

## Electrical contact devices K5500 for pressure and temperature gauges

According to DIN 16085 and DIN 16196

### 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

### TYPICAL USED IN

- Pressure gauges  
T5500-KF, T6500-KF  
P5500, P6500  
F5503  
F5509, F6509
- Temperature gauges  
S5500



MEASURING TYPE:	PRESSURE				DIFFERENTIAL PRESSURE		TEMPERATUR	
Measuring Principle:	Bourden tube		Diaphragm		Diaphragm		Gas actuated	
MODEL:	T5500-KF		P5500		F5503 / F5509		S5500	
Dial Size:	100	160	100	160	100	160	100	160
Min Range:	in bar		in mbar		in mbar		in °C	
- 1 inductive	1	1	50 <sup>1)</sup>		100		no limitations	
- 2 inductive	1,6	1,6	100		100		no limitations	
- 1 magnetic spring	1	1	160		100		no limitations	
- 2 magnetic spring	1,6	1,6	250		100		no limitations	
- 3 magnetic spring	4	2,5	400		100		no limitations	
Note 1) For liquid filled gauges min. span is 100 mbar								

TECHNICAL SPECIFICATIONS OF THE CONTACTS		
	MAGNETIC SPRINGS CONTACT	INDUCTIVE PROXIMITY CONTACT
Max. Contacts:	3	2
Switching Functions:	1 closes at increasing process pressure 2 opens at increasing process pressure 3 change over (SPDT) with max. 2 contacts	1 initiator damped at increasing process pressure (relay energized) 2 initiator free at increasing process pressure (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:	Full Range	
Hysteresis (Deadband):	±2 to 4 % F.S.	

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**ELECTRICAL SPECIFICATION**

	MAGNETIC SPRINGS CONTACT	INDUCTIVE PROXIMITY CONTACT	
Standard:		DIN EN 60947-5-6 (NAMUR)	
Design:		SJ2-N or SJ2-SN <sup>2)</sup>	SI2-K08-Y1
Making and breaking current:	Max. 1 A/250 VAC (see switching capacity graph)		
Nominal current:	Max. 0,6 A		
Load:	Max. 30 W/50 VA (see switching capacity graph)		
Current consumption non actuated:		≥ 3 mA	≥ 2,1 mA
actuated:		≤ 1 mA	≤ 1,2 mA
Internal inductance L:		≤ 100 µH	≤ 266 µH
Internal capacitance C:		≤ 30 nF	≤ 41 nF

Note 2) Only to be used in conjunction with a suitable and/or approved amplifier

**ELECTRICAL CONNECTION**

Location:	Left sided, others on request
Material:	Polyamide 6
Number of Terminals:	6 + PE
Max. Wire Size:	2,5 mm <sup>2</sup>
Cable Connection:	M20x1,5
Protection according EN 60529/IEC 529:	IP54 IP65 for filled or fillable version

**GENERAL SPECIFICATION**

Material of Contacts:	Silver palladium (AgPd 80/20), min 24 VDC Optional Sinidur gold plated, max 12 VDC	-
Accuracy:	150 % compared to gauges without contacts according to EN 837-1, EN 837-3, DIN 16001, DIN 16003 or EN 13190	
Min./Max. Temperatures:	Ambient: -20 to 70 °C Storage: -40 to 70 °C	
Min./Max. Temperatures: (ATEX)	Ambient: -20 to 60 °C Storage: -40 to 70 °C	
Filling Fluids:	Korasilon (Magnetic spring contacts)	White oil (Inductive proximity contacts)
Mounting:	Integral in gauge housing	
Additional weight:	Amplifier relay for inductive contacts Ex and standard	



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## MAGNETIC SPRING CONTACTS

Contact code	Switch function at increasing process pressure	typical diagram (at zero position)
<b>Single contact</b>		
M1000	Contact closes	
M2000	Contact opens	
<b>Dual contact</b>		
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	
<b>Triple contact</b>		
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 PROXIMITY CONTACTS

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

## MICROSWITCH SPDT <sup>2)</sup>

Contact code	Temperature
	S5500
Q3	all ranges (no case filling)
Q33	

Note 2) Max. Rating 3 A 250 VAC / 400 mA 30 VDC

