

Serial Data Interface for F200 Safety Systems

Characteristics

- Data transmission of system information, status, alarm warnings and input configuration for F200 Systems
- RS232 and RS485 interfaces
- Galvanically isolated interfaces
- Communication protocol user adjustable
- 17.5 mm housing
- (DIN rail compatible)
- LED status/activity indicators

Description

The **F240** provides RS232 and/or RS485 serial interfaces for F200 Systems, to transmit status and fault data to a diagnostic panel, PC, or PLC. The **F240** is connected to the F200 system bus, and converts the bus protocol to serial data protocols for the RS232 and RS485 interfaces.

The connection to the F200 system is via the bus connector located on the front of every Basic and Expansion Module.

The **F240** is connected in place of the terminator plug to the free bus connector of the Basic Module or the last connected Expansion Module, depending on the system configuration. Data transfer and power supply are routed through the same bus cable and connectors.

A green LED in the front of the **F240** indicates the presence of supply voltage. A blinking yellow LED signals data exchange activity through the RS232 / RS485 interface.

Mode of Operation

The modular F200 Safety System offers the possibility of monitoring multiple emergency -stop or safety-contacts, or other on-off signal sources, via separate inputs. The status of the inputs is indicated by LED's on the Input Modules.



This information is constantly transmitted via the system data bus to the Basic Module of the system.

The **F240** converts the data on the system bus into RS232 and RS485 transmission levels with appropriate serial data protocols, so that they can be transferred to an external diagnostic system.

The RS232 and RS485 interfaces are galvanically isolated from the F200 system bus. The serial data transmission protocol contains the following information:

- System configuration and set-up information
- On-off status and switching logic of all the inputs
- Configuration of the input circuits
- Error protocols for external faults and internal system errors

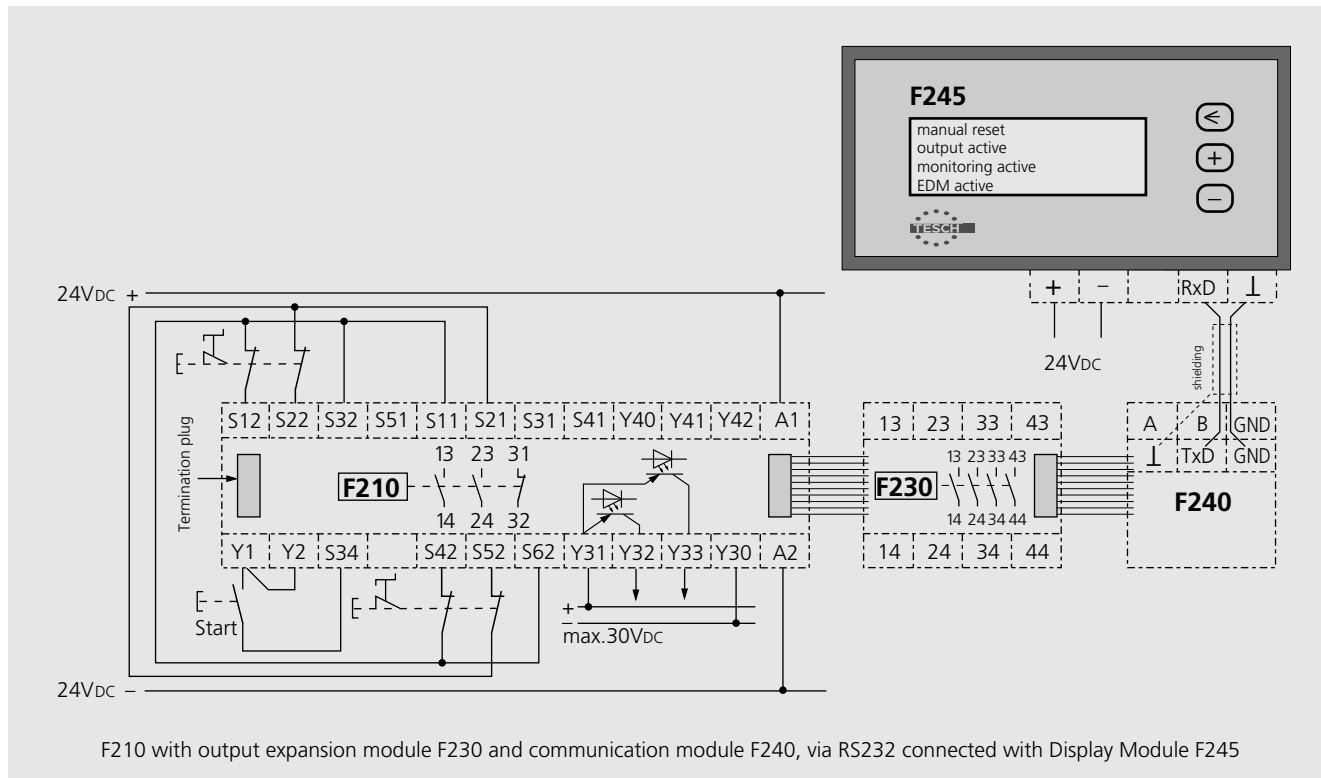
Serial data interface connections are through plug-in terminal blocks.

The transmission rate for the RS485 can be set with the help of two DIP switch segments at 2400, 4800, 9600, or 19200 baud.

The station address can be set by 5 additional DIP switch segments. Up to 32 stations can be connected onto a single RS485 network.

The connected supervisory monitoring or data acquisition system can process and store the data, display it, and record the reason causing a shutdown, along with the time and date of each such occurrence. This makes fault diagnosis much easier.

Wiring Example



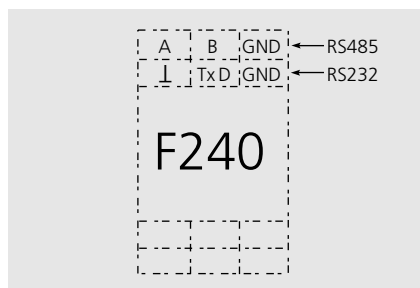
Technical Data

Rated voltage	24 V _{DC}
Power consumption	Approx. 2 W
Ambient temperature	-5 °C to +55 °C
Storage temperature	-25 °C to +70 °C
Protection class	Terminals IP 20, casing IP 40
Terminals	Terminal box with wire protection
Wire cross section	2.5 mm ²
Max. line length	RS 232: approx. 20m RS 485: approx. 1km
Weight	Approx. 90g

Models and Ordering Data

Type F 240	24V _{DC}	Order No.
Interface:		
RS232		074 00183
RS485		074 00184
RS232+RS485		074 00185

Connection Diagram



Dimensional Diagram

