

T8442

Trusted TMR Speed Monitor

PRODUCT TECHNICAL REFERENCE

ICS Triplex T8442 is a Trusted triple modular redundant speed monitor for rotating machinery. It evaluates speed and acceleration inputs and supplies fault-tolerant shutdown outputs for overspeed protection.

OFFICIAL SOURCE

Trusted TMR Speed Monitor | ICSTT-RM276I-EN-P (PD-T8442) Issue 10

Verified technical profile

Trusted TMR Speed Monitor

Speed groups	3
Input architecture	3 TMR speed inputs per group
Output architecture	2 quad-redundant structures per group
Sensor types	Active and passive
Input frequency	Up to 30 kHz
Input duty cycle	20 to 80%
Speed resolution	+/-1 RPM
Speed accuracy	0.01% FS or 1 RPM, whichever is greater
Detection threshold	200 mV peak-to-peak
Field supply	18 to 32 Vdc
System supply	20 to 32 Vdc
System power	22 W at 24 Vdc
Operating temperature	0 to 60 deg C
Dimensions	266 x 30 x 303 mm
Weight	1.28 kg

ENGINEERING USE OF THE VERIFIED DATA

The module operates through the Trusted chassis and model-specific speed-monitor field termination assemblies. Engineering setup includes probe type, tooth count, speed scaling, acceleration logic, trip voting, bypass state and proof testing of associated shutdown circuits.

Verification focus: Confirm T8442, hardware revision and all three configured speed groups.

Only values traceable to the listed manufacturer source are treated as verified technical data.

System role and engineering boundaries

ICS Triplex T8442 is a Trusted triple modular redundant speed monitor for rotating machinery. It evaluates speed and acceleration inputs and supplies fault-tolerant shutdown outputs for overspeed protection.

1

Protects rotating equipment against overspeed and overacceleration

2

Handles active or passive probe interfaces through the approved SIFTA

3

Provides independent protection groups for multiple machine trains

4

Combines continuous diagnostics with fault-tolerant shutdown outputs

ENGINEERING NOTE

Install T8442 with the approved T8846 SIFTA, T8891 SOFTA and TC-801 field interface cable, then configure each speed group for its probe type and toothed-wheel data. Validate direction, frequency response, trip setpoints and every shutdown output using controlled rotation or signal simulation.

Industrial application matrix

Four source-supported operating contexts for this exact product.

Turbine overspeed protection

Monitors shaft-speed inputs and commands the engineered shutdown path when the configured limit is exceeded.

Compressor train protection

Applies independent speed groups to rotating compressor drivers and their trip circuits.

Generator speed supervision

Tracks shaft frequency and acceleration during controlled start-up and operation.

Pump-driver acceleration monitoring

Supervises transient speed behavior where rapid acceleration must initiate protective action.

MODEL-SPECIFIC ACCEPTANCE FOCUS

Confirm T8442 identity and revision, Trusted chassis, T8846 SIFTA, T8891 SOFTA, TC-801 cabling, probe type, tooth count, speed and acceleration settings, firmware/application versions, bypass status and full trip proof test before commissioning.

Related-series navigation

Eight verified Apter Power product pages, kept separate from the manufacturer source record.

RELATED APTER POWER SERIES PAGES	
01	TC-215-02-12M5 Apter Power product page
02	TC-301-02-2M0 Apter Power product page
03	TC-301-02-6M5 Apter Power product page
04	TC-301-02-10M0 Apter Power product page
05	T9482 Apter Power product page
06	T9803 Apter Power product page
07	TC-001-02-2M5 Apter Power product page
08	T8235 Apter Power product page

Navigation links only - not manufacturer evidence for technical parameters.

SOURCE RECORD

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