SIEMENS



Pressure Switches

QPLx5...

The pressure switches are used for monitoring gas or air pressures. When the pressure falls below or exceeds the adjusted switching point, the respective electrical circuit will be opened or changes over.

The QPLx5... and this Data Sheet are intended for use by OEMs which integrate the pressure switches in their products.

Use

- For the supervision of air or gas pressures in gas trains of gas-fired equipment (gas burners)
- QPLx5 are suitable as pressure switches for minimum or maximum pressure
- Adjustable working pressure range up to 50 kPa
- Able for a permanent operation pressure up to 69 kPa
- Suited for gases of gas families 1, 2 and 3 and other neutral gaseous media

		To avoid injury to persons, damage to property or the environment, the following warning notes must be observed!			
		Do not open, interfere with or modify the	pressure switch!		
		 All activities (mounting, installation and service work, etc.) must be performed by qualified staff 			
		 Before making any wiring changes in the unit from the mains supply (all-polar disbe inadvertently switched on again and there is a risk of electric shock hazard Fall or shock can adversely affect the into operation, even if they do not exhibite Do not use the pressure switch in inflar 	the connection area, completely isolate the sconnection). Ensure that the plant cannot that it is indeed dead. If not disconnected, safety functions. Such units must not be put bit any damage nmable or explosive gas atmospheres		
Engineering notes					
Setting the switching point		To set the required switching point, remove the cover from the pressure switch and turn the setting knob clockwise to increase the set value, or counterclockwise to decrease it (see scale under «Dimensions»). Replace the cover and secure it to prevent tampering.			
	(B)	Particularly important! The switching point must be checked in th switching pressure applied and adjusted if	e application against the actual intended necessary.		
		The direction of the pressure lise / pressu	le drop must be observed here.		
Mounting notes					
		 Ensure that the relevant national safety regulations are complied with By check piping connections ensure that there are no leaks To prevent the pressure connection from being blocked on the plant, a suitable preventive precaution must be used Example: Installation of a fine mesh or filter The pressure switch can be mounted either horizontally or vertically, but not in a suspended position (scale must not pointing downward) The pressure switch can be connected via a ¼" thread or O-ring, depending on the type of switch The test point on QPL can be opened with a 2,5 mm allen key Refer also to following Mounting Instructions: 74 319 0551 0 (M7221) 			
		Connection via ¼" (ISO) thread	Connection via O-ring		
		QPL25	QPL15		
		Gas pressure test point Mounting side (optional)	Gas inlets (bottom, optional) Standard base 7221206e/1005 O-ring and self-forming screws are in- cluded in delivery.		

Applied directives:

Directive for gas-fired appliances

2009/142/EC

DIN EN 13611

Compliance with the regulations of the applied directives is verified by the adherence to the following standards / regulations:

- Pressure sensing devices for gas burners and gas burning appliances
 DIN EN 1854 (CE 0085 BR 0021)
- Safety and control devices for gas burners and gas burning appliances - General requirements

The relevant valid edition of the standards can be found in the declaration of conformity!



EAC Conformity mark (Eurasian Conformity mark)



Lifetime

The pressure switch has a designed lifetime* of 50,000 burner startup cycles when using gases in accordance with EN 437 (or specification G260), which, under normal operating conditions in heating mode, correspond to approx. 10 years of usage (starting from the production date given on the type field).

This is based on the endurance tests specified in the standard EN 1854. A summary of the conditions has been published by the European Control Manufacturers Association (Afecor) (<u>www.afecor.org</u>).

The designed lifetime is based on use of the pressure switch according to the manufacturer's data sheet. After reaching the designed lifetime in terms of the number of burner startup cycles, or after the corresponding usage time, the pressure switch must be replaced by authorized personnel.

* The designed lifetime is not the warranty time specified in the Terms of Delivery.

Disposal notes



The unit contains electrical and electronic components and must not be disposed of together with domestic waste. Local and currently valid legislation must be observed.

Mechanical design

- Housing made of durable plastic with die-cast aluminum base
- Adjustable switching point
- Automatic reset

The switching point (setpoint) of the pressure switch is to be set with the adjusting knob located under the securing cover. The pressure switch comes calibrated and has been checked for leaks.

Type summary

When ordering, please give type reference according to «Type summary».

Pressure switches with automatic reset:

Pressure range	¼" COI	nnection	O-ring connection	
	Туре	Article no.	Туре	Article no.
0,07…0,3 kPa	QPL25.003	BPZ:QPL25.003		
0,2…1 kPa	QPL25.010	BPZ:QPL25.010		
0,5…5 kPa	QPL25.050	BPZ:QPL25.050	QPL15.050	BPZ:QPL15.050
0,5…15 kPa	QPL25.150	BPZ:QPL25.150	QPL15.150	BPZ:QPL15.150
1050 kPa	QPL25.500	BPZ:QPL25.500	QPL15.500	BPZ:QPL15.500

Accessories

Accessories must be ordered as separate items:



Contact box - Plug-in connector according to DIN EN 175301-803-A - 4.5...11 mm dia. / max. 1.5 mm²

AGA65

Technical data

General data

Switching voltage	AC effective max. 280 V
Switching current	$\frac{DC 2446 \text{ V}}{ACeff \max 6 \text{ A at } \cos(\theta 1)}$
	AC eff max 2 A at $\cos \phi = 0.6$
	AC eff min 20 mA (on request)
	DC max, 1 A
	DC min. 20 mA
Adjustable operating pressure range	50 kPa (different ranges, refer to «Type
	summary»)
Operating pressure (continuously)	Max. 69 kPa
Weight	
- QPL	Approx. 120 g
- AGA65	Approx. 36 g
Mounting position	horizontal or vertical, but not suspended
Safety class	II to VDE 0631
Degree of protection	IP54
Switching pressure deviation	±15 %, referred to the setpoint (scale)
	(diaphragm in vertical position)
Gas families	I, II, III

Typical hysteresis:

Pressure range in (kPa)	Switching differ- ential in (kPa)	
0,070,3	0,07	
0,21	0,1	
0,55	0,25	
0,515	0,5	
1050	2	
Storage		DIN EN 60721-3-1

Environmental conditions

Storage	DIN EN 60721-3-1	
Climatic conditions	class 1K3	
Mechanical conditions	class 1M2	
Temperature range	-20+60 °C	
Humidity	< 95 % r.h.	
Transport	DIN EN 60 721-3-2	
Climatic conditions	class 2K2	
Mechanical conditions	class 2M2	
Temperature range	-20+60 °C	
Humidity	< 95 % r.h.	
Operation	DIN EN 60 721-3-3	
Climatic conditions	class 3K5	
Mechanical conditions	class 3M2	
Temperature range	-15+60 °C	
Humidity	< 95 % r.h.	



Caution!

Condensation, formation of ice and ingress of water are not permitted!

Connection diagram



Connection examples

QPLx5... fitted to VGD20.xx11

QPLx5... fitted to VGD40...





QPL15... with O-ring with VGD20.xx11



QPL25... with nipple Rp1/4" with VGD20.xx11



QPL15... and QPL25... with VGD40...





Dimensions for reference only

Dimensions in mm

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