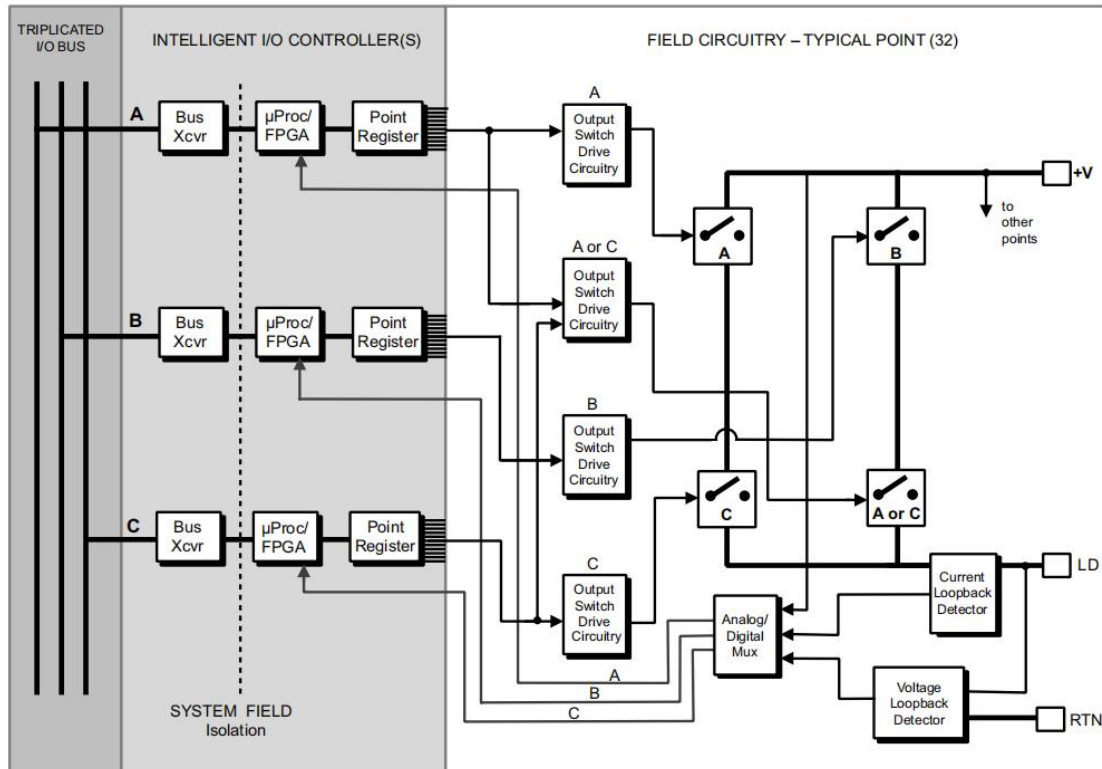# 3625A-Schneider Electric SA/Triconex An Invensys Company-24 VDC Supervised or Non-Supervised Digital Output Modules

This figure is a simplified schematic for Models 3625 and 3625A, which are 32-point TMR Supervised or Non-Supervised Digital Output Modules with nominal ranges of 24 VDC.
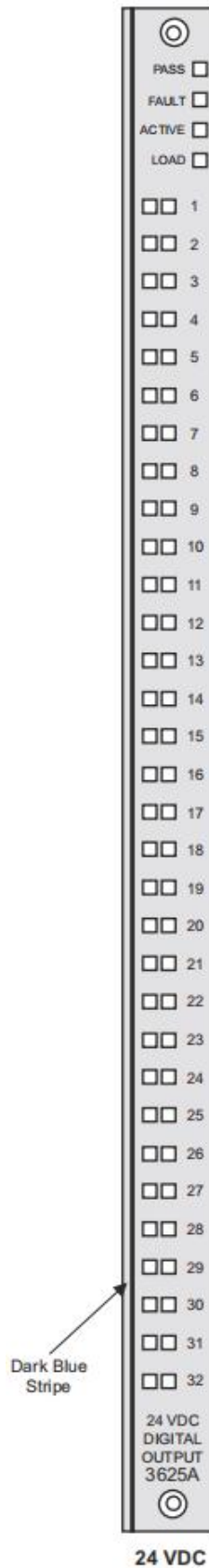

（3625A Simplified Schematic）

NOTE：For the 3625A module, power is commoned in groups of 16 points and is separated by termination panels.

