italtec
technical training systems
Company with Quality Management System
Certified by DNV = ISO 9001/2008 =

URM-02/CC
DC MOTOR CONTROL TRAINING MODULE

URM-02/CC experimental module has been especially designed to provide a comprehensive, hands-on and complete instruction in the principles and operations of DC 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 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. **URM-02/CC** training unit can be easy managed by external devices like any PC or PLC (see also our model **URM-08/PLC** and its related dedicated managing software) .

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

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, brake and Tacho
- External speed regulation either via any PC or PLC
- Open and closed feedback loop
- Possibility of drive managing by means of a PLC module (mod. **URM-07/PLC**) with its own software

ELECTRONIC AND FUNCTIONAL FEATURES

- Possibility to connect the unit to another external DC motors (max 100W)
- Power supply: 24Vdc/1A
- Protected thyristor bridge
- Dual loop (speed and current feedback)
- Speed feedback selectable from D.T. or I x R mode
- 24V/4W DC motor fitted with tachometer dynamo
- Adjustable electromechanical load wit DC dynamo
- Stall torque: 31 mNm
- Efficiency: 81%

URM-SMC
COMPUTERIZED MEASURING SYSTEM FOR DATA ACQUISITION AND GRAPHIC MONITORING

- PC printer port connection
- Resolution: 12 bits 0.025%, Linearity: 10 bits
- Sampling frequency: 100KHz
- Software running in Windows 95/98/NT environments
- 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