

Schneider Service Manual

FBM230

1. Description

FBM230

3. Product Information

FBM230 | Foxboro (by Schneider Electric) | Modbus Master (Serial and TCP/IP) Driver

Foxboro (by Schneider Electric)

Product No. : FBM230

Product Type : Modbus Master (Serial and TCP/IP) Driver

The FBM230 is equipped with four ports, each of which can be configured to use either the RS-232, RS-422, or RS-485 physical interface standard

Protocols : Modbus RTU protocol (for serial devices) , Modbus ASCII protocol (for serial devices) , Modbus/TCP protocol (for Ethernet devices)

Data Type and Format : The Modbus Master driver accepts data from devices in big endian or little endian format; data format is configurable.

The FBM230 has four ports - each can be

individually configured in software for RS-232,

RS-422 or RS-485. This provides a single FBM230

the flexibility to connect to multiple similar but not

identical devices. Physical wiring is in accordance

with Electronic Industrial Association (EIA) standard

RS-232, RS-422 or RS-485.

The FBM230 and its associated termination

assembly (TA) accommodate several types of

connections to single ported devices; direct

connection to devices; connection to modems when

used with the RS-232 communication interface, and

multidrop connections to RS-485 devices. Intrinsic

safety devices can be connected between the TA

and the field device

The key features of the FBM230 are:

- Four ports - each can be individually configured in software for RS-232, RS-422 or RS-485

- Supports RS-232, RS-422 or RS-485 communication interface standards

- I/O software drivers downloadable from a library of available protocols

- Up to 2000 DCI block connections

- Communicates with up to 64 RS-485 or up to 4 direct connect RS-232 or RS-422 devices

- Integrates field device data into a Foxboro control database

- Field mounted

- Class G3 (harsh) environments.

Device Communications

INTERFACE

Four serial I/O communication ports provide

interface to up to four direct connect RS-232,

RS-422 devices or up to 64 devices via four

RS-485 buses (Up to 16 devices per port). Each

port is a single logical port to single ported

devices.

BUS CHARACTERISTICS

General

Electronic Industrial Association (EIA)

RS-232, RS-422 or RS-485 communications

selectable on a per port basis. The RS-485

physical communication medium consists of

twisted-pair shielded copper cable

containing a single conductor pair. The

RS-422 is a 4-wire physical communication

medium. The RS-232 physical

communication medium is a DB-25 cable to

a customer supplied

device/modem/converter.

EIA RS-232, RS-422 and RS-485 I/O

Communication

Type

Asynchronous communication, direct

connect link (RS-232)

Transmission Rate

300, 600, 1200, 2400, 4800, 9600,
19200, 38400, 57600 and 115200 baud.

Protocol

8-bit characters; odd, even or no parity, 1 or
2 stop bits.

FBM230 Power Requirements

INPUT VOLTAGE RANGE (REDUNDANT)

24 V dc +5%, -10%

CONSUMPTION

7 W (maximum)

HEAT DISSIPATION

7 W (maximum)

Operating

TEMPERATURE

-20 to +70°C (-4 to +158°F)

RELATIVE HUMIDITY

5 to 95% (noncondensing)

Storage

TEMPERATURE

-40 to +70°C (-40 to +158°F)

RELATIVE HUMIDITY

5 to 95% (noncondensing)

Contamination

Suitable for use in Class G3 (Harsh) environments as
defined in ISA Standard S71.04, based on exposure
testing according to EIA Standard 364-65, Class III.

Dimensions - Module

HEIGHT

102 mm (4 in)

114 mm (4.5 in) including mounting lugs

WIDTH

45 mm (1.75 in)

DEPTH

104 mm (4.11 in)