

ALCO CONTROLS™

Pressure Controls Series PS4






Technical Bulletin

PS4 Pressure Controls with fixed settings for various applications.

Features



- High- and low-pressure controls
- Precise settings and repeatability
- Cable version with IP67 (IP20 for terminal QC version)
- Normally open/closed electrical contacts (under standard operating conditions)
- TÜV approved versions (W and B versions)
- Compatible with RoHS directive
- UL approved (all versions)
- Minimum order quantity: 100 pieces per type for standard versions listed in selection tables

Standards

-  acc. to Low Voltage Directive and European scheme ENEC05
-  0035 acc. to Pressure Equipment Directive 2014/68/EU
-  acc. to Electrical Equipment Directive 2014/35/EU
-  US Underwriter Laboratories File No. E258370
- 



Type designation – Standard and non-standard types

PS4-  
 e.g. **PS4 - A 1**

Function

- A: Pressure controls, automatic, high pressure or low pressure
- W: Pressure limiters, automatic, type approval acc. EN 12263, (Definition term by EN12263 & EN378: PSL/PSH)
- B: Pressure limiters, external manual reset (by hand); type approval, acc. EN 12263, (Definition term by EN12263 & EN378: PZH)

Electrical connection

- 1: Normally closed silver contact with molded cable
- 2: Normally open silver contact with molded cable
- 3: Normally closed silver contact with quick connector; QC (for push-on spades)
- 4: Normally open silver contact with quick connector, QC (for push-on spades)
- 5: Normally closed gold-plated contact with molded cable
- L: Normally closed silver contact with molded cable suitable for manual rest

Note 1: QC – quick connector. push on spades size 6.4 x 0.8 mm (0.25" x 0.032")

Note 2: Non-standard versions result from combination of above function and electrical connection. Other settings than listed, upon request with minimum 5000 pieces for first order.

Note 3: Please see Special Product Guide for Hydrocarbones for PS4 ATEX versions.

Pressure Controls Series PS4

Selection table: Low Pressure Controls with Automatic Reset; Open on Falling Pressure

Type	Part No.	Setting (bar)		Connector (QC) Cable length (m)	Operating Pressure PS (bar)	Test Pressure PT (bar)	Pressure Connection	EN 12263	Type of contact	
		Cut-out	Cut-in							
PS4-W1	808269	0.3	1.5	3.0	22.7	25	6 mm	PSL	Normally closed silver contact with molded cable	
PS4-A1	808266	0.4	1.4	1.5			7/16-20UNF*	-		
PS4-W1	808208	0.6	1.8	1.5			6 mm	PSL		Normally closed gold-plated contact with molded cable
PS4-W1	808251	0.6	1.8	3.0						
PS4-W5	808289	0.6	1.8	1.5			7/16-20UNF*	Normally closed silver contact with molded cable		
PS4-W1	808209	0.7	2.1	1.5			6 mm		PSL	
PS4-W1	808241	0.7	2.4	3.0						7/16-20UNF*
PS4-A1	808247	1.5	2.5	2.5			7/16-20UNF*		-	
PS4-A1	808229	1.5	3.0	1.5			6 mm	PSL		
PS4-W1	808210	1.7	3.4	1.5			7/16-20UNF*	-		
PS4-W1	808249	1.7	3.4	1.5						
PS4-W1	808271	1.8	3.2	1.5			6 mm	PSL		
PS4-A1	808276	3.3	4.8	1.5					7/16-20UNF*	-
PS4-W3	808235	0.6	1.8	QC			6 mm	PSL	Normally closed silver contact with QC	
PS4-W3	808284	1.2	2.9	QC			7/16-20UNF*			
PS4-W3	808243	1.7	3.4	QC						

Note 1: *) female with Schrader valve opener

Note 2: Minimum order quantity: 100 pieces

Selection table - High Pressure Controls with Automatic Reset; Open on Rising Pressure

