

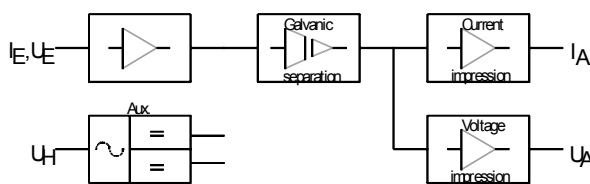


MEASURING TRANSDUCERS FOR DIRECT CURRENT AND DIRECT VOLTAGE

IgT-MU / UgT-MU

Application The measuring transducers IgT-MU and UgT-MU serve to convert and isolate a direct current or a direct voltage 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.

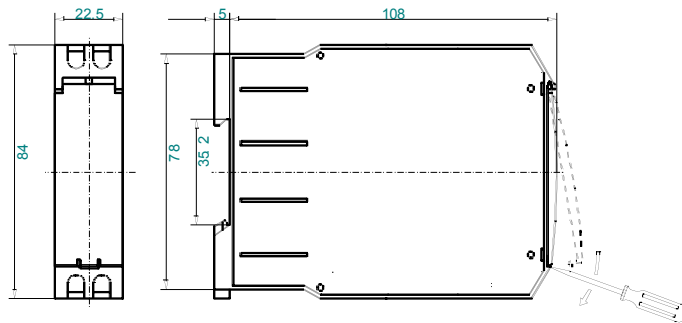
Function The measurable variable gets via an input protective circuit to the amplifier or impedance transformer. The direct voltage obtained is converted into a load-independent direct-current and into an impressed direct voltage. The electrical isolation is effected by means of an optocoupler. Both 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.



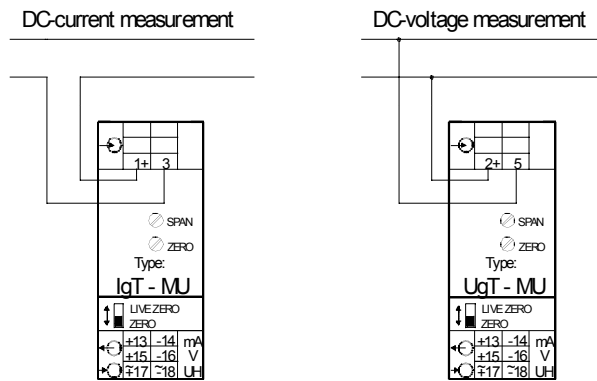
Technical data

Input	Input quantity	direct voltage or direct current
	Rated values	IgT-MU: 0-100 μ A up to 0-5 A, voltage drop 60 mV UgT-MU: 0-5 mV up to 0-600 V, $R_i = 100$ kOhm up to 1 V, > 1 V 100 kOhm/V, max. 2 MOhm
Option	Overload permanent	• Transmission of both polarities Current 2-fold, voltage 5-fold / max. 830 V
	Surge overload	Current 20-fold 1 sec., voltage 5-fold 1 sec.
Output	Output quantities	Load independent direct current and direct voltage
	Double-output	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		• bipolar output (e.g. -20 mA - 0 - +20mA and -10 V - 0 - +10V)
		• Zero point rise (e.g. 0 - 10 mA - 20 mA and 0 - 5 V - 10 V)
		• Frequency module - a value of 0 - 5 Hz up to 0 - 10 kHz
		– „Open-collector“ NPN, max. 30V 100 mA loadable, impulse/break 50/50 % – Square wave signal 5V, max. 10 mA loadable, impulse/break 50/50 %
Dynamic system behaviour	Accuracy	+/- 0,5 %
	Temperature range	-15 °C bis +55 °C
	Temperature influence	< 0,1 % at 10 K
	Influence of aux.	none
	Load influence	none
	External magnetic field influence	none (up to 400 A/m)
	Residual ripple	< 15 mV _{ss}
	Response time	< 300 ms (with frequency module < 400 ms)
	Option	• < 200 μ s
	No-load voltage	max. 24 V
Adjustment	Current limitation	max. 2-fold in case of saturation
	Testing voltage	4 kV between input and output, input and aux., output and aux.
		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 50081-1, DIN EN 61000-6-2
	Mechanical strength Electrical security	DIN EN 61010 part 1 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 at a working voltage up to 600V (network to neutral conductor) degree of pollution 2, overvoltage category CAT II at a working voltage up to 1000V (network to neutral conductor) degree of pollution 1, overvoltage category CAT I
	Accuracy, overload Separation Air gaps and creep distances System of protection Connection	DIN EN 60688 DIN EN 61010 part 1, 3,7 kV 50 Hz 1min DIN EN 61010 part 1 DIN EN 60529 housing IP30, terminals IP20 DIN 43807
Auxiliary voltage		230 V AC \pm 20 %, 45-65 Hz, 2,5 VA ∞ 110 V AC \pm 20 %, 45-65 Hz, 2,5 VA ∞ 24 V DC, -15 % bis +25 %, 2 W, (EMC DIN EN50081-2) ∞ 36-265 V AC+DC, 2 VA, (EMC DIN EN50081-2)
Weight		170g
Dimensions		



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



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