TS-02

01 / Product identity and control context

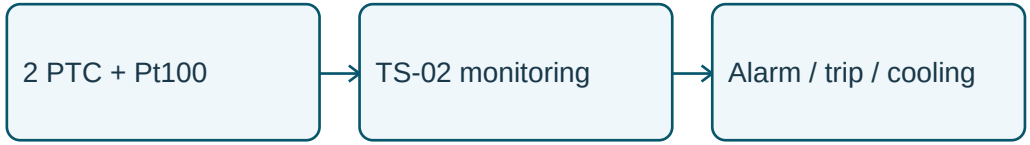
Temperature Monitoring Relay

JOPPICH TS-02 monitors two PTC sensor circuits and one Pt100 input for temperature protection and cooling control in transformers and electrical machines.

Key characteristics

Product type	Temperature monitoring relay
Sensor arrangement	Two PTC channels and one Pt100
Switching outputs	Four relays
Display	Three-digit temperature indication

Functional relationship



Temperature chain

Monitors resistance sensors and operates the assigned alarm, trip and cooling relay circuits.

Configuration boundary

TS-02 combines two PTC protection channels and one Pt100 control channel. Sensor wiring and external alarm, trip or cooling circuits must match the actual installation.

Product and installation enquiries

sales13@apterpower.com | +86 18030235313

Apply manufacturer instructions and approved site procedures.

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02 / Technical characteristics

Hardware and functional data

Manufacturer	JOPPICH
Sensor inputs	Two PTC circuits; one 3-wire Pt100
DC supply	24 to 270 V DC, ±10%
AC supply	40 to 270 V AC, ±10%; 50 to 60 Hz
Pt100 setpoint range	20 to 200 °C
Factory Pt100 setpoint	80 °C
Pt100 switching hysteresis	20 °C

Interfaces and operating conditions

Temperature display	0 to 200 °C; 1 °C resolution
Display update	1.5 s
Relay outputs	Four
Relay switching limits	230 V; 6 A; 1500 VA AC / 120 W DC maximum
Operating temperature	-10 to 50 °C
Mounting	35 mm DIN rail

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03 / Application and integration contexts

Transformer thermal protection

Monitor separate PTC temperature stages for alarm and protective action. Coordinate the relay contacts with the transformer protection design.

Cooling control

Use the Pt100 channel and its adjustable setpoint for the intended cooling command. Account for the 20 °C switching hysteresis.

Sensor wiring

Preserve the two PTC circuits and three-wire Pt100 connection. Check sensor continuity and the designated terminal assignments before applying power.

Electrical machine monitoring

Integrate suitable PTC and Pt100 sensors in an electrical-machine temperature monitoring circuit. Match sensor insulation and wiring to the installation.

Temperature diagnostics

Use the temperature display and channel fault indications to identify sensor-circuit problems. Confirm the fault before replacing the monitored equipment.

Threshold configuration

Record the Pt100 setpoint, hysteresis and external relay functions. Validate the alarm, protective action and cooling response independently.

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04 / Installation and release decisions

Match the sensor types

Keep the two PTC inputs separate from the three-wire Pt100 input. Do not connect an arbitrary analog transmitter to a resistance-sensor channel.

Verify the supply

Compare the applied AC or DC voltage with the TS-02 supply range and terminal arrangement before energization.

Check contact loading

Observe voltage, current and AC/DC switching-power limits together. Relay contact capability does not determine the rating of a connected motor or contactor.

Set the Pt100 threshold

Choose an application-approved setpoint from 20 to 200 °C and account for the 20 °C reset difference. Save the setting with SET.

Review sensor diagnostics

Investigate open-circuit or short-circuit indications and verify sensor wiring before returning the protection circuit to service.

Test the protection chain

Check temperature stages, relay functions and the external alarm/trip or cooling response using the approved commissioning method.

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05 / Lifecycle, evidence and related portfolio

Lifecycle status

The current manufacturing and service-support phase for TS-02 has not been confirmed. Obtain current manufacturer guidance for the complete identification and installed configuration.

Supply boundary

Apter Power availability and dispatch are confirmed separately from the manufacturer lifecycle phase.

Technical basis

Joppich TS-02 Temperaturüberwachung technical and operating instructions.

Related product references

Honeywell 2MLF-RD8A

Allen-Bradley 1756-IRT8I

Siemens 6ES7431-7KF00-6AA0

Navigation only; no substitute or accessory compatibility is implied.

Offered-unit verification

Compare the complete label, connectors, mounting arrangement and applicable hardware/software revision. Confirm included components and accompanying documents in the quotation.

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