
TSDI-1624

Safe digital input FTA (24 Vdc, 16 channels)

Description

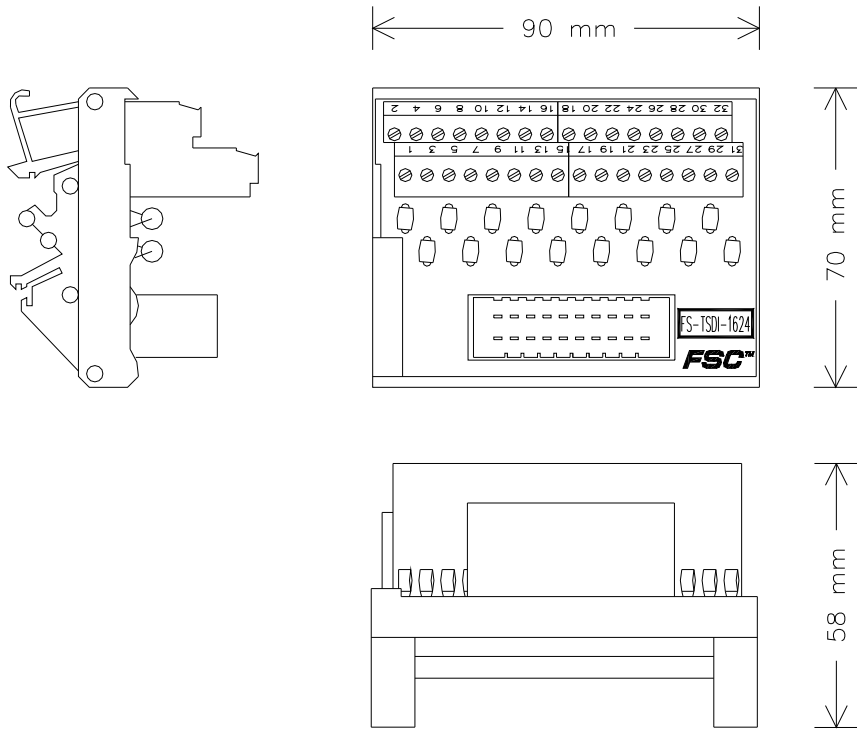
Field termination assembly module TSDI-1624 is the interface between system interconnection cable SICC-0001/Lx and the external field wiring (screw terminals). The SICC cable interconnects the SIC connector on the FTA module and a (redundant pair of) SDI-1624 modules.

The TSDI-1624 module can interface with digital input signals from ‘Class I, Division 2 Hazardous Locations’.

The TSDI-1624 module can handle short circuits to 0 Volt of (INx+ or INx) field wires because the PTC (Positive Temperature Coefficient) resistor between the +24Vout of the SDI-1624 modules and the ‘+24Vout’ connection (INx+) of each input channel limits the current. This prevents the loss of all 16 channels (+24Vout fails) in the case of a single short circuit to 0 Volt of a connected field wire.

The FTA module has a universal snap-in provision for standard DIN EN rails and screw terminals for connecting field wiring.

