GEMÜ 3240

Temperature transducer and temperature switch

Features

- With rotatable LED display and IO-Link interface
- Suitable for highly viscous, contaminated and corrosive media
- Switching output as standard
- Switchable electrical output
- Accuracy in accordance with IEC60770: 0.35% FSO
- Extremely short installation length
- Temperature sensor PT1000 / class A

Description

The GEMÜ 3240 temperature transducer/switch is ideal for precise measurements in a wide temperature range. The sensor is suitable for both highly viscous, as well as contaminated media. It is also suitable for corrosive media thanks to the high-quality material selection. Furthermore, it stands out thanks to its extremely short installation length. The electrical output signals can optionally be changed over between power, current or switching outputs.

Technical specifications

- **Temperature measuring range:** -40 to 150 °C
- **Media temperature:** -40 to 150 °C
- **Operating pressure :** 0 to 160 bar
- **Housing material:** 1.4404
- **Connection type:** Threaded connection
- **Output signals:** 0–10 V I 4–20 mA I NPN I PNP
- **Conformities:** EAC

* depending on version and/or operating parameters

Technical data depends on the respective configuration

further information
webcode: GW-3240

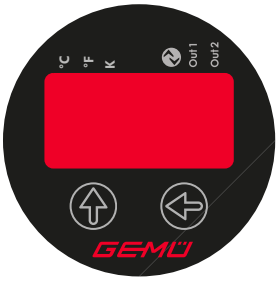
Product description

Temperature transducer/switch

Item	Name	Materials
1*	Pressure connection	1.4404 stainless steel or PVDF
2	Housing	1.4404 stainless steel
3	Display housing	PA 6.6
	Seals*	FPM or EPDM

* Media wetted

Display



- 4-digit, red 7-segment LED display, digit height 7 mm, display range -1999 to +9999, visible area 22.5 x 10.5 mm, 4 LEDs for (°C, °F, K)
- Switching output status indication: Switching output 1: LED, green; switching output 2: LED, yellow

Order data

The order data provide an overview of standard configurations.

Please check the availability before ordering. Other configurations available on request.

Order codes

1 Type	Code
Temperature transducer, temperature switch	3240

2 Connection size	Code
G 1/2	G12

3 Type of measurement	Code
Temperature	T

4 Material	Code
1.4404	7
PVDF	20

5 Seal material	Code
FPM	4
EPDM	14

6 Electrical connection	Code
M12 x 1 plug, 4-pin	M

7 Voltage/Frequency	Code
24 V DC	C1

8 Display	Code
With display	D

9 Output	Code
PNP, NPN, 4-20mA, 0-10V, IO-Link switchable	PNAV

Order example

Order option	Code	Description
1 Type	3240	Temperature transducer, temperature switch
2 Connection size	G12	G 1/2
3 Type of measurement	T	Temperature
4 Material	7	1.4404
5 Seal material	4	FPM
6 Electrical connection	M	M12 x 1 plug, 4-pin
7 Voltage/Frequency	C1	24 V DC
8 Display	D	With display
9 Output	PNAV	PNP, NPN, 4-20mA, 0-10V, IO-Link switchable

Technical data

Temperature

Media temperature:	Stainless steel (code 7):	-40 to 150 °C
	PVDF (code 20):	-30 to 125 °C
Ambient temperature:	Stainless steel (code 7):	-40 to 85 °C
	PVDF (code 20):	-30 to 85 °C
Storage temperature:	Stainless steel (code 7):	-40 to 85 °C
	PVDF (code 20):	-30 to 85 °C

Pressure

Operating pressure:	Stainless steel (code 7):	max. 160 bar
	PVDF (code 20):	max. 60 bar

Product compliance

EMC Directive:	2014/30/EU

Mechanical data

Installation position:	Optional
Protection class:	IP 67 acc. to EN 60529
Measuring range:	Stainless steel (code 7): -40 to 150 °C PVDF (code 20): -30 to 125 °C
Weight:	220 g
Switch-on time:	110 ms
Strength:	10 g / 25 Hz to 2 kHz to DIN EN 60068-2-6 500 g / 1 ms to DIN EN 60068-2-27

Electrical data

Power supply standard

Supply voltage: 24 V DC (-5/+10%)

Current consumption: ≤ 40 mA

Reverse battery protection: Yes

Short-circuit proof: Yes

Duty cycle: Continuous duty

Electrical connection type: M12 connector, 4-pin
Plug design A, DIN EN 175301-803

Electrical output

Supply voltage: 18 - 30 V DC

Output signal: Output 1: Switchable between NPN, PNP switching outputs, IO-Link
output 2: Switchable between NPN, PNP switching outputs, 4 to 20 mA, 0 to 10 V

