NAME			
1	OUT1			
2	OUT2			
3	OUT COMMON			
4	IN1			
5	IN2			
6	IN COMMON			

# WEIGH SCALE INPUT TERMINATIONS TYPICAL FOR OPTIONS "NSA", "WS2", "WS3" AND "WS4"

#### NOTES:

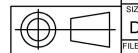
- 1. SEE USER'S GUIDE FOR ADDITIONAL INFORMATION ON LOAD CELL CONNECTIONS. USER'S GUIDE IS LOCATED ON HARDY PROCESS SOLUTIONS WEB SITE.
- 2. IF CONDUIT IS USED, DO NOT RUN LOAD CELL CABLE PARALLEL TO, OR IN SAME CONDUIT WITH, POWER WIRING, RELAY CABLE OR OTHER HIGH ENERGY CABLES.
- 3. FACTORY INSTALLED JUMPERS TO REMAIN IN PLACE ONLY FOR FOUR WIRE NON C2 LOAD CELL CONNECTION. JUMPERS TO BE REMOVED FOR SIX WIRE NON C2 OR EIGHT WIRE C2 LOAD CELL CONNECTIONS AND WHEN USED WITH OPTION IT1.
- 4. TERMINAL BLOCK WIRE SIZE RANGE: 16 AWG MAXIMUM / 28 AWG MINIMUM.
- 5. WIRE TEMPERATURE RATING TO BE 90°C.
- 6. WIRE TIGHTENING TORQUE: 2.0 LB-IN / 2.2 LB-IN [0.23 Nm / 0.25 Nm].
- 7. USE COPPER CONDUCTORS ONLY.



CONNECTION CHART				
PIN NUMBER	SIGNAL NAME			
1	SHIELD			
2	-C2			
3	+C2			
4	-EXC			
5	-SEN			
6	-SIG			
7	+SIG			
8	+SEN			
9	+EXC			



INSTALLATION/INTERCONNECTION DIAGRAM, HI 6850 SERIES



Έ	FSCM	DRAWING NO.
)	21316	0584-0

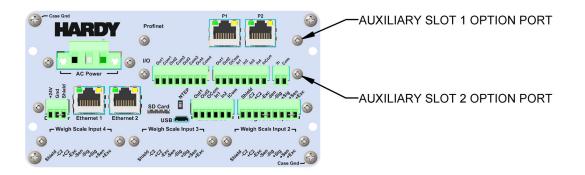
34-0113

SHEET 8 OF 10

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FILE NAME: 0584-0113B1 SLDDRW | SCALE: NONE

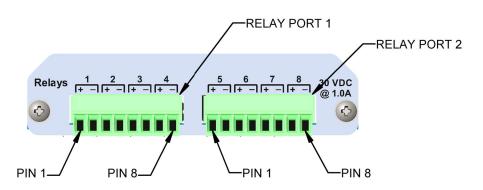
### HI 6850 SERIES INSTRUMENT USER INTERFACE PANEL CONNECTIONS



#### OPTION "GPRC" GENERAL PURPOSE RELAY TERMINATIONS

#### NOTES:

- 1. SEE USER'S GUIDE FOR ADDITIONAL INFORMATION ON RELAY TERMINATIONS. USER'S GUIDE IS LOCATED ON HARDY PROCESS SOLUTIONS WEB SITE.
- 2. DC RELAY RATINGS: 30 VDC @ 1.0 AMP.
- 3. TERMINAL BLOCK WIRE SIZE RANGE: 16 AWG MAXIMUM / 28 AWG MINIMUM.
- 4. WIRE TEMPERATURE RATING TO BE 90° C.
- 5. WIRE TIGHTENING TORQUE: 2.0 LB-IN / 2.2 LB-IN [0.23 Nm / 0.25 Nm].
- 6. USE COPPER CONDUCTORS ONLY.
- 7. WHEN ORDERED, THIS OPTION CAN BE INSTALLED IN EITHER ONE OR BOTH OF THE AUXILIARY SLOT OPTION PORTS.



