Electronic Temperature Switch

ETS 3200 Pressure Resistant for Inline Installation with Menu Navigation to VDMA

Description:

The ETS 3200 is a compact electronic temperature switch with a 4-digit display.
Pressure resistant to 600 bar this model has an integrated 18 mm temperature probe and can be installed directly inline or on the hydraulic block.
Different output versions with one or two switching outputs, and with the possible option of an additional analogue output signal, offer a variety of application possibilities.
The switching points and the associated switch-back points 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:

- Menu navigation according to VDMA
- 2 switching outputs, up to 1.2 A load per output
- Optional analogue output signal selectable (4 .. 20 mA / 0 .. 10 V)
- 4-digit display
- Display can be rotated in two axes for optimal alignment
- Switching / switch-back points and many useful additional functions can be set using keypad
- Display of measured value and units of measurement in °C or °F

Technical data:

Input data	
Measuring range	-25 .. 100 °C (-13 .. 212 °F)
Sensor length	18 mm
Pressure resistance	600 bar
Hydraulic 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 (environment)	≤ ± 0.015 % FS / °C max. zero point ≤ ± 0.015 % FS / °C max. range
Analogue output (optional)	
Signal	selectable: 4 .. 20 mA load ≤ 500 Ω 0 .. 10 V load min. 1 kΩ corresp. in each case to -25 .. +100 °C
Switch outputs	
Type	PNP transistor switching output
Switching current	max. 1.2 A per output
Switching cycles	> 100 million
Rise time to DIN EN 60751	t_{50}: 3 s t_{90}: 9 s
Environmental conditions	
Ambient temperature range	-25 .. +80 °C (-25 .. +60 °C acc. to UL spec.)
Storage temperature range	-40 .. +80 °C
Fluid temperature range[1)]	-40 .. +100°C / -25 .. +100°C
CE mark	EN 61000-6-1 / -2 / -3 / -4
cULus- mark[2)]	Certificate No.: E318391
Vibration resistance according to DIN EN 60068-2-6 (0 .. 500 Hz)	≤ 10 g
Shock resistance according to DIN EN 60068-2-29 (11 ms)	≤ 50 g
Protection class to IEC 60529	IP 67
Other data	
Supply voltage for use acc. to UL specifications	9 .. 35 V DC (without analogue output) 18 .. 35 V DC (with analogue output) – limited energy – according to 9.3 UL 61010; Class 2; UL 1310/1585; LPS UL 60950
Current consumption	≤ 2.455 A total ≤ 35 mA with inactive switching outputs ≤ 55 mA with analogue output and inactive switching outputs
Residual ripple of supply voltage	≤ 5 %
Display	4-digit, LED, 7-segment, red, height of digits 7 mm
Weight (complete unit including probe)	~ 135 g

Note: Reverse polarity protection of the supply voltage, excess voltage, override and short circuit protection are provided.
FS (**F**ull **S**cale) = relative to complete measuring range

1) -25 °C with FPM seal, -40 °C on request

2) Environmental conditions according to 1.4.2 UL 61010-1; C22.2 No. 61010-1

Setting options:

All terms and symbols used for setting the ETS 3200 as well as the menu structure comply with the specifications in the VDMA Standard (VDMA 24574-2) for temperature switches.
The ETS 3200 can easily be adjusted via three push-buttons.

Setting ranges for the switch outputs:

Measuring range	Lower limit of RP / FL	Upper limit of SP / FH
-25 .. +100 °C	-23.8 °C	100.0 °C
-13 .. +212 °F	-11 °F	212 °F

Measuring range	Min. difference betw. RP and SP & FL and FH	Increment*
-25 .. +100 °C	1.2 °C	0.2 °C
-13 .. + 212 °F	2 °F	1 °F

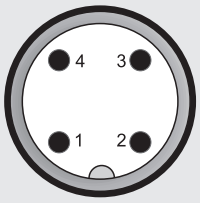
* All ranges given in the table are adjustable by the increments shown.
SP = switch point
RP = switch-back point
FL = temperature window lower value
FH = temperature window upper value

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 function)
- Switch-on and switch-off delay adjustable from 0.00 .. 99.99 seconds
- Choice of display (current temperature, peak temperature, switching point 1, switching point 2, display off)

Pin connections:

M12x1, 4 pole



Pin	ETS 3226-2	ETS 3226-3
1	$+U_B$	$+U_B$
2	SP2	Analogue
3	0 V	0 V
4	SP1	SP1

Model code:

ETS 3 2 2 6 – X – 018 – V00

Type
2 = With integrated temperature sensor

Mechanical connection
2 = G1/2 A DIN 3852, (male)

Electrical connection
6 = Male M12x1, 4 pole

Output
2 = 2 switching outputs
3 = 1 switching output and 1 analogue output

Probe length in mm
018

Modification number
V00 = Menu navigation in accordance with VDMA (Standard 24574-2)

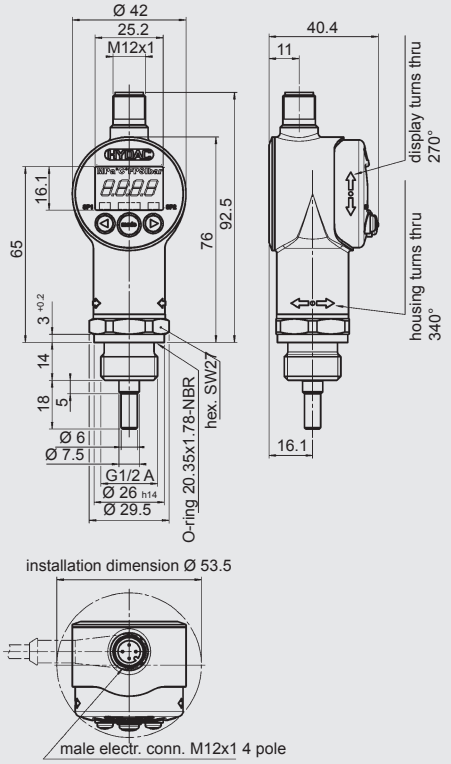
Notes:

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

Accessories:

Appropriate accessories, such as electrical connectors, mechanical adapters, splash guards, clamps for wall-mounting etc can be found in the Accessories brochure.

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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