FuehlerSysteme eNET International
Die Marke für Sensorik

EN **DATA SHEET**

FS1580

Transducer indoor for brightness, movement, humidity and temperature, digital output

Measuring size: temperature, rel. humidity, brightness, motion
Output: Modbus RTU, Relay
Highlights: modern housing design, on-wall or on flush-mounted box

MADE IN GERMANY

Description

The transducer FS1580 detects the brightness, movement, humidity and temperature. The measuring transducer converts the measured values into a digital output signal.
The modern room housing is specially designed for indoor use. The brightness sensor is optimally suited for an energy efficient control of buildings, such as e.g. controlling the lighting in offices, industrial facilities etc..
In the register the switching threshold, hysteresis, offset value etc can be specified.
As special equipment a potential-free alternating contact ist available. 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 brightness	0-100 kLux
Measurement range r.H.	0-100% r.H.
Measurement range motion	motion yes/no, apex angle 90°/110° on 360° range, reach 10 m
Measurement range temp.	-30...+100°C
Accuracy humidity	±3% r.H. (30-70% r.H., else ±5% r.H., at 20°C)
Accuracy brightness	±10% FS
Accuracy temperature	±0,3 K (10...40°C, else ±0,5 K),
Temperature dependency	±5% FS / 10 K
Response time (t90)	< 1 s
Offset	can be entered in the register
Sensor	Motion: infrared sensor, Brightness: photodiode, Humidity/Temperature: combined electronic sensor
Sensor protection	mounted inside housing
Running-in time	Humidity: 10 min, Temperature: 10 min
Supply voltage	24 V DC (±5%)
Current consumption	max. 20-200 mA, depending on the selected measurand and equipment
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
Holding time	adjustable from 5 s up to 15 min
Threshold	threshold can be entered in the register
Electrical connection	push-in terminal, no tools required, time-saving
Housing	ABS polyman, colour signal white like RAL 9003
Cable gland	on the back or housing side (predetermined breaking point)
Dimensions	Housing: L 82 x W 82 x H 25 mm
Protection type	IP30
Protection class	III
Working range r.H.	0...98% r.H. in contaminant-free, non-condensing air
Working temperature	0...+50°C
Storage temperature	-20...+50°C
Installation	on-wall or on flush-mounted box
Approvals	CE, EAC, RoHS

Variants

Article Number					
Brightness	Movement	Humidity	Temperature	Output	Equipment
FS1580-MBR-B1-R					
0-100 kLux	-	-	-	Modbus RTU	Relay
FS1580-MBR-B1-X					
0-100 kLux	-	-	-	Modbus RTU	-
FS1580-MBR-B1M1-R					
0-100 kLux	yes/no	-	-	Modbus RTU	Relay
FS1580-MBR-B1M1-X					
0-100 kLux	yes/no	-	-	Modbus RTU	-
FS1580-MBR-H1M1T1-R					
-	yes/no	0-100% r.H.	-30...+100°C	Modbus RTU	Relay
FS1580-MBR-H1M1T1-X					
-	yes/no	0-100% r.H.	-30...+100°C	Modbus RTU	-
FS1580-MBR-M1-R					
-	yes/no	-	-	Modbus RTU	Relay
FS1580-MBR-M1-X					
-	yes/no	-	-	Modbus RTU	-

Accessories

FS9510

Table stand for room housing

Dimensional Drawing