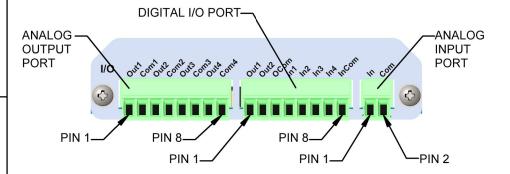
RELAY PORT 1 CONNECTION CHART		
PIN NUMBER	SIGNAL NAME	
1	OUT 1 +	
2	OUT 1 - OUT 2 +	
3		
4	OUT 2 -	
5	OUT 3 +	
6	OUT 3 -	
7	OUT 4 +	
8	OUT 4 -	

RELAY PORT 2 CONNECTION CHA			
PIN NUMBER	SIGNAL NAME		
1	OUT 5 +		
2	OUT 5 -		
3	OUT 6 +		
4	OUT 6 -		
5	OUT 7 +		
6	OUT 7 -		
7	OUT 8 +		
8	OUT 8 -		

# OPTION "GPIO" GENERAL PURPOSE INPUT/OUTPUT TERMINATIONS

#### NOTES:

- 1. SEE USER'S GUIDE FOR ADDITIONAL INFORMATION ON ANALOG AND DIGITAL I/O TERMINATIONS. USER'S GUIDE IS LOCATED ON HARDY PROCESS SOLUTIONS WEB SITE.
- 2. DO NOT BUNDLE ANALOG AND DIGITAL I/O WIRING WITH POWER WIRING, RELAY CABLE OR ANY OTHER HIGH ENERGY CABLES.
- 3. TERMINAL BLOCK WIRE SIZE RANGE: 16 AWG MAXIMUM / 28 AWG MINIMUM.
- 4. WIRE TEMPERATURE RATING TO BE 90° C.
- 5. WIRE TIGHTENING TORQUE: 2.0 LB-IN / 2.2 LB-IN [0.23 Nm / 0.25 Nm].
- 6. USE COPPER CONDUCTORS ONLY.
- 7. WHEN ORDERED, THIS OPTION CAN BE INSTALLED IN EITHER ONE OR BOTH OF THE AUXILIARY SLOT OPTION PORTS.



ANALOG IN CONNECTION CHART		
PIN NUMBER	SIGNAL NAME	
1	4-20MA INPUT	
2	COMMON	

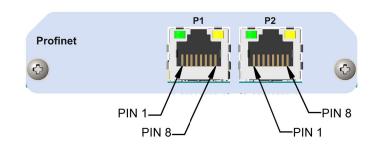
ANALOG OUT CONNECTION CHART			
PIN NUMBER	SIGNAL NAME		
1	ANALOG OUT 1		
2	ANALOG OUT 1 COMMON		
3	ANALOG OUT 2		
4	ANALOG OUT 2 COMMON		
5	ANALOG OUT 3		
6	ANALOG OUT 3 COMMON		
7	ANALOG OUT 4		
8	ANALOG OUT 4 COMMON		

DIGITAL I/O CONNECTION CHART			
PIN NUMBER	SIGNAL NAME		
1	DIGITAL OUT 1		
2	DIGITAL OUT 2		
3	DIGITAL OUT COMMON		
4	DIGITAL IN 1		
5	DIGITAL IN 2		
6	DIGITAL IN 3		
7	DIGITAL IN 4		
8	DIGITAL IN COMMON		
·			

# OPTION "PFNC" - PROFINET COMMUNICATIONS TERMINATIONS

#### NOTES

- 1. SEE USER'S GUIDE FOR ADDITIONAL INFORMATION ON PROFINET TERMINATIONS. USER'S GUIDE IS LOCATED ON HARDY PROCESS SOLUTIONS WEB SITE.
- 2. CONNECTOR TYPE: RJ-45, 8 PIN; QTY 2.
- 3. WHEN ORDERED, THIS OPTION CAN ONLY BE INSTALLED IN THE AUXILIARY SLOT 1 OPTION PORT.