Type	Part No.	Setting (bar)		Connector (QC) Cable length (m)	Operating Pressure PS (bar)	Test Pressure PT (bar)	Pressure Connection	EN 12263	Type of contact		
		Cut-out	Cut-in								
PS4-W1	808200	18	13	1.5	37	41	7/16-20UNF*	PSH	Normally closed silver contact with molded cable		
PS4-W1	808265	18	13	3.0			6 mm				
PS4-W1	808201	26	20	1.5			7/16-20UNF*				
PS4-W1	808224	26	20	3.0			6 mm				
PS4-W1	808282	24	18	5.0			1/4"	-			
PS4-A1	808260	26	20	1.5			7/16-20UNF*	PSH	Normally closed silver contact with QC		
PS4-W3	808236	26	20	QC			6 mm	PSH	Normally closed gold-plated contact with molded cable		
PS4-W5	808288	26	20	1.5							
PS4-W1	808203	28	21	1.5			50	55	7/16-20UNF*	PSH	Normally closed silver contact with molded cable
PS4-A1	808233	28	21	1.5					1/4"		
PS4-A1	808244	28	21	1.5	7/16-20UNF*	-					
PS4-A1	808237	29.5	22.5	1.5							
PS4-A1	808238	31	24	1.5	PSH	Normally closed silver contact with QC					
PS4-A1	808248	32	24	2.5							
PS4-W3	808273	29	22.8	QC							
PS4-W1	808205	42	33	1.5	63	69	6 mm	PSH	Normally closed silver contact with molded cable		
PS4-W1	808261	45	35	1.5			7/16-20UNF		Normally closed silver contact with QC		
PS4-W3	808242	42	33	QC			6 mm	PSH	Normally closed gold-plated contact with molded cable		
PS4-W5	808287	45	34	1.5							

Note 1: *) female with Schrader valve opener

Note 2: Minimum order quantity: 100 pieces pleas

Pressure Controls Series PS4

Selection table - High Pressure Controls with Manual Reset; Open on Rising Pressure

Type	Part No.	Setting (bar)		Cable length (m)	Operating Pressure PS (bar)	Test Pressure PT (bar)	Pressure Connection	EN 12263	Type of contact
		Cut-out	Cut-in**						
PS4-BL	808202	26	-	1.5	37	41	7/16-20UNF*	PZH	Normally closed silver contact with molded cable
PS4-BL	808204	28	-	1.5	50	55			
PS4-BL	808206	42	-	1.5	63	69			

Note 1: *) female with Schrader valve opener

Note 2: Minimum order quantity: 100 pieces

Note 3: **) The manual reset actuation when the pressure drops 25% - 35% below set-point.

Selection table – Fan control with Automatic Reset; Close on Rising Pressure

Type	Part No.	Setting (bar)		Connector (QC) Cable length (m)	Operating Pressure PS (bar)	Test Pressure PT (bar)	Pressure Connection	EN 12263	Type of contact
		Cut-out	Cut-in						
PS4-A2	808212	13	18	1.5	37	41	7/16-20UNF*	-	Normally open silver contact with molded cable
PS4-W2	808274	14.6	20	1.5				PSH	
PS4-A2	808263	16	21.3	1.5				-	
PS4-A2	808264	17	22.6	1.5				-	
PS4-A2	808213	18	24	1.5				-	
PS4-W2	808227	22	28	1.5	50	55	-	PSH	

Note 1: *) female with Schrader valve opener

Note 2: Minimum order quantity: 100 pieces

Technical Data

Type	PS4-A	PS4-W	PS4-B
Electrical Data Silver contact: Inductive Load 230 VAC Inductive Load (DC <28V) Motor rating FLA 230 VAC Motor rating LRA 230 VAC Gold contact (5...24V):	0.1...6 A 2 A 6 A 36 A 25-250 mA		0.1...6 A 2 A 3 A 15 A -
Electrical Connection	Cable or Terminal (QC)* Version		Cable Version
Ranges			
settings (bar)	0 - 6.9	7 - 27.6	27.7 - 38
Operating Pressure PS (bar)	22.7	37	50
Test Pressure PT (Bar)	25	41	55
Life time	> 100.000 cycles -B and -R versions 10.000 cycles (6.000 for UL approved)		
Protection class (IEC 529 / DIN 40050)	IP67 (IP20 for Terminal QC Version)		
Vibration resistance	4 g (10...250 Hz)		
Temperature range Medium Ambient	-40°C...+135°C -40°C...+65°C		
Cable Version	18 AWG 0.8 mm ² . 600 V (max. 125°C)		
Cable Color	Low pressure: (0...8.5 bar: blue)		High Pressure: (>8.5 bar: black)
Weight	approx. 100 g		

Note: *) QC – quick connector. push on spades size 6.4 x 0.8 mm (0.25" x 0.032")

Pressure Controls Series PS4

Pressure setting (Cut-out) drifting:

PS4 factory setting is at 23°C room temperature however, the setting will drift by other ambient and fluid temperatures. The table indicates the amount of drift in function of ambient and media temperature.

