

CC-PAIL51

Low-Level Analog Temperature Input Module

Low-level thermocouple and RTD temperature signals

PRODUCT SNAPSHOT

BRAND
Honeywell

FAMILY
Experion Series-C I/O

PART
CC-PAIL51

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PRODUCT OVERVIEW

Low-level thermocouple and RTD temperature signals

1

Conditions sixteen low-level temperature channels

2

Accepts thermocouple or RTD sensing per channel

3

Separates channels from one another and from module power

4

Pairs with the CC-TAIL51 temperature-input IOTA

SYSTEM COMPONENTS

CC-TAIL51 IOTA

field thermocouples or RTDs

Series-C carrier

Experion controller and Control Builder project

TECHNICAL NOTE

Confirm the installed CC-TAIL51 IOTA, sensor type, cold-junction arrangement, lead compensation and configured engineering range before channel acceptance.

TECHNICAL DATA

PARAMETER	VALUE
Module type	Low-level analog temperature input
Input channels	16
Supported sensor inputs	Thermocouple or RTD per channel
IOTA	CC-TAIL51; 9 in
Operating temperature	-40 to +70 degC
Storage temperature	-40 to +85 degC
Channel isolation	Channel-to-channel and power isolated
Input scan	1 s

PARAMETER	VALUE
Bandwidth	0 to 4.7 Hz
Thermocouple input range	-20 to +100 mV
TC non-damage input	-10 to +10 V
RTD non-damage input	-1 to +2 V at 100 mA
Gain error	0.050% FS maximum
Gain stability	+/-20 ppm
Long-term drift	500 ppm
Input impedance	1 MOhm

ENGINEERING NOTE

Confirm the installed CC-TAIL51 IOTA, sensor type, cold-junction arrangement, lead compensation and configured engineering range before channel acceptance.

RELATED PRODUCTS ON APTER POWER

MODEL	SYSTEM ROLE	APTER POWER PAGE
CC-TAID11	Related industrial automation product	View CC-TAID11 page
MC-IOLX02	Related industrial automation product	View MC-IOLX02 page
10102-2-1	Related industrial automation product	View 10102-2-1 page
DC-TFB412	Related industrial automation product	View DC-TFB412 page
DC-TCF901	Related industrial automation product	View DC-TCF901 page
8C-TDIL11	Related industrial automation product	View 8C-TDIL11 page
8C-TDIL01	Related industrial automation product	View 8C-TDIL01 page
51305508-200	Related industrial automation product	View 51305508-200 page

APPLICATIONS & PRECAUTIONS

COMMON APPLICATIONS

Furnace-zone temperature acquisition

Conditions sixteen low-level temperature channels

Reactor RTD monitoring

Accepts thermocouple or RTD sensing per channel

Turbine-bearing thermocouple measurement

Separates channels from one another and from module power

Isolated temperature-loop renewal

Pairs with the CC-TAIL51 temperature-input IOTA

PRODUCT PRECAUTIONS

- 1 Verify the complete CC-PAIL51 marking and its assigned temperature-input position before work.
- 2 Place the connected process and control strategy in the approved maintenance state.
- 3 Isolate the applicable cabinet supply and sensor 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 CC-TAIL51 IOTA 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 controlled temperature simulation on every active channel and retain the measured result before returning the channel to automatic service.

ENGINEER FAQ

Q1 Does CC-PAIL51 match CC-TAIL51 IOTA in a Furnace-zone temperature acquisition installation?

Verify the complete CC-PAIL51 marking, the documented Experion Series-C I/O position and the installed CC-TAIL51 IOTA before fitting the assembly.

Q2 How should CC-PAIL51 be wired when it must conditions sixteen low-level temperature channels?

Isolate the circuit, identify every terminal and reproduce the approved polarity, shield and channel assignment for CC-PAIL51; then continuity-test the affected path.

Q3 Which Experion Series-C I/O records should be captured before removing CC-PAIL51?

Record the as-found wiring, installed position, active configuration and diagnostic state associated with CC-PAIL51 before disconnection.

Q4 What controlled test confirms that CC-PAIL51 can accepts thermocouple or rtd sensing per channel?

Apply the approved field or simulated stimulus, observe the Experion Series-C I/O indication and confirm the intended response without bypassing the normal interlocks.

Q5 Which field thermocouples or RTDs condition should be checked when CC-PAIL51 reports an abnormal state?

Check the field thermocouples or RTDs supply, seating and connection first, then compare channel diagnostics with the recorded CC-PAIL51 baseline.

Q6 Can CC-PAIL51 be moved directly into Reactor RTD monitoring without validating Experion controller and Control Builder project?

No. Confirm the Experion controller and Control Builder project, revision, connection scheme and Experion Series-C I/O configuration before transferring CC-PAIL51 to that duty.

Q7 What maintenance evidence is required after CC-PAIL51 is used for Turbine-bearing thermocouple measurement?

Retain the nameplate record, corrective action, final diagnostics and a controlled turbine-bearing thermocouple measurement functional-test result for CC-PAIL51.

Q8 How should CC-PAIL51 be returned to service in Isolated temperature-loop renewal?

Restore power under control, verify separates channels from one another and from module power, exercise the intended signal path and release CC-PAIL51 only after the Experion Series-C I/O remains in its approved operating state.

SOURCE Honeywell Experion Series-C I/O Specification | EP03-490-520, Release 520, Version 1.5

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