

TECHNICAL BULLETIN

TB-106: Sealing Options for EPC Encoders

Encoder Products Company uses the international standard IP Code, International Protection Marking, IEC standard 60529¹, for specifying the sealing qualities of our units. The chart below explains what the different numerical designations define. Note that the designations build on the previous ones; that is, an IP69K rating means that unit is also protected against everything that a unit rated IP68, IP67, IP66, etc., is protected against.

EPC encoders offer the following sealing designations on our encoders:

IP50: Unit is not entirely protected from ingress of dust, but not enough dust can enter the unit to interfere with the unit's function. Unit is not protected from water/moisture.

All IP designations of IP60 or higher are protected completely against dust ingress; i.e., "dust-tight".

IP64: Dust-tight. Protected against water sprays from all directions, with limited ingress permitted.

IP65: Dust-tight. Protected against low-pressure jets of water in all directions, with limited ingress permitted.

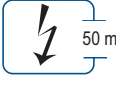

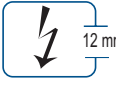

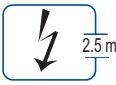

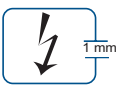

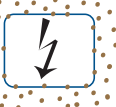
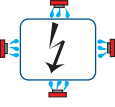
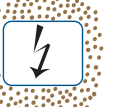
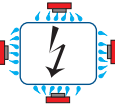
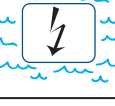


IP66: Dust-tight. Protected against strong-pressure jets of water in all directions, with limited ingress permitted.

IP67: Dust-tight. Protected against water immersion between 15 cm and 1 m for a duration of 30 minutes.

IP69K: Dust-tight. Protected against continuous immersion in water, and Protected against close-range, high pressure, high temperature spray downs.

For help determining which IP rating is right for the encoder in your application, contact our Technical Services Department at techsupport@encoder.com or call us at 1-800-366-5412.

¹ See <http://www.iec.ch/> for testing standards.

1st Digit	Protection Against Solids	2nd Digit	Protection Against Liquids
0	No Protection	0	No Protection
1	 Protected against 50 mm solid objects greater than 50 mm	1	 Protected against vertically falling drops of water
2	 Protected against 12 mm solid objects greater than 12 mm	2	 Protected against direct sprays of water up to 15° from the vertical
3	 Protected against 2.5 mm solid objects greater than 2.5 mm	3	 Protected against direct sprays of water up to 60° from the vertical
4	 Protected against 1 mm solid objects greater than 1 mm	4	 Protected against water sprays from all directions - limited ingress permitted
5	 Dust protected	5	 Protected against low pressure jets of water from all directions - limited ingress permitted
6	 Dust tight	6	 Protected against strong pressure jets of water from all directions - limited ingress permitted
		7	 Protected against water immersion between 15 cm and 1 m for a duration of 30 minutes
		8	 Protected against continuous immersion in water
		9K	 Protected against close-range, high pressure, high temperature spray downs