SCPSi pressure switch

Device features

- Pressure sensor / -switch
- Temperature measurement
- Industry 4.0-ready
- IO-Link 1.1
- Smart Sensor Profile 2nd edition
- Plug & Play
- Compact
- Optimized design
- Adjustable via IO-Link
- Readable via IO-Link
- Useable as IO-Link sensor or switch
- Monolithic pressure cell



The fully electronic pressure switch SCPSi is adjustable and free from susceptible mechanical and moving components.

With its digital interface and smart functions, the SCPSi iis future-proof for the increasing demands of automation solutions.

The 2 switching outputs are individually and safely parameterized from the machine control system via the standardized digital IO-Link interface (IEC 61131-9). This replaces manual programming and the commissioning phase is considerably shortened. Devices can be replaced during operation without the need for reparameterization. In order to react promptly to machine status changes or process adjustments, the re-parameterization is carried out during operation.

As an alternative to the switching functions, diagnostic values, process data and status messages are recorded directly via IO-Link and enable subsequent more complex analyses. Via the integrated temperature measurement of the pressure measuring cell, the media or ambient temperature is recorded.

IO-Link replaces time-consuming manual programming and eliminates the need for a sensitive key display with the manufacturer-dependent setting menu. This more compact, more resistant design without key display, in combi-

nation with the smart functions & setting options, opens up new possibilities in machine design for the machine designer, with considerable savings potential.

The compact stainless steel housing allows space-saving use, even in harsh environments.

The proven stainless steel measuring cell with the wide pressure range (from -1 up to 600 bar) allows a wide range of applications for liquid and gaseous media. The media-contacting pressure connection with the pressure measuring cell is monolithically manufactured from a stainless steel without welds and sets new standards in media compatibility and pressure resistance.

The packaging variant optimized for OEM's is environmentally friendly, cost-optimized and facilitates handling.

Application examples

- Injection-mould machines
- Tool-making machines
- Power packs
- Special machine construction
- Replacement for mechanical pressure switches



26 Catalogue 4083/UK

SCPSi pressure switch

Technical data

SCPSi		001	004	010	025	060	100	250	400	600
Pressure range Pn vacuum tight / relative P _n	bar (psi)	-11 (-1414)	-14 (-1458)	-110 (14145)	-125 (-14362)	060 (0870)	0100 (01450)	0250 (03625)	0400 (05801)	0600 (08702)
Overload pressure relative P _{max}	bar (psi)	6 (87)	10 (145)	030 (435)	80 (1160)	200 (2900)	300 (4351)	750 (10877)	1200 (17404)	1400 (20305)
Burst pressure relative P _{burst}	bar (psi)	9 (130)	15 (217)	100 (1450)	150 (2175)	500 (7251)	800 (11603)	1000 (14504)	2000 (29007)	2200 (31908)
Wetted parts		,	17-4PH); 3; FKM			Mono	litisch 316L	; FKM		
Set point SP Range						1 - 100 %				
Reset point rP Range						0 - 99 %				
Steps / Incremental	mbar	0,1	1	1	1	10	10	10	100	100
Smallest hysteresis (SP-rP) & (FH-FL)	bar	0,001	0,01	0,01	0,01	0,1	0,1	0,1	1	1

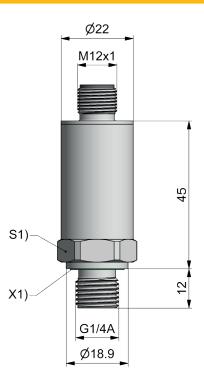
Genral				
Overall Accuracy @ RT [*1]	≤ 0,5 %FS			
Min. pressure cycles	> 100 million			
Material housing	Stainless steel 1.4404			
Weight	approx. 80 g			
Conformity				
RoHS	2011/65/EU, 2015/863			
CE	Yes			
UKCA	Yes			
Process connection				
Thread	G1/4, DIN 3852 T11 (E)			
Seal	ED type: FKM			
Installation torque	Max. 35 Nm			
Ambient conditions				
Media temperature	-25 to 85 °C (-13 to 185°F)			
Operation / Ambient tempera-	-25 to 85 ° C (-13 to 185°F)			
ture	-25 to 85 °C (-13 to 185 F)			
Storage temperature	-40 to 85 °C (-40 to 185°F)			
Vibration	DIN EN 60068-2-6, 20 g			
Shock	DIN EN 60068-2-27, 500 g			
MTTFd	>100 year			
Accuracy				
@ -40°C25°C	≤ 2,5 %FS			
@ -250°C	≤ 1,5 %FS			
@ 085°C	≤ 1 %FS			
Temperature signal				
Output	Via IO-Link			
Short circuit	-40 to 125 °C			
Resolution	1 K			
Accuracy	± 10°K			
t _{0,9}	80 sek.			
Protection				
Overvoltage	70 V			
Short circuit	yes			
Reverse polarity	yes			
Signal on GND/V ₊	yes			
Factory setting				
SP1 / rP1	40 / 60% FS; Hno			
SP2 / rP2	30 / 70% FS; Hno			

