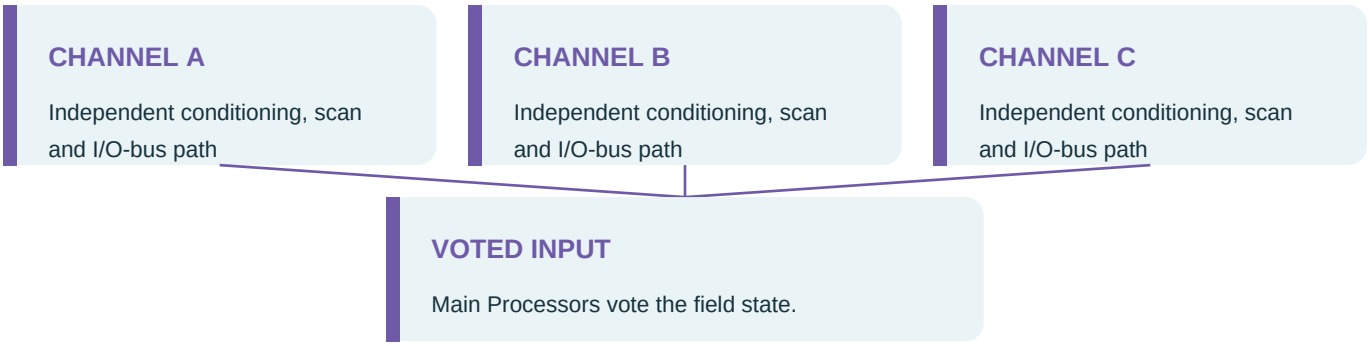
Invensys Triconex 3502E

48 VAC/VDC TMR Digital Input Module

The Invensys Triconex 3502E monitors discrete field states across three independent input channels before the Main Processors vote the resulting data. Its documented diagnostics, hot-spare support and mechanical keying are intended for controlled Tricon v9-v11 service.

- 32 points commoned in groups of eight
- 48 VAC/VDC nominal TMR input architecture
- Continuous circuit stuck-On self-test
- PASS, FAULT, ACTIVE and per-point indicators



IDENTITY HOLD POINT

Confirm the complete 3502E identity, slot keys, ETP, interface cables, field-voltage range and approved maintenance record before installation or replacement.

Verified related ApterPower product pages

These links support portfolio navigation only and do not establish compatibility or substitution.

- **Invensys Triconex 3503E**
- **Invensys Triconex 3504E**
- **Invensys Triconex 3510**

Verified technical record

Module type	TMR digital input with circuit stuck-On self-test
Nominal input	48 VAC/VDC
Input points	32, commoned in groups of 8
Input frequency	DC or 47-63 Hz
Recommended input range	35-95 VAC/VDC
Maximum voltage	95 VAC/VDC
Off-to-On level	27 VAC/VDC typical; 32 VAC/VDC worst-case
On-to-Off level	14 VAC/VDC typical; 11 VAC/VDC worst-case

SYSTEM ROLE

Each channel independently conditions and scans every 3502E input point, then sends its table to the corresponding Main Processor. The Main Processors vote the input data before the application uses it.

Verified related ApterPower product pages

These links support portfolio navigation only and do not establish compatibility or substitution.

Invensys Triconex 3511

Invensys Triconex 3008

Invensys Triconex 3006

Invensys Triconex 4351B

Interface and service boundaries

Nominal turn-on current	6-9 mA
Input impedance	> 2.9 kOhm nominal
Input delay	Off-to-On < 8 ms; On-to-Off < 15 ms
Point isolation	1,000 VAC minimum; 1,500 VDC minimum
Logic power	< 10 W
Status indication	One indicator per point; PASS, FAULT and ACTIVE module indicators
Slot keys	Top 004; bottom 005
Maintenance toggle	Normally Off points: every 24 months, under approved procedure

ENGINEERING NOTE

The self-test checks the ability to detect the transition of a normally energized circuit to the Off state. The official guide warns that a diagnostic glitch can appear on an adjacent de-energized point, so parallel equipment inputs and commissioning tests must account for the documented behavior.

CONTROLLED INTEGRATION

The module requires a matched external termination panel and interface cabling. Mechanical slot keying uses top key 004 and bottom key 005, and the official guide lists field-point toggling for normally Off points at the documented maintenance interval.

Verified related ApterPower product pages

These links support portfolio navigation only and do not establish compatibility or substitution.

- **Invensys Triconex 8312**
- **Invensys Triconex 4000188-320**
- **Invensys Triconex 3706A**
- **Invensys Foxboro DM900WT**

Exact-model questions

What is Invensys Triconex 3502E?
It is a 32-point, 48 VAC/VDC TMR digital-input module with a circuit stuck-On self-test.

How are Invensys Triconex 3502E points grouped?
The 32 input points are commoned in four groups of eight.

What input range is recommended for Invensys Triconex 3502E?
The manufacturer table lists 35-95 VAC/VDC with a 95 VAC/VDC maximum.

How does Invensys Triconex 3502E process input data?
Three independent channels condition and scan the points, and the Main Processors vote the resulting input tables.

Which indicators are present on Invensys Triconex 3502E?
Each point has an On/Off indicator and the module has PASS, FAULT and ACTIVE indicators.

Can Invensys Triconex 3502E be maintained as a hot spare?
The official guide states that Tricon digital-input modules include the hot-spare feature for controlled online replacement.

Which slot keys belong to Invensys Triconex 3502E?
The official slot-key table lists top key 004 and bottom key 005.

Which Invensys Triconex 3502E points require periodic toggling?
The guide lists normally Off points for field-point toggling every 24 months under the approved maintenance procedure.

Verified related ApterPower product pages

These links support portfolio navigation only and do not establish compatibility or substitution.

Invensys Foxboro P0972AJ FBI10E

Invensys Foxboro P0922YU FPS400-24

Invensys Foxboro FBM201 P0916AA

Manufacturer source ledger

SOURCE 1

Invensys Planning and Installation Guide for Tricon v9-v11 Systems, 9720077-019, June 2014, pp. 108-114 and installation/maintenance sections.

SOURCE 2

Invensys Planning and Installation Guide for Tricon v9-v11 Systems, Table 83 slot keys and Table 94 field-point toggle requirements.

SOURCE 3

Schneider Electric EcoStruxure Triconex Safety Systems product information for TMR diagnostics and online module replacement context.

Verified related ApterPower product pages

These links support portfolio navigation only and do not establish compatibility or substitution.

- **Invensys Foxboro FBM4/39/44**
- **Invensys Foxboro FBM3A/33A**
- **Invensys Foxboro FBM2/36**
- **Invensys Foxboro FBM1/37/43**

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3502E