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Transmitter DMS50

- **Weight – Force – Pressure – Torque with DMS-strain gauges**
- **Bridge sensitivity 0.100..5.000 mV/V**
- **Teach-in function**
- **Tare function**
- **Min- and Max peak storage (not voltage safe)**
- **Integrated bridge supply 2.5 V, 5 V, 10 V max. 120 mA**
- **Bus-interface Modbus / Profibus**

Characteristics

The DMS50 converts the output signal of standard strain gauges (DMS measuring bridges) into a standard signal 0/4..20 mA or 0/2..10 DC. The bridge supply and an external control input for the tare function are integrated.
If several strain gauges are required in an application, these must be connected parallel. The bridge current must not exceed 120 mA in this case. Where appropriate, a SBB1616 measuring amplifier is to be interposed for a feed current up to 200 mA.

Technical data

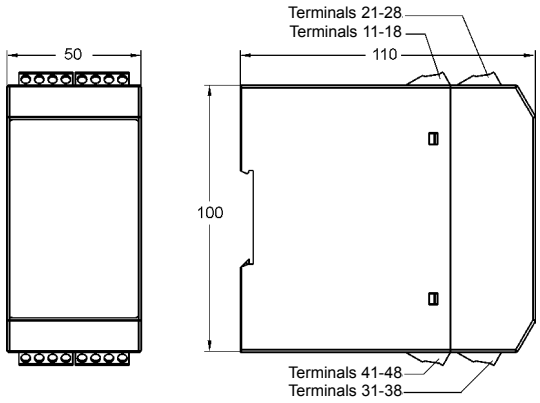
Power supply
Supply voltage : 230 V AC ±10 %; 115 V AC ±10 % or 24 V DC ±15 %
Power consumption : max. 7 VA
Operating temperature : -10..+55 °C
CE- conformity : EN 55022, EN 60555, EN 61326
Input
DMS
Bridge-supply : 2.5 V/ 5 V/ 10 V DC ; programmable; max. 120 mA
Bridge sensitivity : 0.100..5.000 mV/V
Sense line : compensated line resistance of max. 10 Ω
Accuracy : < 0.025 % ± 2 digit
Tare external : ext. contact or 24 V DC signal
Display : graphic LCD-Display 128x64 pixel, backlight white
Indicating range : ±9999 Digit

Outputs
Relay SPDT, A1-A4 : < 250 V AC < 250 VA < 2 A cos φ ≥ 0.3
< 300 V DC < 40 W < 2 A
Analog output : 0/4..20 mA burden ≤ 500 Ω; 0/2..10 V burden > 500 Ω, isolated output changes automatically
Accuracy : 0.2 %; TK 0.01 %/K
Fault indication at error in the DMS measuring circuit
→ Analog output 0 mA, < 3.6 mA or >21.5 mA, programmable
→ Alarm contact(s) min. or max. programmable

Bus system
Modbus : RS485, RTU or ASCII max. 38400 Bd
Profibus : Profibus DP
Connection : 9 pole D-SUB plug in the front

Case : Polyamide (PA) 6.6 , UL94V-0, acc. to DIN EN 60715, DIN rail TS35 DIN rail TS35
Weight : approx. 450 g
Connection : screw terminals 0.14..2.5 mm² AWG 26..AWG14
Protection class : case IP30, terminals IP20 acc. to BGV A3

Dimensions



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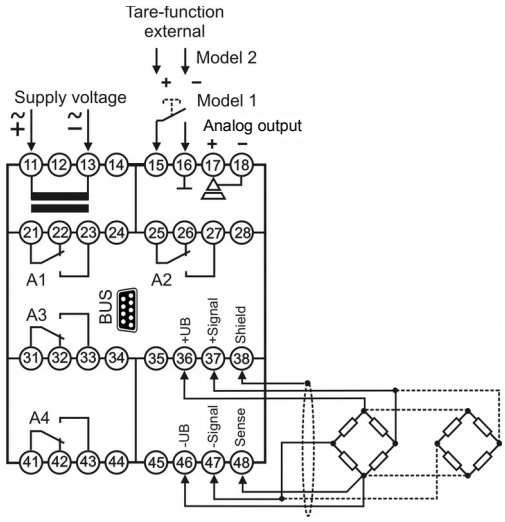
Connection diagram

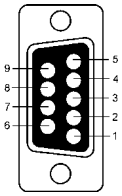


Bridge supply max. 120 mA

Bus connection

Modbus		
PIN	**Signal**	**EIA / TIA-485 name**
5	D1	B / B´
9	D0	A / A´
1	Common	C / C´
Profibus		
3	RxD / TxD-P	
5	DGND	
6	VP / +5V max 10 mA	
8	RxD / TxD-N	

9 pole D-Sub connector in the front



Ordering code

DMS50 - 1. [ ] - 2. [ ] - 3. [ ] - 4. [ ] - 5. [ ] - 6. [ ]

1.	**Model**	
	1	input DMS strain gauge, input ext. tare-function via contact
	2	as 1, but isolated input for external tare function via 24 V DC electronic signal
2.	**Alarm outputs**	
	00	not installed
	2R	2 relay outputs, A1, A2 SPDT
3.	**Alarm outputs/BUS configuration**	
	00	not installed
	2R	2 relay outputs, A3, A4 SPDT
	MB	Modbus RTU/ASCII, RS485
	PB	Profibus DP
4.	**Analog output**	
	AO	0/4..20 mA; 0/2..10 V DC
5.	**Supply voltage**	
	0	230 V AC, ± 10 % 50-60 Hz
	1	115 V AC, ± 10 % 50-60 Hz
	5	24 V DC, ± 15 %
6.	**Options**	
	00	without option