

FC-TSAO-0220M

Safe Analog Output FTA

Honeywell FC-TSAO-0220M is a two-channel Safe Analog Output FTA for controlled current-loop outputs in Safety Manager systems.

PRODUCT SNAPSHOT

BRAND

Honeywell

FAMILY

Safety Manager

PART

FC-TSAO-0220M

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PRODUCT OVERVIEW

Honeywell FC-TSAO-0220M is a two-channel Safe Analog Output FTA for controlled current-loop outputs in Safety Manager systems.

1

Provides two safe analog outputs

2

Limits continuous channel current

3

Terminates output loops on DIN rail

4

Supports certified Safety Manager installations

SYSTEM COMPONENTS

Safety Manager analog-output module

DIN-rail cabinet

Safe 4-20 mA final elements

Approved loop power arrangement

TECHNICAL DATA

PARAMETER	VALUE
Output channels	2
Maximum output voltage	40 Vdc
Continuous current	25 mA maximum per channel
Mounting	DIN rail

PARAMETER	VALUE
Terminal conductor	0.2 to 2.5 mm2
Wire strip length	7 mm
Terminal torque	0.5 to 0.6 Nm
Approvals	CE; UL; CSA; TUV; FM

TECHNICAL NOTE

Use the specified conductor size and terminal torque, keep each loop below 25 mA continuous, and validate safe-state output behavior.

APPLICATIONS & PRECAUTIONS

COMMON APPLICATIONS

Safety valve positioning

Provides two safe analog outputs

Burner fuel-demand limiting

Limits continuous channel current

Protective speed-reference output

Terminates output loops on DIN rail

SIL analog shutdown control

Supports certified Safety Manager installations

PRODUCT PRECAUTIONS

- 1 Verify the complete FC-TSAO-0220M marking and its assigned Safety Manager position before work.
- 2 Isolate the applicable power and field energy before disconnecting FC-TSAO-0220M.
- 3 Protect FC-TSAO-0220M connectors and electronic assemblies with approved ESD controls.
- 4 Record the installed wiring, channel assignment and configuration before replacement.
- 5 Match Safety Manager analog-output module and DIN-rail cabinet to the documented system arrangement.
- 6 Commission FC-TSAO-0220M with controlled status, signal and diagnostic checks.
- 7 Retain the final safety valve positioning functional-test result in the maintenance record.

ENGINEER FAQ

Q1 Does FC-TSAO-0220M match Safety Manager analog-output module in a Safety valve positioning installation?

Verify the complete FC-TSAO-0220M marking, the documented Safety Manager position and the installed Safety Manager analog-output module before fitting the assembly.

Q2 How should FC-TSAO-0220M be wired when it must provides two safe analog outputs?

Isolate the circuit, identify every terminal and reproduce the approved polarity, shield and channel assignment for FC-TSAO-0220M; then continuity-test the affected path.

Q3 Which Safety Manager records should be captured before removing FC-TSAO-0220M?

Record the as-found wiring, installed position, active configuration and diagnostic state associated with FC-TSAO-0220M before disconnection.

Q4 What controlled test confirms that FC-TSAO-0220M can limits continuous channel current?

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

Q5 Which DIN-rail cabinet condition should be checked when FC-TSAO-0220M reports an abnormal state?

Check the DIN-rail cabinet supply, seating and connection first, then compare channel diagnostics with the recorded FC-TSAO-0220M baseline.

Q6 Can FC-TSAO-0220M be moved directly into Burner fuel-demand limiting without validating Approved loop power arrangement?

No. Confirm the Approved loop power arrangement, revision, connection scheme and Safety Manager configuration before transferring FC-TSAO-0220M to that duty.

Q7 What maintenance evidence is required after FC-TSAO-0220M is used for Protective speed-reference output?

Retain the nameplate record, corrective action, final diagnostics and a controlled protective speed-reference output functional-test result for FC-TSAO-0220M.

Q8 How should FC-TSAO-0220M be returned to service in SIL analog shutdown control?

Restore power under control, verify terminates output loops on din rail, exercise the intended signal path and release FC-TSAO-0220M only after the Safety Manager remains in its approved operating state.

SOURCE Honeywell Safety Manager Hardware Reference | EP-SM.MAN.6284 R162

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