



Main features

- Dynamic and static applications
- Used for any kind of strain gage sensors
- Digital amplified output from 0...±10VDC
- High resolutions (24-Bit ADC, 16-Bit DAC)
- Quick plug-in sensor and measure
- Reset type (0V / 24V) easy switchable
- DIN housing fits into control cabinets (IP50)

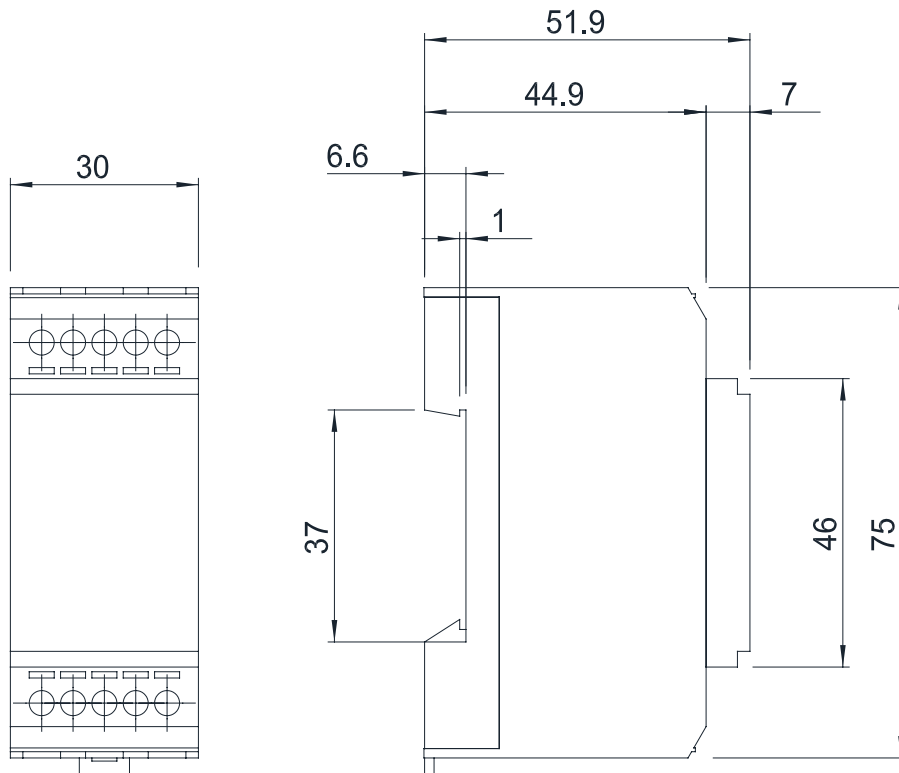
This digital amplifier measures at the strain gage bridge eight times per millisecond which gives a high oversampling range.

This gives a stable signal output with high accuracy and reproducibility. The digitalised signal can be transformed into various outputs

TECHNICAL DATA

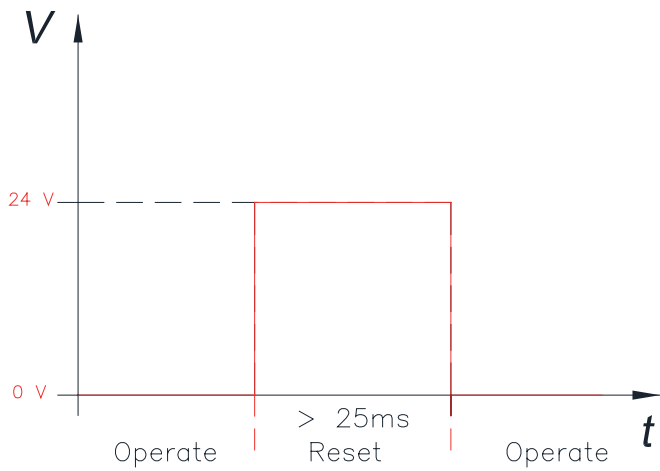
Input Bridge resistance	120...1000Ω
Signal input range (FS)	0.1...3mV/V
Span adjustment	±200% FS
Zero adjustment	±500% FS
Resolution ADC	24-Bit
Resolution DAC	16-Bit
Sampling rate	8kHz
Output rate	800Hz
Low-pass filter	100Hz
Output signal	0...±10VDC
Noise	< 10mV
Accuracy	< ± 0.2% FS
Accuracy of zero point	< ± 0.1% FS
Linearity	< ± 0.02% FS
Output resistance	10Ω
Reset time	> 25ms
Reset voltage	15...28VDC, 0VDC
Supply voltage	20...28VDC
Supply current	< 60mA
Inverse polarity protection	Yes
Accidental short-circuit protection	Yes
Operating temperatur range	-10...+70°C
Storage temperatur range	-10...+70°C
Temperature coefficient at 10°C	< 0.1 (0.05 typical)
Protection class	IP50
EMC	2014/30/EU
Case material	Aluminium
Weight	120g

