10101/2/1

Digital Input Module

Honeywell 10101/2/1 is a 16-channel fail-safe 24 Vdc digital input module for FSC safety applications.

PRODUCT SNAPSHOT

BRAND	**FAMILY**
Honeywell	Fail Safe Controller
PART	**PRODUCT TYPE**
10101/2/1	Digital Input Module

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PRODUCT OVERVIEW

Honeywell 10101/2/1 is a 16-channel fail-safe 24 Vdc digital input module for FSC safety applications.

1. Acquires sixteen 24 Vdc safety-related field states.
2. Drives a de-energized processor input when the input stage fails.
3. Self-tests logic-zero, logic-one and input crosstalk response.
4. Supports documented non-redundant and redundant FSC wiring.

SYSTEM COMPONENTS

- FSC I/O rack
- 24 Vdc internal supply
- 24 Vdc external field supply
- Approved FTA or fused direct wiring

TECHNICAL NOTE

Direct use of the external 24 Vdc output pins without an FTA requires the manufacturer-specified 500 mA fuse. Preserve internal and external supply assignments.

TECHNICAL DATA

PARAMETER	VALUE
Input channels	16
Nominal input	24 Vdc
Safety behavior	Fail-to-safe input stage
HIGH state	Above 15 Vdc
LOW state	Below 9 Vdc; below 2 mA
Typical input current	7 mA at 24 Vdc
Maximum input	36 Vdc

PARAMETER	VALUE
Typical delay	10 ms
Rack space	4 HP; 3U
Approvals	CE; TUV; UL; FM
Minimum software	3.00
5 Vdc demand	8 mA
24 Vdc internal demand	110 mA
24 Vdc external demand	110 mA

ENGINEERING NOTE

Direct use of the external 24 Vdc output pins without an FTA requires the manufacturer-specified 500 mA fuse. Preserve internal and external supply assignments.

RELATED PRODUCTS ON APTER POWER

MODEL	SYSTEM ROLE	APTER POWER PAGE
Honeywell 10002/1/2	FSC control and I/O system module	**View Honeywell 10002/1/2 page**
Honeywell 10005/1/1	FSC system module	**View Honeywell 10005/1/1 page**
Honeywell 10012/1/2	FSC system interface module	**View Honeywell 10012/1/2 page**
Honeywell 10014/F/F	FSC serial communication module	**View Honeywell 10014/F/F page**
Honeywell 10311/2/1	FSC dual key-switch assembly	**View Honeywell 10311/2/1 page**
Honeywell 10020/1/2	FSC quad processor module	**View Honeywell 10020/1/2 page**
Honeywell 10006/2/1	FSC diagnostic battery module	**View Honeywell 10006/2/1 page**
Honeywell 10014/H/F	FSC communication module	**View Honeywell 10014/H/F page**

APPLICATIONS & PRECAUTIONS

COMMON APPLICATIONS

Emergency shutdown inputs

Acquires sixteen 24 Vdc safety-related field states.

Burner interlock contacts

Drives a de-energized processor input when the input stage fails.

Fire and gas trip inputs

Self-tests logic-zero, logic-one and input crosstalk response.

Fail-safe permissive monitoring

Supports documented non-redundant and redundant FSC wiring.

PRODUCT PRECAUTIONS

1. Confirm the complete 10101/2/1 identity and 16-channel map.
2. Record internal and external 24 Vdc supply assignments.
3. Place the safety function in its approved maintenance state.
4. Use the documented 500 mA fuse when external output pins are used without an FTA.
5. Preserve input polarity, return and FTA terminal identity.
6. Check every channel against the documented HIGH and LOW thresholds.
7. Review module self-test and system diagnostics after energization.
8. Retain the witnessed safety-function acceptance record.

ENGINEER FAQ

Q1 How many channels does Honeywell 10101/2/1 provide?

It provides sixteen 24 Vdc digital input channels.

Q2 Why is Honeywell 10101/2/1 described as fail-safe?

A component failure in the input stage produces a de-energized processor signal, the safe state in a normally energized system.

Q3 Which self-tests cover Honeywell 10101/2/1?

The system tests logic-zero reception, logic-one reception and crosstalk between inputs.

Q4 What input levels define HIGH and LOW for Honeywell 10101/2/1?

HIGH is above 15 Vdc; LOW is below 9 Vdc with current below 2 mA.

Q5 What maximum input is documented for Honeywell 10101/2/1?

The technical data lists 36 Vdc maximum.

Q6 When does Honeywell 10101/2/1 require a 500 mA fuse?

Use it when the external 24 Vdc output pins are wired without an FTA.

Q7 Which supplies must be checked on Honeywell 10101/2/1?

Check the 5 Vdc logic supply plus the internal and external 24 Vdc circuits.

Q8 What completes commissioning of Honeywell 10101/2/1?

Prove all sixteen inputs, review self-test diagnostics and retain the witnessed safety-function result.

SOURCE Honeywell FSC Hardware Manual | 10101/2/1 data sheet Version 2.5

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