

*New ratings...
are making a splash*

Compact Pilot Devices IP67 and IP69K Rating



Enclosures 1)



Pushbuttons



Selector switches



Pilot lights



E-stops

1) Enclosures excluding the shroud

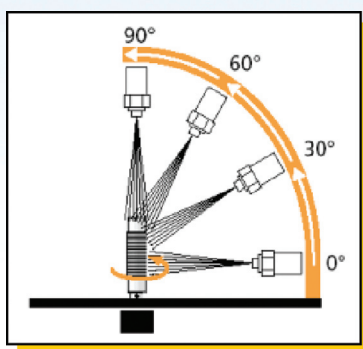
ABB's Compact range of pilot devices and enclosures are now approved for the IP69K rating! This high-pressure spray down protection rating is different from the UL Type 4X rating, and is applicable to many markets. Our Compact products have also been approved according to the IP67 rating in order to meet some of our customers' demands.

With these IP ratings, ABB's Compact pilot devices are even more advantageous in environments requiring a high degree of protection from dust, submersion, and high-pressure, high-temperature spray-down. This level of protection is essential in many food & beverage, pharmaceutical, and petrochemical markets.

What is IP69K?

The IP69K rating is designed to address high pressure, high temperature wash down applications. The "6" applies to external protection from dust. The "9" signifies protection from close-range high-pressure spray downs, and the "K" applies to the high temperature of the water used.

The IP69K rating was established in 1993 as a DIN40050-9 standard. It was originally intended to be a standard for road vehicles that would provide protection against foreign objects such as dust, dirt, high-pressure water, heat, and inadvertent touch.



The IP69K standard requires the water pressure to be 100 bar, at a rate of about 15 l/minute, and at a temperature of 80 °C. The nozzle from which the water is sprayed is 10 cm from the product. The spray is applied at the angles of 0 °, 30 °, 60 °, and 90 °, for duration of 30 seconds at each angle, while the product is rotated at 5 rpm.

IP69K is different from UL Type 4

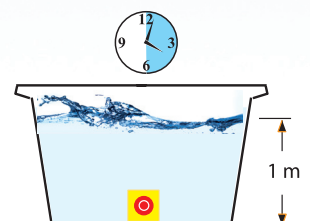
The IP69K and UL Type 4 standards both require the product to protect against the entry of water during a wash/spray-down, but this is where the similarities end. The UL Type 4 test is mainly concerned with hose conditions involving lower pressure water at greater water volume (246 l/minute), and longer distances (3-3.7 m) during a five minute spray-down. The UL Type 4 rating can be compared with spray from a firehose. In contrast, the IP69K test is at a very close range (10 cm), low volume, and very high pressure/high temperature. Because in reality many operators are sprayed down at distances much closer than the approved 3-3.7 m, UL Type 4X rated product may allow ingress in instances where IP69K rated product can withstand it.

What is IP67?

The IP67 is specified in IEC60529. The product is protected against the effects of temporary immersion in water (30 min). A typical situation where this can be applied is when wash-downs occur on the enclosure.

Ingress of water in quantities causing harmful effects shall not be possible when the enclosure is temporarily immersed in water up to a depth of one meter for 30 minutes.

The IP67 also includes tests to ensure that the product is dust tight.



ABB

Benefits of IP67 and IP69K



*Protection from dust,
submersion, and high-pressure,
high-temperature spray-down.*

Benefits of high-pressure wash-down:

- Much less water can be used to obtain the same results as low pressure sprays, meaning – literally – “less money down the drain”
- Detergent used for cleaning is mixed per unit of water, so less detergent is used also, reducing sanitation and treatment costs and improving our environments
- It has been found that it is easier for an employee to effectively clean an enclosure using a high-pressure system rather than a low-pressure spray-down process
- High temperatures allow for better removal of matter and bacteria on surfaces

Some markets requesting the IP67 and IP69K rating:

- Food processing
- Pharmaceutical
- Petrochemical
- Waste Treatment
- Bottling
- Trucking/Transportation
- Water/waste water processing

ABB offers two complete ranges of pilot devices. Both ranges are completely covered by additional protection ratings, including UL Types 1, 3R, 4, 4X, 12 and 13.



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