MECHANICAL DIMENSIONS



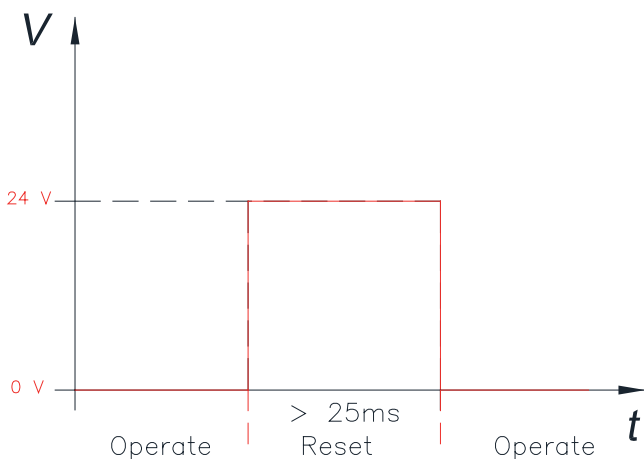
RESET FUNCTIONS

24V-TYPE (changeable with switch as customer)



Reset control input	Reset	15...28 V
	Operate	0V / open
Minimum reset pulse duration	>25 ms	

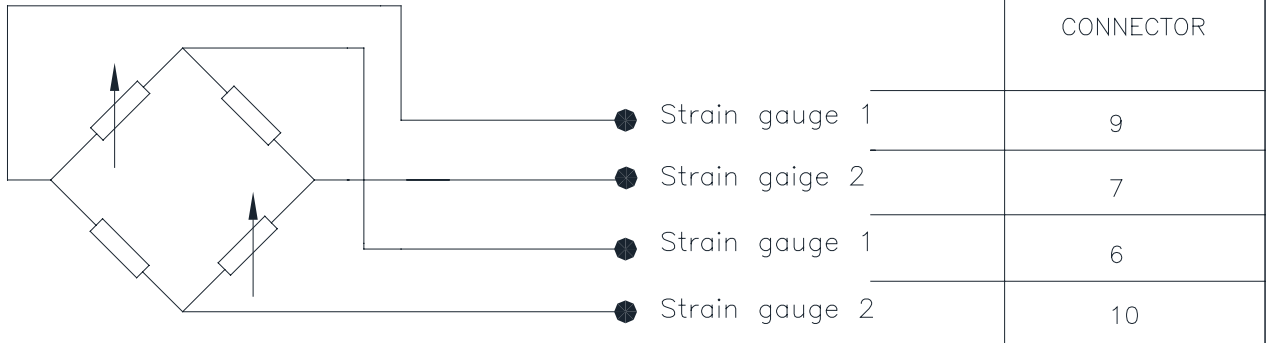
0V-TYPE (changeable with switch as customer)



Reset control input	Reset	0V
	Operate	5...28V / open
Minimum reset pulse duration	>25 ms	

ELECTRICAL CONNECTIONS

SENSOR:
half bridge



full bridge



CONTROLLER

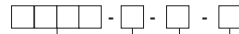
CONNECTOR OUTPUT	FUNCTION
1	Shield
2	24 V
3	GND
4	Signal +
5	Reset

ORDER CODE

DIGITAL STRAIN-GAUGE AMPLIFIER VDA168 - DIN

Output range of used sensor		
Full bridge version	0.5 mV/V	0005
	1.0 mV/V	0010
	2.0 mV/V	0020
2/4 bridge version	500 $\mu\epsilon$	0500
	1000 $\mu\epsilon$	1000
define your range (100 $\mu\epsilon$ up to 1000 $\mu\epsilon$; 0.5 mV/V up to 3 mV/V)		XXX

Bridge	
Full Bridge	4
2/4 bridge	2



Feature	
N	peak-hold negative
P	peak-hold positive
O	no features

Reset	
O	External reset (5 · 10 ⁵ reset cycles allowed)
R	External reset with power-on reset (infinite reset cycles allowed)
S	Static (no external reset)

Example: **VDA168 - DIN - 0020 - 4 - R - P**

is a VDA168-DIN strain-gauge amplifier for four strain gauges, with an output signal of 0...10V (with sensitivity sensor 2 mV/V), with a 3m cable with power-on reset and with peak-hold positive.

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



Sensormate AG
Steigweg 8, - CH-8355 Aadorf, Switzerland
ph: +41(0)52-2421818 - fax: +41(0)52-3661884
Internet: <http://www.sensormate.ch>

GEFRAN

GEFRAN spa
via Sebina, 74 - 25050 PROVAGLIO D'ISEO (BS) - ITALY
ph. +39 030 9888.1 - fax. +39 030 9839063
Internet: <http://www.gefran.com>

DTS_VDA168-DIN_04-2016_ENG