Triconex 8311

01 Product role and installation boundary

What this product does

The 8311 receives an external 24 VDC source and supplies regulated 6.5 VDC logic power to the Tricon chassis. Power-source capacity, chassis load and cabinet temperature all affect whether the installed arrangement is adequately supported.

The recommended input band is the normal design reference. The wider 19.2-36 VDC input band is a short-term extension and must not be used as the normal setpoint. The published 27 A and 175 W output limits apply at the stated 60 C chassis-bottom ambient condition.

Before service, measure and identify both dc feeds, confirm their available capacity and the specified time-delay fuses, and document the fitted chassis load. A redundant arrangement must be handled only under the approved site sequence; then verify regulated output and controller diagnostics.

Installed-system path

1. **24 VDC source**
2. **8311 power module**
3. **6.5 VDC logic**
4. **Tricon chassis**

Selection and pre-work reference

Nominal input	24 V DC
Recommended input	24 V DC, -15% / +20%
Extended input	19.2–36 V DC, short-term
Input isolation	1000 V AC / 1500 V DC
Source capacity	240 W minimum per source

Where this configuration is applied

Tricon chassis power:

Provide logic power for a controller chassis with the documented 24 VDC power architecture.

Redundant supply design:

Review both source capacities and the controller load before planning an online module exchange.

The electrical limits are exact-model 8311 values; extended input is for short-term operation, not the normal setpoint.

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02 Parameters and controlled replacement

Verified technical data

Input fuse	15 A time-delay
Output voltage	6.5 V DC ±1%
Maximum output current	27 A at 60°C chassis-bottom ambient
Output power	175 W at 60°C chassis-bottom ambient
Steady input current	5 A typical / 10 A maximum
Input overvoltage clamp	40 V DC

How to apply the published ratings

Calculate the fitted chassis demand against both 27 A and 175 W limits at the specified 60 C chassis-bottom condition. The output voltage tolerance does not by itself establish adequate capacity under a full configured load.

Check source capability and the 15 A time-delay fuse for each feed. The 40 VDC input clamp is a protection characteristic, not a permissible operating target. Treat the 19.2-36 VDC extended band as short-term only.

Installation and commissioning sequence

01 Measure both dc feeds

Confirm normal input voltage at each source.

02 Check source capacity

Verify at least 240 W is available per source.

03 Confirm fuse type

Use the specified 15 A time-delay input protection.

04 Review load and heat

Check chassis-bottom ambient against the output rating.

05 Observe redundancy procedure

Use the site-approved isolation sequence.

06 Validate diagnostics

Confirm regulated output and supply status after service.

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03 Fault isolation and acceptance

If the restored function does not behave as expected

01 What should be checked if 8311 drops out during load changes?

Measure supply transient voltage at the module, inspect wiring losses and source response, and compare with the minimum input limit.

02 Why does 8311 use a time-delay input fuse?

The published table specifies 15 A time-delay protection; match the installed fuse type to manage normal input transients.

03 How is a redundant 8311 arrangement accepted?

Check both power sources independently and confirm controller diagnostics remain stable under the approved failover procedure.

04 Can a different Tricon power module replace 8311?

Only after input voltage, output capacity, chassis slot and controller compatibility are approved.

05 What data should be recorded after 8311 service?

Record input voltage, output indication, fuse identity, chassis temperature and diagnostic status.

Acceptance and handover evidence

Normal supply	Keep each source within the recommended 24 VDC tolerance.
Thermal rating	Apply the 27 A / 175 W output limit at 60°C chassis-bottom ambient.
Redundancy	Prove both supplies under the approved controller procedure.

Power budget: Check each source and the chassis load at the actual ambient before service.

Other catalogue references

The references below are navigation aids, not confirmed substitutes. Review each against the installed system.

Triconex 3706A

Triconex 4329

Triconex 3008

Technical basis: Triconex Planning and Installation Guide for Tricon v9–v11 Systems, Model 8311 power-module specifications.

For the exact offered unit, request current marking and connector photographs and retain the approved as-found configuration with the acceptance record.