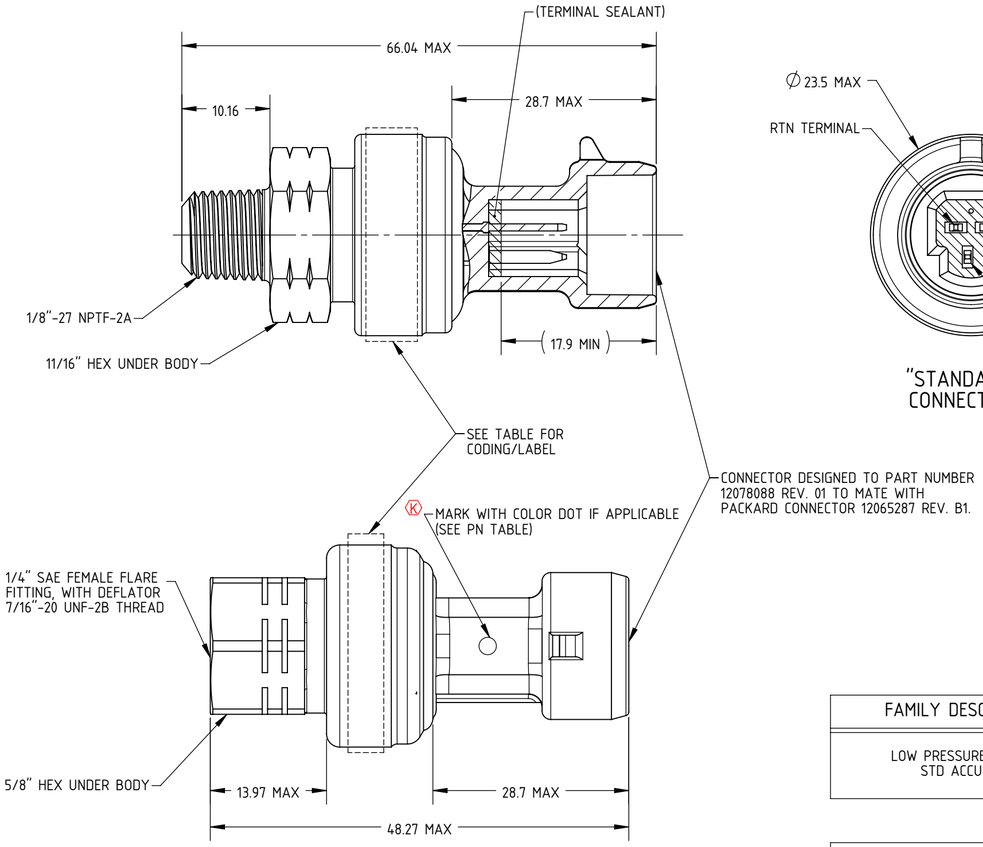
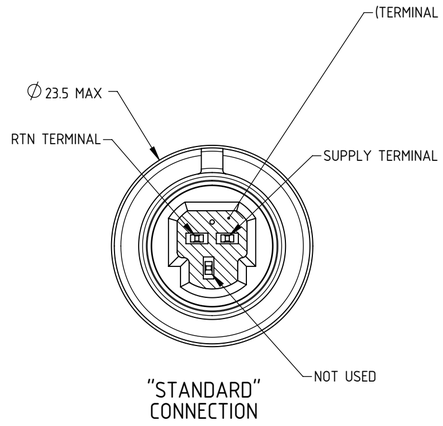
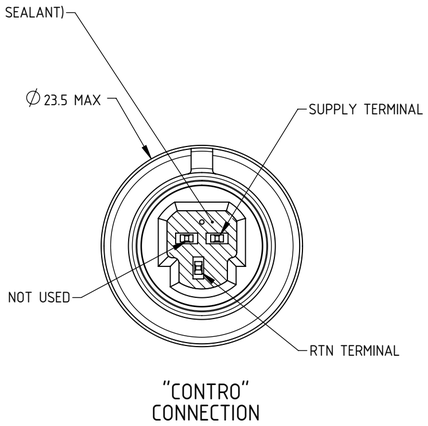
REVISION TABLE					
REV.	DESCRIPTION	DRAFTER	ECO No	DATE	REQUESTOR
K	SEE REVISION ADDENDUM	D. Hristova	ECO-420143	25-Mar-2021	M. Delgado