This figure shows the front panels of Model 3625A.

PASS ☐
FAULT ☐
ACTIVE ☐
LOAD ☐

☐☐ 1
☐☐ 2
☐☐ 3
☐☐ 4
☐☐ 5
☐☐ 6
☐☐ 7
☐☐ 8
☐☐ 9
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☐☐ 29
☐☐ 30
☐☐ 31
☐☐ 32

Dark Blue Stripe

24 VDC
DIGITAL
OUTPUT
3625A

24 VDC

3625A Specifications

This table lists the specifications for Model 3625A, which are 32-point TMR Supervised or Non-Supervised Digital Output Modules. These modules are compatible with 16- point commoned field termination panels, and are intended for energize-to-trip and de-energize-to-trip applications. The 3625A module can be installed only in Tricon v10.2 and later systems.

The 3625A module has been modified to separate the field power supply into groups of 16 points while maintaining a common return. The 3625A module is fully compatible for use in all applications of the 3625 module.

CAUTION Invensys recommends that the termination panels for the 3625A module Is wired in parallel and powered from a single set of redundant field power sources. The 3625A module may be powered from four independent field power sources, but only if the voltage from those sources is within 5% of the highest voltage supplied. If this restriction is not followed, the module will still operate but may experience voter faults and generate an alarm.

3625A Digital Output Specifications

Feature	Specification
Color code	Dark blue
Number of output signals	32, commoned[a]
Recommended voltage range	16–32 VDC
Nominal voltage	24 VDC
Maximum voltage	36 VDC
Logic power	< 13 watts
Current ratings, maximum	1.70 ± 10%amps/ point, 5 amps surge/7 ms
Total module output current (all points)	10 amps/termination panel
Minimum required load	10 mA
Maximum output leakage	2.0 mA @ 24 VDC 2.5 mA @ 32 VDC
Fuses (field termination module)	Not required; output switches are self-protected against over-voltage, over-temperature, and over-current
Status indicator: On or Off state	1 per point
Status indicator: Module status	Pass, Fault, Load, Active
Status indicator: Field alarm[b]	Load (1 per point)
System-to-field isolation	1,500 VDC minimum
Point supervision	Can be programmed per point
Short/Open circuit detection threshold	Programmable per supervised point

3625A Digital Output Specifications *(continued)*

Feature	Specification
Output diagnostic fault coverage[c:]	
Maximum output toggle rate	Every 60 ms
Diagnostic glitch duration	2 ms maximum, 200 µs typical
On-state voltage drop:	< 0.16 VDC typical @ 250mA
At backplane	< 1.12 VDC typical @ 1.7A
On-state voltage drop:	< 1.15 VDC typical @ 250mA
With external termination, 10-foot cable	< 3.33 VDC typical @ 1.7A
On-state voltage drop:	< 2.71 VDC typical @ 250mA
With external termination, 99-foot cable	< 8.92 VDC typical @ 1.7A
Inductive kick-back protection (reverse EMF)	Output switches are self-protected

a. For the 3625A module, field power is commoned in groups of 16 points and is separated by termination panels.

b. Power must be supplied to all points, including unused points on non-commoned panels.

c. The maximum output toggle rate enables proper operation of I/O diagnostics and detection of all normally detectable faults.

Note：   The 3625A module can be installed in low-density systems that have been upgraded to v10.2.x or later. For more information, see "Appendix I, Low-Density Chassis I/O Module Compatibility" in the Field Terminations Guide for Tricon v9–v11 Systems.