Revision History

Sheet 1 of 1

Model: M32XX-AXX0XXX-XXXXX

Document No.: OD-M3200

Drawing Title:

DCN	Rev	Date	Revision	Appvl
	1	2017-8-28	INITIAL RELEASE	Henry Peng

TE connectivity

TITLE

OUTLINE DRAWING OD-M3200

Doc No.: OD-M3200
Rev 1/2017-8-28
(DCN:)
SHEET 1 OF 4

UNLESS OTHERWISE SPECIFIED, DIMS ARE IN INCHES [mm]
TOLERANCES ON
ANGLES = ±1/2° .XX =±.01[0.25]
FRACTION = ±1/10 .XXX =±0.003[0.08]

THIRD ANGLE PROJECTION

M3200 ANALOG OUTPUT STANDARD PART MATRIX

M32 [ ][ ] — [ ][ ] 0 0 0 [ ] — [ ][ ][ ][ ][ ]

MODEL NO.

CODE	OUTPUT SIGNAL	SUPPLY VOLTAGE
1	0 TO 50 mV	5±0.25V
2	0 TO 100 mV	5±0.25V
3	0.5 TO 4.5 V	5±0.25V
4	1 TO 5 V	1 TO 5 V
5	4 TO 20 mA	9-30V
6	0 TO 5 V	8-30V
7	0 TO 10 V	12-30V
8	1 TO 6 V	8-30V

CODE	PORT MATERIAL
0	17-4PH
1	316L SS

0	NO SELECTION
1	OXYGEN CLEAN B40.1 LEVEL IV
2	WITH SNUBBER

CODE	CONNECTION TYPE
1	CABLE 2 FT
E	CABLE 3 FT
2	CABLE 4 FT
3	CABLE 10 FT
4	PACKARD CONNECTOR A
6	FORM C
9	PACKARD CONNECTOR B
M	CABLE 1 M
N	CABLE 2 M
P	CABLE 5 M
R	CABLE 10 M

CODE	PRESSURE PORT	DIM C
2	1/4-19 BSPP	0.366 [9.3]
3	G3/8 JIS B2351	0.366 [9.3]
4	7/16-20 UNF MALE SAE J1926-2 STRAIGHT THREAD O-RING BUNA-N 90SH-904	0.366 [9.3]
5	1/4-18 NPT	0.366 [9.3]
6	1/8-27 NPT	0.366 [9.3]
B	G1/4 JIS B2351	0.366 [9.3]
E	1/4-19 BSPT	0.366 [9.3]
F	1/4-19 BSPP FEMALE *WITHOUT SNUBBER	0.366 [9.3]
G	M14x1.5mm ISO 6149-2	0.366 [9.3]
N	7/16-20 UNF FEMALE SAE J513 STRAIGHT THREAD	0.444 [11.28]
P	7/16-20 UNF FEMALE SAE J513 STRAIGHT THREAD WITH INTERGRAL VALVE DEPRESSOR	0.444 [11.28]
Q	M10×1.0mm ISO 6149-2	0.366 [9.3]
S	M12×1.5mm ISO 6149-2	0.366 [9.3]
U	G1/4 DIN 3852 FORM E GASKET DIN3869-14 NBR	0.444 [11.28]
W	M20X1.5mm ISO 6149-2	0.366 [9.3]

PRESSURE RANGE	
PSI STD	BAR STD
050P	3.5B
100P	007B
200P	010B
300P	020B
500P	035B
01KP	070B
03KP	200B
05KP	350B
07KP	500B
10KP	700B
15KP	01KB

(1)

CODE	PRESSURE TYPE
G	GAUGE
C	COMPOUND

TRANSDUCER SPECIFICATIONS:

UNLESS OTHERWISE SPECIFIED: ALL PARAMETERS MEASURED AT 25°C					
PARAMETERS	MIN	TYP	MAX	UNITS	NOTES
ACCURACY(NLH & REP)	-0.25	-	0.25	%.F.S BFSL	NONE mV OUTPUT
	-1	-	1	%.F.S BFSL	mV OUTPUT
ISOLATION, BODY TO ANY LEAD	50M	-	-	Ohms	@250 VDC
DIELECTRIC STRENGTH	-	-	2	mA	@500 VAC 1 MINUTE
PRESURE CYCLES	1.0E+06	-	-	0~FS CYCLES	
PROOF PRESSURE	2x	-	-	RATED	
BURST PRESSURE	5x	-	-	RATED	NO MORE THAN 20KPSI
LONG TERM STABILITY (1 YEAR)	-0.25	-	0.25	%.F.S	
TOTAL ERROR BAND (none mV output)	-1	-	1	%.F.S	OVER COMPENSATED TEMPERATURE
ZERO THERMAL ERROR (mV output)	-3	-	3	%.F.S	
SPAN THERMAL ERROR (mV output)	-2	-	2	%.F.S	
ZERO OFFSET & SPAN TOLERANCE (mV output)	-2	-	2	%.F.S	AT 25°C
COMPENSATED TEMPERATURE	0	-	55	°C	
OPERATING TEMPERATURE	-20	-	85	°C	
STORAGE TEMPERATURE	-40	-	85	°C	
WEATHER PROOF RATING	IP 67				
WETTED MATERIAL	17-4PH OR 316L STAINLESS STEEL				
RISE TIME(10% TO 90%)	<2 ms(VOLTAGE OUTPUT);<3ms (CURRENT OUTPUT)				
SHOCK	50g, 11 mS HALF SINE SHOCK PER MIL-STD-202G, METHOD 213B, CONDITIONA				
VIBRATION	±20g, MIL-STD-810C, PROCEDURE 514.2, FIG 514.2-2, CURVE L				
CE COMPLIANCE	EN 55022 EMISSIONS CLASS A&B IEC 61000-4-2 ELECTROSTATIC DISCHARGE IMMUNITY(4KV CONTACT/8KV AIR DISCHARGE IEC 61000-4-3 RADIATED,RADIO-FREQUENCY ELECTROMAGNETIC FIELD IMMUNITY (10V/m,80M~1G Hz,3V/m 1.4~2.0G Hz,1V/m 2.0~2.7G Hz) IEC 61000-4-4 ELECTRICAL FAST TRANSIENT/BURST IMMUNITY(±2KV) IEC 61000-4-5 SURGE(Line to Line:±1.0KV/42Ω;Line to case:±1.0KV/42Ω) IEC 61000-4-6 IMMUNITY TO CONDUCTED DISTURBANCES,INDUCED BY RADIO-FREQUENCY FIELDS(150K~80M Hz,3V rms for current output model,10V rms for voltage model)				

NOTES:

(1). FOR mV OUTPUT,THE MINIMUM PRESSURE RANGE IS 100PSI.

UNLESS OTHERWISE SPECIFIED, DIMS ARE IN INCHES [mm]
TOLERANCES ON
ANGLES = ±1/2° .XX =±.01[0.25]
FRACTION = ±1/10 .XXX =±0.003[0.08]

THIRD ANGLE PROJECTION

M3200 DIGITAL OUTPUT STANDARD PART MATRIX

M32 [ ][ ] — [ ][ ] 0 [ ][ ][ ] — [ ][ ][ ][ ][ ]

MODEL NO.

CODE	OUTPUT SIGNAL	SUPPLY VOLTAGE
J	I²C	2.7~5.0V
S	SPI	2.7~5.0V

CODE	CONNECTION TYPE
1	CABLE 2 FT
E	CABLE 3 FT
6	FORM C (3)

CODE	PORT MATERIAL
0	17-4PH
1	316L SS

CODE	FOR DIGITAL OUTPUT ONLY
0	NON-SLEEP MODE
1	SLEEP MODE

CODE	PRESSURE TYPE
G	GAUGE
C	COMPOUND

0	NO SELECTION
1	OXYGEN CLEAN B40.1 LEVEL IV
2	WITH SNUBBER

CODE	ADDR. FOR I²C
0	0X28H
1	0X36H
2	0X46H
3	0X48H
4	0X51H

SPI DEFAULT CODE '0'

