

Last update: 04-2023

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Ref: TI_PS4_A1_A2L_EN_Rev04

Application Engineering Europe

PRESSURE CONTROLS SERIES PS4





General information

PS4 Pressure Controls with fixed settings for various applications

Features

- High- and low-pressure controls
- Precise settings and repeatability
- Cable version with IP67 (IP00 for terminal QC version)
- Normally open/closed electrical contacts (under standard operating conditions)
- TÜV approved versions (W & B versions)
- Compatible with RoHS directive
- Minimum order quantity: 100 pieces per type for standard versions listed in selection tables

Markings

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

A1 **A2L** **A3**



molded cable
7/16-20UNF





PS4
QC
7/16-20UNF



molded cable
1/4" / 6 mm

NOTE: Product types for safety class A3, please refer to separate documents.

Type code

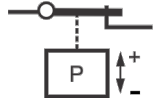
PS4	-  
Product Name	
Function A Pressure controls, automatic, high pressure or low pressure W Pressure limiters, automatic type approval acc. EN 12263, (EN 12263 & EN 378: PSL/ PSH) R Pressure controls, external manual reset (by hand) B Pressure limiters, external manual reset (by hand); type approval, acc. EN 12263, (EN 12263 & EN 378: PZH)	Electrical Connection 1 silver contact with molded cable, normally closed (NC) 2 silver contact with molded cable, normally open (NO) 3 silver contact with quick connector QC (for push-on spades), normally closed (NC) 4 silver contact with quick connector QC (for push-on spades), normally open (NO) 5 gold-plated contact with molded cable, normally closed (NC) L silver contact with molded cable suitable for manual reset, normally closed (NC)

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.

Selection Table - Low Pressure Controls

(Automatic Reset; Normally closed (NC), Open on Falling Pressure)

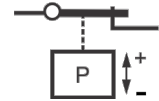


Type	Part No.	Setting		Electrical Connection Connector (QC) / Cable length**	P _{MAX} / PS	EN 12263	Type of contact	Pressure Connection
		Cut-out	Cut-in					
PS4-W1	808269	0.3 bar	1.5 bar	3.0 m	25 bar	PSL	silver	6 mm Brazing
PS4-A1	808266	0.4 bar	1.4 bar	1.5 m		-	silver	7/16-20UNF*
PS4-W1	808208	0.6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

NOTE: *) female with Schrader valve opener **) molded cable

Selection Table – High Pressure Controls

(Automatic Reset; Normally Closed (NC), Open on Rising Pressure)

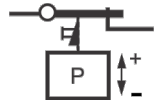


Type	Part No.	Setting		Electrical Connection Connector (QC) / Cable length**	P _{MAX} / PS	EN 12263	Type of contact	Pressure Connection
		Cut-out	Cut-in					
PS4-W1	808200	18 bar	13 bar	1.5 m	41 bar	PSH	silver	7/16-20UNF*
PS4-W1	808265	18 bar	13 bar	3.0 m		PSH	silver	6 mm Brazing
PS4-W1	808201	26 bar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

NOTE: *) female with Schrader valve opener **) molded cable

Selection Table – High Pressure Controls

(Manual Reset; Normally Closed (NC), Open on Rising Pressure)



Type	Part No.	Setting		Electrical Connection Connector (QC) / Cable length**	P _{MAX} / PS	EN 12263	Type of contact	Pressure Connection
		Cut-out	Cut-in***					
PS4-BL	808202	26 bar	-	1.5 m	41 bar	PZH	silver	7/16-20UNF*
PS4-BL	808204	28 bar	-	1.5 m	55 bar	PZH	silver	7/16-20UNF*
PS4-BL	808206	42 bar	-	1.5 m	68 bar	PZH	silver	7/16-20UNF*

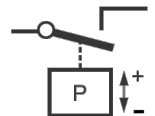
NOTE: *) female with Schrader valve opener

**) molded cable

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

Selection Table – Fan control

(Automatic Reset; Normally Open (NO), Close on Rising Pressure)







Type	Part No.	Setting		Electrical Connection Connector (QC) / Cable length**	P _{MAX} / PS	EN 12263	Type of contact	Pressure Connection
		Cut-out	Cut-in					
PS4-A2	808212	13 bar	18 bar	1.5 m	41 bar	-	silver	7/16-20UNF*
PS4-W2	808274	14.6 bar	20 bar	1.5 m	41 bar	PSH	silver	7/16-20UNF*
PS4-A2	808263	16 bar	21.3 bar	1.5 m	41 bar	-	silver	7/16-20UNF*
PS4-A2	808264	17 bar	22.6 bar	1.5 m	41 bar	-	silver	7/16-20UNF*
PS4-A2	808213	18 bar	24 bar	1.5 m	41 bar	-	silver	7/16-20UNF*
PS4-W2	808227	22 bar	28 bar	1.5 m	55 bar	PSH	silver	7/16-20UNF*

NOTE: *) female with Schrader valve opener

**) molded cable

Technical Data

Type	Cable or Terminal (QC)* Version				Cable Version		
	PS4-A		PS4-W		PS4-B / PS4-R		
Setting (bar)	0 - 6.9	7 - 27.6	27.7 - 38	38.1 - 50	13.8-27.6	27.7 - 38	38.1 - 50
P _{MAX} / PS (bar)	25	41	55	69	41	55	68
Fluid group / Refrigerants (ASHARE)	I & II / (A1) & (A2L) Refrigerants, Mineral-. Synthetic-. POE-Lubricant						
Life time	> 100.000 cycles PS4-B... / PS4-R... versions 10.000 cycles (6.000 for UL approved)						
Vibration resistance	4 g (10...250 Hz)						
Temperature range	Medium: -40 °C...+135 °C Ambient: -40 °C...+65 °C						
Hazard Category (PED 2014/68/EU)	PS4-W.. & PS4-B...versions: IV / Module B + D						
Weight	~ 100 g						
Markings	 (LVD & ENEC05)  0035 (PED)  (pending),  us,						

