LEROY SOMER®

Ref. 3260 - 1.33 / a - 9.99

DMV 242 D2

Variable speed drive for direct current motor

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1 - UTILISATION

The DMV 242 is a reversible single phase analogue speed controller with 2 full-wave bridges of 4 thyristors presented in an enclosure.

It is designed for controlling separate excitation direct current motors.

It allows operation in all 4 quadrants of the torque-speed plane.

Designed for use in a laboratory or workshop, it is completed with controls and protection devices and it must be connected to a voltage source with earth leakage protection.

This drive is designed to supply the DC machine in both the speed and the current.

It should be noted that in current control the DC machine operates as an active load.That is, it operates either as a generator with power regenerated to the mains (driven load) or as a motor (driving load).

The connection is made by "female" safety sockets ; the earthing sockets are "male" sockets of Ø 4mm.

2 - POWER SUPPLY VOLTAGE

Single phase network: 220/240V +10% 50 or 60Hz 14A

3 - MOTOR EXCITATION

190 to 210V DC 1.8A max.

4 - MOTOR ARMATURE

0/200V DC 10A. Overcharge 1.5 In / 15s.

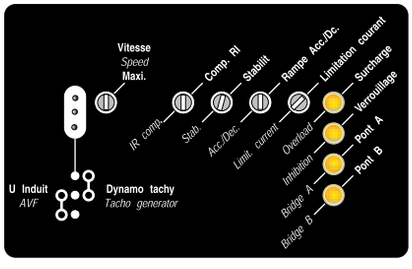
5 - PROTECTION

- General: by thermal overload contact.
- Armarture circuit: by fuse.
- Excitation circuit: by *zero current relay* switching off. the drive if Iexc<0.2A and allowing a restart only if Iexc>0.3A.

6 - SIGNALLING / CONTROL

6.1 - On the front left of the panel are located:

- 4 LEDS indicating the speed drive condition:



1 - overload.

2 - interlock.

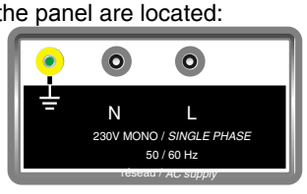
3 - bridge A, conducting.

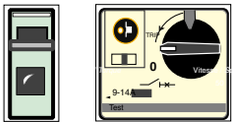
4 - bridge B, conducting.

- 1 selection link allows choice of speed signal feedback that may be obtained by :
  - a tachogenerator.
  - the image of the armature voltage.
- 5 regulating potentiometers accessible on the front ensure matching of the drive to the motor:
  - *Max. speed:* ajustable from 50 to 100%.
  - *RI comp.* : adjustment of R.I. compensation
  - *Stability :* adjustment of the system stability depending on the driven inertias.
  - *Acc./ Dec. ramp:* adjustable from 0.5 to 15 s.
  - *Current limitation:* adjustable from 0 to 150% of In.

6.2 - On the front right of the panel are located:

- the terminals for supply connection.
- the thermal overload contact and the fuse of the "armature" circuit.
- the control potentiometers (torque/speed).





- the control selector switch (torque / speed).
- the zero adjustment push button (RAZ).
- the direction selector switch - FWR or REV.
- the "Start/Stop" push buttons.
- the external default output for connecting the thermal probes of the test machines.

- the 2 terminals for connection to tachogenerator (calibration: 20V to 1000 tr.min-1)
- the "armature" output for connection to motor.
- the "excitation" output for connection to motor.
- the earthing terminal.

7 - SIZE AND WEIGHT

- Width: 0.35 m / H: 0.40 m / D : 0.25 m
- Weight: 10.5 kg

Complying with the requirements of the CE marking
Complying with the Low Voltage and Machine Directives
Complying with the Electromagnetic Compatibility Directive:

- Immunity: EN 50082-2 in conduit
- Emmision: EN 50081-2

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