

**Main features:**

- Direct measurement of surface strain
- With high grade variable digital amplifier
- Amplifies the signal on the spot, avoiding EMC problems
- High accuracy and linearity in tension and pressure (like bonded strain gauges)
- For dynamic applications
- Used on presses, injection moulding and die-casting machines
- Quick and easy mounting
- Protected against overload

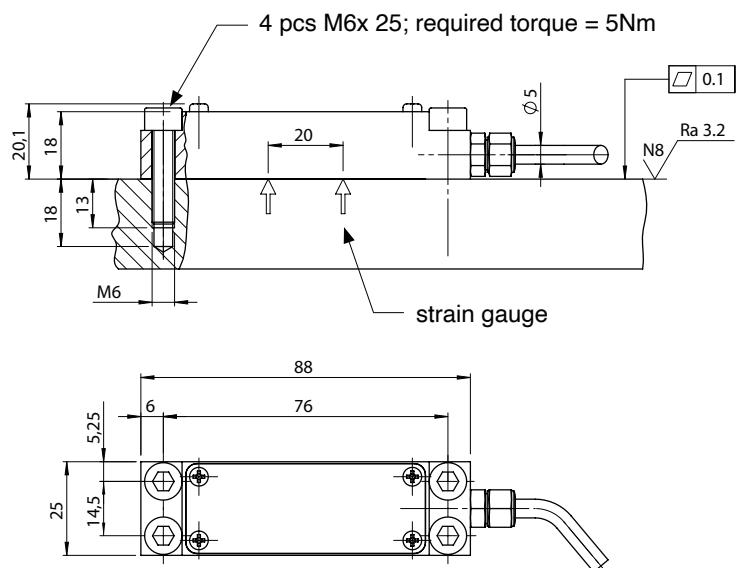
The strain gauge sensor SB76-VDA measure the surface-strain directly at the mounting location in the same quality as bonded strain gages. The integrated variable digital amplifier amplifies the signal on the spot, avoiding EMC problems. The mounting is very fast. The press-on technology, developed by Sensormate AG, presses the strain gauges under the stainless protective film so strongly against the surface to be measured that frictional contact occurs. The sensor can not be overloaded. The sensor do not need a recalibration when it replaced or remounted. The sensor require a cyclical reset.

TECHNICAL DATA

Output signal	VOLTAGE	CURRENT
Strain gauge type	Foil strain gage (GF=2.00)	
Linearity	< ± 0.3% FS	
Hysteresis	< ± 0.5% FS	
Repeatability	< ± 0.2% FS	
Zero accuracy	< ± 0.1% FS	
FS accuracy	< ± 0.2% FS	
Accuracy at room temperature (1)	< ± 0.5% FS	
Bridge resistance	350 Ω	
Measuring range	±100...±1000 με	
Output resolution	16-Bit	
Sampling rate	5 kHz	
Low-pass filter	1 kHz	
Case material	Aluminum	
Cover	Aluminum	
Reset time	> 25 ms	
Reset voltage	12...36 VDC	
Supply voltage	12...36VDC	
Power consumption	0.5W	1W
Zero output signal	0 V (N)	4 mA (E)
Full scale output signal	+ 10 V (N) stretching	20 mA (E) stretching
	- 10 V (N) compression	-
Allowed load	≥ 5 kΩ	0.500 Ω
Operating temperature range	-5°C...+80°C	
Storage temperature range	-5°C...+80°C	
Overload capability	indefinite (offset occurs)	
Weight, without cable	~ 90 g	
Protection class	IP67	
Output short circuit protection	Yes	
Reverse polarity protection	Yes	
Dielectric strength (2)	250V	
EC Conformity	According to Directive 2014/30/EU	
(1) incl. Non-linearity, Hysteresis, Repeatability, Zero-offset and Span-offset		
(2) Uses 50V 2J Voltage suppressor		

DIMENSION

SB76-VDA



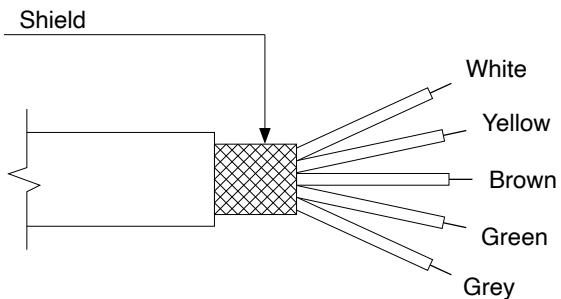
Accessories included:

4 pieces mounting screws M6x25

Dimensions in mm

ELECTRICAL CONNECTION

PUR screened cable (standard); 5 x 0.14mm²; Ø 5mm; bending 10 x Ø

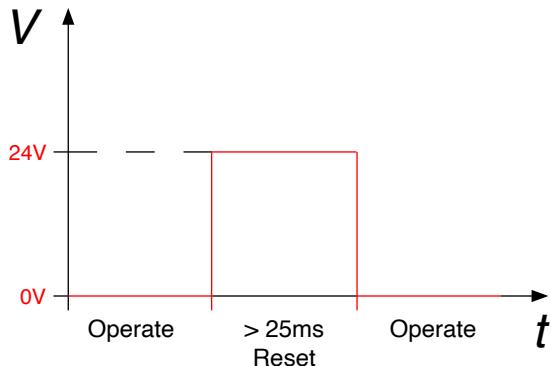


Cable	Function
White	Power (24V)
Yellow	GND (0V)
Brown	Signal -
Green	Reset
Grey	Signal +

Stretching (positive strain) gives positive signal.
Compression (negative strain) gives negative signal.

RESET FUNCTION

24V - TYPE



Reset control input	Reset	12...36V
Operate	0V / open	
Minimum reset pulse duration		>25ms

With the power-on reset function the amplifier generates a reset signal when power is applied to device.

ORDER CODE

Press-on strain sensor with
variable digital amplifier

SB76-VDA - **4** - **O** - - - **0 0** - **2** - - -

Cable length	
1 m	010
3 m	030
5 m	050
10 m	100
15 m	150

Output signal	
0...±10 VDC	N
4...20 mA	E

Measuring range	
100 $\mu\epsilon$	0100
250 $\mu\epsilon$	0250
500 $\mu\epsilon$	0500
750 $\mu\epsilon$	0750
1000 $\mu\epsilon$	1000

Reset type	
External high-reset (24V), without power-on reset, zero stored (2·10 ⁶ reset cycles allowed)	HO11
External high-reset (24V), with power-on reset (infinite reset cycles allowed)	HR11

Peak feature	
No peak-hold	O

Example: SB76-VDA - 4 - O - 010 - N - 00 - 2 - 0100 - HO11 - O

Press-on strain sensor with variable amplifier, cable lenght = 1m, Output signal = 0...±10VDC,
measuring range = 100 $\mu\epsilon$, reset type = external high-reset (24V) without power on reset and zero stored, no peak-hold

GEFRAN spa reserves the right to make any kind of design or functional modification at any moment without prior notice.

GEFRAN

GEFRAN spa
via Sebina, 74 - 25050 Provaglio d'Iseo
(BS) - ITALIEN
Tel.: +39 030 9888.1 - Fax: +39 030 9839063
Internet: www.gefran.com

Gefran Schweiz AG
Steigweg 8, - CH-8355 Aadorf, Schweiz
Tel.: +41 52 523 25 00
Fax: +41(0)52-3661884
Internet: www.gefran.com

DTS_SB76-VDA_06-2025_ENG