



## Electronic Temperature Switch

### ETS 3200 Pressure-Resistant for Inline Mounting

#### Description:

The ETS 3200 is a compact electronic temperature switch with 4-digit digital display.

Pressure resistant to 600 bar, this model has an integral 18 mm temperature probe and can be screwed directly inline or into a hydraulic block.

Different output models with one or two switching outputs, optionally with an additional analogue output signal, offer a variety of application possibilities. The switching points and the associated hystereses can be adjusted very quickly and easily using the keypad.

For optimum adaptation to the particular application, the unit has many additional adjustment parameters (e.g. switching delay times, N/C / N/O function, etc.).

#### Special features:

- 2 switching outputs, up to 1.2 A load per output
- Analogue output selectable (4 .. 20 mA / 0 .. 10 V)
- 4-digit digital display
- Optimum alignment - display can be rotated in two planes (axes)
- Switching / switch-back points and many useful additional functions can be set using keypad
- Display of temperature and unit of measurement in °C or °F

#### Technical specifications:

Input data	
Measuring range	-25 .. 100 °C (-13 .. 212 °F)
Probe length	18 mm
Pressure resistance	600 bar
Mechanical connection	G1/2 A DIN 3852
Torque value	45 Nm
Parts in contact with medium	Mech. connection: Stainless steel Seal: FPM
Output data	
Accuracy (display, analogue output)	≤ ± 1.0 °C (≤ ± 2.0 °F)
Temperature drift (ambient)	≤ ± 0.015 % FS / °C max. zero point ≤ ± 0.015 % FS / °C max. range
Analogue output (optional)	
Signal	selectable: 4 .. 20 mA ohmic resistance max. 500 Ω 0 .. 10 V ohmic resistance min. 1 kΩ corresponds in each case to -25 .. +100 °C
Switching outputs	
Type	PNP transistor switching outputs
Switching current	max. 1.2 A per output
Switching cycles	> 100 million
Rise time to DIN EN 60751	t <sub>50</sub> : 3 s t <sub>90</sub> : 9 s
Ambient conditions	
Ambient temperature range	-25 .. +85 °C
Storage temperature range	-40 .. +85 °C
Fluid temperature range	-40 .. +100 °C
CE mark	EN 61000-6-1 / 2 / 3 / 4
Vibration resistance to DIN EN 60068-2-6 (0 .. 500 Hz)	≤ 10 g
Shock resistance to DIN EN 60068-2-29 (11 ms)	≤ 50 g
Protection class to DIN 40050	IP 67
Other data	
Supply voltage	9 .. 35 V DC without analogue output 18 .. 35 V DC with analogue output
Current consumption	approx. 200 mA
Residual ripple of supply voltage	≤ 5 %
Display	4-digit, LED, 7 segment, red, height of digits 7 mm
Weight	approx. 135 g

Note: Reverse polarity protection of the supply voltage, excess voltage, override, short circuit protection are provided.  
FS (Full Scale) = relative to the complete measuring range

## Setting options:

All the settings available on the ETS 3200 are combined in two easy-to-follow menus. To prevent unauthorised adjustment of the unit a program disable can be activated.

## Setting ranges of the switching points and switch-back hystereses:

Switch point function

Unit	Switch point	Hysteresis	Increment*
°C	-23.0 .. 100.0	1.0 .. 123.5	0.5
°F	-9 .. 212	2 .. 222	1

Window function

Unit	Lower switch value	Upper switch value	Increment*
°C	-23.0 .. 97.5	-22.0 .. 98.5	0.5
°F	-9 .. 208	-7 .. 209	1

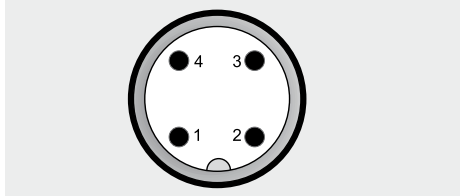
\* All ranges given in the table are adjustable by the increments shown.

## Additional functions:

- Switching mode of the switching outputs adjustable (switching point function or window function)
- Switching direction of the switching outputs adjustable (N/C or N/O)
- Switch-on and switch-back delay adjustable from 0.00 .. 99.99 seconds
- Choice of display (actual temperature, peak temperature, switching point 1, switching point 2, display off)

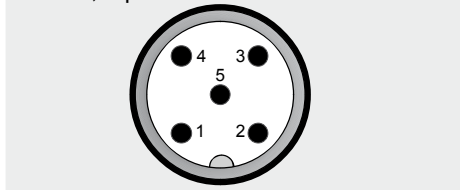
## Pin connections:

M12x1, 4 pole



Pin	ETS 3226-2	ETS 3226-3
1	+U <sub>B</sub>	+U <sub>B</sub>
2	SP 2	Analogue
3	0 V	0 V
4	SP 1	SP 1

M12x1, 5 pole



Pin	ETS 3228-5
1	+U <sub>B</sub>
2	Analogue
3	0 V
4	SP 1
5	SP 2

## Model code:

ETS 3 2 2 X - X - 018 - 000

**Mechanical connection**

2 = G1/4 A DIN 3852 (male)

**Electrical connection**

6 = M12x1, 4 pole

only possible on output models "2" and "3"

8 = M12x1, 5 pole

only possible on output model "5"

**Output**

2 = 2 switching outputs

only in conjunction with electrical connection "6"

3 = 1 switching output and 1 analogue output

only in conjunction with electrical connection type "6"

5 = 2 switching outputs and 1 analogue output

only in conjunction with electrical connection type "8"

**Probe length in mm**

018

**Modification number**

000 = Standard

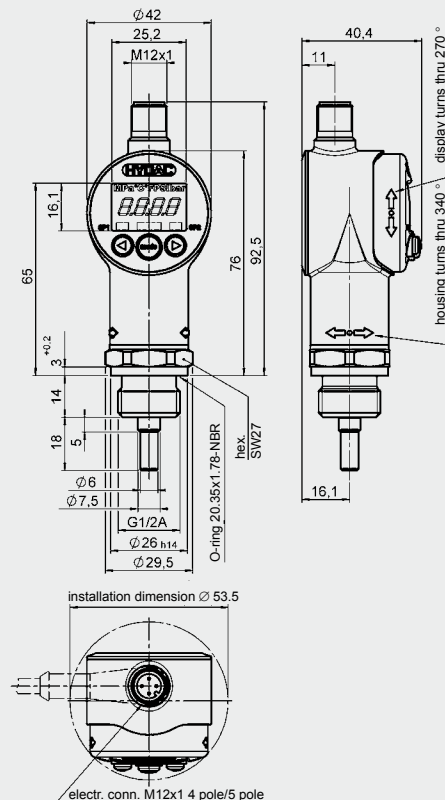
**Note:**

On units with a different modification number, please read the label or the technical amendment details supplied with the unit.

**Accessories:**

Appropriate accessories, such as electrical connectors, splash guards, etc. can be found in the Accessories section.

## Dimensions:



**Note:**

The information in this brochure relates to the operating conditions and applications described.

For applications or operating conditions not described, please contact the relevant technical department.

Subject to technical modifications.

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