

FC-SAI-1620M

Safe Analog Input Module

Sixteen 0 to 4.1 V safety-related analog-input signals

PRODUCT SNAPSHOT

BRAND

Honeywell

FAMILY

Honeywell Safety Manager

PART

FC-SAI-1620M

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PRODUCT OVERVIEW

Sixteen 0 to 4.1 V safety-related analog-input signals

1

Acquires sixteen safe analog input channels

2

Measures within the documented zero-to-4.1-volt range

3

Converts each channel with twelve-bit resolution

4

Provides external readback for controlled verification

SYSTEM COMPONENTS

Safety Manager I/O chassis

conditioned analog safety transmitters

24 V DC module supply

validated safety application

TECHNICAL NOTE

Record channel scaling and trip thresholds, isolate transmitter loops and prove input accuracy, readback and trip behavior under the approved safety test procedure.

TECHNICAL DATA

PARAMETER	VALUE
Input channels	16
Input range	0 to 4.1 V
Input impedance	>1 MOhm
Maximum load capacitance	100 nF
A/D resolution	12 bit
ADC inaccuracy	+/-1 LSB
Module inaccuracy	<0.25%
Absolute maximum input	+/-36 V DC

PARAMETER	VALUE
Crosstalk	>60 dB
External readback range	0 to 4.1 V
External readback impedance	1 MOhm typical
5 V DC current	35 mA
24 V DC current	35 mA
Module size	4TE, 3HE (4HP, 3U)
Approvals	CE, TUV, UL, CSA, FM

ENGINEERING NOTE

Record channel scaling and trip thresholds, isolate transmitter loops and prove input accuracy, readback and trip behavior under the approved safety test procedure.

RELATED PRODUCTS ON APTER POWER

MODEL	SYSTEM ROLE	APTER POWER PAGE
C98043-A7107-L4	Related industrial automation product	View C98043-A7107-L4 page
6RY1803-0DB02	Related industrial automation product	View 6RY1803-0DB02 page
6SL3200-0SP06-0AA0	Related industrial automation product	View 6SL3200-0SP06-0AA0 page
PR6426-010-140	Related industrial automation product	View PR6426-010-140 page
PR6426-000-030	Related industrial automation product	View PR6426-000-030 page
PR6424-010-140	Related industrial automation product	View PR6424-010-140 page
PR6423-10R-010	Related industrial automation product	View PR6423-10R-010 page
PR6422-013-041	Related industrial automation product	View PR6422-013-041 page

APPLICATIONS & PRECAUTIONS

COMMON APPLICATIONS

Analog trip-threshold monitoring

Acquires sixteen safe analog input channels

Safety transmitter acquisition

Measures within the documented zero-to-4.1-volt range

Process protection measurement

Converts each channel with twelve-bit resolution

Safe analog-input renewal

Provides external readback for controlled verification

PRODUCT PRECAUTIONS

- 1 Verify the complete FC-SAI-1620M marking and its assigned sixteen-channel safe analog-input position before work.
- 2 Place the connected process and control strategy in the approved maintenance state.
- 3 Isolate the applicable cabinet supply and analog 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 multi-point scaling, readback and trip-response proof testing and retain the measured result before returning the channel to automatic service.

ENGINEER FAQ

Q1 Does FC-SAI-1620M match Safety Manager I/O chassis in a Analog trip-threshold monitoring installation?

Verify the complete FC-SAI-1620M marking, the documented Honeywell Safety Manager position and the installed Safety Manager I/O chassis before fitting the assembly.

Q3 Which Honeywell Safety Manager records should be captured before removing FC-SAI-1620M?

Record the as-found wiring, installed position, active configuration and diagnostic state associated with FC-SAI-1620M before disconnection.

Q5 Which conditioned analog safety transmitters condition should be checked when FC-SAI-1620M reports an abnormal state?

Check the conditioned analog safety transmitters supply, seating and connection first, then compare channel diagnostics with the recorded FC-SAI-1620M baseline.

Q7 What maintenance evidence is required after FC-SAI-1620M is used for Process protection measurement?

Retain the nameplate record, corrective action, final diagnostics and a controlled process protection measurement functional-test result for FC-SAI-1620M.

Q2 How should FC-SAI-1620M be wired when it must acquires sixteen safe analog input channels?

Isolate the circuit, identify every terminal and reproduce the approved polarity, shield and channel assignment for FC-SAI-1620M; then continuity-test the affected path.

Q4 What controlled test confirms that FC-SAI-1620M can measures within the documented zero-to-4.1-volt range?

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

Q6 Can FC-SAI-1620M be moved directly into Safety transmitter acquisition without validating validated safety application?

No. Confirm the validated safety application, revision, connection scheme and Honeywell Safety Manager configuration before transferring FC-SAI-1620M to that duty.

Q8 How should FC-SAI-1620M be returned to service in Safe analog-input renewal?

Restore power under control, verify converts each channel with twelve-bit resolution, exercise the intended signal path and release FC-SAI-1620M 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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