Emerson 8623-FT-IS

Technical Reference

01 Exact identity and system role

Emerson 8623-FT-IS is a 16-channel intrinsically safe field terminal for the PAC8000 8220-DI-IS digital-input module. It brings discrete field circuits to the module through the keyed terminal interface.

Full reference	Emerson 8623-FT-IS
Document role	Apter Power technical reference
Installed system	PAC8000 / 8220-DI-IS digital input
Evidence scope	The order table and certificate identify 8623-FT-IS as the 16-channel IS DI terminal; the paired module is 8220-DI-IS.

Functional position

This PAC8000 terminal connects discrete hazardous-area field signals to a matched intrinsically safe digital-input module.

02 Interface and signal architecture

The 8623-FT-IS is the 16-channel DI terminal in the PAC8000 field-terminal list. Emerson identifies 8220-DI-IS as the 16-channel intrinsically safe digital-input module, and the terminal sheet assigns connection diagram 6 to 8623-FT-IS. Each input must be checked against its own field device and channel position before the module scan is accepted.

The approved 8220-DI-IS pairing uses field-terminal key position B/1. The terminal uses module-side multipin connectors and screw-clamp field wiring with a tagging strip. The blue terminal body identifies intrinsically safe field connections, while the separate I/O module and carrier remain necessary parts of the assembly.

Product role	Intrinsically safe digital-input field terminal
Matched I/O module	8220-DI-IS, 16-channel DI
Field channels	16 digital-input terminations
Field-terminal key	B / 1 with 8220-DI-IS
Wiring diagram	Diagram 6 for 8623-FT-IS

03 Technical data and configuration limits

Connector arrangement	Two multipin module connectors
Terminal voltage limit	30 V maximum, certificate condition
Field termination	Screw-clamp terminal rows
Field wiring location	Zone 0 IIC or Class I Div 1 when approved as an assembly
Terminal body	Blue moulding for IS field wiring
Tagging strip	Present on screw-clamp terminal

Engineering boundary

IECEx BAS 12.0023U covers the 8623-FT-IS as a 16-channel IS field terminal and limits terminal input/output voltage to 30 V. Field-device type, cable, power arrangement and certificate entity parameters must be checked as a complete loop; do not apply the RTD terminal wiring diagrams of 8626-FT-IS to this DI terminal.

04 Supported application patterns

Use case	Documented relationship
Switch contacts	Bring approved dry-contact field signals to designated 8220-DI-IS input channels.
Proximity detection	Terminate compatible intrinsically safe proximity-detector circuits in their assigned DI positions.
Channel identification	Use the terminal tagging strip to preserve the field-device-to-channel map during maintenance.
System replacement	Keep the 16-channel 8623 terminal distinct from the eight-channel 8624-FT-IS loop-disconnect variant.

Commissioning relevance

Pair the full terminal reference with 8220-DI-IS and its B/1 key position, then follow diagram 6 and the approved IS loop design.

05 Engineering questions and source record

Exact-model question	Evidence-led answer
Which module is specified with Emerson 8623-FT-IS?	Emerson lists 8220-DI-IS as the matched 16-channel intrinsically safe digital-input module.
How many field channels does Emerson 8623-FT-IS provide?	The terminal is identified as the 16-channel DI field-terminal variant.
Which connection diagram applies to Emerson 8623-FT-IS?	The field-terminal wiring sheet assigns diagram 6 to this terminal.
What key position pairs Emerson 8623-FT-IS with 8220-DI-IS?	The approved pairing uses B/1 for the field-terminal key.

Technical source

Emerson PAC8000 Remote I/O, 00813-0100-0108, February 2022; MTL Field terminals, January 2007; IECEx BAS 12.0023U

Discuss the complete reference

Emerson 8623-FT-IS

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