

3511

Eight-Point Pulse Input Module

CONTROLLED ENGINEERING COPY

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.

INSTALLATION IDENTITY	REQUIRED VALUE
Complete model	3511
Manufacturer part	3511
Hardware type	TMR pulse input
System family	Tricon pulse input



APTER POWER SALES TEAM

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



01 PRE-INSTALLATION PLAN

- 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.

MATCHED HARDWARE

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

INSTALLATION CONTROL RECORD

CONTROL ITEM	REQUIRED RECORD
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

02 WIRING & INTERFACE CHECKS

CHECK ITEM	REQUIRED 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
Overrange protection	+/-150 VDC continuous
Typical hysteresis	150 mV
Duty cycle	10% to 90%
Wave shapes	Sine; square; pulse

FIELD 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.

03 COMMISSIONING WORKFLOW



COMMISSIONING ACCEPTANCE EVIDENCE

EVIDENCE ITEM	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

04 RETURN-TO-SERVICE RECORD

- ☐ Keep unused pulse-input points shorted as specified for the termination panel.
- ☐ Inject controlled frequencies and compare indicated frequency or RPM on all three channels.
- ☐ Review PASS/FAULT/ACTIVE status and prove overspeed logic before return to service.
- ☐ Confirm the intended process response before normal operation.

VERIFICATION RECORD

TECHNICIAN

DATE

CABINET / POSITION

FINAL DIAGNOSTIC STATE

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

SOURCE IDENTIFIERS

Tricon Systems Technical Product Guide
9791007-013

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