Load resistor: R_{min} = 10 kΩ
R_{max} = 330 Ω

Max. switching current: 200 mA

Accuracy: ≤ ± 0.35% FSO

Switching output
Switch point: ≤ ± 0.5% FSO
Characteristic deviation in accordance with IEC 60770 – limiting value adjustment (non-linearity, hysteresis, reproducibility)
Repetition: ≤ ± 0.2% FSO

Temperature drift: ≤ ± 0.3 °C + 0.005 + T

Switching frequency: Max. 170 Hz

Switching cycles: > 100 x 10^6

Specific data relating to IO-Link

Transmission rate: 38,400 baud, COM2

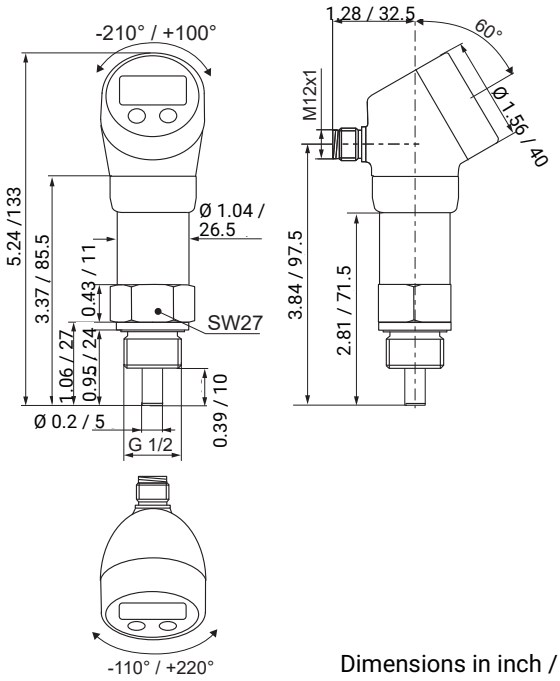
IO-Link specification: V1.1, slave

SIO operation: Yes

IEC Guideline: 61131-9

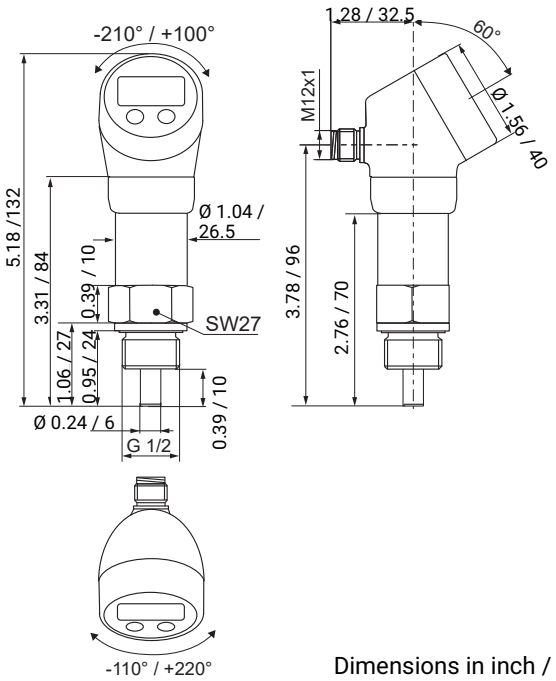
Dimensions

Device with pressure connection 1.4404 (code 7)



Dimensions in inch / mm

Device with pressure connection PVDF (code 20)

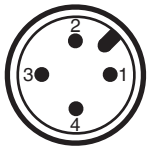


Dimensions in inch / mm

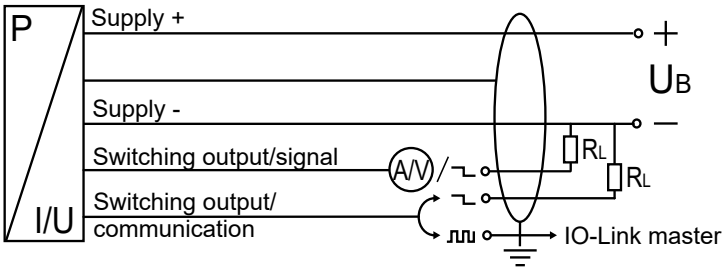
Electrical connection

Connect the product in accordance with the pin assignment.

3-wire system (output code PNAV)



Pin	Description
1	Supply +
2	Switching output / Signal
3	Supply -
4	Switching output / Communication



Accessories

GEMÜ 1219

Cable socket / cable plug M12

The GEMÜ 1219 is a connector (cable socket / cable plug) M12, 5-pin. Straight and/or 90° angled plug type. Defined cable length or with threaded connection without cable. Various materials available for the fixing nut.

Suitable for electrical connection of the connector X1

Description	Length	Order number
5-pin, angle	without cable	88205545
	2 m cable	88205534
	5 m cable	88205540
	10 m cable	88210911
	15 m cable	88244667
5-pin, straight	without cable	88205544
	2 m cable	88205542
	5 m cable	88205543
	10 m cable	88270972
	15 m cable	88346791

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