

SIMATIC PXI inductive proximity switches

Rugged, accurate and reliable

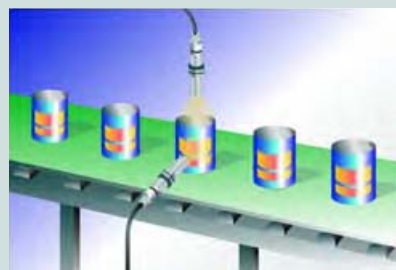
SIMATIC PXI inductive proximity switches are used for non-contact sensing of metal objects, e.g. on printing presses, conveyor systems, robots, elevators, presses, automatic welding machines, etc. Inductive proximity switches feature a long service life, high switching accuracy and a fast response. They can also be used in demanding environments, exposed to e.g. splash water, cleaning emulsions, oil and lubricants.



*Recognition of the valve position
(completely open or closed)*



*Recognition of adjusting screws on the
wheel for velocity or direction control*



Recognition of cans and lids

Overview of SIMATIC PXI inductive proximity switches

SIMATIC PXI200



	3 mm	4 mm	M5	5 mm x 5 mm	M8	6.5 mm	8 mm x 8 mm	M12	12 mm x 40 mm	12 mm x 32 mm	Quader mit M14	M18	18 mm	M30	40 mm x 40 mm	60 mm x 80 mm	80 mm x 100 mm	4 mm	M5	M8	
Operating distance																					
• 0 to 0.8 mm (PXI.1.)	0.6 mm	0.8 mm	0.8 mm	0.8 mm														0.6 mm	0.6 mm		
• 1 to 4 mm (PXI.2.)					1 mm 1.5 mm 2.5 mm	1.5 mm 2.5 mm	1,5 mm	2 mm 4 mm	2 mm 4 mm	2 mm	2,5 mm									1 mm 2 mm 2,5 mm 3 mm	
• 5 to 10 mm (PXI.3.)											5 mm	5 mm 8 mm	5 mm	10 mm						6 mm	
• 12 to 22 mm (PXI.4.)														15 mm	15 mm 20 mm						
• 25 to 40 mm (PXI.5.)																30 mm					
• 50 to 75 mm (PXI.6.)																	40 mm				
Output																					
• NO contact / NC contact	■ / —	■ / —	■ / —	■ / —	■ / ■	■ / ■	■ / ■	■ / ■	■ / ■	■ / ■	■ / ■	■ / ■	■ / ■	■ / ■	■ / ■	■ / ■	■ / ■	■ / ■	■ / —	■ / —	■ / ■
• pnp / npn	■ / —	■ / —	■ / ■	■ / ■	■ / ■	■ / ■	■ / ■	■ / ■	■ / —	■ / —	■ / ■	■ / ■	■ / ■	■ / ■	■ / ■	■ / —	■ / —	■ / —	■ / —	■ / —	■ / ■
• Analog																					
Number of wires	3	3	3	3	2, 3, 4	3	3	2, 3, 4	3, 4	4	2, 3, 4	2, 3, 4	3	2, 3, 4	2, 3, 4	4	4	3	3	3	
Operating voltage																					
• 10/15 ... 30/35 V DC	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■
• 10 ... 65 V DC																					■
• 20 ... 265/320 V AC/DC																					
Connection																					
• M8 connector		■	■		■	■	■		■												■
• M12 connector					■			■	■		■	■			■						■
• Cable	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■				■	■	■
• Terminal compartment															■	■	■				
Degree of protection																					
• IP 65 / IP 67	— / ■	— / ■	— / ■	— / ■	— / ■	— / ■	— / ■	— / ■	— / ■	— / ■	— / ■	— / ■	— / ■	— / ■	■ / ■	■ / —	■ / —				— / ■
• IP 68 / IP 69K																			■ / —	■ / —	■ / —
Product selection code	3RG4603	3RG4200	3RG4210 3RG4610	3RG4636 3RG4236	3RG4011 3RG4021 3RG4611 3RG4211	3RG4050 3RG4060 3RG4601 3RG4201	3RG4637 3RG4237	3RG4012 3RG4022	3RG4070 3RG4080	3RG4071	3RG4072 3RG4082	3RG4013 3RG4023	3RG4075	3RG4014 3RG4024	3RG4031 3RG4034 3RG4038 3RG4041	3RG4042	3RG4043	3RG4600	3RG4610	3RG4011 3RG4111 3RG4611 3RG4621	

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 In the A&D Mall: enter the product selection code to display a list of relevant products.
 In Catalog FS 10: use the product selection code in the order number index in Chapter 6 to find the chapter and page of suitable products.

