

INDUSTRIAL AUTOMATION PRODUCT

3511

Eight-Point Pulse Input Module

Triconex 3511 is an eight-point TMR pulse input module. It measures high-frequency differential sensor signals and supplies voted frequency or RPM data to the control program.

IDENTITY	VERIFIED VALUE
Manufacturer	Triconex
System family	Tricon pulse input
Part number	3511
Country	USA
HS code	8537101190

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Technical Specifications

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

PARAMETER	VALUE
Module type	TMR pulse input
Input signals	8 non-commoned
Frequency range	20 Hz to 20 kHz
Resolution	16 bit
Accuracy	+/-0.01% from 1 kHz to 20 kHz
Update rate	25 ms typical
Input coupling	AC coupled; balanced differential
Input impedance	>8 kOhm; 20 kOhm typical
Common-mode range	-100 to +100 VDC peak-to-peak
Normal-mode range	1.5 to 200 V peak-to-peak

PARAMETER	VALUE
Overrange protection	+/-150 VDC continuous
Typical hysteresis	150 mV
Duty cycle	10% to 90%
Wave shapes	Sine; square; pulse
Current input option	0-20 mA with 250 Ohm shunt
Input indicators	1 per point
Module indicators	PASS; FAULT; ACTIVE
Compatible basic panel	9753-110
Compatible nonincendive panel	9793-110

VERIFIED PRODUCT RECORD

DATA GROUP	VERIFIED VALUE
Installed host / carrier	9753-110 or 9793-110 termination panel
Companion hardware	magnetic speed sensor
Field connection	Tricon I/O chassis and main processors
Primary system function	Measures rate from eight balanced high-frequency pulse inputs
Controlled acceptance duty	Turbine overspeed measurement

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System Role and Architecture

Triconex 3511 is an eight-point TMR pulse input module. It measures high-frequency differential sensor signals and supplies voted frequency or RPM data to the control program.

FUNCTION 1

Measures rate from eight balanced high-frequency pulse inputs

FUNCTION 2

Accepts non-amplified magnetic speed-sensor signals from rotating equipment

FUNCTION 3

Counts transitions with microsecond timing and produces frequency or RPM data

FUNCTION 4

Uses three isolated channels and voted data for high-integrity speed measurement

Matched system components

- 9753-110 or 9793-110 termination panel
- magnetic speed sensor
- Tricon I/O chassis and main processors
- balanced shielded pulse wiring

SYSTEM INTEGRATION RECORD

INTEGRATION ITEM	DOCUMENTED ROLE
Installed host / carrier	9753-110 or 9793-110 termination panel
Companion hardware	magnetic speed sensor
Field connection	Tricon I/O chassis and main processors
Primary system function	Measures rate from eight balanced high-frequency pulse inputs
Controlled acceptance duty	Turbine overspeed measurement

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Applications and Engineering Context

Turbine overspeed measurement

Measures rate from eight balanced high-frequency pulse inputs

Compressor shaft-speed monitoring

Accepts non-amplified magnetic speed-sensor signals from rotating equipment

Rotating-equipment rate feedback

Counts transitions with microsecond timing and produces frequency or RPM data

High-integrity magnetic pickup acquisition

Uses three isolated channels and voted data for high-integrity speed measurement

TECHNICAL NOTE

Preserve balanced differential wiring and sensor polarity, confirm signal amplitude and frequency inside the published range, and validate RPM scaling plus trip action after installation.

MODEL-SPECIFIC ACCEPTANCE EVIDENCE

CHECK	ACCEPTANCE CONDITION
Identity	3511 / 3511 recorded
Physical interface	9753-110 or 9793-110 termination panel
Companion check	magnetic speed sensor
Functional proof	Measures rate from eight balanced high-frequency pulse inputs
Application test	Turbine overspeed measurement

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Engineering Precautions

1

Verify 3511 and the eight assigned speed channels before removing the module.

2

Place the rotating machine and overspeed function in the approved maintenance state.

3

Isolate sensor circuits and record IN+/IN- polarity and shield grounding.

4

Confirm amplitude, frequency, duty cycle, and common-mode voltage remain within limits.

5

Use 9753-110 or the documented nonincendive panel; do not substitute a totalizer-only arrangement.

RELATED PRODUCTS ON APTER POWER

MODEL	SYSTEM ROLE	APTER POWER PAGE
Triconex 3504E	High-Density Digital Input Module	Open product page
Triconex 3008	Main Processor Module	Open product page
Triconex 4210	Remote Extender Module Set	Open product page
Triconex 4119A	Enhanced Intelligent Communication Module	Open product page

MANUFACTURER SOURCE RECORD

Tricon Systems Technical Product Guide

9791007-013

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