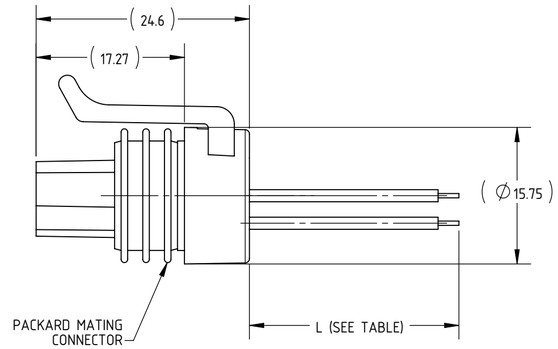




"STANDARD" CONNECTION



"CONTRO" CONNECTION



88CP X X X XXX X X (X)

FAMILY DESCRIPTION
LOW PRESSURE, 4-20mA, STD ACCURACY

HEXPORT MATERIAL	
CODE	MATERIAL
7	BRASS
8	PLATED STEEL
9	STAINLESS STEEL

HEX UNDER BODY		
CODE	THREAD	HEX
2	1/8"-27 NPTF-2A	11/16" UNDER
5	7/16"-20 UNF-2B W/ DEFLATOR	5/8" UNDER

ELECTRICAL CONNECTOR	
CODE	DESCRIPTION
5	TWO TAIL PACKARD CONNECTOR STANDARD
7	TWO TAIL PACKARD CONNECTOR "CONTRO"

MATERIAL	
CONNECTOR:	
INSULATOR:	PPO 30% GLASS FILLED
TERMINALS:	CDA 260 BRASS WITH Sn PLATE

TERMINAL SEALANT		
CODE	SEAL MATERIAL	SEAL TEMPERATURE
T	TSE-399 RTV SILICONE	TERMINAL SEALANT, ONLY APPLICABLE WHEN T IS SPECIFIED

PRESSURE SEALS		
CODE	SEAL MATERIAL	SEAL TEMPERATURE
F	FLUOROSILICONE	(-45 °C TO +135 °C)
H	HYDROGEN'D NITRILE	(-20 °C TO +135 °C)
N	NEOPRENE	(-37 °C TO +120 °C)
V	FLUOROCARBON	(-26 °C TO +135 °C)

PRESSURE REFERENCE	
CODE	DESCRIPTION
A	ABSOLUTE (NO VENT)
G	RELATIVE (VENT)
S	SEALED GAGE (NO VENT)

LOW PRESSURE RANGE		
CODE	OPERATING PRESSURE	
M11	-1.... 11	BAR
M35	0....34.5	BAR
M15	0....15	BAR
M50	0....50	BAR
M18	0....18	BAR
M30	0....30	BAR

SPECIFICATIONS	mA OUTPUT
1. POWER SUPPLY VOLTAGE	6 TO 30 VDC
2. ENVIRONMENTAL(AMBIANT) TEMPERATURE	-20 °C TO +135 °C
3. STORAGE TEMPERATURE	-40 °C TO +150 °C
4. MEDIUM(FUILD) TEMPERATURE	-40 °C TO +135 °C
5. OUTPUT LOAD (WHERE Vs-ACTUAL SUPPLY V)	(Vs-7)/0.02
6. PERFORMANCE(STATIC ERROR BAND @ 25°C)	+/-1% SPAN@16Vdc
7. LINEARITY	<+/-0.75% SPAN
8. ERROR BAND	-20 °C TO +100 °C ±2% SPAN
9. TOTAL ERROR BAND	-20 °C TO +135 °C -3.5%/+2% SPAN
10. OVERVOLTAGE/REVERSE PROTECTION	39 Vdc
11. PROOF PRESSURE	>1.5 TIME PRESSURE RANGE
12. BURST PRESSURE	>3 TIME PRESSURE RANGE
13. RANDOM VIBRATION	10 Grms(25-2000Hz)
14. EMC (512 MHz - 1 GHz acc,EN61000-4-3)	30 V/m
15. ESD (EN61000-4-2)	8kV IN AIR,4kV CONTACT

