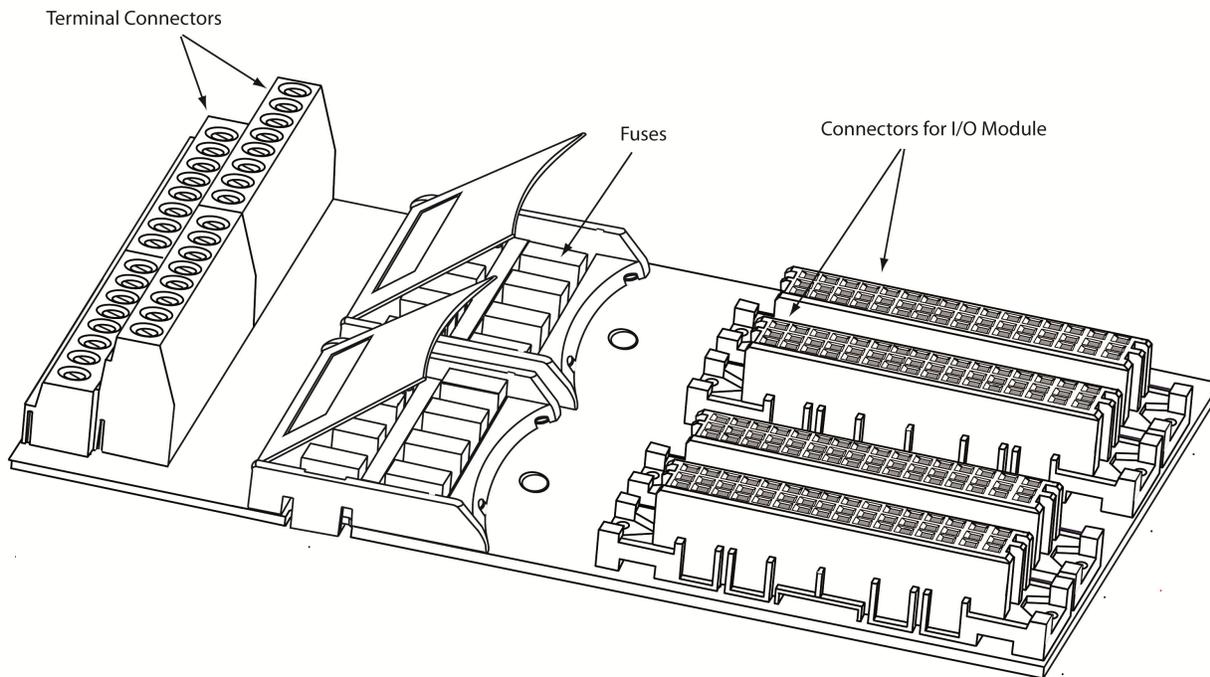


Figure 31 - Digital/Analogue Input Termination assembly



A replaceable fuse protects each channel from field faults. Fuses can be replaced without removing a module or the termination assembly.

### T9801/2/3 Digital Input Termination Assembly

A T9801 termination assembly is for a simplex configuration and has terminations for 16 non-isolated digital inputs. The T9802 and T9803 termination assemblies support 16 isolated digital inputs for dual and triple modular redundant arrangements of digital input modules.

Table 28 - T9801/2/3 Digital Input TA Characteristics

Attribute	Value
<b>Functional Characteristics</b>	
Field Connections	16; wiring: Conductor cross section maximum 1.31 mm <sup>2</sup> (16 AWG); Stripping length 6 mm (¼ in.)
Input modules supported	
T9801	One T9401/2
T9802	Two T9401/2
T9803	Three T9401/2
<b>Electrical Characteristics</b>	
Input channel fuses	50 mA, 125 V, Type T manufactured by Littelfuse
Channel load	(5.125 ± 0.2 %) kΩ
Input measurement voltage resolution	5 mV, 13 bit
Channel isolation	
T9801	None
T9802, T9803:	± 1.5 kVdc maximum withstanding for 1 minute
Maximum field loop power dissipation	0.2 W for each field loop (0.68 BTU/hr)

## T9431/2 Analogue Input Module, 8/16 Channel

The T9431/2 analogue input has eight (T9431) or sixteen (T9432) isolated analogue input channels and measures input current in the range 0 mA to 24 mA. Each channel supplies digital state and analogue data to the processor for process monitoring. Each input has five configurable voltage bands (there are eight distinct switching thresholds to allow hysteresis), each of which can be adjusted to supply line monitoring and field device diagnostics.

The input module makes local module and channel status indications through its front panel LEDs, the same indications can be connected to application variables and viewed at the Workbench. Comprehensive diagnostics at system and module levels give clear indications which help fast maintenance and repair.

The module incorporates signal and power isolation circuits, which divide each input channel from the remainder of the system, protecting the controller from field faults. An independent watchdog arrangement monitors the module operation and supplies more fault containment by a shutdown mechanism if a fault occurs.

These modules mate with the T9831/2/3 Analogue Input termination assemblies. When analogue modules are installed in a dual or TMR configuration they supply fault tolerant input functionality, enabling you to replace input modules without interrupting the channel input data flow to the processor modules.

This module supports HART commands #03 to collect data from the field device. The application can be configured to use HART information to monitor and respond to device conditions, it may also be used to supply module diagnostic information such as comparison and error reporting.

### Analogue Input Line Monitoring

Each analogue input module is set up through the AADvance Workbench. Monitoring levels for each input channel are configurable at both the module and channel level. The default parameters are:

- Fault: 0 mA to 3.8 mA
- Normal: 3.8 mA to 22.0 mA
- Fault: > 22.0 mA

## T9431/2 Analogue Input Module Specification

**Table 29 - Analogue Input Module Specification**

Attribute	Value
<b>Functional Characteristics</b>	
Input channels:	T9431: 8 T9432: 16
Degradation	1oo1D, 1oo2D and 2oo3D
<b>Performance Characteristics</b>	
Safety integrity level	IEC 61508 SIL 3 <sup>(1)</sup>
Safety level degradation	1oo1D, 1oo2D and 2oo3D
Safety accuracy limit	200 µA