

Description**Changeover contact, GEMÜ 1250**

Limit switches, GEMÜ 1251-1257 for flowmeters operating on the variable area principle. Reading of the level of the float at the switching points.

Instrument sensors, GEMÜ 1270-1273 for flowmeters operating on the variable area principle. Continuous reading of the level of the float.

Construction**GEMÜ 1250**

A change-over contact is built into the limit switch.

GEMÜ 1251-1257

Bistable reed contacts are built into the limit switches which are actuated by the magnet incorporated in the float.

GEMÜ 1270-1273

The instrument sensors contain reed contacts which are triggered by the magnetic flowmeter float. GEMÜ 1270/1271 have a voltage output signal via voltage divider.

GEMÜ 1272/1273 are equipped with an integrated 2-wire measuring transducer and realize a current output signal.

Function

The limit switches and instrument sensors are fixed to the dove-tail sections moulded onto the flowmeter type series GEMÜ 800 and GEMÜ 850 (see data sheets 800/850). The float in the flowmeter is equipped with a permanent magnet for this application.

GEMÜ 1251-1257

When the magnetic float has passed the contacts fixed to the tube at least once, the following conditions occur:

Position of the float in relation to the contact:

	above contact	below contact
Max. contact (GEMÜ 1251/1256)	closed	open
Min. contact (GEMÜ 1252/1257)	open	closed

The contacts then remain in this position, even if the float moves a long way from the min. or max. contact and will only change when the float passes the respective contact again.

GEMÜ 1270-1273

The reading from the GEMÜ 1270/1271 instrument sensor is emitted as voltage output signal via a voltage divider (0-10 kΩ).

GEMÜ 1272/1273 produce a current output signal which can be directly processed without any further conversion.

The function of the limit switches or instrument sensors is neither affected by the working pressure, nor by the conductivity, concentration or density of the medium.

The application of the flowmeters with continuous reading or limit switches together with a measuring transducer is suitable for use with conducting, non-conducting and also with turbid media.

**GEMÜ® 1250-1257****GEMÜ® 1270-1273**

Max. limit switch GEMÜ 1251/1256 - Min. limit switch GEMÜ 1252/1257 - Change-over contact GEMÜ 1250

Housing material:	PBTP	Max. peak value of starting current:	0.5 A
Electrical connection:	Standard connector supplied with switch bistable reed switches as described	Max. continuous current:	0.2 A
Contacts:		Max. switch performance:	10 VA
Contact function:	min. or max. switch as described	Range available:	1251/1252 for GEMÜ 800 and 850 DN 25, cable gland PG 9 1256/1257 for GEMÜ 850 DN 10-20, cable gland PG 9
Protection class:	IP 65	Order instructions	GEMÜ 1251/1256 Max. limit switch GEMÜ 1252/1257 Min. limit switch
Max. voltage:	250 V		
Ex-protection class:	Ex II2GD IIC T6X		

GEMÜ 1270 - 1273 Instrument sensors

Housing material:	Impact resistant plastic
Electrical connection:	Standard connector supplied with instrument sensor
Sensing system:	Series of reed contacts connected to a chain of resistors, 0 - 10 kΩ
Protection class:	IP 65
Delivery:	Connector with PG 9 cable gland
Ex-protection class:	Ex II2GD IIB T6X (only GEMÜ 1270/1271)

GEMÜ 1272 and 1273 Instrument sensors

Voltages:	Umin = 11 V + 0.02 A x resistor (Ohm) Umax = 40 V For values see diagram
Max. power consumption:	V x 20 mA
Current output:	4 - 20 mA

