

INDUSTRIAL AUTOMATION PRODUCT

EMT6-DB-066401

EMT6 Thermistor Overload Relay

Eaton EMT6-DB-066401 is a thermistor machine-protection relay. It monitors a PTC sensor circuit and switches control contacts when motor or equipment temperature reaches the trip condition.

IDENTITY	VERIFIED VALUE
Manufacturer	Eaton
System family	Eaton Moeller EMT6 machine-protection relay
Part number	EMT6-DB-066401
Country	Germany
HS code	8537101190

APTER POWER SALES TEAM

WHATSAPP / PHONE +86 180 3023 5313
EMAIL sales13@apterpower.com
WEBSITE www.apterpower.com



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Technical Specifications

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

PARAMETER	TECHNICAL VALUE
Catalog number	066401
Control voltage	230 V AC, 50/60 Hz
Measuring circuits	1
Output contacts	1 NC + 1 NO
Trip resistance	3600 Ohm
Reset resistance	1600 Ohm
Measuring range	750 to 12000 Ohm
Rated switch current	6 A
Terminal torque	1.2 N m
Terminal screw	M3.5
Conductor range	0.5 to 2.5 mm ²
Power consumption	3.5 VA AC
Degree of protection	IP20
Operating temperature	-25 to +60 degC
Storage temperature	-45 to +85 degC
Rated insulation voltage	400 V
Pollution degree	3
Overvoltage category	III

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System Role and Architecture

Eaton EMT6-DB-066401 is a thermistor machine-protection relay. It monitors a PTC sensor circuit and switches control contacts when motor or equipment temperature reaches the trip condition.

FUNCTION 1

Evaluates a PTC thermistor circuit embedded in protected machinery

FUNCTION 2

Changes isolated relay contacts when the configured thermistor threshold is exceeded

FUNCTION 3

Supports manual or remote reset after the sensor circuit returns below reset resistance

FUNCTION 4

Provides test, mains-status, and fault indication for commissioning

Matched system components

- PTC thermistor chain
- machine contactor or control circuit
- 230 V AC control supply
- remote-reset circuit

SYSTEM INTEGRATION RECORD

INTEGRATION ITEM	DOCUMENTED ROLE
Installed host / carrier	PTC thermistor chain
Companion hardware	machine contactor or control circuit
Field connection	230 V AC control supply
Primary system function	Evaluates a PTC thermistor circuit embedded in protected machinery
Controlled acceptance duty	Motor-winding overtemperature protection

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Applications and Engineering Context

Motor-winding overtemperature protection

Evaluates a PTC thermistor circuit embedded in protected machinery

Pump motor thermal shutdown

Changes isolated relay contacts when the configured thermistor threshold is exceeded

Fan and compressor motor protection

Supports manual or remote reset after the sensor circuit returns below reset resistance

Machine-bearing PTC supervision

Provides test, mains-status, and fault indication for commissioning

TECHNICAL NOTE

Wire the PTC measuring circuit separately from power conductors, confirm the 230 V AC control supply, and prove trip, reset, lock, and contact behavior with the driven machine isolated.

MODEL-SPECIFIC ACCEPTANCE EVIDENCE

CHECK	ACCEPTANCE CONDITION
Identity	EMT6-DB-066401 / EMT6-DB-066401 recorded
Physical interface	PTC thermistor chain
Companion check	machine contactor or control circuit
Functional proof	Evaluates a PTC thermistor circuit embedded in protected machinery
Application test	Motor-winding overtemperature protection

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Engineering Precautions

1

Verify EMT6-DB-066401 and catalog number 066401 before panel work.

2

Isolate the 230 V AC control circuit and prove all terminals de-energized.

3

Keep the PTC measuring pair separated from motor power and switching conductors.

4

Check total thermistor-loop resistance before energizing the relay.

5

Confirm the required manual or remote reset arrangement and lock setting.

6

Apply the published terminal torque without damaging fine control conductors.

7

Use the TEST function to verify contact transfer and downstream interlock logic.

8

Record the trip, reset, LED, and contact results before returning the motor to service.

CONFIGURATION VERIFICATION MATRIX

- **INSTALLED POSITION** PTC thermistor chain
- **COMPANION HARDWARE** machine contactor or control circuit
- **FUNCTIONAL DUTY** Evaluates a PTC thermistor circuit embedded in protected machinery
- **ACCEPTANCE APPLICATION** Motor-winding overtemperature protection

MANUFACTURER SOURCE RECORD

Eaton EMT6 Thermistor Machine Protection Relay Product Data

Catalog 066401

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