

# ELECTRICAL SERVOMOTOR SERIES 4521



- High positioning accuracy
- Output torque from 25 to 100Nm
- Block in position without command
- Handwheel for emergency operation
- Constant absorbed current, even in case of block of the operated device
- Maintenance free
- High reliability during time
- Fit for working in particularly extreme conditions (dusty environments or places with high temperature or humidity rates)
- (C) brand certification
- Production process certified ISO9001

## FUNCTIONAL CHARACTERISTICS

The servomotor series 4521 has been expressively designed to supply high performances both in the control systems that require high positioning accuracy that in those that need high control torque or high positioning speeds.

Servomotor 4521 is equipped with a step motor, operated as synchronous motor.

The main characteristics of this kind of motors are the high torque supplied and the possibility of control of tiny excursions so as to guarantee a precise positioning of the controlled device.

Another characteristic of these motors which is rather unique is an inner limitation of the absorbed current that prevents any damaging in case of block.

In fact the absorbed current when the shaft is blocked corresponds to the current absorbed by the motor in standard working conditions.

As concerns this, the possible block of the operated device, does not cause any damaging to the servomotor, that can restart its normal working when released.

Since the motor is connected to the output shaft by a toothed wheel-worm screw, the transfer of the movement to the opposite direction, i.e. from the organ up to the motor is prevented.

This solution completely eliminates the inertial phenomenon of the operated device and the block in position is ensured, without control and even without magnetic brakes, a critical component of the normal servomotors with reduction gear.

The structure of the machine and the solution adopted in construction phase guarantees full reliability, safe operations and maintenance free operation for the servomotor series 4521, and makes it a fundamental element in the main automatic control systems.

## IDENTIFICATION CODE

4521 - X - XXXX - X - X

(A\*)

- . 0 - two internal limit switches
- . 1 - two internal limit switches + an additional one
- . 2 - two internal limit switches + two additional

- . 0 - without position feedback potentiometer
- . 1 - one 1000 Ohm potentiometer
- . 2 - two 1000 Ohm potentiometers
- . 3 - one 135 Ohm potentiometer
- . 4 - two 135 Ohm potentiometers

- . 0230 - 25 Nm 90° in 30 Sec.
- . 0345 - 35 Nm 90° in 45 Sec.
- . 0560 - 50 Nm 90° in 60 Sec.
- . 0530 - 50 Nm 90° in 30 Sec.
- . 0845 - 75 Nm 90° in 45 Sec.
- . 1260 - 100Nm 90° in 60 Sec.

- . 1 - power supply 110V±10% 50/60 Hz
- . 2 - power supply 220V±10% 50/60 Hz

## TECHNICAL CHARACTERISTICS

- |                          |                                                                |
|--------------------------|----------------------------------------------------------------|
| - Output torque          | : 25, 35, 50, 75, 100 Nm                                       |
| - Travel time (90°)      | : 30, 45, 60 sec.                                              |
| - Power supply           | : 110/220V±10% 50/60Hz                                         |
| - Absorbed current       | : 0.24 A (110V) - A* : 0230, 0345, 0560<br>0.10 A (220V) - " " |
|                          | : 0.45 A (110V) - A* : 0530, 0845, 1260<br>0.24 A (220V) - " " |
| - Command pulses         | : 3600 P/h max.                                                |
| - Duty cycle             | : 100%                                                         |
| - Operating temperature  | : -10÷75°C                                                     |
| - Motor                  | : Step motor with permanent magnet<br>operated as synchronous  |
| - Electrical connections | : Screw pins                                                   |
| - Protection class       | : IP65                                                         |
| - Weight                 | : 11 Kg                                                        |

## DIMENSIONAL DRAWING

