


# Digital Strain Gauge and Standard Signal Amplifier ADLM-NS

## ● Characteristics

3 - WEIGHING SYSTEM - SOLUTION - VESSEL - SILO - TANK - VEHICLE - SCALE

	- Input strain gauge:	up to 4 full bridges (350 Ω)
	- Sensitivity strain gauge:	0,1...5 mV/V (adjustable)
	- Input standard signal:	4...20 mA (options available)
	- Analog output:	4...20 mA / 0...10 V (options available)
	- Limit contacts:	2 relays (option)
	- Voltage supply:	24 VDC
	- Accuracy:	0,2% of end scale value (combined error)
	- Interfaces:	RS232, RS485, CANopen, Profibus
	- Protection:	IP20
	- Mounting:	top hat rail
- Application:	e.g. operation of large indicator LDS	

## ● Technical Data

### Input

Strain gauge:	Full bridge:	up to 4, 350 Ω (sum signal)
	Sensitivity:	0,1...5 mV/V (programmable)
Standard signal:	4...20 mA	
Options:	0...10 V	
	0...20 mA	
	2...10 V	
Note:	Kind of input signal is factory-set	

### Output

Analogue:	Standard:	0...10 V and 4...20 mA
	Options:	0...10 V and 0...20 mA
		2...10 V and 4...20 mA
		2...10 V and 0...20 mA
Current:	Working resistance:	<500 Ω
Voltage:	Load resistor:	>10 kΩ

### Limiting Value Switch (Option)

Relays:	2, each with change over contact, with fail safe function	
Resistive load:	Peak switching current:	30 VDC 1 A / 125 VAC 0,3 A
	Peak switching power:	30 W / 37,5 VA
	Peak switching voltage:	110 VDC / 125 VAC
	Peak switching current:	1 A

### Indication

Display:	microprocessor based multifunction indicator
Function:	4 keys for programming
Indication:	current values / switch points / diagnostic values

### Interfaces

Standard (Interface 1):	RS232 for configuration and data read (always available)
Option Interface 2:	Without / RS232 / RS485 / CAN-bus / Profibus (for evaluation)

## ● Applications

The measuring amplifier is suitable for load/force measuring and has a comfortable configuration. With the output signal it is possible to operate e.g. a large indicator or to evaluate it with a SPS. Among others for use in container terminals, silo works or overhead cranes.



## ● Technical Data (Continued)

### Measuring Amplifier

Resolution:	12 / 14 / 15 / 16 bit (measuring rate: 128 / 32 / 16 / 8 per second)
Combined error:	±0,2% of end scale value
Temperature coefficient.:	<50 ppm/K
Configuration:	RS232 and/or front keys
Tare:	front keys or externally (active/passive)
Measuring rate and filter:	10 ms....5 s (programmable)

### Power Supply

Voltage:	24 VDC
Power consumption:	with options approx. 5 W (without external load)
Residual ripple:	200 mV
Sensor supply:	5 VDC, 60 mA maximum
External load:	24 VDC, 2 A