CODE	PRESSURE PORT	DIM C
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PRESSURE RANGE	
PSI STD	BAR STD
050P	3.5B
100P	007B
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300P	020B
500P	035B
01KP	070B
03KP	200B
05KP	350B
07KP	500B
10KP	700B
15KP	01KB

NOTES:
1. REFLECT PRESSURE PORT DIAPHRAGM TEMPERATURE OVER THE COMPENSATED TEMPERATURE RANGE;
2. RESPONSE TIME IS FROM POWER ON TO READING MEASUREMENT DATA;
(3) FORM C CONNECTOR IS AVAILABLE FOR I2C OUTPUT ONLY.

TRANSDUCER SPECIFICATIONS:

UNLESS OTHERWISE SPECIFIED:ALL PARAMETERS MEASURED AT 25˚C					
PARAMETERS	MIN	TYP	MAX	UNITS	NOTES
OUTPUT AT ZERO PRESSURE	750	1000	1250	COUNT	
OUTPUT AT FS PRESSURE	14750	15000	15250	COUNT	
CURRENT CONSUMPTION	-	-	3.5	mA	
PROOF PRESSURE	2x	-	-	RATED	
BURST PRESSURE	5x	-	-	RATED	NO MORE THAN 20KPSI
ISOLATION, BODY TO ANY LEAD	50M	-	-	Ohms	@250 VDC
PRESURE CYCLES	1.0E+06	-	-	0~FS CYCLES	
ACCURACY (NLH&REP)	-1	-	1	%.F.S BFSL	@ 25˚C
TEMPERATURE ACCURACY	-3	-	3	˚C	NOTE 1
LONG TERM STABILITY (1 YEAR)	-0.25	-	0.25	%.F.S	
TOTAL ERROR BAND	-2	-	2	%.F.S	OVER COMPENSATED TEMPERATURE
COMPENSATED TEMPERATURE	0	-	55	˚C	
COMPENSATED TEMP.OUTPUT	512	-	1075	COUNT	
OPERATING TEMPERATURE	-20	-	85	˚C	
STORAGE TEMPERATURE	-40	-	85	˚C	
WEATHER PROOF RATING	IP 67				
RESPONSE TIME	NON-SLEEP MODE: <3 mS @4MHz; SLEEP MODE:<8.4 mS@4MHz				
WETTED MATERIAL	17-4PH OR 316L STAINLESS STEEL				
SHOCK	50g, 11 mS HALF SINE SHOCK PER MIL-STD-202G, METHOD 213B, CONDITIONA				
VIBRATION	±20g, MIL-STD-810C, PROCEDURE 514.2, FIG 514.2-2, CURVE L				
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TITLE

OUTLINE DRAWING
OD-M3200

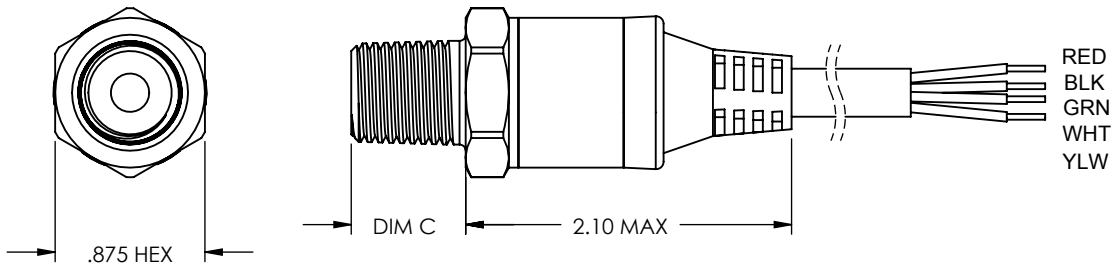
Doc No.: OD-M3200
Rev 1/2017-8-28
(DCN:)
SHEET 3 OF 4

UNLESS OTHERWISE SPECIFIED, DIMS ARE IN INCHES [mm]
TOLERANCES ON
ANGLES = ±1/2° .XX =±.01[0.25]
FRACTION = ±1/10 .XXX =±0.003[0.08]

