

MEASURING TRANSDUCERS FOR PRESSURE TRANSMITTER

(with four-armed strain gauge full bridge)

Output selectable between 0-20mA, 4-20mA, 0-10V, 2-10V

Easy to use

Calibration (80%)

Input adjustable from 1,8 up to 3,6 mV/V



TTDMS-MU

Application The measuring transducers DMS-MU serve to convert and isolate a change of resistance of a four-armed strain gauge full bridge into a load-independent direct-current and direct-voltage signal. The calibrated double-outputs can be switched over between 0-20 mA / 0-10 V and 4-20 mA / 2-10 V.

Function The strain gauge measuring bridge is supplied with a constant reference voltage and the measuring signal is tapped in form of a voltage difference. The input lines at the terminals A, B, C and D are checked for line break. The galvanic separation is effected by means of an optocoupler. Both outputs are no-load resistant and short-circuit proof. Any connection between both outputs will be unacceptable. An auxiliary voltage will be required for all types.

Technical data

Input	Input quantity Rated values	Resistance change of a four-armed strain gauge full bridge with e.g. 350 Ohm Difference input voltage 2-3,3 mV/V, adjustable from 1,8 up to 3,6 mV/V (corresponds to 12 up to 24,5 mV)
	Bridge supply voltage Zero point	approx. 6,8 V +/- 3 mV adjustable
Output	Output quantities Double-output	Load independent direct current and direct voltage 0-20mA /0-750 Ohm of load and 0-10V max. load 20 mA as well as 4-20mA /0-750 Ohm of load and 2-10V max. load 20 mA front-laterally switchable
	Option	<ul style="list-style-type: none"> • Frequency module - a value of 0 – 5 Hz up to 0 – 10 kHz <ul style="list-style-type: none"> ○ „Opencollector“ NPN, max. 30V 100 mA loadable, impulse/break 50/50 % ○ <u>Square wave</u> signal 5V, max. 10 mA loadable, impulse/break 50%
Dynamic system behaviour	Accuracy Temperature range Temperature influence Influence of aux. Load influence External magnetic field influence Residual ripple Response time No-load voltage Current limitation Testing voltage Sensor break	+/- 0,5 % -15°C up to +20°C up to +30°C up to +55 °C < 0,2 % at 10 K none none none (up to 400 A/m) < 30 mV _{ss} < 300 ms (with frequency module < 400 ms) max. 24 V max. 2-fold in case of saturation 4 kV between input and output, input and aux., output and aux. In case of interruption of one of the input lines at the terminals A, B, C or D, the output of the measuring transducer changes to maximum output signal.
Adjustment	After taking off the plexiglass cover it is possible to adjust with the potentiometer which is named "SPAN" the final value and with the potentiometer which is named "ZERO" the zero-point. With the slide switch the output can be changed over between "LIVE ZERO" (4-20 mA/2-10 V) and "ZERO" (0-20 mA/0-10 V).	

Regulations

EMC	DIN EN 61326
Mechanical strength	DIN EN 61010 part 1
Electrical security	DIN EN 61010 part 1
	Housing all insulated, protection class II, at a working voltage up to 300V (network to neutral conductor) degree of pollution 2, overvoltage category CAT III
Accuracy, overload	DIN EN 60688
Separation	DIN EN 61010 part 1, 3,52 kV 50 Hz 1sec.
Air gaps and creep distances	DIN EN 61010 part 1
System of protection	DIN EN 60529 housing IP30, terminals IP20
Connection	DIN 43807

Auxiliary voltage

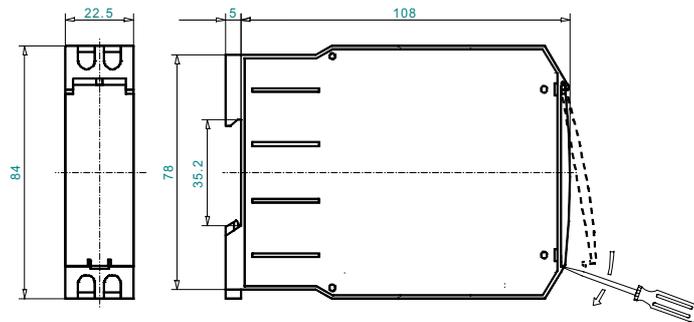
230 V AC \pm 20 %, 45-65 Hz, 2,5 VA

Option

- 110 V AC \pm 20 %, 45-65 Hz, 2,5 VA
- 24 V DC, -15 % bis +25 %, 2 W, (EMC DIN EN 61326 class A)
- 6-30 V AC + DC or 36-265 V AC + DC, 2 VA, (EMC DIN EN 61326 class A)

Weight 180g

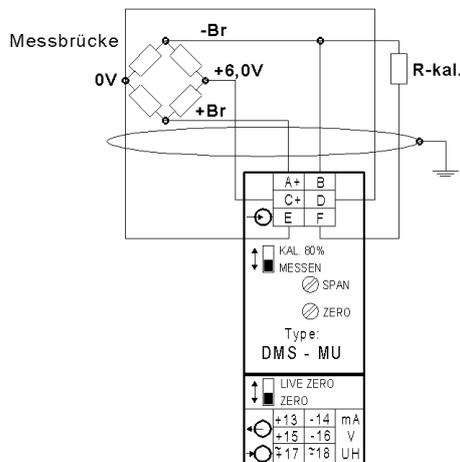
Dimensions



Installation

Attachement	snap-on mounting according to DIN EN 50 022
Electrical connection	threaded terminal end 4 mm ² max.

Connection



Transducers with frequency module have no further outputs and no "LIVE-ZERO"-switching. At the clamps +13 and -14 the frequency output is available.