Figure 300 Mechanical layout



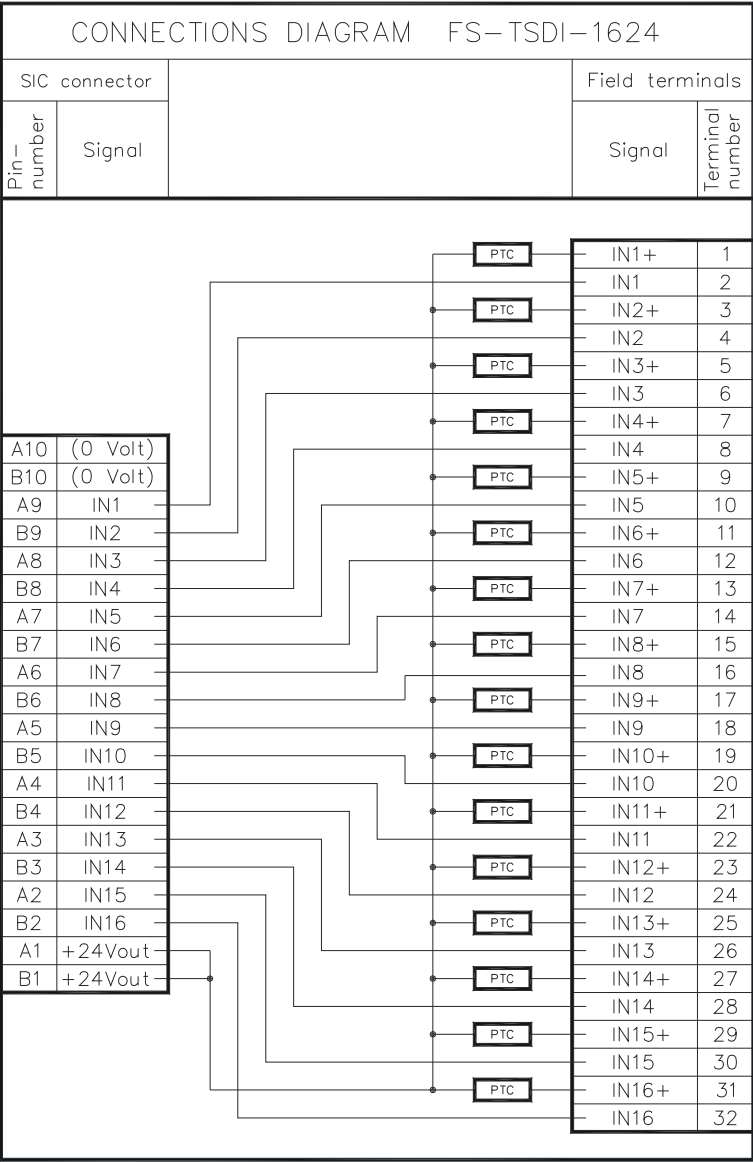
Applications

For details on applications and connection options for the TSDI-1624 module, see “SICC-0001/Lx” on page 715.

Connections

The connection diagram of the TSDI-1624 module:

Figure 301 Connection diagram



Technical data

The TSDI-1624 module has the following specifications:

General	Type numbers ¹ :	FS-TSDI-1624
		FC-TSDI-1624
	Approvals:	CE, TUV, UL, CSA, FM ²
Input	Number of input channels:	16
	Input voltage:	24 Vdc, -15%—+30%
	Input current:	≤ 15mA at 24 Vdc (with a redundant pair of SDI-1624 modules as load)
	PTC resistance:	260 Ω ±25% at 25°C
	PTC (steady) current:	typ. 45 mA ±35% at 24 Vdc
Physical	Module dimensions:	90 × 70 × 58 mm (L × W × H) 3.54 × 2.76 × 2.28 in (L × W × H)
	DIN EN rails:	TS32 / TS35 × 7.5
	Used rail length:	91 mm (3.58 in)
Termination	Screw terminals:	
	• Max. wire diameter	2.5 mm ² (AWG 14)
	• Strip length	7 mm (0.28 in)
	• Tightening torque	0.5 Nm (0.37 ft.-lb)
Field signal specifications for non-incentive field circuits Class 1 Division 2	Max. closed loop resistance:	10 Ω
	Min. open loop resistance:	15 kΩ
	HYDROGEN (GROUP A & B):	
	• max. supply voltage	28.8 Vdc
	• max. loop inductance	3 mH
	• max. loop capacitance	0.3 μF
	HYDROGEN (GROUP C & D):	
	• max. loop inductance	10 mH
	• max. loop capacitance	6 μF

1 FS-type modules are non conformal coated modules.

FC-type modules are conformal coated modules.

2 FM approval is pending at the date of issue of this information. For updates contact Honeywell SMS.

General	Type numbers ¹ :	FS-TSDI-1624C
		FC-TSDI-1624C
	Approvals:	CE, TUV, UL, CSA, FM
Input	Number of input channels:	16 (2 groups of 8)
	Input voltage:	24 Vdc, -15%—+30%
	Input current:	≤ 15 mA at 24 Vdc (with a redundant pair of safe digital input modules SDI-1624 as load)
	Igniting current per channel:	< 100 mA at 24 Vdc +30%
Physical	Module dimensions:	170 × 70 × 60 mm (L × W × H) 6.69 × 2.76 × 2.36 in (L × W × H)
	DIN EN rails:	TS32 / TS35 × 7.5
	Used rail length:	171 mm
Fuse	Rating:	250 mA _T (slow acting)
	Dimensions:	5 × 20 mm (0.2 × 0.79 in)
Termination	Screw terminals:	
	• Max. wire diameter	2.5 mm ² (AWG 14)
	• Strip length	7 mm (0.28 in)
	• Tightening torque	0.5 Nm (0.37 ft.-lb.)
Field signal specifications for non-incendiary field circuits to Class 1 Division 2	Max. closed loop resistance:	250 Ω
	Min. open loop resistance:	15 kΩ
	HYDROGEN (Group A & B):	
	• Max. loop inductance	8 mH
	• Max. loop capacitance	0.3 μF
	NON-HYDROGEN (Group C & D):	
	• Max. loop inductance	22 mH
	• Max. loop capacitance	7 μF

¹ FS-type modules are non conformal coated modules.
FC-type modules are conformal coated modules.