



## FS1042

### Temperature transducer with radiation sensor, digital output

Measuring size: temperature

Output: Modbus RTU, Relay

Highlights: aluminium globe, measuring of the thermal radiation



### Description

The FS1042 room pendulum transducer registers the heat radiation in, for example, high rooms and converts this measured value into a digital output signal.

The temperature transducer is simply hung in the room as a pendulum, whereby an accurate measurement result for the perceived room temperature is ensured in high rooms.

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 configured 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 be 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.	-30...+75°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
Sensor	Pt100 DIN EN 60751 Cl. B
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 PVC cable (max. +105°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	Globe: aluminium (black)
Dimensions	Housing: L 89 x W 80 x H 47 mm, Globe: Ø 70 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: -30...+75°C, Electronic: -20...+70°C
Storage temperature	-20...+70°C
Installation	screw fastening
Approvals	CE, EAC, RoHS

## Variants

Article Number			
Temperature	Cable	Output	Equipment
<b>FS1042-MBR-T1-2-D</b>			
-30...+75°C	2 m PVC (2x0,25 mm <sup>2</sup> )	Modbus RTU	Display
<b>FS1042-MBR-T1-2-DR</b>			
-30...+75°C	2 m PVC (2x0,25 mm <sup>2</sup> )	Modbus RTU	Display, Relay
<b>FS1042-MBR-T1-2-R</b>			
-30...+75°C	2 m PVC (2x0,25 mm <sup>2</sup> )	Modbus RTU	Relay
<b>FS1042-MBR-T1-2-X</b>			
-30...+75°C	2 m PVC (2x0,25 mm <sup>2</sup> )	Modbus RTU	-



### Dimensional Drawing

