# Honeywell FC-DCOM-232/485

## 01 RS232 and RS422/485 Communication Field Termination Assembly / system role

### Product function and operating context

Honeywell FC-DCOM-232/485 sets the electrical boundary between processor communication cabling and the external serial network, with switch settings and termination matched to the chosen topology.

The FTA is powered by the connected control processor or redundant processor pair and does not require a separate supply connection. Its cabinet-earth terminal connects internal cable shields and field-connector housings to the intended earth reference.

### Integration checkpoints

- RS232 equipment connection
- RS422 point-to-point link
- RS485 multidrop communication
- Safety Manager serial integration

| | |
|---|---|
| Processor connection | Communication and power through internal cables |
| Field selection | RS232 or RS422/485 |
| Configuration focus | Master pin allocation, bias and end termination |

Two identical male nine-pin connectors serve RS422/485, while a female nine-pin connector serves RS232. Where only one RS485 connector is used, the other requires the specified end-of-line termination; connector gender and appearance do not replace the pin-allocation check.

# FC-DCOM-232/485

## 02 Technical operating envelope

| | |
|---|---|
| Processor supply | 5 V DC +/-5% |
| Maximum current | 500 mA |
| RS232 baudrate | 0-250 kbaud |
| RS422/485 baudrate | 0-2 Mbaud |
| RS232 topology | Point-to-point |

| | |
|---|---|
| RS422 topology | Point-to-point |
| RS485 full-duplex devices | 32 maximum |
| RS485 half-duplex devices | 16 maximum |
| Line conditioner | 680 ohm pull-up and pull-down resistors |
| Rail provision | TS32 / TS35 x 7.5 |

Apply the FC-DCOM-232/485 execution and the stated configuration-dependent limits; shared family material does not assign features from another variant.

### Power and earth

Use the processor-supplied connection and the specified cabinet-earth terminal. Do not introduce a separate field supply into the communication assembly.

### Topology-dependent wiring

The Master switch changes the RS422/485 pin allocation. Check straight-through versus crossover cabling, both endpoint settings and the end-of-line terminator before judging the link.

### Rate and cable limit

Cable length depends on both baudrate and duplex mode: at up to 100 kbaud, the limits are 10 m for RS232, 1.2 km for RS422/485 full duplex and 600 m for RS485 half duplex with the proper cable.

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## 03 System integration and applications

### RS232 equipment connection

Provide a compatible point-to-point serial interface.

### RS422 point-to-point link

Match pin allocation and endpoint cable arrangement.

### RS485 multidrop communication

Apply the supported duplex, device-count and termination limits.

### Safety Manager serial integration

Use the FTA only in its supported controller and network relationships.

### Application and compatibility boundary

Three DIP switches select master pin allocation and line conditioning. The required settings depend on the communication method; switch 3 must be ON for proper RS232 operation. The FTA is not suitable for the specified 1 or 2 Mbaud FSC-to-Safety-Manager SafeNet RS485 link.

### Available unit verification

Check the FC label, connector arrangement, all three DIP settings, earth terminal and processor cable identities. Confirm the FTA, earth terminal, internal processor cables, external serial cables and end-of-line terminators in the quotation. Evaluate the actual interfaces and included accessories against the installed arrangement.

# FC-DCOM-232/485

## 04 Engineering selection decisions

### Why does FC-DCOM-232/485 not need a separate supply pair?

Its internal processor connection supplies power as well as communication. Retain the approved internal cables and cabinet earth instead of adding an independent supply.

### Which switch is essential for RS232 operation on FC-DCOM-232/485?

DIP switch 3 must be ON. Check the complete RS232 point-to-point setting and the correct female field connector before troubleshooting the external device.

### What changes when the Master switch on FC-DCOM-232/485 is moved?

It changes the RS422/485 connector pin allocation. Cable type and the setting at the opposite end must be considered together, especially when retaining one-to-one cables.

### Why is a spare RS485 connector on FC-DCOM-232/485 not necessarily left open?

The two connectors are identical, and when only one is used the other needs the prescribed end-of-line terminator. An unterminated network end can cause communication errors.

### Can FC-DCOM-232/485 serve every 1 or 2 Mbaud SafeNet RS485 connection?

No. It cannot be used for the specified FSC-to-Safety-Manager SafeNet link at those rates. Select the appropriate communication FTA for that system relationship.

### How does half-duplex operation change the network limit for FC-DCOM-232/485?

It has a different cable-length and device-count limit from full duplex. Review both the network topology and baudrate rather than retaining full-duplex assumptions.

### Why should line conditioning on FC-DCOM-232/485 follow the actual topology?

The bias resistors establish receiver behavior while transmitters are inactive. Incorrect settings can leave an unstable idle line or an unsuitable network load.

### What does a successful local serial test fail to prove about FC-DCOM-232/485?

It does not prove the full installed cable length, endpoint settings, termination or redundant-processor behavior. Validate the complete network under the intended operating configuration.

# FC-DCOM-232/485

## 05 Configuration boundary and references

### Lifecycle and support

The current manufacturing and manufacturer-support stage for this exact model is not confirmed.

### Replacement assessment

Retain the exact serial topology, processor-cable arrangement and DIP settings. A different communication FTA must be assessed against the Safety Manager relationship and required line coding.

### Available unit details

Offered reference: Honeywell FC-DCOM-232/485. Condition: New, original product. Check the FC label, connector arrangement, all three DIP settings, earth terminal and processor cable identities. Confirm the FTA, earth terminal, internal processor cables, external serial cables and end-of-line terminators in the quotation; companion equipment is included only when itemized.

Document roles: The original excerpt retains manufacturer tables and drawings; this brief addresses selection and system context; the separate installation guide covers field procedures and acceptance.

Technical basis: Honeywell Safety Manager Hardware Reference, EP-SM.MAN.6284 Issue 2.1, DCOM-232/485 datasheet version 1.2.

### Related product navigation

- Honeywell FC-QPP-0002 V1.0
- Honeywell FC-USI-0001
- Honeywell FC-PSU-240516 V1.1

Related products for separate application assessment; verify the platform and interface. No interchangeability is implied.

Product enquiries