



MEASUREMENT SYSTEMS AND SENSORS
Sensors

TECHNICAL DATA *digi* **SENS** -T01

Temperature transmitter T01

The T01 temperature transmitter is designed and built for mobile machines, industrial vehicles, and industrial process control. The EMC properties and the resistance to shock and vibration are specified for these applications. The transmitter is therefore well suited to a broad range of demanding applications, for example mobile hydraulics.

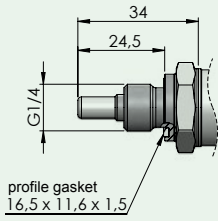
The standard T01 is available for the temperature range -40°C to $+150^{\circ}\text{C}$. The maximum allowed media temperature is $+150^{\circ}\text{C}$, the storage temperature $+125^{\circ}\text{C}$. Components in contact with the media are made of stainless steel (1.4571), which in combination with the welded sensor casing ensure a very high media compatibility. The T01 with stainless steel housing can be delivered with a plastic or a stainless steel M12 connector.

Technical Data

Measuring range	$^{\circ}\text{C} / ^{\circ}\text{F}$	$-40 \dots +150 / -40 \dots +302$
Overall accuracy	%FS	0.6 ($-40^{\circ}\text{C} \dots +150^{\circ}\text{C} / -40^{\circ}\text{F} \dots +302^{\circ}\text{F}$) 0.4 ($-40^{\circ}\text{C} \dots +85^{\circ}\text{C} / -40^{\circ}\text{F} \dots +185^{\circ}\text{F}$)
Diameter sensor casing	mm	6
Media temperature	$^{\circ}\text{C} / ^{\circ}\text{F}$	$-40 \dots +150 / -40 \dots +302$
Operating temperature / Storage temperature	$^{\circ}\text{C} / ^{\circ}\text{F}$	$-40 \dots +125 / -40 \dots +257$ (limitations due to the electric connection possible)
Reaction Time (guidance values)	s	$t_{0,5} = 4$, in water 0.2 m/s $t_{0,9} = 9.6$, in water 0.2 m/s $t_{0,5} = 45$, in air 2 m/s $t_{0,9} = 160$, in air 2 m/s
Protocol		CANopen / SAE J1939
Digital filter		Average filter, configurable at CANopen
Bitrate	kbit/s	CANopen: 125, configurable SAE J1939: 250
Voltage supply	VDC	9 ... 36 (allowable ripple @ 50 Hz: 10%)
Electrical protection		Short circuit and inverse polarity
Electrical connection		M12 connector, DIN-Bajonett (acc. to DIN 72585), DT04 4-pole, other connectors on request
Process connection		G 1/4, other connectors on request
Protection class		IP67 (optionally IP6K9K)
Installation torque		max. 35 Nm
EMC		EN 61326-1
Shock		50 g / 11 ms, 30 g / 6 ms acc. to EN60068-27 300 g acc. to IEC60068-2-27
Vibration		20 g acc. to IEC 60068-2-6, Random vibration acc. to ISO16750-3
Material with medium contact		1.4548, 1.4571 / FKM
Material housing		1.4301
Material connector		PBT GF30 or PBT GF30 / 1.4301

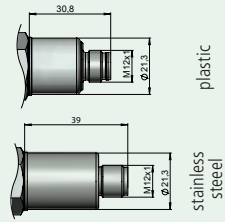
Process connections

G 1/4, DIN 3852 T 11
(Form E)

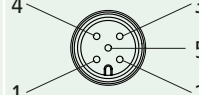


Electrical connections, protection class IP per IEC 60 529

Circular plug-in connector
M12 x 1, 5-pole, IP 67

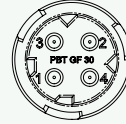
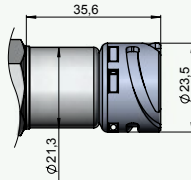


plastic
stainless steel



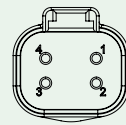
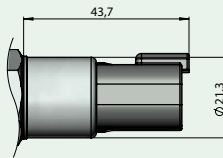
Pin	Connection
1	PE, housing
2	VCC
3	GND
4	CAN_H
5	CAN_L

Bayonet connector
DIN 72 585, 4-pole, IP 67



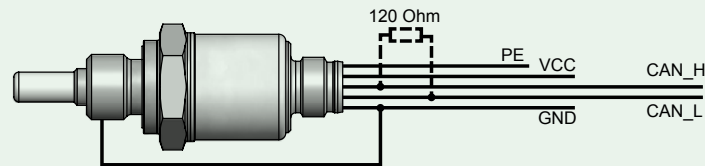
Pin	Connection
1	VCC
2	GND
3	CAN_H
4	CAN_L

Connector
DT04-4P, 4-pole, IP 67



Pin	Connection
1	CAN_L
2	VCC
3	GND
4	CAN_H

Recommended terminal layout



Order codes

model			unit	output protocol		process connection		electrical connection	
T	0	1	-	-	-	-	-	-	-
			° C	0 8	0 1	0 1	0 1		
			° F	CANopen	G 1/4"	M12 (plastic)			
				0 9	...	1 1			
				SAE J1939	9 9	M12 (stainless steel)			
					custom specific				
						0 4			
						bayonet mount (DIN 72585)			
						0 9			
						DT04 (4-pole)			
						...			
						9 9			
						custom specific			

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