MAXIFLEX Dual Serial Network Interface Module

Model M1580A Dual RS232/485 Programmable Network Interface Module

DATASHEET

FEATURES

- **Two Integral RS232/485 Serial Ports**
- **Each Serial Port isolated independently to 1500Vac**
- **Built in Modbus® and Conet/s protocols.**
- **Programmable for custom protocols**
- **Easy configuration using free software utility.**
- **Check availability of protocol of your choice**
- **Integrates any serial device into standard SCADA or DCS or PLC systems.**
- **The M1580A has identical functionality to the M1592A modules, but with two serial ports for higher density**

The M1580A Dual Serial Network Interface Module (Dual Serial NIM) is designed specifically to allow serial access to a wide range of third party serial devices in either point-to-point or multi-drop configuration using RS485. The provision of two independent serial ports allows higher density Maxiflex installations to be implemented

The Dual Serial NIM comes equipped with the Conet/s protocol for peer-to-peer applications, or with Modbus Master and Slave protocols for access to a wide range of third party devices.

In addition, the Dual Serial NIM supports the development of custom protocol drivers in the EziFORTH programming language. Custom protocols maybe downloaded to the module to communicate with any device equipped with a RS232 or RS485 serial port.

All data is accessible by a SCADA, DCS or PLC via the Maxiflex system CPU through a 3000 register Data Interchange Table.

All system configuration data and dynamic data can be read and written through this convenient table interface.

Using the supplied Omniset configuration utility, advanced polling schemes may be easily set up without the need for programming. All polling and communications processing is performed in the module, unloading the Maxiflex CPU module for the more important system tasks such as control and SCADA communications.

Through the use of network routing capability built into the Conet/s protocol, this NIM may form part of a larger network of networks, passing data seamlessly across different network segments transparently to the supervisory computer.

The M1580A has identical functionality to the M1592A Single Serial NIM, but with the addition of a second serial port. Each serial port can be used independently with different protocols. The M1580A has a single programming space exactly like the M1592A but with access to both serial ports.

APPLICATIONS

- **Communicate with multiple devices that have a serial port, and integrate the data from this device into a DCS, PLC or SCADA system.**
- **Point-to-Point Telemetry systems with analog and digital data in both directions over a serial link.**
- **Remote I/O for SCADA software packages incorporating third party devices.**
- **Use MODBUS to communicate with many third party devices to integrate these devices into the SCADA, DCS or PLC system**
- **Use the Conet/s protocol for full duplex peer-to-peer communications with RTU's over a serial link including fibre optic.**
- **Communicate over wide area networks, integrating remote RTU's into local systems.**

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Specifications

Serial Ports	
Quantity	2 independent serial ports
Type	Asynchronous RS232/485 serial
Protocols supported	Modbus Master (ASCII or RTU) Modbus Slave (ASCII or RTU) Conet/s (peer-to-peer) Custom and other 3rd party protocols
Baud Rate	300 – 38,400 baud.
Maximum cable length	5 meters (50ft) in RS232 mode 1200m (4000ft) in RS485 mode
Connection	9 pin sub-miniature DB9 (male).
Isolation between ports	Tested to 1500Vac
Isolation to Logic	Tested to 1500Vac
Memory	
User Program	10k EEPROM
User Variables	10k Battery Backed RAM
Data Interchange Table	3000 16 bit Registers
Front Panel Indicators	
OK (Green)	On = Healthy Flashing or Off = NIM faulty
RUN (Green)	On = Application Program Running Off = No application program or application program not running
Tx (Red) (1 for each port)	On = Data is being sent out the serial port.
Rx (Amber) (1 for each port)	On = Data is being received on serial port.
Environmental	
Operating Temperature	-25°C to +50°C (-13°F to +140°F)
Storage Temperature	-40°C to +70°C (-40°F to +158°F)
Humidity	95% max. at 40°C (104°F) non-condensing.
Protection	Electronics conformal coated
Logic Power Consumption	
From Logic Power Supply	250mA from 5Vdc max.
Mass	
Excluding Packaging	390g (13.8oz)
Including Packaging	480g (16.9oz)
Ordering Information	
Description	**Order Code**
Maxiflex Serial NIM	M1580A

Serial Port Connection Details

The selection of either RS232 or RS485 is accomplished by specific wiring of the serial port connector. No internal links need be changed to select between RS232 and RS422/485.

Pin number	*Communication Standard*	
	RS232	***RS485***
1	Do not connect	Rx Data + (In)
2	Rx Data (In)	Rx Data – (In)
3	Tx Data (Out)	Do not connect
4	Do not connect	Tx Data+ (Out)
5	Ground	Ground
6	Do not connect	+5V
7	RTS (Out)	Do not connect
8	CTS (In)	Do not connect
9	Do not connect	Tx Data – (Out)

Pin allocation of serial port connector.

NOTE1: The RTS and CTS handshaking lines are available for applications that require it. It is not a requirement of the CPU to use handshaking. In most applications connecting handshaking lines is not a requirement.