

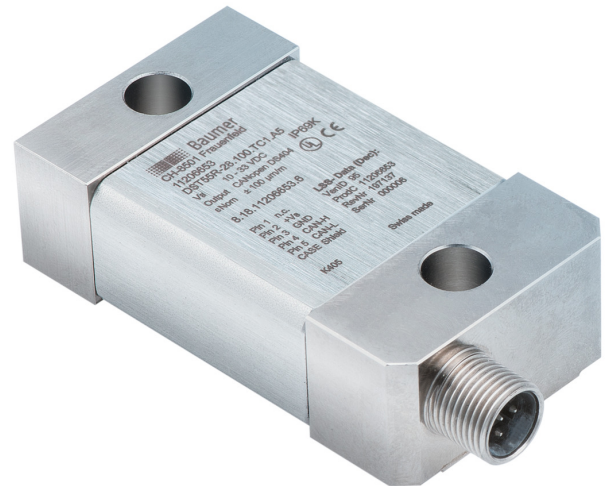
## DST55R

Strain sensor for harsh outdoor environment with CANopen output

DST55R-28.###.TC1.A5

### Overview

- Highest protection class IP 68/69K
- Tested long term seal according to proTect+
- Corrosion protection C5-M
- Measuring range  $\pm 100 \dots 2000 \mu\text{m/m}$
- Output signal CANopen
- Integrated amplifier electronics



### Technical data

#### General data

Nominal strain	0 ... 2000 $\mu\text{m/m}$
Non-linearity	< 0.5 %
Repeatability	< 0.1 %
Mechanical mounting	2 x M8 screws

#### Mechanical data

Overload	150 %
Sensor stiffness	80 N @ 100 $\mu\text{m/m}$ 100 N @ 500 $\mu\text{m/m}$ 200 N @ 250 $\mu\text{m/m}$ 200 N @ 1000 $\mu\text{m/m}$ 400 N @ 2000 $\mu\text{m/m}$
Weight	330 g
Material sensor body	1.7225, chemically nickel plated
Material housing	Stainless steel, 1.4301
Material sealing	NBR
Compensated for thermal expansion coefficient	$11.1 \cdot 10^{-6} 1/\text{K}$
Electrical connection	M12, 5 pin, male

#### Environmental conditions

Operating temperature range	-40 ... 85 °C
Storage temperature range	-40 ... 85 °C

#### Environmental conditions

Protection class EN 60529, ISO20653	IP 68, 168h @ 1m H <sub>2</sub> O IP 69K ProTect+
Corrosion protection IEC 60068-2-52 salt spray test	C5-M (ISO 12944-5: protective paint systems)
Vibration IEC 60068-2-6	10 ... 57 Hz: 1.5 mm p-p, 58 ... 2000 Hz: 10 g
Random IEC 60068-2-64	20 ... 1000 Hz: 0.1 g <sup>2</sup> /Hz
Shock IEC 60068-2-27	50 g / 11 ms, 100 g / 6 ms

#### Electrical data

Output signal	CANopen DS404
Signal polarity positive	Tension
Bridge resistance	350 $\Omega$
Supply voltage	10 ... 33 VDC
Current consumption	< 60 mA
Measuring resolution	0.1 $\mu\text{m/m}$
Cut-off frequency (3 db)	1000 Hz

#### Compliance and approvals

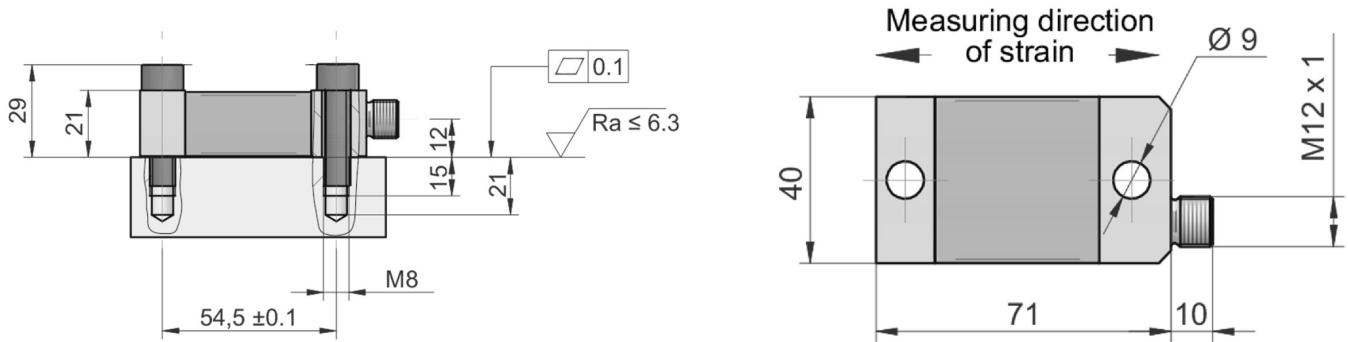
EMC	EN 61000-6-2 EN 61000-6-3 EN 61326-2-3
UL listed	E217824

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## Dimensional drawings (mm)



## Electrical connection



1	n.c.
2	+V <sub>s</sub>
3	GND
4	CAN-H
5	CAN-L
CASE	shield

## Ordering key - Configuration possibilities see website

	DST55R	-	28	.	###	.	T	C1	.	A5
<b>Product family</b>	Strain sensor for harsh outdoor environment									
<b>Type of installation</b>	2 x M8 bolts									
<b>Measuring range</b>	28									
100 µm/m	100									
250 µm/m	250									
500 µm/m	500									
1000 µm/m	102									
<b>Measuring direction positive</b>	Tension									
<b>Output signal</b>	CANopen									
<b>Electrical connection</b>	M12 x 1, 5 pin, male									

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