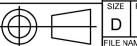


CONNECTION CHART			
PIN NUMBER	SIGNAL NAME		
1	TX+		
2	TX-		
3	V+		
4	GND		
5	GND		
6	V+		
7	RX+		
8	RX-		



INSTALLATION/INTERCONNECTION DIAGRAM, HI 6850 SERIES

1	SIZE	FSCM	DRAWING NO.			REV.	
F	D	21316	0584-0113			В	}
1	FILE NAME: 0584-0113B1.SLDDRW		SCALE: NONE	SHEET 9	OF	10	

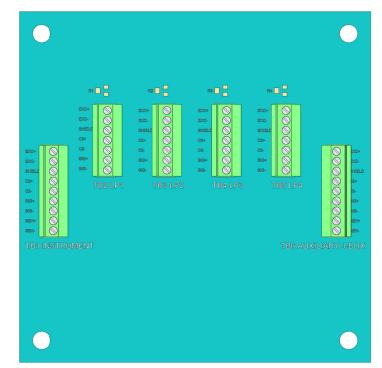


# HI 6850 SERIES OPTION CODE "IT1"

# **OPTION IT1 SUMMING CARD TERMINATIONS**

#### NOTES:

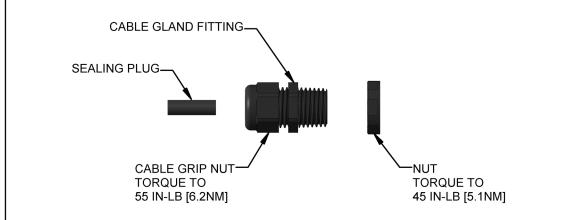
- 1. SEE USER'S GUIDE FOR ADDITIONAL INFORMATION ON LOAD CELL CONNECTIONS. USER'S GUIDE IS LOCATED ON HARDY PROCESS SOLUTIONS WEB SITE.
- 2. IF CONDUIT IS USED, DO NOT RUN LOAD CELL CABLE PARALLEL TO, OR IN SAME CONDUIT WITH, POWER WIRING, RELAY CABLE OR OTHER HIGH ENERGY CABLES.
- 3. TERMINAL BLOCK WIRE SIZE RANGE: 16 AWG MAXIMUM / 28 AWG MINIMUM.
- 4. WIRE TEMPERATURE RATING TO BE 90° C.
- 5. WIRE TIGHTENING TORQUE: 2.0 LB-IN / 2.2 LB-IN [0.23 Nm / 0.25 Nm].
- 6. USE COPPER CONDUCTORS ONLY.
- 7. OPTION "IT1" CAN ONLY BE ORDERED WITH TYPE 4X ENCLOSURE OPTION "PMWS1" OR "PMWS2".



#### HI 6850 SERIES OPTION CODES "NSC" AND "IT1" CABLE GLAND SET

#### NOTES:

- 1. OPTION NSC INCLUDES CABLE GLAND SET ONLY.
- 2. OPTION IT1 INCLUDES IT SUMMING CARD AND CABLE GLAND SET
- 3. CABLE GLAND SET INCLUDES QTY 6 CABLE GLAND FITTINGS, QTY 6 NUTS AND QTY 6 SEALING PLUGS. [SEALING PLUG TO BE INSTALLED INTO CABLE FITTING WHEN SIGNAL CABLE IS NOT USED]
- 4. CABLE GLAND SET IS PACKED SEPARATELY INSIDE ENCLOSURE.
- 5. OPTIONS "NSC" AND "IT1" AND CAN ONLY BE ORDERED WITH TYPE 4X ENCLOSURE OPTION "PMWS1" OR "PMWS2".



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SHEET 10 OF 10

#### SUMMING CARD CABLE WIRING DIAGRAM

