APTER POWER

PRODUCT TECHNICAL REFERENCE

INDUSTRIAL AUTOMATION PRODUCT

CC-PAIL51

Low-Level Analog Temperature Input Module

Low-level thermocouple and RTD temperature signals

IDENTITY	VERIFIED VALUE
Manufacturer	Honeywell
System family	Experion Series-C I/O
Part number	CC-PAIL51
Country	USA
HS code	8537101190

APTER POWER SALES TEAM

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2 Technical Specifications

Technical values below are limited to the named Honeywell product record.

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
Bandwidth	0 to 4.7 Hz
Thermocouple input range	-20 to +100 mV

PARAMETER	VALUE
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
Common-mode voltage	+/-250 V DC or V AC rms
CMRR	120 dB
Channel-to-channel voltage	+/-250 V
Crosstalk	80 dB at 50 Hz; 120 dB at 60 Hz

VERIFIED PRODUCT RECORD

DATA GROUP	VERIFIED VALUE
Installed host / carrier	CC-TAIL51 IOTA
Companion hardware	field thermocouples or RTDs
Field connection	Series-C carrier
Primary system function	Conditions sixteen low-level temperature channels
Controlled acceptance duty	Furnace-zone temperature acquisition

3 System Role and Architecture

Low-level thermocouple and RTD temperature signals

FUNCTION 1

Conditions sixteen low-level temperature channels

FUNCTION 2

Accepts thermocouple or RTD sensing per channel

FUNCTION 3

Separates channels from one another and from module power

FUNCTION 4

Pairs with the CC-TAIL51 temperature-input IOTA

Matched system components

- CC-TAIL51 IOTA
- field thermocouples or RTDs
- Series-C carrier
- Experion controller and Control Builder project

SYSTEM INTEGRATION RECORD

INTEGRATION ITEM	DOCUMENTED ROLE
Installed host / carrier	CC-TAIL51 IOTA
Companion hardware	field thermocouples or RTDs
Field connection	Series-C carrier
Primary system function	Conditions sixteen low-level temperature channels
Controlled acceptance duty	Furnace-zone temperature acquisition

4 Applications and Engineering Context

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

TECHNICAL NOTE

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

MODEL-SPECIFIC ACCEPTANCE EVIDENCE

CHECK	ACCEPTANCE CONDITION
Identity	CC-PAIL51 / CC-PAIL51 recorded
Physical interface	CC-TAIL51 IOTA
Companion check	field thermocouples or RTDs
Functional proof	Conditions sixteen low-level temperature channels
Application test	Furnace-zone temperature acquisition

5 Engineering 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.

RELATED PRODUCTS ON APTER POWER

MODEL	SYSTEM ROLE	APTER POWER PAGE
10024-H-I	Related industrial automation product	View 10024-H-I page
51305348-100	Related industrial automation product	View 51305348-100 page
8C-TAOXB1-51307137-175	Related industrial automation product	View 8C-TAOXB1-51307137-175 page
MC-TSTX03-51309140-175	Related industrial automation product	View MC-TSTX03-51309140-175 page
05701-A-0302	Related industrial automation product	View 05701-A-0302 page
8C-PAOHA1	Related industrial automation product	View 8C-PAOHA1 page
51403698-100	Related industrial automation product	View 51403698-100 page
10300-1-1	Related industrial automation product	View 10300-1-1 page

MANUFACTURER SOURCE RECORD

Honeywell Experion Series-C I/O Specification

EP03-490-520, Release 520, Version 1.5

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