**PS4 safety pressure cut-out
Braze connection**

Media temp. (°C)	Ambient temperature (°C)									
	0	10	23	25	30	35	40	45	50	55
	Total drift of cut-out set point (%)									
80	+5	+2.8	*	*	*	*	-3.7	-4.8	-5.9	-7.0
85	+5	+2.8	*	*	*	*	-3.8	-4.9	-6.0	-7.1
90	+5	+2.8	*	*	*	*	-3.9	-5.0	-6.1	-7.2
95	+5	+2.8	*	*	*	*	-4.0	-5.1	-6.2	-7.3
100	+5	+2.8	*	*	*	*	-4.1	-5.2	-6.3	-7.4
105	+5	+2.8	*	*	*	-3.1	-4.2	-5.3	-6.4	-7.5
110	+5	+2.8	*	*	*	-3.2	-4.3	-5.4	-6.5	-7.6
115	+5	+2.8	*	*	*	-3.3	-4.4	-5.5	-6.5	-7.6
120	+5	+2.8	*	*	*	-3.4	-4.5	-5.5	-6.6	-7.7
125	+5	+2.8	*	*	*	-3.4	-4.5	-5.6	-6.7	-7.8
130	+5	+2.8	*	*	*	-3.5	-4.6	-5.7	-6.8	-7.9
135	+5	+2.8	*	*	*	-3.6	-4.7	-5.8	-6.9	-8.0

**PS4 safety pressure cut-out
Thread connection**

Media temp. (°C)	Ambient temperature (°C)									
	0	0	23	25	30	35	40	45	50	55
	Total drift of cut-out set point (%)									
80	+5	+2.8	*	*	*	*	-3.7	-4.8	-5.9	-7.0
85	+5	+2.8	*	*	*	*	-3.9	-5.0	-6.1	-7.2
90	+5	+2.8	*	*	*	*	-4.1	-5.2	-6.3	-7.4
95	+5	+2.8	*	*	*	-3.2	-4.3	-5.4	-6.5	-7.6
100	+5	+2.8	*	*	*	-3.4	-4.5	-5.6	-6.7	-7.8
105	+5	+2.8	*	*	*	-3.6	-4.7	-5.8	-6.9	-8.0
110	+5	+2.8	*	*	*	-3.8	-4.9	-6.0	-7.1	-
115	+5	+2.8	*	*	*	-4.0	-5.1	-6.2	-7.3	-
120	+5	+2.8	*	*	-3.2	-4.2	-5.3	-6.4	-7.5	-
125	+5	+2.8	*	*	-3.4	-4.5	-5.5	-6.6	-7.7	-
130	+5	+2.8	*	*	-3.6	-4.7	-5.7	-6.8	-7.9	-
135	+5	+2.8	*	*	-3.8	-4.9	-6.0	-7.0	-	-

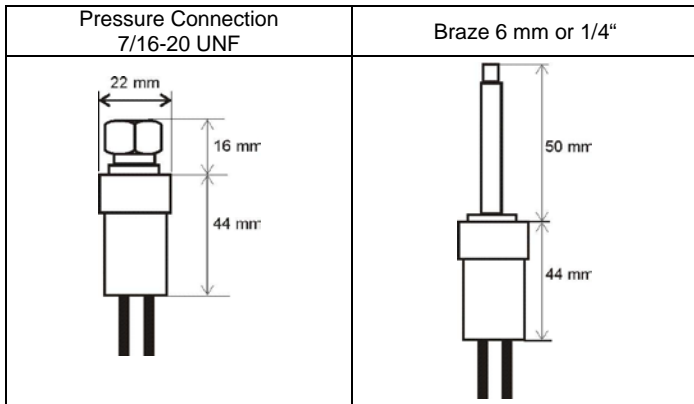
Note: European standard for high safety pressure switches permits maximum +0% / -8% of the setting at extreme operating conditions.
*) The device will cut-out anywhere from 0 to -3% from the cut-out.

For low pressure switches with settings between 0 to 6.9 bar:

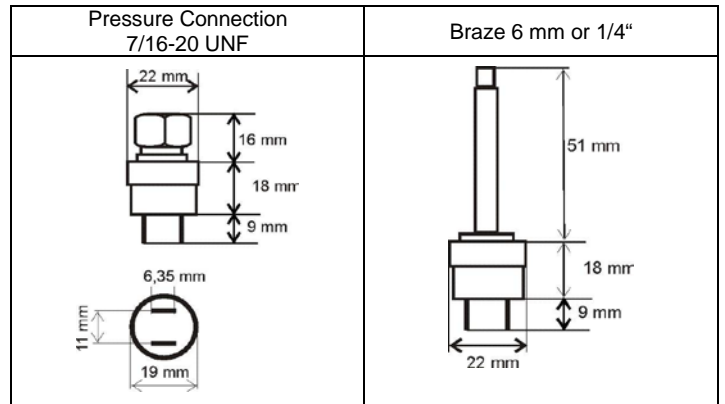
- type approval, version (W) according to EN 12263: -0 / +1 bar
- standard version (A) according to EN 12263 -0.5 / +0.5 bar

Dimensions

PS4-A and PS4-W cable version



PS4-A and PS4-W terminal version



PS4-B and PS4-R cable version