Electronic Connectivity Power supply voltage V ₍₊₎ 1830VDC Connector M12 Consumption < 15 mA @ 24V 2 switching outputs, NPN / PNP, 1 IO-Link output Switch current Max. 200mA Max. switch frequency 200 Hz Response time > 3 ms IO-Link Interface IO-Link V1.1 Process Data Variable; Device Identification; Device Diagnosis Min. process cycle time 4 ms Transmission type COM2, 38.4kBaud Profile Smart Sensor Profile 2nd Edition v1.1.2 SIO-Mode yes Master port type A Process data analogue (in Pa) 2 Byte Process data 1 Byte scaling factor Process data binary 1 byte SDCI Standard IEC 61131-9 Vendor ID 271 / 10f (hex) Device IODD https://ioddfinder.io-link.com/#/ M12x1 Protection class (mounted connector) Pin 1 V ₍₊₎ Pin 2 S2 out Pin 3 OV / GND Pin 4 S1 out / IO-Link						
Connector Consumption <pre></pre>	Electronic Co	nnectivity				
Consumption < 15 mA @ 24V 2 switching outputs, NPN / PNP, 1 IO-Link output Switch current Max. 200mA Max. switch frequency 200 Hz Response time ≥ 3 ms IO-Link Interface Revision IO-Link V1.1 Process Data Variable; Device Identification; Device Diagnosis Min. process cycle time 4 ms Transmission type COM2, 38.4kBaud Profile Smart Sensor Profile 2nd Edition v1.1.2 SIO-Mode yes Master port type A Process data analogue (in Pa) 2 Byte Process data 1 Byte scaling factor Process data binary 1 byte SDCI Standard IEC 61131-9 Vendor ID 271 / 10f (hex) Device IODD https://ioddfinder.io-link.com/#/ M12x1 Protection class (mounted connector) Pin 1 V ₍₊₎ Pin 2 S2 out Pin 3 0V / GND	Power supply v	voltage V ₍₊₎	1830VDC			
Output 2 switching outputs, NPN / PNP, 1 IO-Link output	Connector		M12			
Output NPN / PNP, 1 IO-Link output Switch current Max. 200mA 200 Hz Response time ≥ 3 ms IO-Link Interface IO-Link V1.1 Process Data Variable; Device Identification; Device Diagnosis Min. process cycle time Transmission type COM2, 38.4kBaud Profile Smart Sensor Profile 2 nd Edition v1.1.2 SIO-Mode Master port type A Process data analogue (in Pa) Process data binary SDCI Standard Vendor ID Device IODD https://ioddfinder.io-link.com/#/ M12x1 Protection class (mounted connector) Pin 1 Pin 2 Pin 3 OV / GND	Consumption		< 15 mA @ 24V			
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Revision Color Process Data Variable; Device Identification; Device Diagnosis	Max. switch fre	equency	200 Hz			
Revision IO-Link V1.1 Process Data Variable; Device Identification; Device Diagnosis Min. process cycle time Transmission type COM2, 38.4kBaud Profile Smart Sensor Profile 2nd Edition v1.1.2 SIO-Mode Master port type A Process data analogue (in Pa) Process data inary Process data binary SDCI Standard Vendor ID Device IODD M12x1 Protection class (mounted connector) Pin 1 Pin 2 Pin 3 OV / GND			≥ 3 ms			
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Process data analogue (in Pa) 1 Byte scaling factor Process data binary 1 byte SDCI Standard Vendor ID 271 / 10f (hex) Device IODD https://ioddfinder.io-link.com/#/ M12x1 Protection class (mounted connector) Pin 1 Pin 2 S2 out Pin 3 0V / GND	Master port typ	oe	A			
SDCI Standard	Process data analogue (in Pa)		•			
Vendor ID Device IODD https://ioddfinder.io-link.com/#/ M12x1 Protection class (mounted connector) Pin 1 Pin 2 Pin 2 S2 out Pin 3 0V / GND	Process data binary		1 byte			
Device IODD https://ioddfinder.io-link.com/#/ M12x1 Protection class (mounted connector) Pin 1 V ₍₊₎ Pin 2 S2 out Pin 3 0V / GND	SDCI Standard		IEC 61131-9			
M12x1 Protection class (mounted connector) IP67 Pin 1 V ₍₊₎ Pin 2 S2 out Pin 3 0V / GND	Vendor ID		271 / 10f (hex)			
Protection class (mounted connector) Pin 1 V ₍₊₎ Pin 2 S2 out Pin 3 OV / GND	Device IODD		https://ioddfinder.io-link.com/#/			
Pin 1 V ₍₊₎ Pin 2 S2 out Pin 3 OV / GND OV / GND	M12x1					
(mounted connector) Pin 1 V ₍₊₎ Pin 2 S2 out Pin 3 OV / GND OV / GND	Protection class		IP67			
Pin 2 S2 out Pin 3 0V / GND	(mounted connector)		11 07			
Pin 3 OV / GND	1	Pin 1	(.)			
	2 4	Pin 2	S2 out			
Pin 4 S1 out / IO-Link		Pin 3				
	3	Pin 4	S1 out / IO-Link			



27 Catalogue 4083/UK

SCPSi pressure switch



Order code

SCPSi Pressure switch	SCPSi-xxx-04
Druckbereich	
0001 bar	001
0004 bar	004
0010 bar	010
0025 bar	025
0060 bar	060
0100 bar	100
0250 bar	250
0400 bar	400
0600 bar	600

