italtec
Technical Training Systems

Company with Quality Management System
Certified by DNV = ISO 9001/2008 =

TRAINING MODULE
STEPPER MOTOR CONTROL

URM-01

GENERAL FEATURES

- Industrial electronic drives (low power) with built-in latest technology
- Main test points and controls available on panel
- Operating modes LEDs indicators
- Short circuit electrical and electronic protection
- Test points on standard safety bushes (2 mm)
- Supplied complete of motor and position indicator
- External speed regulation either via any PC or PLC
- Three different ways of clock input (single pulse, continuously variable signals generator and V/F converter)
- Possibility of drive managing by means of a PLC module (mod. URM-07/PLC) with PLC software.

CE

TRAINING MODULE FOR LEARNING AND EXPERIMENTING OF STEPPER MOTOR DRIVE AND CONTROL

URM-01/PP experimental module has been especially designed to provide a comprehensive, hands-on and complete instruction in the principles and operations of Stepper motor control circuits (drives) most widely used in industry nowadays. The module is completely self-sufficient and doesn't require any external devices or special equipment other than the common DC power supply (+24Vdc) and the standard laboratory measuring instruments. A special computerised device known as "URM-SMC" enables automatic measurements, data acquisition and graphic monitoring of the signals using any PC. Full technical bibliography complete of theory of the control circuits and hands-on experiments are provided with the module ensuring a fast and effective learning on the subject. The module can be used as easily either resting on a bench top surface or fitted on a special vertical anodised aluminium frame. With our module URM-07/PLC and its software it is possible to manage the unit.

ELECTRONIC AND FUNCTIONAL FEATURES

- 20 Khz PWM control
- Step angle degree: 1,8º
- 1/1,1/2,1/4 and 1/8 step angles selectable
- Power supply: 24 Vdc
- Peak output current: 2.5 A
- Mean output current: 1.5 A
- Motor power: 5W
- Max revs.:1500
- Max torque: 24.5 mNm
- Step accuracy: 0.08mm
- Motor shaft with angular position indicator

MECHANICAL FEATURES

- Silk screened anodised aluminium panel reproducing the various internal electronic circuits
- Easy mechanical mounting/removal system on vertical frame
- Execution according to international safety rules.
- Electronic circuits plastic protection
- Highly reliable bushes for safe connections
- Side ventilation holes
- Rubber feet
- Dimensions: mm 375 x 303 x 110h

OPTION:

URM-SMC COMPUTERIZED MEASURING SYSTEM

- PC printer port connection
- Resolution: 12 bits 0.025%, Linearity: 10 bits
- Sampling frequency: 100KHz, Conversion time: 10 µS
- Two separate input channels (Z=1Mohm/20pF)
- Accuracy: 0.25% ± 1 LSB
- Measuring Instruments: oscilloscope, storage oscilloscope, true RMS voltmeter, spectrum analyser and transient recorder.

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