Electrical Data

Type	Cable or Terminal (QC)* Version		Cable Version
	PS4-A	PS4-W	PS4-B / PS4-R
Silver contact:			
Inductive Load 230 VAC	0.1...6 A		0.1...6 A
Inductive Load (DC <28V)	2 A		2 A
Motor rating FLA 230 VAC	6 A		3 A
Motor rating LRA 230 VAC	36 A		15 A
Gold contact (12 / 24 VDC):	250 mA		-
Protection class (IEC 529 / DIN 40050)	IP67 (IP00 for Terminal QC Version)		
Cable Version	18 AWG 0.8 mm ² . 600 V (max. 125 °C)		
Cable Colour	Low pressure: (0...8.5 bar: blue) High Pressure: (>8.5 bar: black)		

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
110	+5	+2.8	*	*	*	*	-3.2	-4.3	-5.4	-6.5
115	+5	+2.8	*	*	*	*	-3.3	-4.4	-5.5	-6.6
120	+5	+2.8	*	*	*	*	-3.4	-4.5	-5.6	-6.7
125	+5	+2.8	*	*	*	*	-3.4	-4.5	-5.6	-6.7
130	+5	+2.8	*	*	*	*	-3.5	-4.6	-5.7	-6.8
135	+5	+2.8	*	*	*	*	-3.6	-4.7	-5.8	-6.9

**PS4 safety pressure cut-out
Thread connection 7/16-20 UNF**

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	*	*	*	*	-3.9	-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
100	+5	+2.8	*	*	*	*	-3.4	-4.5	-5.6	-6.7
105	+5	+2.8	*	*	*	*	-3.6	-4.7	-5.8	-6.9
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
125	+5	+2.8	*	*	*	*	-3.4	-4.5	-5.6	-6.7
130	+5	+2.8	*	*	*	*	-3.6	-4.7	-5.8	-6.9
135	+5	+2.8	*	*	*	*	-3.8	-4.9	-6.0	-7.0

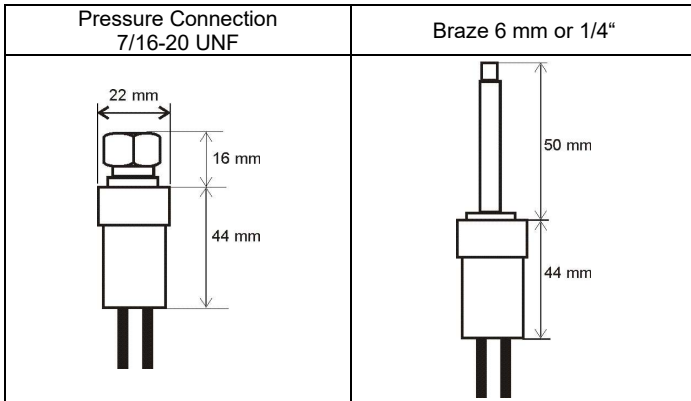
NOTE: European standard for high safety pressure switches permits maximum +0% / -8% of the setting at extreme operating conditions.
*) The device will cut-out anywhere from 0 to -3% from the cut-out.

For low pressure switches with settings between 0 to 6.9 bar:
- type approval, version (W) according to EN 12263: -0 / +1 bar

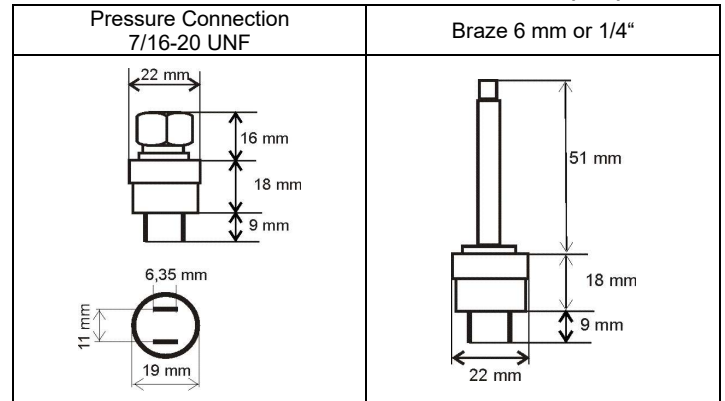
- standard version (A) according to EN 12263 -0.5 / +0.5 bar

Dimension (mm)

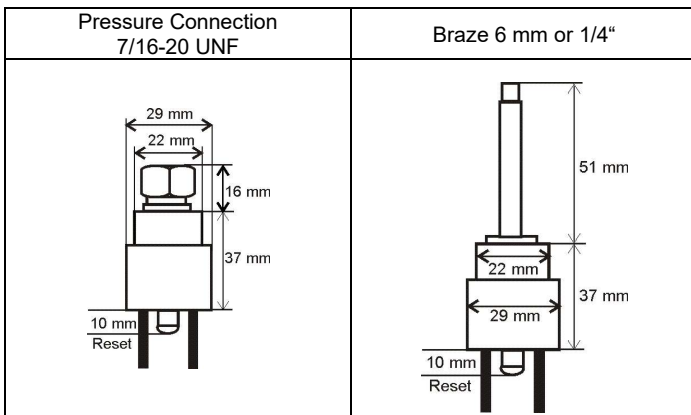
PS4-A... / PS4-W... cable version



PS4-A... / PS4-W... terminal version (QC)



PS4-B... / PS4-R... cable version



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