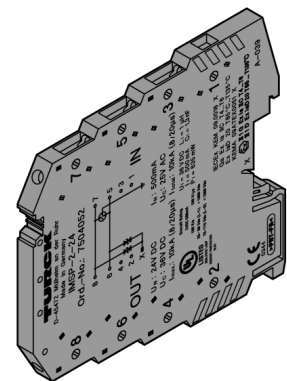
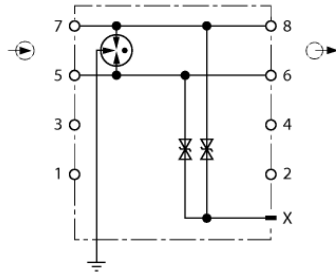


Surge protection
1-channel
IMSP-2-24



The IMSP-2-24 is a surge protection module, designed for the MSR technology. It protects two 24 V operated floating signal conductors.

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

Slim design 6.2 mm, for DIN rail mounting acc. to DIN NS35.

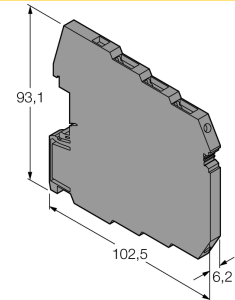
- Application area acc. to ATEX: II 1 G, II 1 D
- IECEx
- Nominal voltage 24 VDC
- For 2 floating signal conductors
- IEC category: C1 / C2 / C3 / D1
- UL
- SIL2
- Flammability class V-0

Surge protection

1-channel

IMSP-2-24

Dimensions



Type code	IMSP-2-24
Ident no.	7504052
Nominal voltage U_n	24 VDC
IEC category	C1; C2; C3; D1
Surge arrester, rated voltage U_c	25 VAC / 36 VDC
Nominal current I_n ($\leq 40^\circ\text{C}$)	500 mA
Active current I_c with given U_c	2 μA (per path)
Leakage current acc. to PE with given U_c	2 μA
Nominal discharge surge current I_n (8/20) μs (core-core)	250 A
Nominal discharge surge current I_n (8/20) μs (core-ground)	5 kA
Total surge current (8/20) μs	10 kA
Total surge current (10/350) μs	1 kA
Discharge surge current I_{max} (8/20) μs (core-to-core)	250 A
Discharge surge current I_{max} (8/20) μs (core-to-earth)	10 kA
Nominal pulse current I_{an} (10/1000) μs (core-core)	50 A
Nominal pulse current I_{an} (10/1000) μs (core-ground)	50 A
Lightning test current (10/350) μs , peak current I_{imp}	500 A
Output voltage limitation 1kV/μs (core-to-core)	≤ 60 V
Output voltage limitation 1kV/ μs (core-to-earth)	≤ 650 V
Residual voltage U_r (core-to-core)	≤ 60 V
Residual voltage U_r (core-to-earth)	≤ 60 V
Protection level U_p C1 - 500 V/250 A (core-core)	≤ 60 V (C1 - 500 V / 250 A)
Protection level U_p C3 - 10 A (core-core)	≤ 60 V (C3 - 10 A)
Protection level U_p C1 - 500 V/250 A (core-ground)	≤ 650 V (C1 - 500 V / 250 A)
Protection level U_p C2 - 10 kV/5 kA (core-ground)	≤ 650 V (C2 - 10 kV / 5 kA)
Protection level U_p D1 - 500 A (core-ground)	≤ 700 V (D1 - 500 A)
Response time t_A (core-to-core)	≤ 1 ns
Response time t_A (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 f_g (3dB), asym. (GND) 50 Ω system	Typ. 7,5 MHz
Cutoff frequency f_g (3dB), asym. (GND) 100 Ω 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
Standards for air and creepage distances	IEC 60664-1 / EN60079-11
Standards/Regulations	IEC 61643-21 / DIN EN 61643-21
Flammability class acc. to UL 94	V-0
Ex approval acc. to conformity certificate	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_i	≤ 36 V
Max. input current I_i	≤ 500 mA
Max. input power P_i	≤ 635 mW
Internal inductance/capacitance L/C_i	$L_i = 1$ μH , $C_i = 1.3$ nF
Approval	SIL 2
Mechanical Data	
Protection class	IP20
Ambient temperature	-40...+80 $^\circ\text{C}$
Storage temperature	-40...+80 $^\circ\text{C}$
Dimensions	93.1x 6.2x 102.5 mm
Weight	43 g
Mounting instruction	For mounting on DIN rail
Housing material	Plastic
Electrical connection	Screw terminals
Terminal cross-section	2.5 mm ²
Tightening torque	0.8 Nm