

FC-SDO-0824

Safe Digital Output Module

Eight protected 24 V DC safety-related source-output signals

PRODUCT SNAPSHOT

BRAND
Honeywell

FAMILY
Honeywell Safety Manager

PART
FC-SDO-0824

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PRODUCT OVERVIEW

Eight protected 24 V DC safety-related source-output signals

1

Controls eight independent safe output channels

2

Sources 24 V DC through protected solid-state outputs

3

Limits each channel to the documented current duty

4

Supports Safety Manager output diagnostics and proof testing

SYSTEM COMPONENTS

Safety Manager I/O chassis

24 V DC field supply

approved final elements and wiring

validated safety application

TECHNICAL NOTE

Record every energized load and safe state, isolate internal and external 24 V supplies, confirm keying A9/C9 and complete a controlled output proof test.

TECHNICAL DATA

PARAMETER	VALUE
Module type	Safe digital output
Output channels	8
Output type	24 V DC solid-state source
Output protection	Short-circuit proof
Maximum channel current	550 mA
Lamp load	120 mA; 2.9 W
Maximum load capacitance	1 uF
Voltage drop	<2 V at 500 mA

PARAMETER	VALUE
Off-state current	<0.1 mA
5 V DC current	25 mA
24 V DC internal current	25 mA
24 V DC external current	70 mA unloaded
Watchdog current	8 mA
Module size	4TE, 3HE (4HP, 3U)
Approvals	CE, TUV, UL, CSA, FM
Keying holes/pins	A9, C9

ENGINEERING NOTE

Record every energized load and safe state, isolate internal and external 24 V supplies, confirm keying A9/C9 and complete a controlled output proof test.

RELATED PRODUCTS ON APTER POWER

MODEL	SYSTEM ROLE	APTER POWER PAGE
FC-TSAO-0220M	Related industrial automation product	View FC-TSAO-0220M page
51305776-100	Related industrial automation product	View 51305776-100 page
CC-TSP411-51306669-175	Related industrial automation product	View CC-TSP411-51306669-175 page
CC-TDIL51-51307083-175	Related industrial automation product	View CC-TDIL51-51307083-175 page
CC-TDOR01-51308376-175	Related industrial automation product	View CC-TDOR01-51308376-175 page
8C-PCNT01-51454363-175	Related industrial automation product	View 8C-PCNT01-51454363-175 page
DC-TDIL01-51307780-176	Related industrial automation product	View DC-TDIL01-51307780-176 page
CC-PDOD51-51454408-175	Related industrial automation product	View CC-PDOD51-51454408-175 page

APPLICATIONS & PRECAUTIONS

COMMON APPLICATIONS

Emergency-shutdown solenoid control

Controls eight independent safe output channels

Burner-management trip output

Sources 24 V DC through protected solid-state outputs

Machine-safety final-element actuation

Limits each channel to the documented current duty

Safe-output module renewal

Supports Safety Manager output diagnostics and proof testing

PRODUCT PRECAUTIONS

- 1 Verify the complete FC-SDO-0824 marking and its assigned eight-channel safe-output 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 output 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 a commanded safe-state and final-element proof test and retain the measured result before returning the channel to automatic service.

ENGINEER FAQ

Q1 Does FC-SDO-0824 match Safety Manager I/O chassis in a Emergency-shutdown solenoid control installation?

Verify the complete FC-SDO-0824 marking, the documented Honeywell Safety Manager position and the installed Safety Manager I/O chassis before fitting the assembly.

Q2 How should FC-SDO-0824 be wired when it must controls eight independent safe output channels?

Isolate the circuit, identify every terminal and reproduce the approved polarity, shield and channel assignment for FC-SDO-0824; then continuity-test the affected path.

Q3 Which Honeywell Safety Manager records should be captured before removing FC-SDO-0824?

Record the as-found wiring, installed position, active configuration and diagnostic state associated with FC-SDO-0824 before disconnection.

Q4 What controlled test confirms that FC-SDO-0824 can sources 24 v dc through protected solid-state outputs?

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-SDO-0824 reports an abnormal state?

Check the 24 V DC field supply supply, seating and connection first, then compare channel diagnostics with the recorded FC-SDO-0824 baseline.

Q6 Can FC-SDO-0824 be moved directly into Burner-management trip output without validating validated safety application?

No. Confirm the validated safety application, revision, connection scheme and Honeywell Safety Manager configuration before transferring FC-SDO-0824 to that duty.

Q7 What maintenance evidence is required after FC-SDO-0824 is used for Machine-safety final-element actuation?

Retain the nameplate record, corrective action, final diagnostics and a controlled machine-safety final-element actuation functional-test result for FC-SDO-0824.

Q8 How should FC-SDO-0824 be returned to service in Safe-output module renewal?

Restore power under control, verify limits each channel to the documented current duty, exercise the intended signal path and release FC-SDO-0824 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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