PRODUCTION SETUP P/N	MATING HARNESS	CODING/LABEL
88CP957M35SV	INCLUDING 2 WIRE CONTRO HARNESS* L=3m	LABEL WITH: P/N, 0..34,5BAR, 4-20mA, 6-30Vdc AND DATECODE
88CP957M11SV	INCLUDING 2 WIRE CONTRO HARNESS* L=3m	LABEL WITH: P/N, -1..11BAR, 4-20mA, 6-30Vdc AND DATECODE
88CP857M50SN		LABEL WITH: P/N, 0..50BAR, 4-20mA, 6-30Vdc AND DATECODE
88CP957M15SV	INCLUDING 2 WIRE CONTRO HARNESS* L=3m	LABEL WITH: P/N, 1..15BAR, 4-20mA, 6-30Vdc AND DATECODE
88CP957M50SV	INCLUDING 2 WIRE CONTRO HARNESS* L=3m	LABEL WITH: P/N, 0..50BAR, 4-20mA, 6-30Vdc AND DATECODE
88CP757M18SNT	NOT APPLICABLE	LABEL WITH: P/N, 0...18BAR, 4-20mA, 6-30Vdc AND DATECODE
88CP757M30SN	NOT APPLICABLE	LABEL WITH: P/N, 0...30BAR, 4-20mA, 6-30Vdc AND DATECODE

* MATING HARNESS IS NOT CONNECTED TO THE SENSOR, HARNESS IS BOXED WITH SENSOR

NOTES:

1. TERMINAL SEALANT DECREASES RATE OF MOISTURE INGRESS INTO THE ELECTRONICS CAVITY PER THE CHILL BLOCK TEST DOCUMENTED IN DOC00127454. TERMINAL SEALANT DOES NOT PROTECT TERMINAL PINS FROM MOISTURE EFFECTS WHICH CAN ADVERSELY AFFECT DEVICE OUTPUT ACCURACY.
2. TERMINAL SEALANT HAS BEEN VALIDATED BY CLIVET IN APPLICATION.
3. APPLICATION NOTE:
   - SENSATA PRESSURE SENSORS OF FAMILY 87CP/88CP ARE NOT INTENDED TO USE AS SAFETY DEVICES AND MAY NOT BE UTILIZED FOR THIS SAFETY FUNCTION.
   - THE SENSOR MUST ONLY BE USED FOR PRESSURE MEASUREMENT; REGULATING THE APPLICATION.
   - HE INFORMATION, RECEIVED FROM THE SENSOR BY CUSTOMER SOFTWARE, SHALL BE TRANSFERRED INTO A CUSTOMER CONTROL UNIT WHICH REGULATES/STEER THE APPLICATION.
   - NEXT TO THE SENSOR, THERE IS ALWAYS A HIGH-PRESSURE CUT-OUT SWITCH MUST BE INSTALLED IN THE SAME APPLICATION, TO PROTECT THE SYSTEM.

FOR REFERENCE ONLY, CHECK LATEST REVISION BEFORE USE.

FIRST ISSUE DATE: 17-Apr-2015
FIRST DRAWN BY: R. van der Felz
ENGINEER: K. Maslova
ENGINEERING SUPERVISOR: W. Alink
PRODUCT GROUP: H&I
MATERIAL: N.A.
GEN. ROUGHNESS: Ra, acc. ISO 1302:2002
ESTIMATED WEIGHT: . g.

