

FC-SDI-1624

Safe Digital Input Module

Sixteen 24 V DC safety-related discrete-input states

PRODUCT SNAPSHOT

BRAND

Honeywell

FAMILY

Honeywell Safety Manager

PART

FC-SDI-1624

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PRODUCT OVERVIEW

Sixteen 24 V DC safety-related discrete-input states

1

Monitors sixteen safe discrete channels

2

Uses documented HIGH and LOW voltage thresholds

3

Applies a typical ten-millisecond input delay

4

Provides protected 24 V DC output support for field circuits

SYSTEM COMPONENTS

Safety Manager I/O chassis

24 V DC field supply

safety switches and contacts

validated safety input application

TECHNICAL NOTE

Isolate internal and external supplies, record every input state and field-return path, then simulate both LOW and HIGH conditions before releasing the safety function.

TECHNICAL DATA

PARAMETER	VALUE
Input channels	16
Nominal input	24 V DC
Input current	7 mA at 24 V DC
Maximum input voltage	36 V DC
HIGH threshold	>15 V DC
LOW threshold	<9 V DC; <2 mA
Input delay	10 ms typical
Maximum input capacitance	100 nF

PARAMETER	VALUE
Output type	24 V DC solid-state; short-circuit proof
Maximum output current	450 mA
Maximum output capacitance	32 uF
Output voltage drop	<1.5 V at 450 mA
5 V DC current	8 mA
24 V DC internal current	110 mA
24 V DC external current	110 mA input current
Supply ripple	<0.5 V peak-to-peak; 0 to 360 Hz

ENGINEERING NOTE

Isolate internal and external supplies, record every input state and field-return path, then simulate both LOW and HIGH conditions before releasing the safety function.

RELATED PRODUCTS ON APTER POWER

MODEL	SYSTEM ROLE	APTER POWER PAGE
TK-IOLI01	Related industrial automation product	View TK-IOLI01 page
05704-A-0145	Related industrial automation product	View 05704-A-0145 page
80363972-150	Related industrial automation product	View 80363972-150 page
51402615-400	Related industrial automation product	View 51402615-400 page
FC-PSU-240516-V1-1	Related industrial automation product	View FC-PSU-240516-V1-1 page
80363975-100	Related industrial automation product	View 80363975-100 page
FC-USI-0001	Related industrial automation product	View FC-USI-0001 page
CC-TAIN01-51306513-175	Related industrial automation product	View CC-TAIN01-51306513-175 page

APPLICATIONS & PRECAUTIONS

COMMON APPLICATIONS

Emergency-stop input acquisition

Monitors sixteen safe discrete channels

Burner-permissive monitoring

Uses documented HIGH and LOW voltage thresholds

Guard-switch safety input

Applies a typical ten-millisecond input delay

Safe-input module renewal

Provides protected 24 V DC output support for field circuits

PRODUCT PRECAUTIONS

- 1 Verify the complete FC-SDI-1624 marking and its assigned sixteen-channel safe-input position before work.
- 2 Place the connected process and control strategy in the approved maintenance state.
- 3 Isolate the applicable cabinet supply and 24 V input field energy before disconnecting conductors.
- 4 Record terminal numbers, channel assignments, polarity, shields and configured ranges before removal.
- 5 Use ESD controls and protect the backplane connector, terminal hardware and coated electronics.
- 6 Confirm the installed Safety Manager I/O chassis and carrier arrangement against the approved project.
- 7 Restore power in a controlled sequence and clear only diagnostics created by the maintenance activity.
- 8 Complete LOW/HIGH transition and diagnostic tests on every active channel and retain the measured result before returning the channel to automatic service.

ENGINEER FAQ

Q1 Does FC-SDI-1624 match Safety Manager I/O chassis in a Emergency-stop input acquisition installation?

Verify the complete FC-SDI-1624 marking, the documented Honeywell Safety Manager position and the installed Safety Manager I/O chassis before fitting the assembly.

Q2 How should FC-SDI-1624 be wired when it must monitors sixteen safe discrete channels?

Isolate the circuit, identify every terminal and reproduce the approved polarity, shield and channel assignment for FC-SDI-1624; then continuity-test the affected path.

Q3 Which Honeywell Safety Manager records should be captured before removing FC-SDI-1624?

Record the as-found wiring, installed position, active configuration and diagnostic state associated with FC-SDI-1624 before disconnection.

Q4 What controlled test confirms that FC-SDI-1624 can uses documented high and low voltage thresholds?

Apply the approved field or simulated stimulus, observe the Honeywell Safety Manager indication and confirm the intended response without bypassing the normal interlocks.

Q5 Which 24 V DC field supply condition should be checked when FC-SDI-1624 reports an abnormal state?

Check the 24 V DC field supply supply, seating and connection first, then compare channel diagnostics with the recorded FC-SDI-1624 baseline.

Q6 Can FC-SDI-1624 be moved directly into Burner-permissive monitoring without validating validated safety input application?

No. Confirm the validated safety input application, revision, connection scheme and Honeywell Safety Manager configuration before transferring FC-SDI-1624 to that duty.

Q7 What maintenance evidence is required after FC-SDI-1624 is used for Guard-switch safety input?

Retain the nameplate record, corrective action, final diagnostics and a controlled guard-switch safety input functional-test result for FC-SDI-1624.

Q8 How should FC-SDI-1624 be returned to service in Safe-input module renewal?

Restore power under control, verify applies a typical ten-millisecond input delay, exercise the intended signal path and release FC-SDI-1624 only after the Honeywell Safety Manager remains in its approved operating state.

SOURCE Honeywell Safety Manager Hardware Reference | EP-SM.MAN.6284, Issue 1.10

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