SERIES PROTECT-IE-02 & PROTECT-IE-11

Input Expansion Module

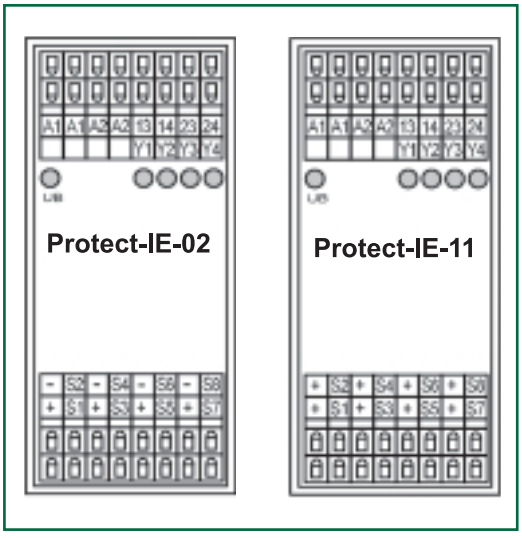
Description

The Protect-IE is designed for use as an accessory for Schmersal's Protect Series Safety Controllers. It provides 4 additional sensor inputs where required to satisfy the system control requirements. Depending on the version, the Protect-IE monitors 1 NO/1NC or 2 NC contacts. It is possible to cascade multiple units to monitor up to 80 sensors.

TECHNICAL FEATURES

Input Voltage	24 VDC
Number & Type of Outputs	2 N.O. (dry contacts) to master safety controller
Number & Type Auxiliary (non-safety or signalling outputs)	4 – 24 VDC (Y1-Y4)
Reset & Feedback Monitoring	Performed by master controller
Typical Input Devices Monitored	• E-stops • Interlocks • Coded-magnets
LED Displays	Green LEDs for: • U_B (voltage at input terminals) • Y1-Y4 (signalling output)
Conformity to Standards	UL, CSA, BG (CE-compliant) (In preparation)
Stop Category	0
Safety Control Category Rating Per EN 954-1	A function of the master safety controller (mounted in same control cabinet), with a maximum of Control Category 3
Selected Features	• Cage-clamp terminals • Cross-short recognition • Electronic fuse • Compatible with all SRB Protect Series models with 2 N.C. inputs

Front View



AVAILABLE MODELS

Model Number	Monitoring Configuration of Sensors	Operating Voltage
Protect-IE-02	2 NC	24 VDC
Protect-IE-11	1 NO/1 NC	24 VDC

SERIES PROTECT-IE-02 & PROTECT-IE-11

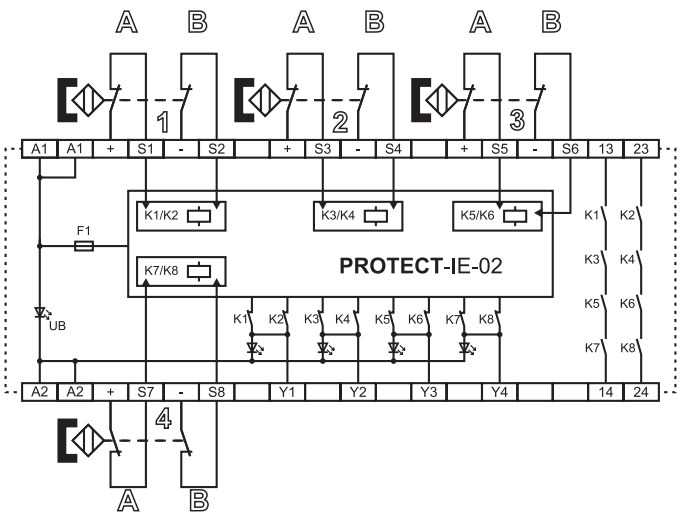
MECHANICAL SPECIFICATIONS

Dimensions (W x H x D)	48mm x 126mm x 61mm (1.89" x 4.96" x 2.4")
Ambient Operating Temperature Range	-25°C to +55°C (-13°F to +131°F)
Mechanical Life Expectancy	>10^7 switching cycles
Weight	140 gm
Mounting	DIN rail

ELECTRICAL SPECIFICATIONS

Operating Voltage	24 VDC -15% / +20%, residual ripple max. 10%
Power Consumption	1.7 W max.; plus Y1-Y4
Fuse (input power)	Internal electronic fuse, tripping current > 100 mA
Fuse (outputs)	2 A slow-blow
Switching Capacity (outputs)	24V, 2 A Resistive (inductive with suitable suppressor)
Switching Capacity (auxiliary contacts)	24 VDC, 100 mA (Y1-Y4)
Pick-up Delay	≤ 20 ms
Drop-out Delay	≤ 20 ms
Contact Resistance	100 mOhm (max. in new state)
Air Clearance & Creepage Distance	DIN VDE 0110-1 (04.97), 4 kV/2
Cable Connections	• Cage-clamp terminals for min. 0.08mm² & max. 2.5mm² • Stranded or multi-core with wire end ferrule
Terminal Labeling	DIN EN 50 005 / DIN 50 013

Typical Wiring Diagram (Model Protect-IE-02 shown)



Terminal Connections (Model Protect-IE-02 shown)