

Technical Sheet

Sliprings Type SMART PRE

Main Performances

Housing	In thermoplastic insulating material
Inside passage	42 mm diameter through steel pipe for the passage of hoist cables, fluid cables and piston stems
Positioning	Vertical axis with threaded pipe as illustrated here below
Cable entry	Through M20 cable glands on the lower and upper flange. Inside terminal board for rings connection.
Brushes	20 A copper-graphite brushes, 30 A blade or copper-graphite and 50 A blade or copper-graphite
Executions	Versions in unique compositions 20 A, 30 A or 50 A Mixed versione with 20 A / 30 A / 50 A rings
Armonized rules	EN 60947-1 EN 60529 Directives: 2014/35/UE - 2014/30/UE - 2006/42/CE - RoHS 2011/65/UE
Marking	UE

Electrical Features

Nominal voltage	660 V ac - dc
Nominal current	I_{th} 20 A - 30 A - 50 A
Protection degree	IP 52
Max rotating speed	30 revs / min
Test voltage	2,5 kV
Operating temperature	- 20 °C ÷ + 60 °C

Availability on demand:

- more radial or axial cable glands for brushes
- Signal versions with silver rings
- Long Life versions

Standard Types

20 A Type	30 A Type	50 A Type	H=mm*
G PRE2 B4	–	–	230
G PRE2 B8	G PRE1 C4L	–	260
G PRE2 B12	G PRE1 C6L	G PRE1 D4L	290
G PRE2 B16	G PRE1 C8L	–	320
G PRE2 B20	G PRE1 C10L	–	350
G PRE2 B24	G PRE1 C12L	GPRE1 D8L	380
G PRE2 B28	G PRE1 C14L	–	410
G PRE2 B32	G PRE1 C16L	G PRE1 D12L	440
G PRE2 B36	G PRE1 C18L	–	470
–	G PRE1 C20L	–	500
–	G PRE1 C22L	–	530
–	G PRE1 C24L	–	560

Only for 30 A and 50 A executions, please omit the final "L" of the code if you need copper-graphite brushes.



Advantages PRE SMART

- Total interchangeability with PRP
- Robust entrainment pins
- Inside terminal boards
- Axial and radial cable glands
- Double joint for 30 A and 50 A brushes
- Height reduction
- Openable, not detachable bands
- Long Life version

Installation and Wiring

The PRE Smart slipring has to be installed only by qualified personnel in compliance with current safety standards. Power to the machine must be turned off before carrying out cabling. Connections are to be made in compliance with the wiring scheme of the controlled equipment. After installation has been completed, the installer is required to check that all commands are working properly. Avoid prolonged contact with oils and acids when using the equipment, as these may damage the products.

- 1) Using the locknuts (Ref. 2), attach the central pipe (Ref. 1) to a minimum 3 mm thick plate with a central hole of $\varnothing 48.5 \div 52.5$ mm (using the reducing cable clip on the nuts). As an alternative the central pipe (Ref. 1) can be attached to a plate with a threaded hole of $\varnothing 48$ mm, 1.5 mm pitch using the locknuts as jam nuts (Ref. 2).
- 2) Rotation is achieved thanks to 4 pivots (Ref. 3) situated on the cover (Ref. 10). We recommend the coupling to be made with slack to take up any possible runout during rotation. The movement can also be obtained by rotating the central tube (Ref. 1) by means of a suitable coaxial joint and by keeping the cover (Ref. 10) fixed by the 4 pivots (Ref. 3).
- 3) The cables are connected to the brushes through the gland (Ref. 4) on the lower flange (Ref. 5) while the rings are connected to the upper terminal board (Ref. 6) through the glands (Ref. 7). Please ensure that the wires do not interfere with any moving parts. During the tightening of the cables to the brushes, brush holders must be locked.
- 4) Please check the equipotential of any surfaces not generally recommended to be used under tension, and the ground connection using the cables provided.

Maintenance

A programme of periodical maintenance is required to be carried out to ensure that the PRE Smart slipring is kept in perfect working order. All maintenance is to be effected by qualified personnel, using only original spare parts. The first maintenance is to be carried out within 300 hours rotation (50 revs/min) or 12 months after installation. Successively, maintenance should be carried out every 18 months. Any defective or altered parts must be promptly replaced, even outside the maintenance schedule, as they could impact on the device safety. In particular:

- 1) Disconnect from power source and wait until the internal parts have cooled down.
- 2) Unscrew the captive screws (Ref. 8) and open the mobile half-covers (Ref. 9).
- 3) Copper-graphite brushes execution : check the brushes for wear and tear, and check that they fit properly to the rings. Blade brushes execution : check the brushes and rings for wear and tear. As for the brushes 20 Amps, they must be in contact with the rings, without lifting the holders.
- 4) Copper-graphite brushes execution: remove copper-graphite dust with de-humidified compressed air or a clean brush. Blade brushes execution: remove dust or grease and grease again with a suitable lubricant.
- 5) Check tightness of cables.
- 6) Check that the cover seal is in good condition.
- 7) Replace the mobile half-covers (Ref. 9) and restart the screws (Ref. 8).

Please note that the guarantee does not cover any equipment whose parts have been modified and tampered. RAVIOLI declines any responsibility for damage deriving from incorrect installation or use of the product.

Dimensions

