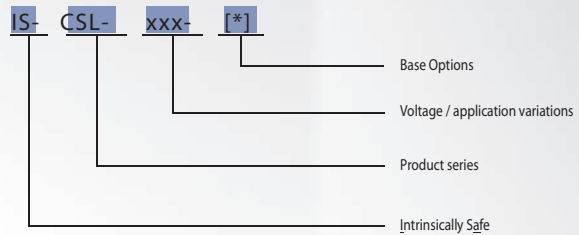


Intrinsically Safe Surge Protectors for Signal Lines IS-CSL-xxx Serie



IS-CSL-485



Information

The intrinsically safe IS-CSL series is specifically designed to protect intrinsically safe analog and digital interfaces with low currents to 250mA against lightning and surges. To protect the variety of analog and digital interfaces and protocols, such as RS-485, Profibus, RTD, etc., the IS-CSL series is available in different voltage variants. In addition, versions with cut-off frequencies of up to 20MHz are available.

The two or three staged protection circuit of the IS-CSL series is based on a powerful gas discharge tube in combination with either a diode network or a MOV network. Installation and grounding is easily accessible via DIN-rail. For this purpose, two different bases offer two ways of grounding via rail - a direct earthing or an over a gas arrester earthing isolated.

For applications with higher currents up to 6A CITEL also offers the IS-CSSP6A series.

Features

- Intrinsically safe
- Slim line, just 7mm width
- Pluggable protection module
- Earthing via DIN-rail or screw contact
-  II 1 G Ex ia IIC T4 Ga
- Compliant with EN 61643-21, VDE 0845-3-1, EN 60079-0, EN 60079-11 and Directive 94/9/EC

Intrinsically Safe Surge Protectors for Signal Lines IS-CSLxxx Serie

Characteristics

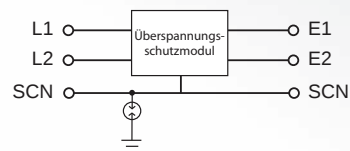
		IS-CSL7v5	IS-CSL18	IS-CSL36	IS-CSL485	IS-CSL-DH	IS-CSL-RTD	IS-CSL420i
Electrical Specifications								
Application		0-5 V analog, 5 V digital	0-10 V analog, 12 V digital	4-20 mA analog, 24V digital	RS 485, RS 422, Profibus DP, CAN	Data Highway, RS232, HART	RTD Applications	0-20mA, 4-20 mA analog
Maximum continuous voltage (DC)	Uc	7 V	16 V	34 V	8 V	34 V	7 V	34 V
Maximum continuous voltage (AC)	Uc	5 V	11 V	24 V	6 V	24 V	5 V	-
Modes of protection		CM/DM						
Maximum discharge current (8/20µs)	I _{max}	5 kA per line, 10 kA total						
D1 Maximum discharge current (10/350µs)	I _{imp}	1 kA per line, 2 kA total						
Maximum load current	I _L	250 mA			250 mA			30 mA
L-L Voltage protection level @ 1kV/µs	U _p	10 V	20 V	40 V	30 V	60 V	20 V	40 V
L-L Voltage protection level @ 3kA 8/20µs	U _p	20 V	30 V	50 V	35 V	65 V	25 V	50 V
L-PE Voltage protection level @ 1kV/µs		170 V	170 V	170 V	400 V	400 V	400 V	40 V
L-PE Voltage protection level @ 3kA 8/20µs		210 V	210 V	210 V	450 V	450 V	450 V	50 V
C2 Nominal discharge current (10 x 8/20µs)		5 kA total						
AC durability		5 x 1 s, 1 Arms						
Overstressed fault mode		Mode 3						
Response time	t _A	<5 ns						
Line resistance		8.2 Ω			3.9 Ω			7 Ω
Line inductance		72.6 µH			72.6 µH			-
Insertion loss @ 150Ω		0.5 dB			0.2 dB			0.4 dB
3dB Frequency @ 50Ω	f _c	250 kHz			20 MHz		250 kHz	10 MHz
Safety Parameters								
	U _i	30 V						34 V
	I _i	-						
	P _i	1.3 W						
	C _i	0						
	L _i	0						
Mechanical Specifications								
Connection Type		Series						
Mounting		TS35 DIN rail						
Earthing		- Direct earth connection via DIN rail and screw terminals with the IS-CSL-DIN-G Base - 90V isolation between DIN rail earth and shield/protection with the IS-CSL-DIN-EC90 Base						
Operating temperature range @ I _L		-20°C / +40°C						
Operating humidity		5 - 95 %						
Wiring		0.5-2.5 mm ²						
Terminal screw torque		0.5 Nm						
UL 94 flammability rating		V-0						
Environmental		IP 20						
Weight		35 g						
Dimensions		see Dimensions-Diagram						
Standards								
Directive 94/9/EC		Equipment and protective systems intended for use in potentially explosive atmospheres						
EN 60079-0		Explosive atmospheres - Part 0: Equipment - General requirements						
EN 60079-11		Explosive atmospheres - Part 11: Equipment protection by intrinsic safety 'i'						
EN 61643- 21		Surge protective devices connected to telecommunications and signalling networks						
Accreditation								
TUV 14 ATEX 7584 X		Ex II 1 G Ex ia IIC T4 Ga						
Part Number								
Module		159001	159002	159003	159006	159007	159008	159005
Base IS-CSL-DIN-G		159021			-	159021		
Base IS-CSL-DIN-EC90		159022						
Earthing Comb: CSL-Comb		159031						



Intrinsically Safe Surge Protectors for Signal Line IS-CSL-xxx Serie

Electrical diagram

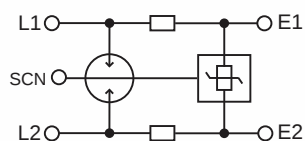
IS-CSLDIN-EC90



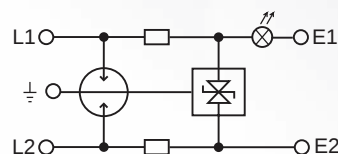
IS-CSLDIN-G



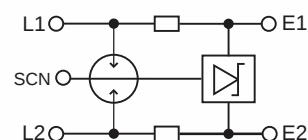
IS-CSL-485
IS-CSL-DH



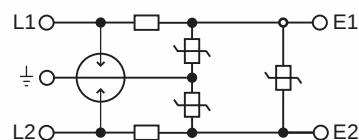
IS-CSL-420i



IS-CSL-RTD



IS-CSL7V5
IS-CSL18
IS-CSL36



Dimensions

Bsp.: IS-CSL485-EC90