NEITHER THIS PRINT NOR THE INFORMATION CONTAINED HEREON IS TO BE USED AGAINST THE INTERESTS OF SENSATA TECHNOLOGIES OR AGAINST THE INTERESTS OF ANY OF ITS AFFILIATED COMPANIES OR WHOLLY OWNED SUBSIDIARIES

INTERPRET DIMENSIONING AND TOLERANCING PER ASME Y14.5-2009 UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN MILLIMETERS.

GENERAL TOLERANCES UNLESS OTHERWISE SPECIFIED:

LINEAR	ANGLES	EDGES
0 UP TO 6: ±0.1	±3°	L±0.2 L±0.2
OVER 6 UP TO 30: ±0.2		
OVER 30 UP TO 120: ±0.3		
OVER 120 UP TO -: ±0.5		

acc. ISO 13715:2000

DO NOT SCALE DRAWING | THIRD ANGLE PROJECTION | DRAWING SIZE: A2

Sensata Technologies
JAN TINBERGENSTRAAT 80
7559 SP HENGELO
THE NETHERLANDS

TITLE
ENVELOPE DRAWING
88CP 4-20mA PRESSURE TRANSDUCER TYPES

DRAWING STATUS: PRODUCTION

DRAWING NUMBER	REV
T-674308-ENV	K

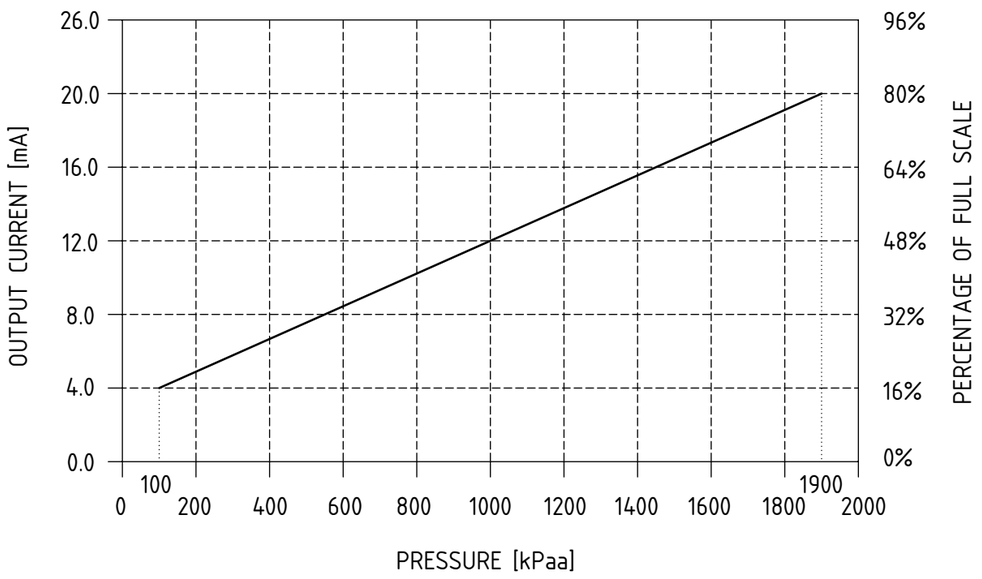
SCALE 2:1 | SOLIDWORKS | SHEET 1 OF 3

REVISION SYMBOL: ⬡

PROJECT NO: PRJ0005433

PRODUCTION SETUP P/N	MATING HARNESS	CODING/LABEL
88CP757M30SN..B01MX	NOT APLICABLE	LASER CODE WITH: SENSATA PN, 0...50BAR AND DATECODE
88CP857M50SN..B01MX	NOT APLICABLE	LASER CODE WITH: SENSATA PN, 0...30BAR AND DATECODE
88CP757M30SH..B10MX	NOT APLICABLE	LASER CODE WITH: SENSATA PN, 0...30BAR AND DATECODE ADD WHITE DOT ON CONNECTOR'S NECK
88CP857M50SH..B10MX	NOT APLICABLE	LASER CODE WITH: SENSATA PN, 0...50BAR AND DATECODE ADD WHITE DOT ON CONNECTOR'S NECK