SIMATIC PXI300

SIMATIC PXI400

SIMATIC PXI600

SIMATIC PXI900



M12	Box with M14	6.5 mm	8 mm x 8 mm	M18	18 mm	M30	40 mm x 40 mm	60 mm x 80 mm	80 mm x 100 mm	M8	M12	M18	M30	40 mm x 40 mm	80 mm x 80 mm	M12	M18	M30	40 mm x 40 mm	M14	M12
2 mm 4 mm	2.5 mm	2.5 mm 3 mm	3 mm	5 mm 8 mm	5 mm 8 mm	10 mm	15 mm 20 mm	25 mm 30 mm 35 mm 40 mm	30 mm 40 mm 50 mm	1.5 mm 4 mm	3 mm 8 mm	5 mm 10 mm 12 mm	10 mm 20 mm	15 mm 25 mm 35 mm 40 mm	75 mm	2 mm 4 mm	5 mm 8 mm	10 mm 15 mm	15 mm	3 mm	0 ... 6 mm
■ / ■	■ / ■	■ / —	■ / ■	■ / ■	■ / ■	■ / ■	■ / ■	■ / ■	■ / ■	■ / —	■ / —	■ / —	■ / —	■ / —	■ / —	■ / ■	■ / ■	■ / ■	■ / ■	■ / ■	■ / ■
2, 3	2, 3	3	3	2, 3	3	2, 3	2, 3, 4	2, 3	2, 3	3	3	3	3	3	3	4	4	4	4	3	4
■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■
■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■
■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■
— / ■	— / ■	— / ■	— / ■	— / ■	■ / ■	■ / ■	■ / ■	■ / —	■ / —	■ / —	■ / —	■ / —	■ / —	■ / —	■ / —	— / ■	— / ■	— / ■	— / ■	■ / —	■ / —
3RG4012 3RG4022 3RG4112 3RG4612 3RG4622	3RG4072 3RG4082	3RG4302 3RG4602	3RG4337 3RG4637	3RG4013 3RG4323 3RG4313 3RG4613 3RG4623 3RG4023 3RG4113	3RG4053 3RG4063	3RG4014 3RG4324 3RG4314 3RG4614 3RG4624 3RG4024 3RG4114	3RG4030 3RG4031 3RG4038 3RG4041 3RG4041 3RG4134 3RG4138 3RG4131 3RG4144 3RG4148 3RG4141	3RG4042 3RG4142	3RG4033 3RG4043 3RG4143	3RG4611 3RG4621	3RG4612 3RG4622	3RG4613 3RG4623	3RG4614 3RG4624	3RG4634 3RG4638 3RG4644 3RG4648	3RG4643	3RG4012 3RG4022	3RG4013 3RG4023	3RG4014 3RG4024	3RG4038 3RG4138	3RG4652	3RG4612

SIMATIC PXI inductive proximity switches

Functionality and highlights

Function

A high-frequency alternating field is generated in the proximity switch and emerges at the "sensing face". The physical size of this alternating field determines the "range" of the device. When a material that is a good conductor of electricity and/or magnetism comes into close proximity with the sensing surface, the field is damped. Both states (field damped or undamped) are evaluated in the proximity switch and result in a change in the output state of the switch.

Built-in protection:

- Spurious switch-on pulse
- Short circuit and overload (DC)
- Swapped connectors
- Wire-break (connection L- or L+),
- Overvoltage peaks
- Radio interference
- Spurious signal suppression

The inductive proximity switches are classified in accordance with their applications or their technical characteristics:

- for standard duty
- for PLCs (2-wire)
- for extra electrical duty
- for extreme environmental conditions (IP69 K)
- with greater operating distance
- without a reduction factor
- pressure-resistant up to 500 bar (7250 psi)
- with analog output
- for use in Ex zone 2/22

Product families


The inductive proximity switches are classified in accordance with the various possible applications or their technical characteristics:

SIMATIC Sensors	Application areas and special features
PXI200	Sensors for standard applications and for use with LCs Operating distance acc. to standard
PXI300	Sensors for extra duty Sensors with greater operating distance Sensors for extreme environmental conditions (IP68 / IP69K)

Highlights

- Extremely compact and rugged
- High degree of protection (IP67/IP68/IP69K)
- Correction factor 1
- High sensing ranges
- Fast switching frequencies
- Flexible mounting
- Especially suitable for small spaces
- UL/CSA approvals
- Versions for use in Ex zone 2/22



SIMATIC Sensors	Application areas and special features
PXI400	Sensors without a reduction factor; for welding applications
PXI600	 Sensors for EX zone 2/22 Approved for gas: EX II 3G EEx nA II T6 X Approved for dust : EX II 3D IP65 T 80 °C X
PXI900	Pressure-proof sensors up to 500 bar Sensors with analog output