

Model MPT161



Melt Pressure and Temperature Transducers & Transmitters

BCM melt pressure transducers and transmitters (MPT) are developed from BCM strain gauge technology and manufactured in mass production. The MPT are constructed with a full bridge strain gauge circuit and 100% made from stainless steel material (standard version). In addition, the pressure diaphragm features a surface treatment with special alloy coating for all the MPT models. Both the rigid stem and flexible extension provide thermal isolation to MPTs electronic circuitry, which enable MPT suitable for melt pressure and melt temperature measurements.

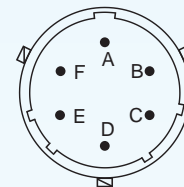
The output of BCM MPT is either the strain gauge signal (for instance, 3.33mV/V multiplied by the bridge excitation voltage), or the amplified signals (such as 0~10 Vdc or 4~20 mA). By short-circuit, a shunt resistor will be connected which provides MPT with a 80%FSO signal for calibration without need of the external calibration pressure.



Features:

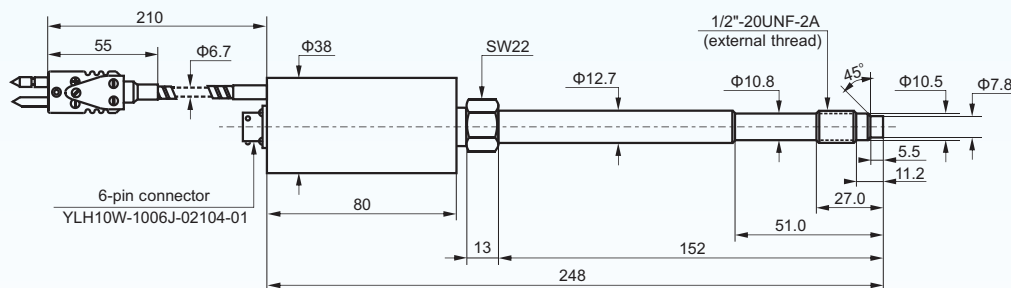
- * simultaneous pressure and temperature measurement at a single point
- * measuring range from 0/10 to 0/2000 bar, accuracy up to 0.3 %FS
- * rigid and compact construction
- * internal shunt calibration signal of 80%FS
- * amplified output signal available in 4~20 mA or 0~5, 0~10 Vdc
- * hastelloy-C membrane available on request
- * 100% stainless steel construction with special alloy coating
- * on pressure diaphragm

Electrical Connectors:



6-pin male connector
YLH25N1006J-4
(6-hole mating socket: YLH26N1006K22)

Dimensions:



BCM SENSOR TECHNOLOGIES BVBA

Specifications:

measuring range	bar	0/10, 0/20, 0/35, 0/50, 0/70, 0/100, 0/200, 0/350, 0/500, 0/700, 0/1000, 0/1400, 0/2000
overload pressure	% FS	150 (2100 bar max.)
signal output @ FS or: amplified output signal	mV/V	3.33 0~5 Vdc, 0~10 Vdc, 4~20 mA
supply voltage	Vdc	10 (8~12 acceptable) for MPT of 3.33 mV/V strain gauge output 12~36 for MPT of amplified output signal
combined error	%fso	0.3, 0.5 (standard), 1.0
zero adjustment	%fso	±10
span adjustment	%fso	± 6
repeatability	%fso	0.2
output resistance	Ω	350 ± 10%
insulation resistance	MΩ	1000 @ 100 Vdc
max. temp. @ wetted parts	°C	400
temperature coefficient of ZERO	%fso/10°C	0.5
temperature coefficient of SPAN	%fso/10°C	0.5
compensated temp. range	°C	0~80
temperature sensor		J-type (Fe-CuNi) thermocouple (standard), other type temperature sensor on request
thermocouple connection		2-pin (male) plug in connector
process connection	external thread	1/2"-20 UNF-2A (standard), M14x1.5, M18x1.5
electrical connection	connector	6-pin (standard) male tighten connector, 8-pin male screw in connector
long term stability	%fso/year	< 0.15
max. mounting torque	N.m.	40
weight	kg	0.5

The listed specifications are subject to change without prior notice.



Ordering codes:

example: MPT161 - 700 - D - II - M - d - J - X

model	
MPT160	MPT260*
MPT161	MPT261*
MPT162	MPT262*
MPT163	MPT263*

pressure ranges	
010 = 0~10 bar	350 = 0~350 bar
020 = 0~20 bar	500 = 0~500 bar
035 = 0~35 bar	700 = 0~700 bar
050 = 0~50 bar	1000 = 0~1000 bar
070 = 0~70 bar	1400 = 0~1400 bar
100 = 0~100 bar	2000 = 0~2000 bar
200 = 0~200 bar	

output signal	
A = 3.33 mV/V	C = 0~10 V (4-wire)
B = 0~5 V (4-wire)	D = 4~20 mA (2-wire)

combined error
I = ± 0.3 %fso
II = ± 0.5 %fso (standard)
III = ± 1.0 %fso

process connection
M = 1/2"-20 UNF-2A (standard)
N = M14 x 1.5
O = M18 x 1.5

length of rigid stem	
a = 76 mm	d = 228 mm
b = 102 mm	e = 305 mm
c = 152 mm (standard)	f = other length

temperature measurement
J = J-thermocouple (standard)
K = K-thermocouple
E = E-thermocouple
Pt = Pt100 thermal resistor

electrical connection
X = 6-pin male connector (standard)
Y = 8-pin male connector
Z = others

*: MPT26X-series feature a pressure manometer mounted on the top of MPT16X-series products.

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MPT161 melt pressure and melt temperature transmitter of a flexible extension, measuring range 0~700 bar, output 4~20 mA, combined error 0.5 %FS, connection thread 1/2"-20UNF-2A, rigid stem length 228 mm, J-type thermocouple, 6-pin male electrical connector.

OPTIONS

- MPT with CANbus output is available on request.
- The 6-core (for 3.33mV/V, 0~5 V or 0~10 V output) or 4-core (for 4~20 mA output) shield VPC cable of 5 meter length, with a 6-hole or 8-hole mating socket connected, is available on request.
- The 2-core temperature compensation cable of 5 meter length with a 2-hole mating socket connected, is available on request.

