EPIC® Pin & Sleeve Connectors

Technical Data: Plugs & Connectors Reference Data

Reference Standards:

- General Characteristics:	• CEI EN 60309-1	• IEC 309	• CEI 23-12/1
- Standardization:	• CEI EN 60309-2	• IEC 309-2	• CEI 23-12/2
- Protection Ratings:	• CEI EN 60529	• IEC 529	• CEI 70-1

Constructional characteristics of both the IP 44 and the IP 67 versions:

- Pins and plug contacts are made of solid brass bars with a high level of copper.
- External screws, where present, and spring clasps for lids are made of stainless steel.
- The cable clamp is designed to prevent strain from torque and/ or traction on the wires in the terminals, also assures that the wire covering stays in good condition.
- Elements holding live parts are made (for 20A and 30A North American or 16A and 32 A International power) in self-extinguishing thermoplastic technopolymer (UL94-V2), with GLOW-WIRE resistance to 850°C and resist ance to tracking of >600V. For 60A and 100A North American and 63A and 125A International, they are made of self extinguishing thermoset technopolymer (UL94-V0), with GLOW- WIRE resistance to 960°C and resistance to tracking of >600V.
- Body and lids are made of technopolymer with high impact resistance and excellent dimensional stability.

Constructional characteristics of the IP 67 versions:

- Pins are subject to a thick nickel-plating treatment to increase their resistance to oxidation and wear even under the worst operating conditions.
- 60A and 100A North American and 63A and 125A international types are inclusive of a standard pilot contact.
- Cable glands have parts in peelable rubber for adapting them to the size of the cable used.
- 60A and 100A North American and 63A and 125A International plug and socket-outlet bodies are made of extra-durable thermoplastic technopolymer to assure improved impact resistance even under extreme conditions.

Resistance to excess heat and fire:

Glow-wire test (according to Publication IEC 695-2-1): This test checks the reaction of a given insulation after overheating of adjacent metallic parts caused by bad connections or faults in the system.

A glow wire coil is pressed into the specimen for 30 seconds, penetrating up to 7mm. A sheet of tissue paper is put under the point of contact. The temperature of the wire required by the standards is 850°C for items used for holding parts that carry current, and 650°C for other insulations. The test is considered to have a positive outcome if the specimen does not catch fire, or if it self extinguishes within 30 seconds of the wire being removed without burning entirely and causing continuous burning of the tissue paper beneath.

All plugs and connector components meet or exceed the temperature test requirements set by IEC.

UL 94: Self extinguishing test:

A bunsen burner is twice brought into contact with an insulation specimen in a vertical position, each time lasting 10 seconds. Cotton wool is placed under the point of contact.

Classification	Reaction of specimen
V0	Extinguishes within 5 seconds and the cotton beneath does not ignite.
V1	Extinguishes within 25 seconds and the cotton beneath does not ignite
V2	Extinguishes within 25 seconds and the cotton beneath ignites.
HB	Does not extinguish within 25 seconds, and when testing the specimen horizontally, burns at a speed lower that 38 mm/min. (at a thickness greater than 3mm) and less than 76 mm/min (at a thickness of up to 3mm).

Values for Products: HB V2 V1 V0

Testing for resistance to tracking (in compliance with IEC 112 publication):

The surfaces of the insulated item being tested are arranged horizontally, and two platinum electrodes are placed on them at a distance of 4 mm which are connected to a 50 Hz supply source.

Every 30 seconds a drop of 0.1% ammonium chloride in distilled water falls between the two electrodes. The test is passed if there are no electrical charges between the two electrodes before 50 drops have fallen. Obviously, the results depend on the level of voltage applied to the electrodes, and this is taken as the index of resistance to tracking.

All plugs and connectors comply with the tracking resistance requirement of IEC.