

ADDITIONAL INSTRUCTIONS FOR LOW TORQUE D.C. BRAKE - AMS SERIES

GENERAL SAFETY INSTRUCTIONS



Danger: electric rotating machine have dangerous rotating and conductive parts, as well as possibly hot surfaces..
The commissioning of electric motor is forbidden until the machine on which it has been incorporated has been declared conform to 2006/42/EC directive (Machine Directive).



All transportation, storage,, installation, commissioning, inspection, maintenance and repair works have to be carried out exclusively by qualified personnel (definition according to IEC 364) according to EN 60204-1.
Improper use may cause major damage to persons and objects.

Operating conditions have to be according to EN 60034-1.

BRAKE MOTORS INSTALLATION



The responsibility of the correct brake functionality is completely of the installer, who has to:

- comply with the wiring diagram placed inside the terminal box
- supply the rectifier / brake according to the data on the nameplate
- check the correct brake functionality
- check that the brake torque satisfies the application needs
- supply in a correct way auxiliary equipments, if any (see specific documentation)



Earthing has always to be carried out (according to local regulations) before the connection to the main.



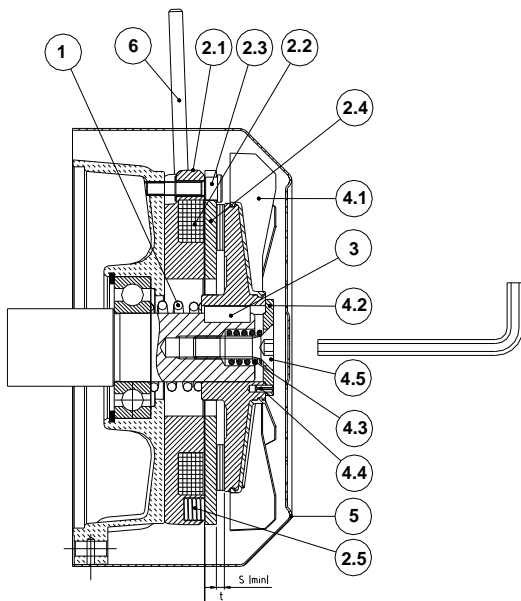
The supply of motor, rectifier/brake, auxiliary equipments (if any) has to be made using cables of suitable section in order to avoid overheating and/or too high voltage drop.

Pay attention not to alter the protection degree (use only original gaskets).

In case of inverter supply follow correctly the wiring instructions of the inverter manufacturer for the motor and separately supply (directly from the main) the rectifier/brake.

For any special design see specific documentation.

The good brake running in time depends on a correct periodical maintenance.



MAIN COMPONENTS LIST

- 1 Main contrast spring
- 2.1 Magnet casing
- 2.2 Brake coil
- 2.3 Fastening screw
- 2.4 Mobile anchor with friction surface
- 2.5 Braking spring
- 3 Key
- 4.1 Fan
- 4.2 Washer with spigot
- 4.3 Auxiliary contrast spring
- 4.4 Elastic pin
- 4.5 Screw TSPEI UNI 5933
- 5 Fan cover
- 6 Hand release (on request)

SPARE PARTS LIST

- 1 Main contrast spring
- 2 Preassembled part
- 4 Fan with brake tightening/air gap adjustment kit
- 5 Fan cover
- 6 Hand release (always with apt fan cover)

PERIODICAL MAINTENANCE OF BRAKE MOTORS



Every maintenance work on brake motors should only be carried out by qualified personnel, always with the machine out of operation, disconnected and previously secured against starting.

Low-torque d.c. brake with reduced overall dimensions (with electromagnetic brake braking in case of failure supply) have fixed braking torque (no braking torque regulation is possible) that means that the periodical maintenance consists on checking that the air-gap " t " and the minimum friction surface thickness " S_{min} " are according the following table:

Brake size	Moto size	$t^{1)}$ [mm]	$S_{min}^{2)}$ [mm]	Socket head screw key	γ
63	63	0,25 ... 0,5	1	2,5	150°
71	71	0,25 ... 0,5	1	3	150°
80	80	0,25 ... 0,5	1	4	120°
90	90	0,25 ... 0,5	1	5	120°
100/112	100	0,3 ... 0,55	1	6	120°
100/112	112	0,3 ... 0,55	1	6	120°
132/160	132	0,35 ... 0,6	1	8	120°
132/160	160	0,35 ... 0,6	1	8	120°

1) Refer to minimum value

2) Minimum thickness of friction surface (for lower values it is necessary to replace the preassembled part)



Too high air-gap values could produce a noisy operation and even cause the brake not to be released; excessive air-gap values can cause the brake not to work.

AIR-GAP ADJUSTMENT WITH MOUNTED FAN COVER (STD DESIGN)

Tighten down the screw 4.5 completely without forcing using the socket head screw key referred to the table and then unscrew of the γ angle written on table, that correspond to the minimum air gap value.

The values of the air-gap of and the minimum friction surface thickness written on the above table are applicable also for other brake tightening/air gap adjustment designs.

Occasionally we recommend to use an air jet to eliminate dust or other particles that may have settled on the braking surface.

After several air-gap adjustments verify that the thickness of the friction surface is no lower the minimum value stated in the above table; if needed replace the fan.



Any repair work within the guarantee period is subject to the motor manufacturer approval.
For any brake motors repair use only original spare parts.