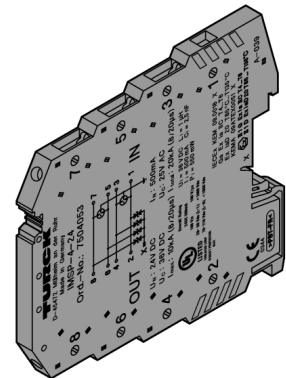
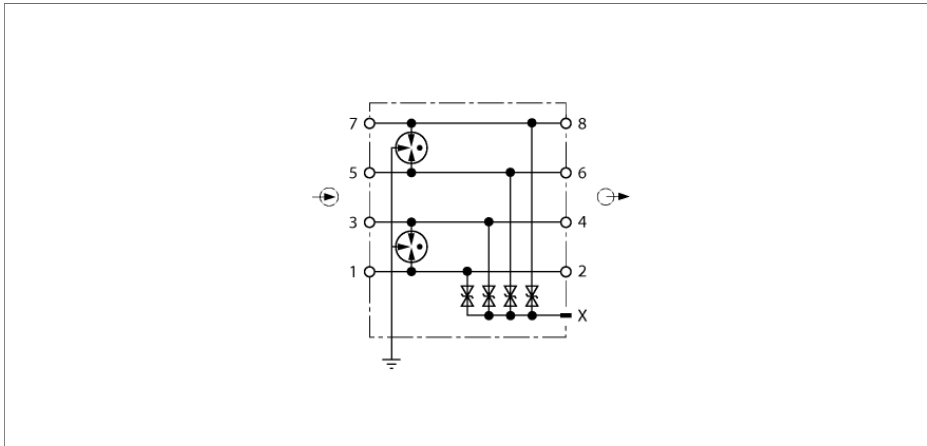


**Surge protection  
2-channel  
IMSP-4-24**



The IMSP-4-24 is a surge protection module, designed for the MSR technology. It protects four 24 V operated floating signal conductors.

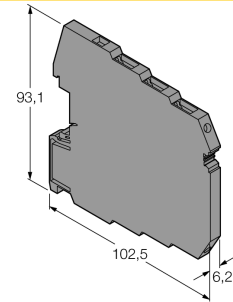
The devices are IP20 protected and can be installed in Ex as well as non-Ex areas.

The 6.2 mm housing can be mounted on DIN rail acc. to DIN NS35.

- Application area acc. to ATEX: II 1 G, II 1 D
- IECEx
- Nominal voltage 24 VDC
- For 4 floating signal conductors
- IEC category: C1 / C2 / C3 / D1
- UL
- SIL2
- Flammability class V-0

**Surge protection**  
**2-channel**  
**IMSP-4-24**

**Dimensions**



<b>Type code</b>	IMSP-4-24
Ident no.	7504053
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<b>Nominal voltage U<sub>n</sub></b>	24 VDC
IEC category	C1; C2; C3; D1
Surge arrester, rated voltage U <sub>c</sub>	25 VAC / 36 VDC
<b>Nominal current I<sub>n</sub> (≤ 40 °C)</b>	500 mA
Active current I <sub>c</sub> with given U <sub>c</sub>	2 µA (per path)
Leakage current acc. to PE with given U <sub>c</sub>	4 µA
Nominal discharge surge current I <sub>n</sub> (8/20) µs (core-core)	250 A
Nominal discharge surge current I <sub>n</sub> (8/20) µs (core-ground)	5 kA
Total surge current (8/20) µs	20 kA
Total surge current (10/350) µs	2 kA
Discharge surge current I <sub>max</sub> (8/20)µs (core-to-core)	250 A
Discharge surge current I <sub>max</sub> (8/20)µs (core-to-earth)	10 kA
Nominal pulse current I <sub>sn</sub> (10/1000) µs (core-core)	50 A
Nominal pulse current I <sub>sn</sub> (10/1000) µs (core-ground)	50 A
Lightning test current (10/350)µs, peak current I <sub>imp</sub>	500 A
<b>Output voltage limitation 1kV/µs (core-to-core)</b>	≤60 V
Output voltage limitation 1kV/µs (core-to-earth)	≤650 V
Residual voltage I <sub>n</sub> (core-to-core)	≤60 V
Residual voltage I <sub>sn</sub> (core-to-core)	≤60 V
Protection level U <sub>p</sub> C1 - 500 V/250 A (core-core)	≤60 V (C1 - 500 V / 250 A)
Protection level U <sub>p</sub> C3 - 10 A (core-core)	≤60 V (C3 - 10 A)
Protection level U <sub>p</sub> C1 - 500 V/250 A (core-ground)	≤650 V (C1 - 500 V / 250 A)
Protection level U <sub>p</sub> C2 - 10 kV/5 kA (core-ground)	≤650 V (C2 - 10 kV / 5 kA)
Protection level U <sub>p</sub> D1 - 500 A (core-ground)	≤700 V (D1 - 500 A)
<b>Response time tA (core-to-core)</b>	≤1 ns
Response time tA (core-to-earth)	≤100 ns
Insertion loss aE, sym.	Typ 0,1 dB (1 MHz / 50 Ω)
Insertion loss aE, asym.	Typ. 0,1 dB (450 kHz / 150 Ω)
Cutoff frequency fg (3dB), asym. (GND) 50Ω system	Typ. 7,5 MHz
Cutoff frequency fg (3dB), asym. (GND) 100Ω system	Typ. 2,5 MHz
Capacitance	≤1.3 nF (per path)
Resistance per path	0 Ω
Required backup fuse, max.	500 mA
Surge protection acc. to IEC 61643-21 (core-to-core)	C1 (500 V / 250 A); C3 (25 A)
Surge protection acc. to IEC 61643-21 (core-to-earth)	C2 (10 kV / 5 kA); C3 (25 A); D1 (500 A)
AC protection acc. to IEC 61643-21	5 A - 1 s
<b>Standards for air and creepage distances</b>	IEC 60664-1 / EN60079-11
Standards/Regulations	IEC 61643-21 / DIN EN 61643-21
Flammability class acc. to UL 94	V-0
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<b>Ex approval acc. to conformity certificate</b>	DEKRA 11 ATEX 0016 X
Application area	II 1 G, II 1 D
Protection type	Ex ia IIC T4...T6; Ex iaD 20 T85°C...T135°C
Max. input voltage U <sub>i</sub>	≤ 36 V
Max. input current I <sub>i</sub>	≤ 500 mA
Max. input power P <sub>i</sub>	≤ 550 mW
Internal inductance/capacitance L/C <sub>i</sub>	Li = 1 µH, Ci = 2.5 nF
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<b>Approval</b>	SIL 2
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<b>Mechanical Data</b>	
Protection class	IP20
Ambient temperature	-40...+80 °C
Storage temperature	-40...+80 °C
Dimensions	93.1x 6.2x 102.5 mm
Weight	52 g
Mounting instruction	For mounting on DIN rail
Housing material	Plastic
Electrical connection	Screw terminals
Terminal cross-section	2.5 mm <sup>2</sup>
Tightening torque	0.8 Nm