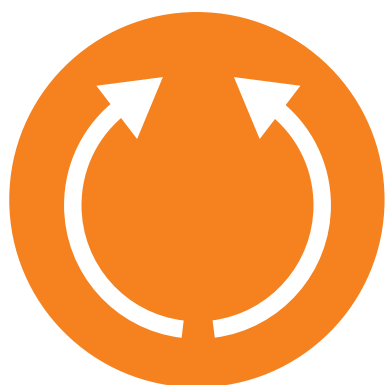
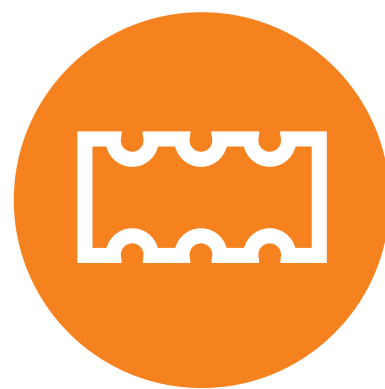


OVERVOLTAGE PROTECTION





Quick Product Selection	4
SINGLE-POLE Lightning Current and Surge Arresters Class I / (B+C) I_{imp} : up to 100 kA (10/350)	6
MULTI-POLE Lightning Current and Surge Arresters Class I / (B+C) I_{imp} = 25 kA (10/350)/pole	14
MULTI-POLE Lightning Current and Surge Arresters Class I / (B+C) I_{imp} = 12,5 kA (10/350)/pole	22
SINGLE-POLE Lightning Current and Surge Arresters Class I / (B+C) I_{imp} = 12,5 kA (10/350)/pole	30
SINGLE-POLE and MULTI-POLE Surge Arresters Class II / (C) I_{max} = 20 kA (8/20)	33
MULTI-POLE Lightning Current and Surge Arresters Class I / (B+C) and Class II / (C) PHOTOVOLTAIC SYSTEMS	44
SINGLE AND MULTI-POLE Surge Arresters Class III / (D) U_{oc} / I_{sc} = 10kA per pole (1.2/50, 8/20)	50
Surge Arresters for Overhead Power Lines Class II / (A) I_{max} = 40kA (8/20)	57
SINGLE AND MULTI-POLE Lighting and Surge Arresters for wind generation system Class II / (B+C) I_{IMP} = 25 kA per pole, I_{max} = 40kA per pole	60



QUICK PRODUCT SELECTION

Category IEC VDE	Description	Product Name	Pages	Product Photos
Class I B + C	SINGLE-POLE Lightning Current and Surge Arresters I_{imp} : up to 100 kA (10/350)	ISPRO BS(R) 50 ISPRO BS(R) 25 ISPRO-G BS		
	MULTI-POLE Lightning Current and Surge Arresters I_{imp} : 25 kA (10/350) / pole	ISPRO-K BS(R) 75 (3+0) ISPRO-K BS(R) 100 (4+0) ISPRO-K BS(R) 100 (3+1)		
	MULTI-POLE Lightning Current and Surge Arresters I_{imp} : 12,5 kA (10/350) / pole	ISPRO-K BS(R) 37,5 (3+0) ISPRO-K BS(R) 50 (4+0) ISPRO-K BS(R) 50 (3+1)		
	SINGLE-POLE Lightning Current and Surge Arresters I_{imp} : 12,5 kA, 8 kA (10/350)	ISPRO B2N(R) 12,5		
Class II C	SINGLE-POLE and MULTI-POLE Surge Arresters I_{max} : 40 kA (8/20) / pole	ISPRO C(R) 40 ISPRO C(R) 80 (2+0; 1+1) ISPRO C(R) 120 (3+0) ISPRO C(R) 160 (4+0) ISPRO C(R) 160 (3+1)		
Class I; II B + C, C	MULTI-POLE Lightning Current and Surge Arresters PHOTOVOLTAIC SYSTEMS	PV ISPRO BS(R) 12,5 PV ISPRO C(R) 40		
Class III D	SINGLE-POLE and MULTI-POLE Surge Arresters $U_{oc} / I_{sc} = 10 \text{ kV} / 5 \text{ kA}$ / pole	ISPRO D(R) 10 ISPRO DM(R) 10 (2+0) ISPRO DMG(R) (2+0)		
Class II A	Surge Arresters for Overhead Power Lines $I_{max} = \text{up to } 40 \text{ kA (8/20)}$	ISPRO AQ 40		
Class II B+C	SINGLE-POLE and MULTI-POLE Surge Arresters $I_{max} = \text{up to } 40 \text{ kA per pole}$	WT ISPRO BS(R) 25 WT ISPRO BS(R) 12,5 WT ISPRO C(R) 40 WT ISPRO C(R) 120 (3+0)		

