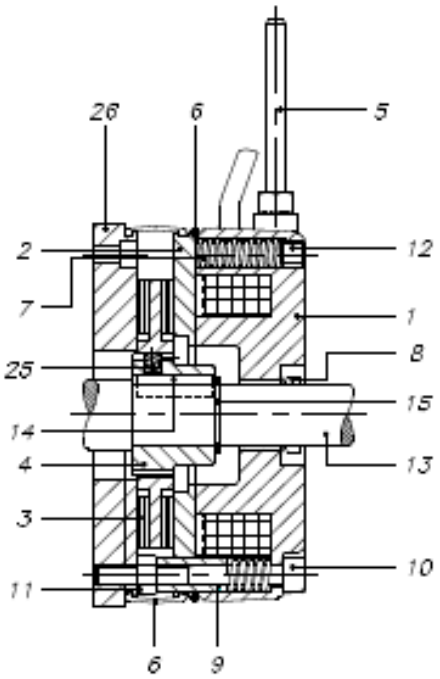
Electromagnetic brake in DC direct current

Description & Operation:

Electromagnetic brake with negative operation, whose braking action is exercised in the absence of power supply. When the power supply is interrupted, the excitation coil is no longer powered and therefore does not exert the magnetic force necessary to restrain the mobile armature (2) which, pushed by the pressure spring (7), compresses and the armature itself on the other, thereby creating a braking action. The allowed rated supply voltage variation for the brake is +/- 10%



Adjustment:

Two different types of adjustment are possible:

Air gap adjustment – for proper operation, the air gap "6" between the electromagnet (1) and the mobile armature (2) must be between the limits indicated in the sable (S-nom – S-max); adjust using the threaded bushes (11), using a thickness gauge to make sure that the desired air gap S-nom is reached.

Braking torque adjustment – This is done using the adjuster ring (12) according to the instructions in the table (Cn = rated torque; C – torque variation per tooth). If the hand release lever (5) is present, once the braking torque is adjusted it is also necessary to adjust the free stroke of the lever before release begins, using the holding data of the lever itself.

Brake intervention time – For the DC brake, it is possible to improve the braking time by directly interrupting the brake power supply via the switch on rectifier.

(6) Mobile armature, (7) Springs, (3) Brake disc, (4) Driver, (26) Motor flange, (1) Electromagnet, (5) Release lever, (15) Snap Ring, (6) Dust protection ring, (11) Threaded bush, (6) Air gap.

DC Brake	56	63	71	80	90	100	112	132
S-nom [mm]	0.15	0.20	0.20	0.20	0.20	0.30	0.30	0.30
S-max [mm]	-	0.50	0.50	0.50	0.50	0.70	0.80	1.00
Cn [Nm]	1.0	4.0	4.0	8.0	16.0	32.0	60.0	80.0
C [Nm]	-	0.10	0.10	0.36	0.60	1.20	1.50	2.10
Braking time [ms]	30.0	45.0	50.0	70.0	90.0	120.0	180.0	210.0
Rapid braking time [ms]	20.0	25.0	30.0	40.0	45.0	60.0	110.0	140.0
Release time [ms]	12.0	15.0	30.0	35.0	50.0	65.0	75.0	90.0
Rapid release time [ms]	8.0	12.0	20.0	25.0	35.0	45.0	60.0	70.0
Absorbed power [W]	20.0	20.0	20.0	20.0	25.0	35.0	55.0	55.0
Noise level [dB]	39.0	39.0	36.0	36.0	37.0	37.0	38.0	39.0
Max speed [rpm]	3600	3600	3600	3600	3600	3600	3600	3600
Weight [kg]	1.5	1.5	1.5	2.2	3.1	8.3	8.3	12.0

Rectifier Wiring: Brakes will come pre-wired to the terminal block to allow the correct voltage, regardless of Y-Y or Y connection to be fed to the brake.

1. 205Vdc brakes will be supplied with a full bridge rectifier.
2. 103Vdc brakes will be supplied with a ½ bridge rectifier.

Connections are same for either brake. If brake is powered separately, such as required when motor is powered by VFD. Ensure correct voltage is supplied to rectifier. 230V for full bridge to 205Vdc brake. 460V for ½ bridge to 205Vdc brake. 115V for full bridge to 103Vdc brake, and 230V for ½ bridge to 103Vdc brake. 24Vdc brakes require fused 24Vdc power supply.