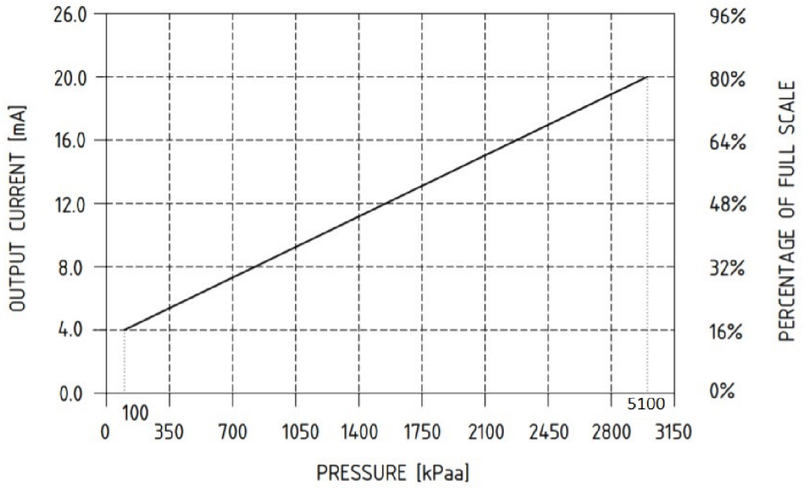
OUTPUT CHARACTERISTICS FOR 88CPXXXM18SX(X)



Iout (mA) = 0.00889 * P [kPaa] + 3.111
%FS = 0.03556 * P [kPaa] + 12.444
FULL SCALE (FS) = 25 mA

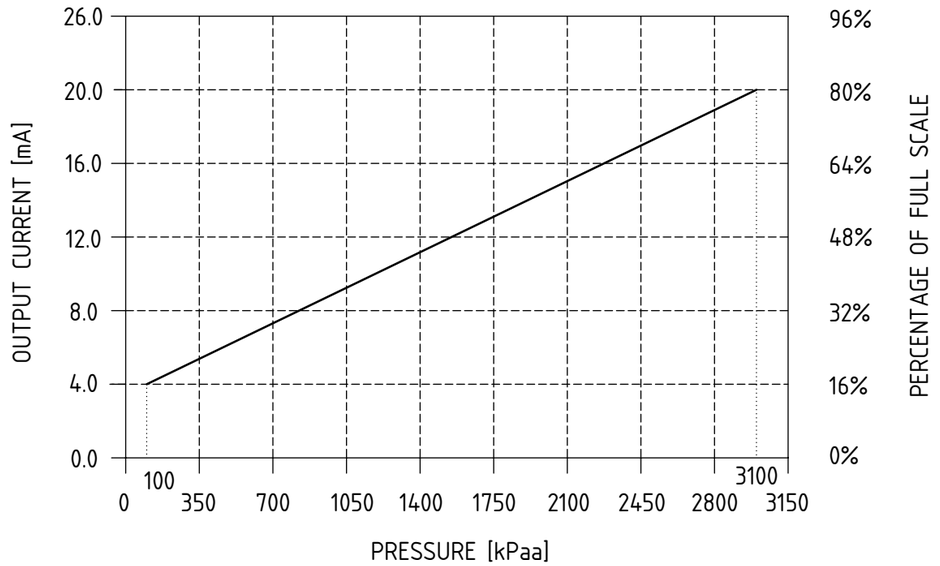
SATURATION FOR BOTH OUTPUT CHARACTERISTIC CHARTS: LOW: 6.62% ±1%FS
HIGH: 93.88% ±1.5%FS

OUTPUT CHARACTERISTICS FOR 88CPXXXM50SX(X)



Iout (mA) = 0.00320*P[kPa]+3.68
%FS=0.0128*P[kPa]+14.72
FULL SCALE (FS) = 25mA
CHECK SATURATION: LOW: TBD ±1%Vs
HIGH: TBD ±1.5%Vs

OUTPUT CHARACTERISTICS FOR 88CPXXXM30SX(X)



