MDI-16/MSS-16

16-Channel Solid State I/O Module System For the METRABUS

Functional Description

Keithley's MSS-16 I/O module carrier and MDI-16 digital interface card combine to form a 16-channel digital I/O module interface system for the METRABUS. The MDI-16 adapter board connects to the METRABUS cable and performs all METRABUS interface functions. The MSS-16 plugs into the MDI-16 and supports the installation of up to 16 solid state digital I/O modules. Either input or output I/O modules may be installed in the MSS-16. A number of different input and output voltage specifications are available including 120/230 VAC inputs and outputs, 0-60 VDC outputs, 10-32 VDC inputs, etc.
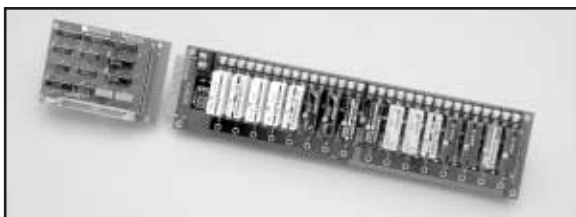
The bank of 16 modules are configured as two 8-bit ports on the METRABUS. Input and output modules can be mixed within a bank although for simpler programming it is recommended that banks be dedicated to either input or output. The MDI-16 uses 2 consecutive addresses

on the METRABUS allowing up to 32 MSS-16 solid state I/O module backplanes (512 I/O points) to be controlled by the 64-bit address space of the METRABUS driver card.

The addition of multiple driver cards allows a single PC to control and monitor thousands of I/O points. Larger systems can be powered from the METRABUS power supply, MBUS-PWR.

The MDI-16 is connected to the METRABUS cable via a standard METRABUS cable. Screw terminals on the MSS-16 offer easy connection to your application and accept wire sizes 12-22 AWG. An LED indicates the state of each channel.

The MDI-16 requires only +5V to operate which means that small systems operating from a MDB-64 require no external power supply. Large systems or systems operating from an interface other than a MDB-64 require external power such as the MBUS-PWR.

Applications which are to be mounted in 19-inch racks should specify the MDI-16R and not the standard MDI-16 board. Keithley's RMT-02 is pre-drilled to accept the MDI-16R and MSS-16. For flat panel (minimum 24 inch width) the in-line MDI-16 and MSS-16 should be used.

FEATURES
- Up to 32 I/O module carriers per system
- Up to 512 digital I/O modules per PC expansion slot
- Control up to 3 AMP AC & DC loads
- Sense AC & DC signals
- Easy programming with INP & OUT Basic statements
- 4 KV optical isolation
- Powered from PC power supply or external power pack
- Optional mounting in NEMA enclosures
- LED status indicators
- 19-inch rack mount panel available, model RMT-02
- Read back data from output module
- Color-coded industry standard modules (UL recognized)

APPLICATIONS
- Energy management
- Process and production control
- Motor control
- Limit switch and relay condition monitoring

SPECIFICATIONS

METRABUS ADDRESS SPACE

2 consecutive addresses

POWER REQUIREMENTS

+5V: 325mA typ, 400mA max
±15V: Not used

ISOLATION

4000V rms min

PHYSICAL

DIMENSIONS: MSS-16: 3.5in × 14.5in
MDI-16: 3.5in × 5in
OPERATING TEMPERATURE: 0 to +70°C
STORAGE TEMPERATURE: –20 to 100°C
HUMIDITY: 0 to 90% non-condensing

AVAILABLE SOLID STATE I/O MODULES

IDC-05: Sense 3.3 to 32VDC
IAC-05: Sense 90 to 140VAC/VDC
IAC5A: Sense 90 to 280VAC/VDC
ODC-05: Control 3 to 60VDC at 3 Amps
ODC5A: Control 5 to 200VDC
OAC-05: Control 12 to 140VAC at 3 Amps
OAC5A: Control 24 to 280VAC

ORDER	DESCRIPTION
MSS-16	METRABUS Solid State I/O Module Backplane
MDI-16	Digital Interface Board for the MSS-16
MDI-16R	Digital Interface Board with right-angle connector for 19-inch rack mounts