Electrical contact devices
For pressure and temperature gauges

Integrated in housing
For dial size 100 and 160 mm

Features

- Intrinsically safe with inductive contacts
- Inductive and magnetic spring contacts
- Up to 3 contacts
- Switch rating up to 1 A 250 VAC
- For dry or liquid filled gauges

Applications

Measuring type		Pressure				Diff. pressure	Temperature
Measuring principle		Bourdon tube		Diaphragm		Diaphragm	Gas actuated
Instruments		T5500		P5500		F5503/F5509	S5500
Minimum range in		bar		mbar		mbar	°C
For dial size in mm		100	160	100	160	100/160	100/160
and	1 inductive contact	1,0	1,0	40	40	60	All ranges are possible
	2 inductive contacts	1,6	1,6	100	100	100	
	3 inductive contacts	1,6	1,6	100	250	100	
or	1 magnetic spring contact	1,0	1,0	40	40	100	
	2 magnetic spring contacts	1,6	1,6	100	100	100	
	3 magnetic spring contacts	4,0	2,5	250	250	100	

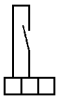
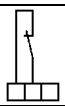
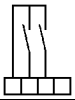
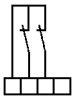
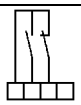
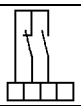
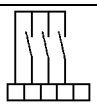
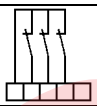
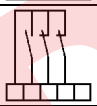
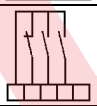
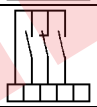
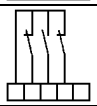
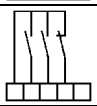
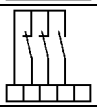
Technical specification	**Magnetic spring contact**	**Inductive contact**
Max. numbers of contacts	3	2
Switch functions	1 closes at increasing process 2 opens at increasing process 3 change over (SPDT) (max. 2 contacts)	1 initiator damped at increasing process (relay energizes) 2 initiator free at increasing process (relay de-energized)
Contact assignment	**Contact** 1 left hand setpoint, **Contact** 2 right hand setpoint with 2 contacts and middle setpoint with 3 contacts, **Contact** 3 right setpoint with 3 contacts	
Adjustable range	Over full scale	
Deadband (hysteresis)	±2 to 4 % F.S.	
Electrical specification		
		Only to be used in conjunction with an suitable and/or approved amplifier relay
Design		DIN 19 234 (NAMUR)
Making and braking current	Max. 1 A 250 VAC (see switching capacity graph)	8 VDC
Nominal current	Max. 0,6 A	
Load	Max. 30 W/50 VA (see switching capacity graph)	
Current consumption		Initiator damped ≤ 1 mA, free ≥ 3 mA
Self inductance		29 µH
Self capacitance		20 nF
Insulation voltage		500 V
Explosion proof (ATEX)		II 2 G c IIC T6 EEx ia IIC T6 only for zone 1 and zone 2 (only for T5500)
Electrical connection		
Location	Left sided, others on request	
Material	Polyamide 6	
Number of terminals	6 + PE	
Max. wire size	2,5 mm^2	
Cable connection	M20x1,5	
Protection according EN 60 529/IEC 529	IP65	
Material contacts	Silver palladium (AgPd 80/20), min. 24 VDC Optional Sinidur gold plated, max. 12 VDC	Not applicable
Accuracy	Rated accuracy of gauge doesn't exceed 150 % of gauges without contacts in according to DIN 16 085	
General specification		
Permissible Ambient temperature Storage temperature	 -20 ... 70 °C -40 ... 70 °C	
Filling liquids	Napvis (for T5500, F5503 and F5509), silicone (for S5500 and P5500), others on request (only if gauge is liquid filled design)	
Mounting	Integral in gauge housing	
Additional weight dry/filled in kg	100 mm: 0,3/1,0; 160 mm: 0,4/1,5	
Accessories, options	Amplifier relay for inductive contacts EEx and standard	

EDISON

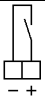
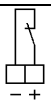
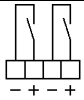
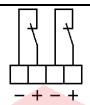
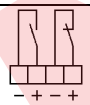
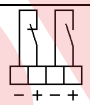
All specifications are subject to change without notice.

