Dynisco

Model
MDT420CAN
MDT460CAN

Melt Pressure Transmitter with digital signal output and CANopen-Bus communication Series MDT4X0CAN

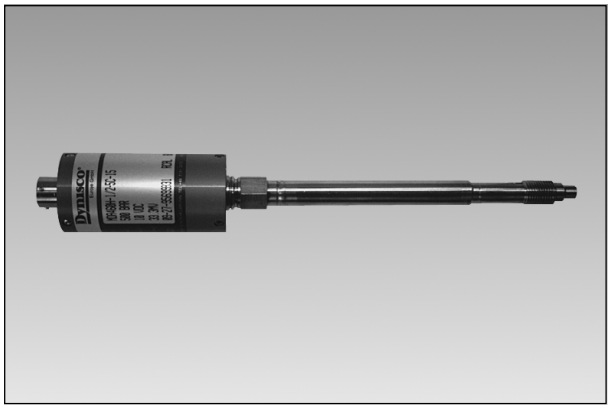
CE

Description

All Dynisco melt pressure sensor models are available in CANopen versions. These models can easily be interfaced directly with sophisticated CAN-BUS control systems. The integrated "intelligent" CAN electronic works completely in digital functions behind the initial analog/digital conversion of the strain gage pressure element signal.
The sensor functions and communication software is in accordance with the standard CANopen Device Profile "CiA DSP 404". The digital pressure signal output has the high solution of 12 bit. The bidirectional bus-communication combined with internal functions like transducer setup and calibration, pressure operating alarms and sensor watchdog control etc. give the advantage of more and versatile operating conditions and security functions than analog transmitters.

Features

- Standard CiA DSP 404 CANopen protocol
- Digital pressure signal with 12 bit solution
- Central control for sensor set-up and functions via bidirectional BUS communication
- Zero suppression and range extension within 12 bit accuracy
- Watch-dog alarms for sensor element and electronic
- Programmable alarm limits within pressure range
- Sensor CAN-BUS Nodes direct to adress by hardware jumpers, easy field replacement



Technical Data / Operating Data

Pressure range	0 - 17 bar to 0 - 2000 bar
Accuracy	MDT420CAN ± 0.5 % f.s.v. - up to 50 bar ± 1 % f.s.v. MDT460CAN ± 1 % f.s.v.
Repeatability	MDT420CAN ± 0.1 % f.s.v. - up to 50 bar ± 0,2 % f.s.v. MDT460CAN ± 0.2 % f.s.v.
Resolution	12 Bit
Maximum overload (without influencing operating data)	2 x pressure range for range 1000 and 1400 bar max. 1750 bar and max. 2400 bar for range 2000 bar
Burst pressure	6 x pressure range max. 3000 bar
Material in contact with media	15-5 Mat. No. 1.4545, DyMAX coated

Electrical Characteristics

Configuration	4-arm Wheatstone bridge strain gauge (DMS)
Isolation resistance	1000 MΩ @ 50 V DC
MDT4X0CAN	**2-wire interface CAN-Bus**
CAN-Communication	CANopen according to CiA standard DSP404
Output signal	digital 12 bit resolution
Sampling rate	20 ms
Supply voltage	24 V DC (18 - 32 V DC)

Adjustment and monitoring functions via CAN-Bus communication

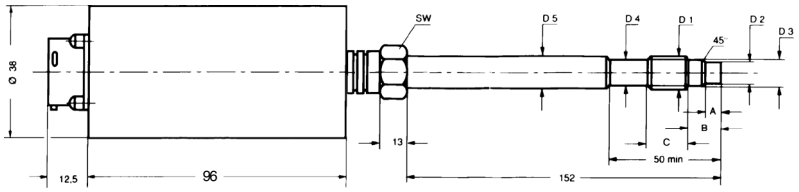
Alarm	1 integrated alarm. configuration over CAN-Bus
"Watch-Dog" alarm	integrated function monitoring of the sensor element and CAN-Bus electronic
Zero adjustment	„Auto-Zero" function
Zero suppression	within 12 bit resolution
Range extension	within 12 bit resolution

Temperature influence

Diaphragm		**Housing**	
Max. Temperature	400 °C	Max. Temperature	70 °C
Zero shift due to		zero shift due to	± 0.2 % f.s.v. / 10 °C
temperature change	MDT420CAN < 0.2 bar / 10 °C	temperature change	
	MDT460CAN < 0.4 bar / 10 °C	Sensitivity shift due to temperature change	MDT420CAN ±0.1% f.s.v./10°C -up to 50 bar ±0.2% f.s.v./10°C MDT460CAN ±0.4% f.s.v./10°C

Dimensions

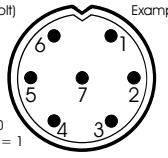
MDT420CAN / MDT460CAN



D1	D2	D3	D4	D5	A	B	C	SW
1/2"-20UNF-2A	$7{,}8^{-0{,}05}$	$10{,}5^{-0{,}05}$	$11^{-0{,}5}$	12,5	$5{,}3^{+0{,}25}$	11	16	16
M18 x 1,5	$10^{-0{,}05}$	$16^{-0{,}1}$	$16^{-0{,}5}$	18	$6^{-0{,}25}$	14	20	19

7-pol. DIN-connector (view pin contacts)

1 V CC (+17 ... +32 Volt)
2 GND
3 CAN high
4 CAN low
5 P00
6 P01
7 P02
Pxx NOT connected = 0
Pxx connected to GND = 1



Example: P00 = 0/P01 = 0/P02 = 1
Then Object 2002
Hardware_ID_Code
== 4 decimal

Accessories

Cleaning Tool Kit, Machining Tool Kit, Process Readout UPR700, Process Controller ATC770

Order Specifications

MDT4X0CAN - XXX - XXX - XX - XXX

Model

MDT420CAN = digital CAN-Bus 0,5 % accuracy

MDT460CAN = digital CAN-Bus 1,0 % accuracy

Mounting Thread

1/2 = Thread 1/2“ 20 UNF 2A

M18 = Thread M18 x 1,5

Pressure range

17[1)2)] = 0 - 17 bar	**2C** = 0 - 200 bar	**1M** = 0 - 1000 bar
35[1)] = 0 - 35 bar	**3,5C** = 0 - 350 bar	**1,4M** = 0 - 1400 bar
50[1)] = 0 - 50 bar	**5C** = 0 - 500 bar	**2M** = 0 - 2000 bar
1C = 0 - 100 bar	**7C** = 0 - 700 bar	

[1)] only MDT420CAN [2)] only M18

Options

Rigid stem

15 = Stem length 152 mm (Standard)

All other models of the MDT/TDT series are available in CAN-Bus version. Please call for specific delivery information.

Conversion table psi/bar and inch/mm on page 141.

Options on page 136.

09/2005