

# Temperature Transmitter / Switch with display

8400

- Menu-guided configuration
- Wide choice of connections and outputs
- Large digital display
- Bar graph display for local monitoring
- Continuous on/off control
- 2-wire transmitter

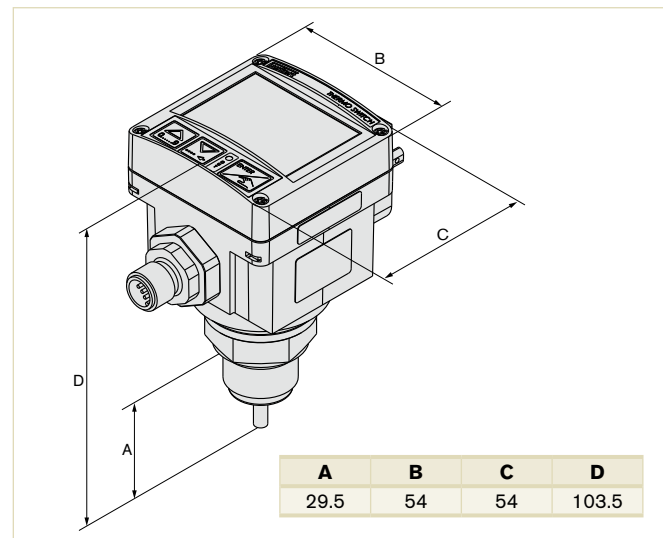


This intelligent sensor / switch with a particularly large display is designed specifically for monitoring limit values or an on/off or continuous control loop. The switching points can be programmed directly via buttons on the display or optionally externally by a PLC via a 4-20 mA standard signal input. In addition, the process value can be transmitted via a 4-20 mA signal to the PLC.

## Technical Data

General data	
<b>Materials</b>	
Housing	PC, +20% glass fibre
Front panel folio / Screws	Polyester / Stainless steel
Cable plug, Multipin	PA
<b>Materials wetted parts</b>	
Sensor element	Stainless steel
Seal	FKM
<b>Sensor element</b>	Pt100
<b>Screw-in thread</b>	G 1/2"
<b>Electrical connections</b>	Cable plug: EN 175301-803 Multipin: swivel M12, 5-pin or M12, 4-pin or 8-pin
<b>Voltage supply cable</b>	max. 100 m, shielded, 0.14 up to 0.5 mm <sup>2</sup> max. 5 Ω max. cable impedance (Wall-mounted version)
<b>Complete device data (pipe + electronic module)</b>	
<b>Pipe diameter</b>	Any pipe with sensor connection 1/2"
<b>Measuring range</b>	-40 to +125 °C (for ambient temp. between 0 and +40 °C)
Compact version	-40 to +90 °C (for ambient temp. > +40 °C)
<b>Medium temperature</b>	+125 °C max.
<b>Fluid pressure max.</b>	PN16
<b>Switching accuracy</b>	±0.5 °C (0 up to +80 °C) ±1.5 °C (outside of 0 up to +80 °C)
<b>Repeatability</b>	≤ ±0.4%
<b>Electrical data</b>	
<b>Power supply</b>	12-30V DC, filtered and regulated
<b>Outputs - Compact version</b>	
Transistor (programmable)	NPN and PNP, open collector, 5 up to 30V DC, 700 mA max., protected against short circuits
Relay (programmable)	3A/250V AC or 3A/30V DC 3A/48V AC or 3A/30V DC <sup>1)</sup>
<b>Input external setpoint</b>	
Compact version	4-20 mA, galvanic insulation, max. input impedance: 250 Ω
<b>Current consumption</b>	
Compact version	Max. 80 mA (no load)
<b>Response time (10 to 90%)</b>	7 s (for one step increment from 0 up to 100 °C)
<b>Reversed polarity of DC</b>	Protected

## Envelope Dimensions [mm] (see datasheet for details)



Environment	
<b>Ambient temperature</b>	-20 up to 60 °C
<b>Relative humidity</b>	≤ 80%, without condensation
<b>Standards, directives and approvals</b>	
<b>Protection class</b>	IP65 with connector plug-in
<b>Standards and directives</b>	
EMC	EN 50081-1, 50082-2
Security	EN 61010-2
Pressure	Complying with article 3 of §3 from 97/23/CE directive.*
Vibration	EN 60068-2-6
Shock	EN 60068-2-27

\* For the 97/23/CE pressure directive, the device can only be used under following conditions (depend on max. pressure, pipe diameter and fluid).

