

8C-TAIM01

LL Mux IOTA

Honeywell 8C-TAIM01 is the coated IOTA for the Series 8 low-level input multiplexer. With 8C-PAIM01 and the documented FTA, it supports isolated thermocouple or RTD acquisition across 64 channels.

BRAND	Honeywell	MODEL	8C-TAIM01
PRODUCT	LL Mux IOTA	FAMILY	Series 8 I/O
OFFICIAL SOURCE	PlantCruise by Experion Series 8 I/O Specification	RECORD	PC03-490-100, Release 100, October 2011, sections 2.1 and detailed specifications

DOCUMENT SCOPE

Official technical evidence, controlled engineering checks, model-specific FAQ and related product navigation.

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Product Overview and Applications

SYSTEM FUNCTION

Honeywell 8C-TAIM01 is the coated IOTA for the Series 8 low-level input multiplexer. With 8C-PAIM01 and the documented FTA, it supports isolated thermocouple or RTD acquisition across 64 channels.

FUNCTION 1

Sixty-four isolated low-level input channels

FUNCTION 2

Thermocouple and RTD field measurement

FUNCTION 3

Sixteen-channel FTA grouping

FUNCTION 4

Open-thermocouple detection support

APPLICATION	ENGINEERING CONTEXT
Thermocouple measurement	Connects approved thermocouple groups through the MC-TAMT04 FTA for low-level process-temperature acquisition.
RTD measurement	Connects approved RTD groups through the MC-TAMR04 FTA with the documented sensor excitation.
High-channel temperature monitoring	Concentrates up to sixty-four fully isolated temperature inputs for the Series 8 low-level multiplexer.
Mixed sensor cabinet	Supports documented thermocouple and RTD groups when FTA type, sensor map and channel configuration are controlled.

Technical Data and Acceptance

PARAMETER	VERIFIED VALUE
Complete model	8C-TAIM01
Honeywell item number	51306999-175
IOTA role	Coated low-level multiplexer termination assembly
Compatible I/O module	8C-PAIM01
Compatible FTAs	MC-TAMT04 thermocouple and MC-TAMR04 RTD
Input types	Thermocouple and/or RTD
Input channels	64 fully isolated channels in sixteen-channel increments
Input scan rate	1 second fixed; up to 64 channels per second
Channel bandwidth	0 to 4.7 Hz at -3 dB
Thermocouple nominal range	-20 to +100 mV
Gain error	0.050% full scale maximum
Input impedance	1 Mohm at dc for thermocouple inputs
Common-mode rejection	120 dB minimum at 50 or 60 Hz
Normal-mode rejection	60 dB minimum at 50 or 60 Hz
RTD excitation	1 mA
Cold-junction compensation	-20 to +60 degrees C, +/-0.5 degrees C typical

Acceptance Path

1 IDENTITY

IOTA, 8C-PAIM01 and every FTA identity match the engineering record.

2 CONFIGURATION

All sensor types, channel groups and line-frequency settings are restored.

3 ISOLATION CHECK

Sensor wiring and channel isolation boundaries match the approved topology.

4 MEASUREMENT PROOF

All enabled channels and open-sensor diagnostics pass controlled testing.

Precautions and Model-Specific FAQ

NO.	PRECAUTION	QUESTION	ANSWER
1	Verify the complete 8C-TAIM01 and 51306999-175 marking before work.	Which I/O module is paired with Honeywell 8C-TAIM01?	Honeywell specifies 8C-TAIM01 as the coated IOTA for the 8C-PAIM01 low-level multiplexer module.
2	Confirm the companion low-level multiplexer module is Honeywell 8C-PAIM01.		
3	Identify every MC-TAMT04 thermocouple and MC-TAMR04 RTD FTA connection.	How many channels are supported by Honeywell 8C-TAIM01?	The documented arrangement supports sixty-four fully isolated input channels in sixteen-channel increments.
4	Record all sixty-four channel assignments in their sixteen-channel groups.		
5	Preserve sensor type, polarity, lead compensation, shielding and isolation boundaries.	Which sensors can Honeywell 8C-TAIM01 receive?	It supports thermocouple and/or RTD inputs through the documented low-level multiplexer arrangement.
6	Confirm the configured 50 Hz or 60 Hz line-frequency integration setting.	Which FTAs are used with Honeywell 8C-TAIM01?	Honeywell lists MC-TAMT04 for thermocouples and MC-TAMR04 for RTDs.
7	Use approved ESD controls and inspect IOTA, module and FTA interfaces before seating hardware.		
8	Verify cold-junction compensation, open-sensor diagnostics and all enabled channels before release.		

FAQ, Related Products and Sources

QUESTION	ANSWER
What scan rate applies to Honeywell 8C-TAIM01?	The official specification states a fixed one-second scan, up to sixty-four channels per second.
What line-frequency setting is available for Honeywell 8C-TAIM01?	The low-level multiplexer provides a fixed selectable 50 Hz or 60 Hz line-frequency integration setting.
How does Honeywell 8C-TAIM01 handle an open thermocouple?	Each conversion is qualified by the documented open-thermocouple detection thresholds in the Honeywell specification.
What proves Honeywell 8C-TAIM01 commissioning is complete?	The module, IOTA and FTA identities must match, all channel and sensor assignments must be restored, and cold-junction, open-sensor and functional checks must pass.

MANUFACTURER SOURCE RECORDS

PlantCruise by Experion Series 8 I/O Specification - PC03-490-100, Release 100, October 2011, sections 2.1 and detailed specifications
Series 8 Controller and I/O Specification - S803-150-530, Version 1.0, May 2024, Series 8 architecture and I/O overview

Related Products on Apter Power

MODEL	APTER POWER PAGE
Honeywell CC-TCF901-51308301-175	View Honeywell CC-TC F901-51308301-175
Honeywell CC-TCNT01-51308307-175	View Honeywell CC-TC NT01-51308307-175
Honeywell CC-TDI220-51308394-275	View Honeywell CC-TDI 220-51308394-275
Honeywell CC-TDIL01	View Honeywell CC-TDIL01
Honeywell CC-TDIL11	View Honeywell CC-TDIL11
Honeywell CC-TDIL51-51307083-175	View Honeywell CC-TDI L51-51307083-175
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