TECHNICAL REFERENCE / EXACT-MODEL DOSSIER

WESTINGHOUSE 5X00594G01

Thermocouple Input Module

WESTINGHOUSE 5X00594G01 is an Ovation sixteen-channel thermocouple input module for low-level millivolt temperature signals.

IDENTITY AND FUNCTION SNAPSHOT	
H1 Sixteen thermocouple channels	**H2** Low-level millivolt acquisition
H3 ±20, ±50 and ±100 mV families	**H4** 1C31116G05 interface pairing

Installed-system position

1	Thermocouple sensor
2	1C31116G05 field interface
3	5X00594G01 conversion stage
4	Ovation controller

Exact-model release boundary

Identity Keep WESTINGHOUSE 5X00594G01 complete in drawings, labels and acceptance records.	**Evidence** Use only the exact-model and explicitly applicable family facts documented here.
Configuration Record cables, jumpers, settings and the installed functional position before work.	**Acceptance** Prove the affected control path before returning the equipment to service.

02 / SYSTEM ROLE AND INTERFACES

Architecture, interfaces and service boundaries

WESTINGHOUSE 5X00594G01 expands low-level temperature acquisition to sixteen channels. Correct thermocouple type, polarity, cold-junction arrangement, cable material and the 1C31116G05 pairing must be verified as one system.

CONTROL PATH	
1	Thermocouple sensor
2	1C31116G05 field interface

3	5X00594G01 conversion stage
4	Ovation controller

Interface architecture

Sensor boundary	Sixteen thermocouple or low-level millivolt circuits
Field interface	1C31116G05 signal routing and termination
Conversion boundary	5X00594G01 low-level acquisition
Controller boundary	Temperature or millivolt values delivered to Ovation

Interface acceptance checks

1

Isolate affected thermocouple circuits before handling WESTINGHOUSE 5X00594G01.

2

Confirm the G01 identity and the installed 1C31116G05 field-interface module.

3

Record sensor type, polarity, range, engineering units and cold-junction arrangement for all channels.

4

Use matching thermocouple extension wire and preserve the original polarity end to end.

Engineering rule

A nearby WESTINGHOUSE family code does not establish interchangeability with 5X00594G01; use the physical nameplate and controlled site records.

ENGINEERING SUMMARY / MODEL-SPECIFIC CHECKPOINTS

- Sensor boundary: Sixteen thermocouple or low-level millivolt circuits
- Field interface: 1C31116G05 signal routing and termination
- Conversion boundary: 5X00594G01 low-level acquisition
- Controller boundary: Temperature or millivolt values delivered to Ovation

03 / VERIFIED TECHNICAL DATA

Engineering matrix and component map

Every populated row is a technical value supported by the reviewed exact-model record or an explicitly applicable WESTINGHOUSE family source.

Product class	Thermocouple input module
Platform	Ovation I/O
Channel count	16
Input families	±20 mV; ±50 mV; ±100 mV
Field-interface pairing	1C31116G05
Signal class	Low-level thermocouple / millivolt
Main power	2.4 W
Full model	5X00594G01

CHANGE CONTROL

Record

Capture the full model, revision, slot, connectors and as-found condition.

Compare

Match every populated technical row to the replacement and project record.

Protect

Apply controlled isolation, stored-energy and ESD practices.

Prove

Complete the product-specific functional and safe-state checks.

Source applicability

Evidence record	Applicable scope
Ovation Planning manual OW351, exact 5X00594G01 thermocouple-module table	Supports only the exact-model or explicitly applicable family facts used in this document.

04 / SERVICE LOGIC AND ACCEPTANCE

Fault isolation and controlled return

1	Capture the fault, indicators and surrounding-system state
2	Verify exact identity, power boundary, cabling and installed position
3	Test WESTINGHOUSE 5X00594G01 against the approved service procedure
4	Correct the isolated cause and restore the recorded configuration

5	Commission the affected path and archive measured evidence

Eight product-specific precautions

1 Isolate affected thermocouple circuits before handling WESTINGHOUSE 5X00594G01.	**2** Confirm the G01 identity and the installed 1C31116G05 field-interface module.
3 Record sensor type, polarity, range, engineering units and cold-junction arrangement for all channels.	**4** Use matching thermocouple extension wire and preserve the original polarity end to end.
5 Keep low-level wiring segregated from power and switching conductors.	**6** Do not inject voltage outside the configured millivolt family.
7 Commission with a traceable thermocouple or millivolt source at representative points.	**8** Release the module only after every used channel and its configured alarm behavior agree with the site test.

05 / ENGINEERING FAQ AND SUPPORT

Model-specific engineering decisions

Engineering decision	Controlled response
How many thermocouple channels belong to WESTINGHOUSE 5X00594G01?	It provides sixteen thermocouple input channels.
Which low-level ranges are associated with WESTINGHOUSE 5X00594G01?	The documented input families are ±20 mV, ±50 mV and ±100 mV.
Which field-interface module pairs with WESTINGHOUSE 5X00594G01?	The documented pairing is 1C31116G05.
What type of wiring is critical for WESTINGHOUSE 5X00594G01?	Use the correct thermocouple extension-wire material and preserve polarity and shield routing.
What main-power value is documented for WESTINGHOUSE 5X00594G01?	The planning data lists 2.4 W main power.
Why must channel range be checked on WESTINGHOUSE 5X00594G01?	The configured millivolt family must match the installed sensor and project database.
How should WESTINGHOUSE 5X00594G01 be calibrated in the field?	Apply a traceable thermocouple or millivolt source and compare terminal input with the controller value.
When is WESTINGHOUSE 5X00594G01 ready to return to service?	Verify sensor type, polarity, range, cold-junction arrangement, channel accuracy and alarm action.

Related Apter Power references

Related Apter Power references	Scope note
WESTINGHOUSE 1C31192G01	Portfolio reference only; verify compatibility independently.
WESTINGHOUSE 1C31223G01	Portfolio reference only; verify compatibility independently.
WESTINGHOUSE 1C31238H01	Portfolio reference only; verify compatibility independently.

	Apter Power technical support sales13@apterpower.com +86 180 3023 5313 www.apterpower.com	Model record WESTINGHOUSE 5X00594G01 Thermocouple Input Module Verify the complete nameplate before installation.

ENGINEERING SUMMARY / MODEL-SPECIFIC CHECKPOINTS

- Exact model: WESTINGHOUSE 5X00594G01
- Retain nameplate, wiring and as-left acceptance evidence.
- Use only the Apter Power links contained in this document.
- Verify compatibility independently before installation.