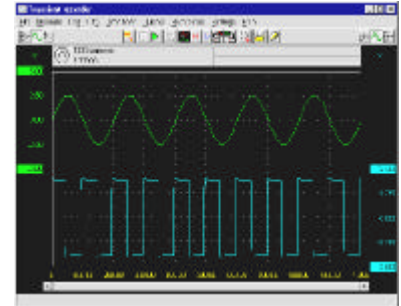
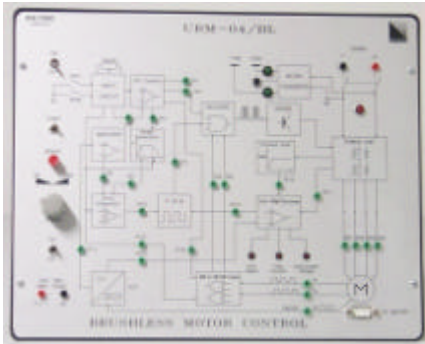


**TRAINING MODULE FOR LEARNING AND EXPERIMENTING
THE BRUSHLESS MOTOR DRIVE AND CONTROL**



URM-04/BL teaching and experimental module has been especially designed to provide a comprehensive, hands-on and complete instruction in the principles and operations of control circuits of Brushless electrical motors most widely used in industry today.

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 computerized device known as "**URM-SMC**" enables automatic measurements, data acquisition and graphic monitoring of the signals using any PC. Full technical bibliography complete of the theory of the control circuits and many hands-on experiments are provided with the module ensuring a fast and effective learning of the subject. The module can be used as easily either resting on a flat surface or fitted to a special vertical anodized alluminium frame. **URM-04/BL** training unit can be easily managed by external devices like PC or PLC (see our model **URM-07/PLC** and its related dedicated managing software) .

MECHANICAL FEATURES

- Anodized alluminium and silk screened panel reproducing the various internal electronic circuits
- Easy mechanical mounting/removal system from the vertical frame
- Plastic protection under the electronic circuits
- Highly reliable bushes for safe connections
- Side ventilation
- 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
- LEDs to indicate operating modes
- Short circuit electrical and electronic protection
- Test points on safety bushes
- Supplied complete of motor and speed detectors
- External speed regulation either via PC or PLC (separate inputs)
- Possibility to manage the drive by means PLC module (mod. **URM-07/PLC**) with drive application software
- Supplied complete with teaching manual containing theory and practical experiences

ELECTRONIC AND FUNCTIONAL FEATURES

- Max current: 3A at 24Vdc
- Digital speed feedback
- Analog current feedback
- Electronic braking
- PWM frequency: 10KHz
- Digital rotation sense detector
- Brushless 4-phase Dc motor mounted on panel
- Motor with built-in polyphase encoder
- Torque rate: 8 Ncm
- Max speed: 3000 rpm
- Motor shaft with optic disk
- Connection Panel-motor by means of special high reliable connecting cables

**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
- 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 analyzer and transient recorder