Type of fluid	Conditions
<b>Fluid group 1, §1.3.a</b>	DN25 only
<b>Fluid group 2, §1.3.a</b>	DN ≤ 50
<b>Fluid group 1, §1.3.b</b>	DN ≤ 50
<b>Fluid group 2, §1.3.b</b>	DN ≤ 50

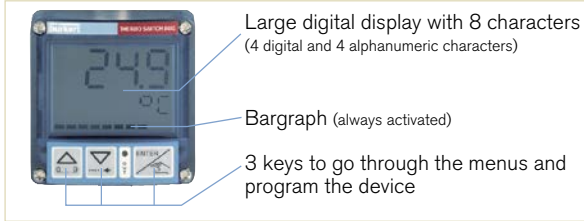
<sup>1)</sup> Valid for: external setpoint input and process value output

## Option

- 8400: Outputs : Relay 3 A/250 or 3 A/30V DC

## Main features

### Display



### Software main features

- International measuring units
- 10-segment bar graph
- Temperature adjusting for a better accuracy
- Simulation mode to test the programming of the switching points, in dry conditions

### 8400 with external setpoint

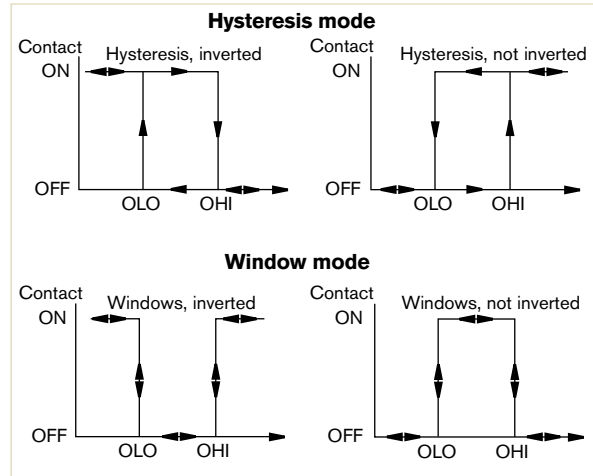
- The switching points are automatically adjusted by the 4-20 mA input signal originating from a PLC.
- On/Off relay output

### 8400 with process value option

- This version delivers a 4-20 mA electric signal whose value is the image of the measured temperature
- On/Off relay output
- 4-20 mA output
- External setpoint (4-20 mA input)

### 8400 with standard On/Off output

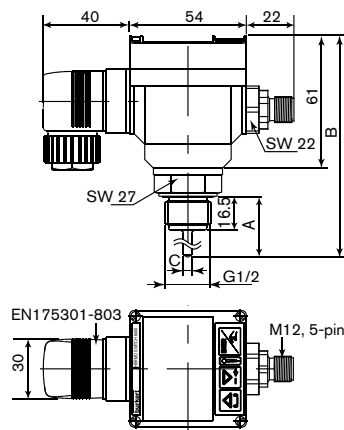
- 2 switching modes for the output, either hysteresis or window, inverted or not



- Programmable delay before switching
- Possible outputs depending on the version: relay, transistor NPN or transistor PNP

## Dimensions [mm]

### 8400 Standard



Version	A	B	C
Standard	29.5	103.5	Ø 4

## Ordering Chart

8400 Sensor/Switch for sensor connection G 1/2"	Item no.
NPN and PNP, free positionable 5-pin M12	436 501
Transmitter Version is available with 4 - 20 mA output and relay with 8-pin M12 and cable plug EN175301-803	444 696
Relay version is available, free positionable 5-pin M12 and cable plug EN175301-803	436 503

## Accessories

ON/OFF Temperature Control System 8400	Item no.
5-pin M12 female connector with moulded on cable (2 m long, shielded)	438 680