FuehlerSysteme eNET International
Die Marke für Sensorik

EN **DATA SHEET**

FS1051

Temperature transducer with surface sensor and stainless steel block, digital output

Measuring size: temperature
Output: Modbus RTU, Relay
Highlights: stainless steel block

MADE IN GERMANY

Description

The FS1051 surface transducer with stainless steel block registers the temperature on surfaces and converts this measured value into a digital output signal.
Using a screw or mounting glue the stainless steel block of the temperature sensor is quickly and securely mounted to the surface to be measured.
As special equipment a potential-free alternating contact and/or a backlit display are available The contents of the display can be rotated in steps of 90° by using a command.
As special functions a series of defined measured values from other bus-participants (also cross-manufacturers) can be shown in the display. To display measured values from other bus-participants these are entered into the corresponding register by the bus-Master. The optional alternating contact can be configurated for measured values from other bus-participants.
The configuration of address, transmission mode/speed, terminating resistor and master/slave function of the bus-devices can easily be done using the innovative DIP switch technology. Thus devices can quickly and easily integrated into the system and later parameterised via the master.
The bus-devices can even be reset to the works settings during operation of the master. Thus the basic functionality of the device is recreated in a matter of seconds. This can be necessary in the event of incorrect parameterisations of, e.g. offset, switching threshold, display modes etc..
By means of the FS master/slave topology autarkic nodes without additional SPS master can be installed within the device series. Hereby a bus-device assumes the master function in the node. This requests the measured values from other bus-participants, automatically enters these into the corresponding register and shows them in the internal display. Furthermore the master can evaluate and operate additional actuators in the device series (analogue in- and outputs, relay station).

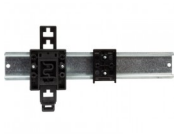
Technical Specifications

Measurement range temp.	-40...+250°C
Accuracy	±0,2 K + max. ±1% mv (-30?+100°C), else ±0,3 K + max. ±1,5% mv
Offset	can be entered in the register
Supply voltage	24 V DC (±5%)
Current consumption	max. 20 mA + 30 mA (option display) + 20 mA (option relay)
Digital output	Modbus RTU
Alarm output	1 x potential-free change-over contact, 48 V, 1 A
Switching Hysteresis Relay	can be entered in the register
Electrical connection	push-in terminal, no tools required, time-saving
Cable	2 m glass fibre/stainless steel netting (2x0,22 mm², max. +400°C)
Housing	Polycarbonate PC UL 94 V0 with hinge locks, color signal white similar to RAL 9003
Cable gland	PG11 high-strength cable gland with strain relief
Display	optional LCD display with backlight on/off/auto
Material	Contacting block: stainless steel VA 1.4571
Dimensions	Housing: L 89 x W 80 x H 47 mm, Contacting block: L 15 x W 8 x H 8 mm, bore hole Ø 5 mm
Protection type	IP65 (housing), IP54 (probe)
Protection class	III
Working range r.H.	0...98% r.H. in contaminant-free, non-condensing air
Working temperature	Probe: -40...+400°C, Electronic: -20...+70°C
Storage temperature	-20...+70°C
Installation	screw fixing or adhesive bond
Approvals	CE, EAC, RoHS

Variants

Article Number			
Temperature	Cable	Output	Equipment
FS1051-MBR-T1-2-D			
-40...+250°C	2 m glass fibre/stainless steel netting (2x0,22 mm²)	Modbus RTU	Display
FS1051-MBR-T1-2-DR			
-40...+250°C	2 m glass fibre/stainless steel netting (2x0,22 mm²)	Modbus RTU	Display, Relay
FS1051-MBR-T1-2-R			
-40...+250°C	2 m glass fibre/stainless steel netting (2x0,22 mm²)	Modbus RTU	Relay
FS1051-MBR-T1-2-X			
-40...+250°C	2 m glass fibre/stainless steel netting (2x0,22 mm²)	Modbus RTU	-

Accessories



SB/E

Snap-on mounting for DIN rails

Dimensional Drawing