

## Technical characteristics

### Han-Modular® SP SO CM4

Nominal voltage( $U_N$ )*	24 V
Max. continuous operating voltage (d.c.) ( $U_C$ )*	33 V
Max. continuous operating a.c. voltage ( $U_C$ )	23 V
Nominal current at 70 °C ( $I_L$ )	0.5 A
Impulse Category	D1, C1, C2, C3
D1 Lightning impulse current (10/350 $\mu$ s) per line ( $I_{imp}$ )	1 kA
C1, C2 Total nominal discharge current (8/20 $\mu$ s) ( $I_n$ )	20 kA
C1, C2 Nominal discharge current (8/20 $\mu$ s) per line ( $I_n$ )	5 kA
Voltage protection level line-line for $I_n$ C2 ( $U_p$ )	$\leq 95$ V
Voltage protection level line-PG for $I_n$ C2 ( $U_p$ )	$\leq 55$ V
Voltage protection level line-line for 1kV / $\mu$ s C3 ( $U_p$ )	$< 90$ V
Voltage protection level line-PG for 1kV / $\mu$ s C3 ( $U_p$ )	$< 45$ V
Series impedance per line	1.8 Ohm
Cut-off frequency line-PG ( $f_G$ ) / 50 Ohm	5.5 MHz
Capacitance line-line (C)	$< 0.5$ nF
Capacitance line-PG (C)	$< 1.0$ nF
Operating temperature range ( $T_U$ )*	-40 °C ... +85 °C
Degree of protection*	IP20
Dimensions	34.2x54.9x14.65 mm (WxLxH)
Wire connection method*	Push In
Pluggabel into*	Plug module SP PL CM4
Enclosure Material*	Polycarbonate
Cross-sectional area, solid*	AWG 24 - 16; 0.2 mm <sup>2</sup> - 1.5 mm <sup>2</sup>
Cross-sectional area, flexible*	AWG 24 - 16; 0.2 mm <sup>2</sup> - 1.5 mm <sup>2</sup> (without ferrule)
Stripping length*	min. 8 mm
Mounting*	Han-Modular® Hinged Frame
Colour*	RAL 7032
Test standards	IEC 61643-21 / EN 61643-21
UL approval/ flammability class.*	UL497B / UL94 V-0
Shock and vibration*	IEC 60068-2-6 / IEC 60068-2-29
Equipotential bonding	via earthed hinged frame ( $\geq 6$ mm <sup>2</sup> / $\leq$ AWG 10)

## Specifications and approvals

Compliant with UL 497 B





Common mode-4 channels

## Features

- Surge protection for four single lines
- Protects signals with common ground
- Fits in Han® Modular connector system
- Nominal voltage: 24VDC
- Nominal current: 0.5A

## General description

The surge protection module protects up to 4 single lines with common reference potential and unbalanced interfaces against lightning strikes or overvoltages.

Preferred field of application is the protection of digital control signals up to max. 24VDC with a max load of 0.5A/line. The equipotential bonding will be led via the earthed hinged frame of the Han-Modular® system.

Identification	Part number	Drawing	Dimensions in mm
Han-Modular® SP PL CM4, male	09 80 000 0101		
Han-Modular® SP SO CM4, female	09 80 003 0201	<p style="text-align: center;">Basic circuit diagram</p>	