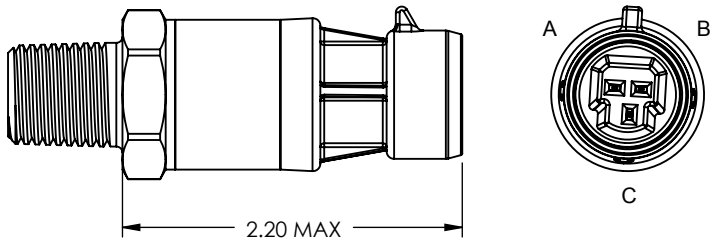
THIRD ANGLE PROJECTION

CONNECTION TYPE

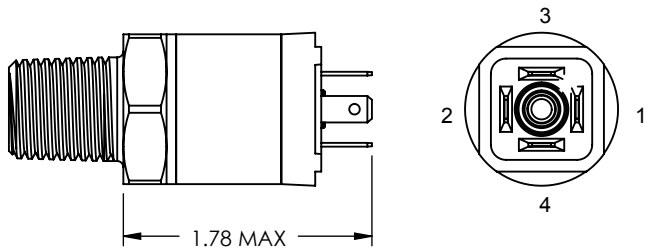
CABLE



PACKARD CONNECTOR



FORM C



NOTE:
1.NC. PINS ARE RESERVED FOR FACTORY USE ONLY. **CUSTOMER SHALL NOT CONNECT!**
2.FOR CABLE CONNECTION, THE DRAIN WIRE IS INTERNALLY TERMINATED TO PRESSURE PORT.
3.TRANSMITTER OF GAGE PRESSURE TYPE REQUIRES VENT TO ATMOSPHERE ON THE PRESSURE REFERENCE SIDE. THIS IS ACCOMPLISHED VIA A CABLE FROM THE TRASNMITTER (THE END OF THE CABLE SHOULD BE TERMINATED TO CLEAN & DRY AREA) OR THROUGH THE CUSTOMER MATING CONNECTOR/CABLE ASSEMBLY WHICH HAS INTERNAL VENT PATH.
4.WEATHER-PROOF RATINGS ARE MET WHEN THE MATING CONNECTORS ARE INSTALLED PROPERLY AND THE CABLE TERMINATION IS TO DRY AND CLEAN AREA.

CURRENT OUTPUT WIRING				
CONNECTION	+SUPPLY	-SUPPLY	NC.PINS	P REF VENT
CABLE	RED	BLK	-	IN CABLE
PACKARD A	A	B	C	HOLE THROUGH CONNECTOR
PACKARD B	B	A	C	HOLE THROUGH CONNECTOR
FORM C	1	2	3,4	THREAD THROUGH CONNECTOR

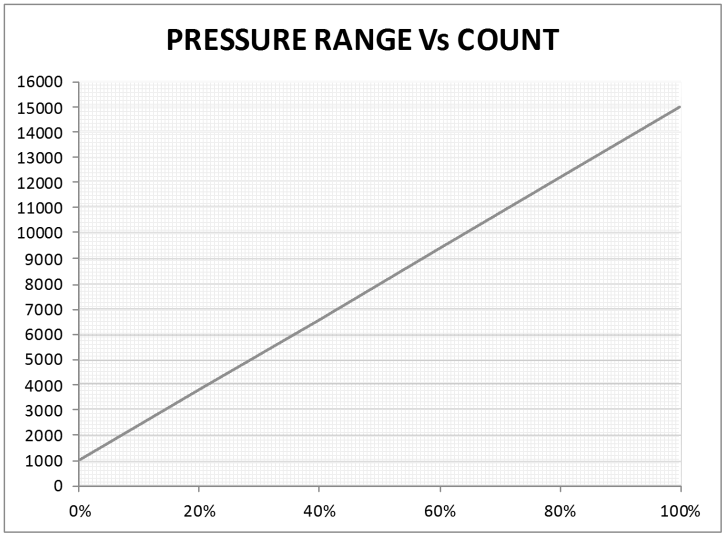
VOLTAGE OUTPUT WIRING						
CONNECTION	+SUPPLY	-SUPPLY	+OUTPUT	-OUTPUT	NC.PINS	P REF VENT
CABLE (mV OUTPUT)	RED	BLK	GRN	WHT	-	IN CABLE
CABLE (V OUTPUT)	RED	BLK	WHT	CUT OFF	-	IN CABLE
PACKARD A	A	B	C	-	-	HOLE THROUGH CONNECTOR
PACKARD B	B	A	C	-	-	HOLE THROUGH CONNECTOR
FORM C	1	3	2	-	4	THREAD THROUGH CONNECTOR

