

Description

Changeover contacts, type 1250

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

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

GEMÜ®

Limit switches Instrument Sensors

Construction

Type 1250

In the switches there are changeover contacts.

Types 1251-1257

In the switches there are bistable reed contacts actuated by the magnet incorporated in the float.

Types 1270-1273

The instrument sensor contains reed contacts which are triggered by the magnetic flowmeter float.

Types 1272/1273 are equipped with an integrated 2-wire signal converter which realizes a current output signal.

Function

The limit switches and instrument sensors are fixed to the dovetail-sections moulded onto the flowmeter type series 800 and 850 (see datasheets 800 and 850). The float in the flowmeter is equipped with a permanent magnet.

Types 1251-1257

When the magnetic float has passed the limit switches fixed to the tube at least once, it will produce the following circuit condition:

Position of the float in relation to the limit switch:

	above the switch	below the switch
Max. limit switch (types 1251/1256)	closed	open
Min. limit switch (types 1252/1257)	open	closed

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

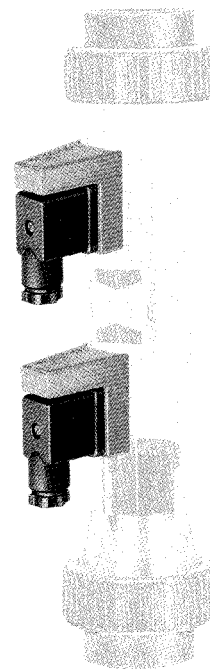
Types 1270-1273

After passing through the type 1274 or 1279 signal transmitters, the reading from the type 1270/1271 instrument sensor is available as a digital indicating signal and as an analogue output signal which can be used for further processing.

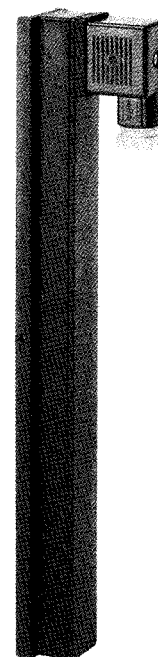
Types 1272/1273 produce a current output signal which can be directly processed without any further conversion.

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 signal converter is suitable for use with conducting, non-conducting and also with turbid media.



Types 1251-1257



Types 1270-1273

Types 1251/1256 Max.Limit Switches - Types 1252/1257 Min. Limit Switches - Changeover contact Type 1250

Housing material: PBTP
Electrical connection: Standard connector, supplied with switch
Contacts: Bistable reed switches
Switching function: Min. or max. switch as described
Degree of protection: IP 65
Max. voltage: 250 V

Max. peak value of marking current: 0,5 A
Max. steady current: 0,2 A
Max. switching duty: 10 VA
Specification: 1251/1252 for types 800 and 850 DN 25, cable gland PG 9
 1256/1257 for type 850 DN 10-20, cable gland PG 9
Ordering information: Types 1251/1256 max. limit switch
 Types 1252/1257 min. limit switch

Types 1270 - 1273 Instrument Sensors

Housing material: Impact resistant plastic
Electrical connection: Standard connector with PG 9 cable gland, supplied with instrument sensor
Sensing system: Series of reed switches connected to a chain of resistors (0 - 10 kΩ)
Degree of protection: IP 65
Delivery: Cable socket

Types 1272 and 1273 Instrument Sensors

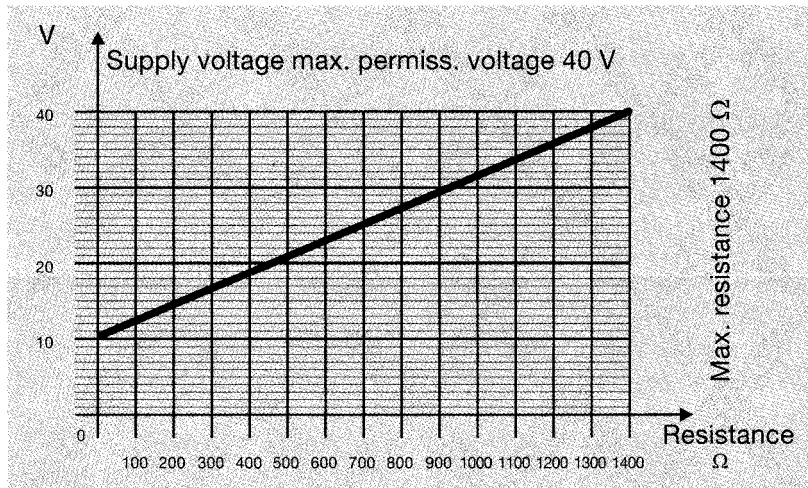
Voltages: $U_{min} = 11 \text{ V} + 0.02 \text{ A} \times \text{burden (Ohm)}$
 $U_{max} = 40 \text{ V}$
 Value acc. to diagram
Max. power consumption: $\text{V} \times 20 \text{ mA}$
Current output: 4 - 20 mA

Supply voltage:
 types 1270 / 1271 max. 24 V DC
 types 1272 / 1273 see table below
Supply voltage dependent upon the resistance (in types 1272/73)

Supply voltage in V	Resistance 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

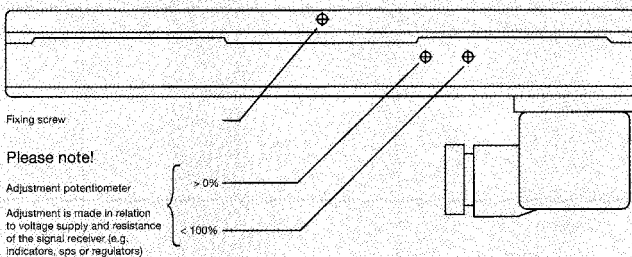
Adjustment note:

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. With viscous media the adjustment points must be corresponding closer.

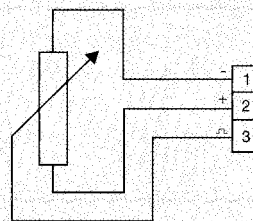


Type	For flow-meter type	Signal transmitter	Metering length	Number of switch points	Distance of reed contacts	Combination within the GEMÜ modular system
Type 1270/000/Z 25	800	without	230 mm	55	4.25 mm	Types 1281 - 1284 Types 1286 - 1289 Types 1275
Type 1271/000/Z 10	850/DN 10-20	without	118 mm	43	3.00 mm	
Type 1271/000/Z 25	850/DN 25	without	147 mm	43	3.50 mm	
Type 1272/000/Z 25	800	with integrated two wire signal converter	210 mm	55	4.25 mm	Type 3000, 1275 remote indication with input 4 - 20 mA, e.g. SPS
Type 1273/000/Z 10	850/DN 10-20		112 mm	43	3.00 mm	
Type 1273/000/Z 25	850/DN 25		125 mm	43	3.50 mm	

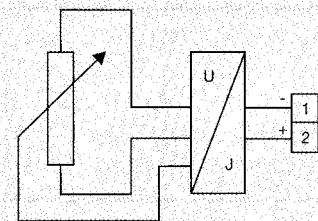
Types 1272/1273



Types 1270/1271



Types 1272/1273



Ordering information: Types 1281-1289 3-point controllers, Typ 3000 accumulated flow counter. Please order separate datasheets..

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