Technical data

The SDI-1624 module has the following specifications:

General	Type numbers[1]:	FS-SDI-1624 V1.0
		FC-SDI-1624 CCV1.0
	Approvals:	CE, TUV, UL, CSA, FM
	Space requirements:	4 TE, 3 HE (= 4 HP, 3U)
Power	Power requirements:	5 Vdc, 8 mA 24 Vdc int., 110 mA 24 Vdc ext., 110 mA (input currents)
	Ripple content (on 5 Vdc):	< 0.5 Vp-p (0—360 Hz)
Input	Number of input channels:	16
	Maximum input voltage:	36 Vdc
	Input current:	7 mA at 24 Vdc
	Input HIGH:	> 15 Vdc
	Input LOW:	< 9 Vdc (I < 2 mA)
	Input delay:	Typically 10 ms
Output	Type	24 Vdc solid state, short circuit proof
	Maximum current	450 mA (see Figure 174 on page 296)
	Max. load capacitance	32 µF
	Voltage drop	< 1.5 V at 450 mA
Key coding	(See section “Key coding” on page 17)	
	Module connector code:	
	• Holes	A5, C5
	Chassis connector code:	
	• Large pins	A5, C5

1 FS-type modules are non conformal coated modules.
FC-type modules are conformal coated modules. Conformal coated modules have the letters “CC” preceding the version number.

Fault Tolerant Ethernet (FTE)

An Ethernet based control network of Experion PKS.

FC

Prefix used to identify conformal-coated module from non conformal coated modules. See also: FS.

- FC-SDI-1624 is a safe digital input module with conformal coating
- FS-SDI-1624 is a safe digital input module without conformal coating

Field Termination Assembly (FTA)

Assembly to connect field wiring to the SM chassis IO modules.

Field value

The value of a process point as present at the interface of the system with the EUC.

Fieldbus

Wiring solution and communication protocol in which multiple sensors and actuators are connected to a DCS or SIS, using a single cable.

Fire and Gas system

Independent protective system which continuously monitors certain process points (e.g. combustible gas levels) and environmental points (e.g. heat, smoke, temperature and toxic gas levels). If any of these points exceed a predetermined level, the system will raise an alarm and take automatic action to close operating valves and damper doors, activate extinguishers, cut off electrical power and vent dangerous gases.

Force

A signal override of some sort that is applied on a system level.

A force applied to an input affects the input application state as it overrides the actual field value and diagnostic state of the forced input.

A force applied to an output affects the output field state as it overrides the application value or diagnostic value with the forced value.

Caution

Forcing introduces a potentially dangerous situation as the corresponding point could go unnoticed to the unsafe state while the force is active.

FS

Prefix used to identify non conformal-coated module from conformal coated modules. See also: FC.

- FS-SDI-1624 is a safe digital input module without conformal coating
- FC-SDI-1624 is a safe digital input module with conformal coating

Function block

Element in a functional logic diagram (FLD) which performs a user defined logic function. Function blocks are designed to implement & re-use complex functions via a single (user defined) element.

Functional Logic Diagram (FLD)

Diagrammatic representation of the application (conform the IEC 61131-3 standard) which is used to program Safety Manager. FLDs are directly translated into code that can be executed by Safety Manager, thus eliminating the need for manual programming. See also: Application Editor.

Functional safety

Part of the overall safety relating to the EUC and the EUC control system which depends on the correct functioning of the E/E/PE safety-related systems, other technology safety-related systems and external risk reduction facilities.

Figure 539 Failure model