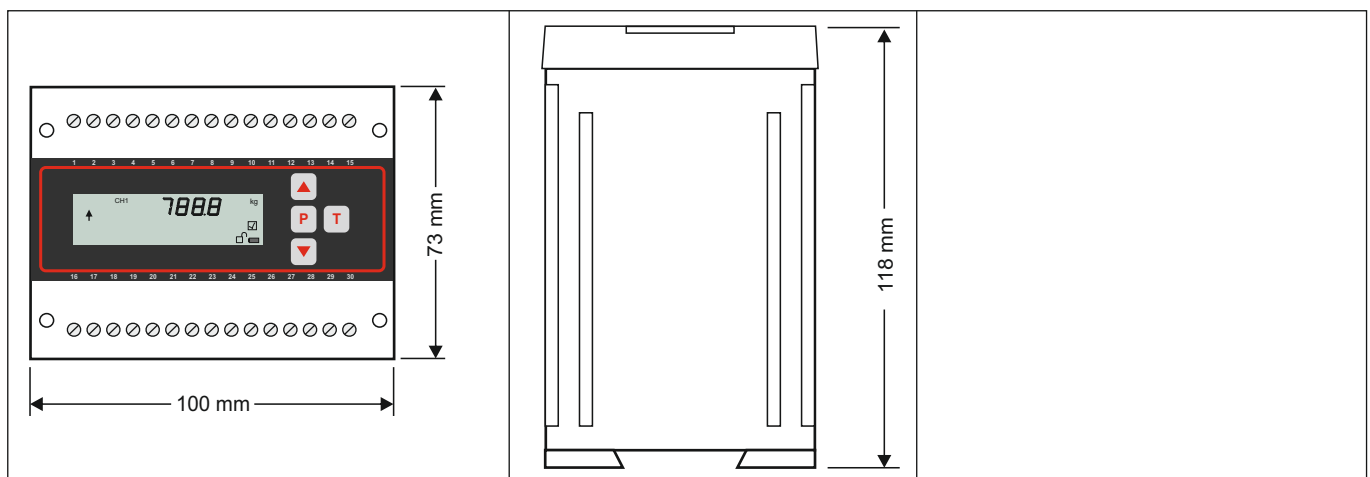
### Ambient Conditions

Operating temperature:	-10...+60°C
Storing temperature:	-20...+70°C

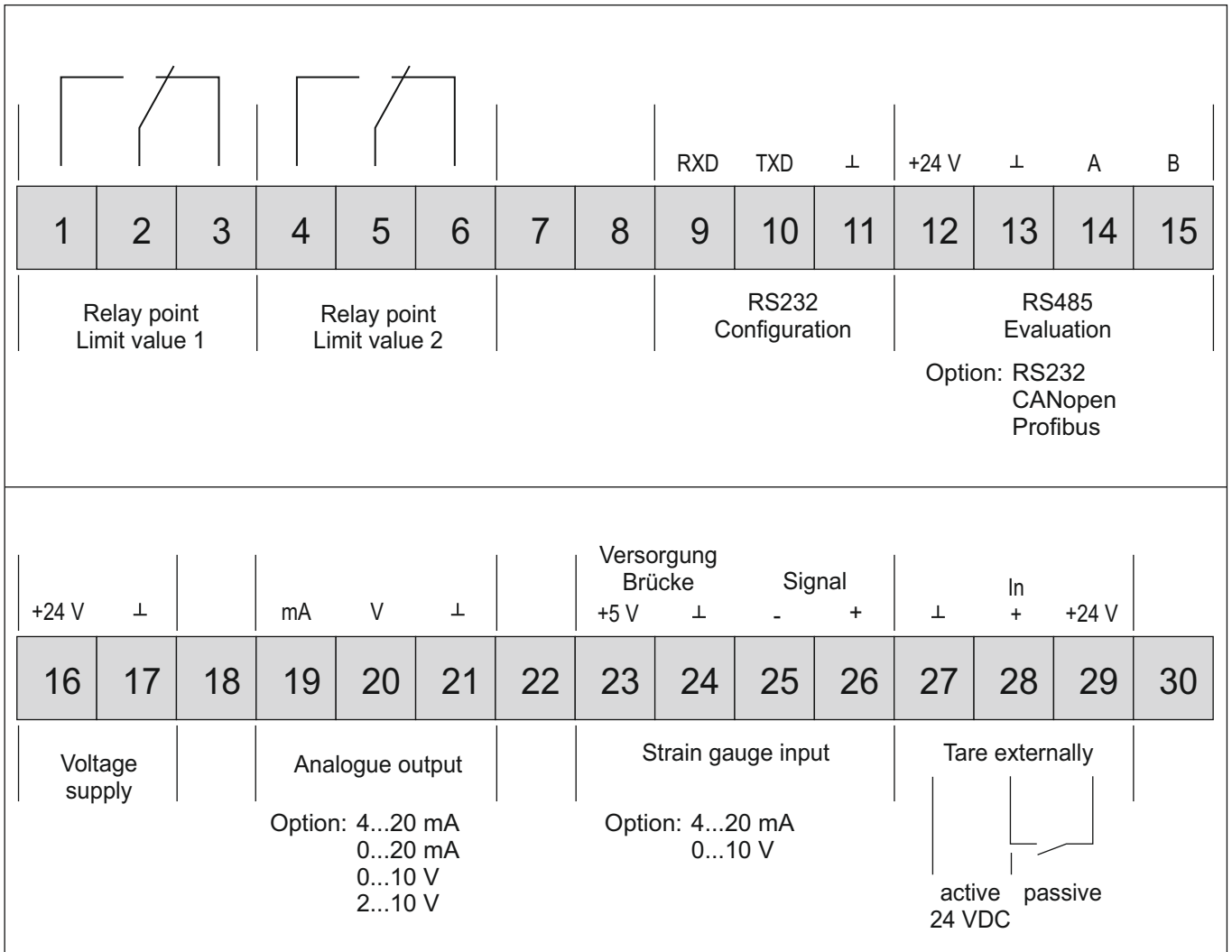
### Mechanics

Enclosure:	Material:	polycarbonate GF
	Dimensions:	73 x 100 x 118 mm
	Colour:	Bottom part: black Front: grey
	Connection:	Terminals: up to 1x 4 mm <sup>2</sup> (solid) up to 1x 2,5 mm <sup>2</sup> (flexible with end splice) up to 2x 1,5 mm <sup>2</sup> (flexible with end splice)
	Burning behaviour:	UL94 V-0
	Mounting:	on top hat rail
	Protection:	Enclosure: IP40 Terminals: IP20
Weight:	approx. 700 g	

## ● Dimensions (in mm)



● **Connection**



● **Use as Control Unit for Large Indicator LDS**

	- Input:	RS485
	- Digits:	2, 4, 6 digits
	- Display colour:	red (optionally: green, amber, blue, white)
	- LED Segments:	16
	- Digit height:	57 mm / 100 mm
	- Supply:	24 VDC
	- Range:	-199999...999999 (6 digits)
	- Brightness:	dimnable in several steps
	- Unit:	display / adhesive foil
	- Enclosure:	powder coating white aluminium
- Protection:	IP 65	

● **Order code**

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<b>Input:</b>	Strain gauge bridge	0																		
	4...20 mA	1																		
	0...10 V	2																		
	0...20 mA	3																		
	2...10 V	5																		
<b>Supply:</b>	24 VDC		0																	
<b>Option Interface 2:</b>	Without			0																
	RS485			1																
	RS232			2																
	CANopen			3																
	Profibus			4																
<b>Limit value contacts:</b>	Without																			0
	With 2 relays																			1
<b>Display:</b>	With																			1
<b>Analogue output:</b>	4...20 mA, 0...10 V (standard)																			0
	4...20 mA, 2...10 V																			1
	0...20 mA, 0...10 V																			2
	0...20 mA, 2...10 V																			3
<b>Tare externally:</b>	Active (24 V)																			0
	Passive (contact)																			1
<b>Configuration:</b>	Factory setting <sup>1)</sup>																			0
	Customized (please specify) <sup>2)</sup>																			1
<b>Other:</b>	Special model																			0

- 1) Factory-set: sensitivity: 3 mV/V / analogue output: 0...10 V and 4...20 mA (standard) / resolution: 16 bit / measuring rate: 5/s / filter: 1s / external tare: active (24 V)
- 2) For possible options, see technical data. If no values are given, the factory setting will be used.

<b>Accessories:</b>	V24 programming cable, software	Order No.:
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