DIGITAL OUTPUT CONNECTION (CABLE TYPE)					
MODE	RED	BLK	GRN	WHT	YLW
I^2C	+SUPPLY	-SUPPLY	SCL	SDA	-
SPI	+SUPPLY	-SUPPLY	SCLK	MISO	SS

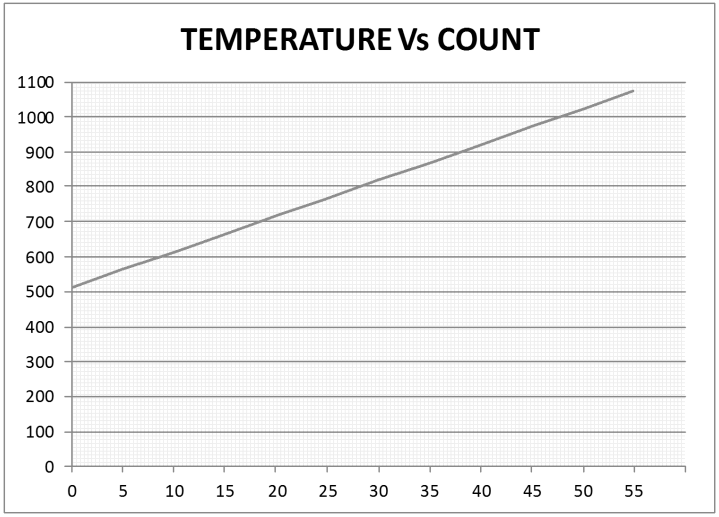
DIGITAL OUTPUT CONNECTION (FORM C TYPE)				
MODE	PIN 1	PIN 3	PIN 2	PIN 4
I^2C	+SUPPLY	-SUPPLY	SCL	SDA

UNLESS OTHERWISE SPECIFIED, DIMS ARE IN INCHES [mm]
TOLERANCES ON
ANGLES = ±1/2° .XX =±.01[0.25]
FRACTION = ±1/10 .XXX =±0.003[0.08]

THIRD ANGLE PROJECTION



$$\text{OUTPUT (DECIMAL COUNTS)} = \frac{15000-1000}{\text{Pmax-Pmin}} X \ (\text{Papplied-Pmin})+1000$$



$$\text{OUTPUT (DECIMAL COUNTS)} = \frac{(\text{OUTPUT}^{\circ}\text{C}+50^{\circ}\text{C})X2048}{150^{\circ}\text{C}-(-50^{\circ}\text{C})}$$

SENSOR OUTPUT AT SIGNIFICANT PERCENTAGES

% OUTPUT	DIGITAL COUNTS (DECIMAL)	DIGITAL COUNTS(HEX)
0%	1000	0×3E8
5%	1700	0×6A4
10%	2400	0×960
50%	8000	0×1F40
90%	13600	0×3520
95%	14300	0×37DC
100%	15000	0×3A98

TEMPERATURE OUTPUT

OUTPUT °C	DIGITAL COUNTS (DECIMAL)	DIGITAL COUNTS (HEX)
0	512	0×200
10	614	0×266
25	767	0×2FF
40	921	0×399
55	1075	0×433

APPROVAL

SIGNATURE (CUSTOMER)	PRINT NAME	DATE
SIGNATURE (MEAS-SPEC)	PRINT NAME	DATE