Order information

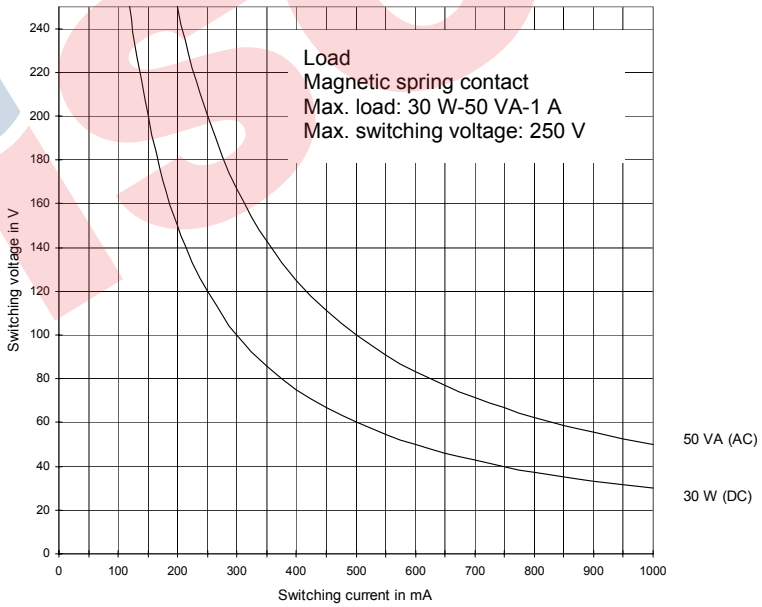
Magnetic spring contacts

Contact code	Switch function at increasing process	Typical diagram (at zero position)
Single contact		
M1000	Contact closes	
M2000	Contact opens	
Dual contact		
M1100	Contact 1 closes Contact 2 closes	
M2200	Contact 1 opens Contact 2 opens	
M1200	Contact 1 closes Contact 2 opens	
M2100	Contact 1 opens Contact 2 closes	
Triple contacts		
M1110	Contact 1 closes Contact 2 closes Contact 3 closes	
M2220	Contact 1 opens Contact 2 opens Contact 3 opens	
M1220	Contact 1 closes Contact 2 opens Contact 3 opens	
M2110	Contact 1 opens Contact 2 closes Contact 3 closes	
M1210	Contact 1 closes Contact 2 opens Contact 3 closes	
M2120	Contact 1 opens Contact 2 closes Contact 3 opens	
M1120	Contact 1 closes Contact 2 closes Contact 3 opens	
M2210	Contact 1 opens Contact 2 opens Contact 3 closes	

Inductive contacts

Contact code	Switch function at increasing process	Equivalent circuit diagram (at zero position)	Position of control vane (at zero position)
Single contact			
I1000 (standard) **I1000SN** (safety design)	Current flows		
I2000 (standard) **I2000SN** (safety design)	No current flows		
Dual contact			
I1100 (standard) **I1100SN** (safety design)	Contact 1 current flows Contact 2 current flows		
I2200 (standard) **I2200SN** (safety design)	Contact 1 no current flows Contact 2 no current flows		
I1200 (standard) **I1200SN** (safety design)	Contact 1 current flows Contact 2 no current flows		
I2100 (standard) **I2100SN** (safety design)	Contact 1 no current flows Contact 2 current flows		

Switching capacity graphs for contact devices



Microswitch SPDT (max. rating 3A 250 VAC/400 mA 30 VDC), for case ∅100/160

Contact code	Pressure (diaphragm gauge)	Differential pressure	Temperature
	P5500	F5502	S5500
Q3 (1 microswitch) **Q33** (2 microswitch)	min. 0/1,6 bar (no case filling)	all ranges (case filling only NAPVIS)	all ranges ((no case filling)

Consult factory for other contact types and number of contacts, such as two independent contacts, pneumatic, slide wire and others.

Order example

Contact type

M1200 | Add contact code to the selected gauge coding.

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