Iout (mA) = 0.00533 * P [kPaa] + 3.467
%FS = 0.0213 * P [kPaa] + 13.867
FULL SCALE (FS) = 25 mA

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DRAWING SIZE	DRAWING NUMBER	REV
A3	T-674308-ENV	K

SCALE 2:1 | SOLIDWORKS | SHEET 2 OF 3

REVISION ADDENDUM

DATE	REV.	ECO# ; DRAFTER	ZONE		DESCRIPTION
17-Apr-2015	A	ECO-113520;RF			INTIAL PRODUCTION RELEASE
15-Jul-2015	B	117553 ; RG	G8	Added	table
			C2	deleted	text date code
			B3 and D3	changed	coding box
			C10	Added	"L(see table)"
			B10	changed	packard mating connector
24-Mar-2017	C	ECO-155107; RK		Updated	to new standard
			F9	Added	new low pressure range in the table
			G8	Added	new production setup P/N in table
7-Nov-2017	D	ECO-194661; BG	A4	ADDED	NOTE: "(TERMINAL SEALANT)"
			A6/7	ADDED	NOTE: "(TERMINAL SEALANT)"
			B4	ADDED	DIMENSION: (17.9 MIN)
			C9	ADDED	ADDITIONAL "(X)" TO THE CODE AND TABLE "TERMINAL SEALANT"
			F9	ADDED	M18 AND M30 CODE IN "LOW PRESSURE RANGE" TABLE
			G8	ADDED	88CP757M18SNT AND 88CP757M30SN IN PRODUCTION SETUP PART NUMBER
12-Dec-2017	E	ECO-201351; BG	G7	ADDED	NOTES: 1. TERMINAL SEALANT DECREASES RATE OF MOISTURE INGRESS INTO THE ELECTRONICS CAVITY PER THE CHILL BLOCK TEST DOCUMENTED IN DOC00127454. TERMINAL SEALANT DOES NOT PROTECT TERMINAL PINS FROM MOISTURE EFFECTS WHICH CAN ADVERSLY AFFECT DEVICE OUTPUT ACCURACY. 2. TERMINAL SEALANT HAS BEEN VALIDATED BY CLIVET IN APPLICATION. 3. APPLICATION NOTE: SENSATA PRESSURE SENSORS OF FAMILY 87CP/88CP ARE NOT INTENDED TO USE AS SAFETY DEVICES AND MAY NOT BE UTILIZED FOR THIS SAFETY FUNCTION. THE SENSOR MUST ONLY BE USED FOR PRESSURE MEASUREMENT; REGULATING THE APPLICATION. HE INFORMATION, RECEIVED FROM THE SENSOR BY CUSTOMER SOFTWARE, SHALL BE TRANSFERRED INTO A CUSTOMER CONTROL UNIT WHICH REGULATES/STEER THE APPLICATION. NEXT TO THE SENSOR, THERE IS ALWAYS A HIGH-PRESSURE CUT-OUT SWITCH MUST BE INSTALLED IN THE SAME APPLICATION, TO PROTECT THE SYSTEM.
7-Mar-2018	F	ECO-216993; BG	SHEET 2	ADDED	2X TRANSFER FUNCTION CURVE
25-Nov-2019	G	ECO-339240; RK	Sh1/D10	Changed	HYDROGEN'D NITRILE temperature rating from (-40 C TO +135 C) to (-20 C TO +135 C)
21-AUG-2020	H	ECO-384631; KB	SH2/D3	ADDED	TRANSFER FUNCTION CURVE
			SH2/A6	ADDED	TABLE
28-Jan-2021	J	ECO-407497; DH	Sh2/A5	Updated	Table
25-Mar-2021	K	ECO-420143; DH	Sh1/C3	Added	Note
			Sh2/A5	Updated	Table

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DRAWING SIZE	DRAWING NUMBER	REV
A3	T-674308-ENV	K

SCALE 1:1 | SOLIDWORKS | SHEET 3 OF 3