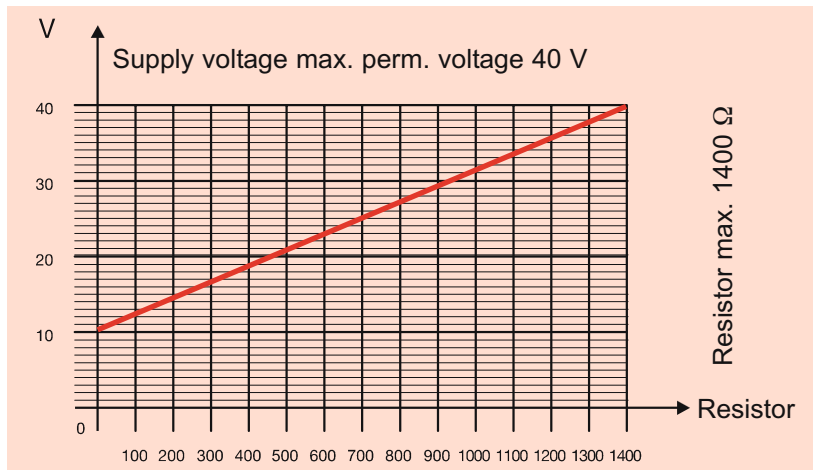
Note on index X: Operation in potentially explosive areas only in conjunction with an isolation switch amplifier complying with ATEX which is designed for operating electro-mechanical switching contacts and for which separate operating instructions apply.

Main voltage:
GEMÜ 1270 / 1271 max. 24 V DC
GEMÜ 1272 / 1273 see table below
Supply voltage dependent upon the resistor (GEMÜ 1272/73)

Supply voltage in volt	Resistor in Ω	Current in mA
11.0	0.55	20
12.45	47	20
13.5	100	20
14.6	150	20
15.7	200	20
17.6	300	20
19.7	400	20
21.7	500	20
23.8	600	20
25.6	700	20
27.7	800	20
29.8	900	20
31.7	1000	20
33.7	1100	20
35.8	1200	20
37.7	1300	20
39.9	1400	20

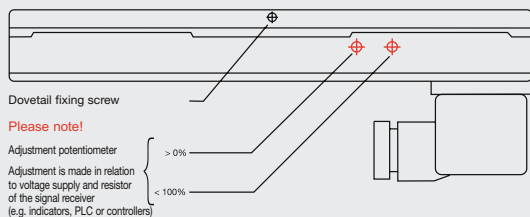
Adjustment note:

In order to compensate the difference between the linear output signal and the non-linear scale of the flowmeters, adjustment must be made to the signal receivers, e.g. utilising water at 20% (= 7.2 mA) and 80 % (= 16.8 mA) volumetric flow.

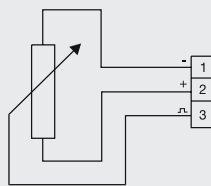


Type	For flowmeter type	Measuring transducer	Metering length	Number of switch points	Distance of reed contacts	Combination within the GEMÜ modular system
GEMÜ 1270 000Z2501	800	without	230 mm	55	4.25 mm	GEMÜ1284 GEMÜ 1275
GEMÜ 1270 000Z2503	800	without	230 mm	100	2.3 mm	
GEMÜ 1271 000Z1001	850 DN 10 - 20	without	118 mm	35	3.5 mm	
GEMÜ 1271 000Z2501	850 DN 25	without	147 mm	43	3.5 mm	
GEMÜ 1272 000Z2501	800	with integrated two wire transducer	210 mm	55	4.25 mm	GEMÜ 1275
GEMÜ 1272000Z2503	800		210 mm	100	2.3 mm	
GEMÜ 1273 000Z1001	850 DN 10 - 20		112 mm	23	3.5 mm	
GEMÜ 1273000Z2501	850 DN 25		125 mm	43	3.5 mm	

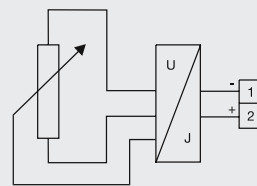
GEMÜ 1272/1273



GEMÜ 1270/1271



GEMÜ 1272/1273



Ordering information: GEMÜ 1284 3-point controller. Please order separate data sheet.

GEMÜ® VALVES, MEASUREMENT AND CONTROL SYSTEMS