QUICK PRODUCT SELECTION



U _c (V _{AC})	I _{imp} (kA)/pole (10/350)	I _{maks} (kA)/pole (8/20)	U _{oc} / I _{sc} (kV/kA) (1.2/50 – 8/20)	Network Type				Remote Signalization Of Failure	Housing
				TNC	TNS	TT	IT		
150, 275, 320, 385, 440	50	100		✓	✓	✓	✓	✓	Compact
	25	100		✓	✓	✓	✓	✓	
255	100	160							
150, 275, 320, 385, 440	25	100		✓			✓	✓	Compact
	25	100			✓		✓	✓	
	25/50 (MOV/GDT)	100/160 (MOV/GDT)				✓		✓	
150, 275, 320, 385, 440	12,5	50		✓			✓	✓	
	12,5	50			✓		✓	✓	
	12,5/50 (MOV/ GDT)	50/100 (MOV/GDT)				✓		✓	
150, 275, 320, 385, 440	12,5	50		✓	✓	✓	✓	✓	Compact
75, 150, 275, 320, 385, 440		40		✓	✓	✓	✓	✓	Modular
150, 275, 320, 385, 440		80		✓	✓	✓	✓	✓	
		120		✓	✓	✓	✓	✓	
		160		✓	✓	✓	✓	✓	
		160		✓	✓	✓	✓	✓	
100, 500, 1000 V _{DC}	12,5 ✗	80 40					✓ ✓	Compact Modular	
150, 275, 320, 385, 400		10	10/5	✓	✓	✓	✓	✓	Modular
150, 275, 320, 385, 400		40							Compact
690/900	25	80		✓					Compact
	12.5	40							Modular
	✗ ✗	40 40							



SINGLE-POLE LIGHTNING CURRENT AND SURGE ARRESTERS

CLASS I / (B+C)

I_{imp} : up to 100 kA (10/350)

COMPACT HOUSING



ISPRO BS(R) 50



The ISPRO BS(R) 50 series of low cost, over voltage surge protective devices has been developed to protect against partial direct and indirect lightning discharges and is intended to provide protection in zones 0_A – 1 as per IEC 62305.

It consists of two separate, high performance dual MOV blocks, each with a separate disconnection device.

Category IEC/EN/VDE	Class I/Type 1/B+C
Location of use	Main distribution boards
Protection modes	L/N-PE, L-PEN
Protection element	High Energy MOV
High surge discharge ratings	$I_{imp} = 50 \text{ kA}$, $I_{max} = 100 \text{ kA}$
Internal protection and safety	Separate thermal disconnector for each MOV block
Status indication	Mechanical flag + remote contacts (R)
Housing	Compact design



Technical data

Type			ISPRO BS(R) 50/xxx				
			150	275	320	385	440
Standards			IEC-61643-1				
Max. continuous operating voltage (AC/DC)	U_c	V	150/200	275/350	320/420	385/500	440/580
Nominal discharge current (8/20)	I_n	kA	25				
Max. discharge current (8/20)	I_{max}	kA	100				
Impulse current (10/350)	I_{imp}	kA	50				
Specific energy		kJ/Ω	625				
Charge		As	25				
Protection level	U_p	kV	< 0,6	< 1,2	< 1,2	< 1,6	< 1,9
Residual Voltage at I_{imp}	U_{res}		< 0,7	< 1,2	< 1,2	< 1,5	< 1,8
Follow current	I_f		NO				
Response time	t_A	ns	25				
Residual current at U_c	I_{PE}	mA	2,5				
Thermal protection			YES				
Terminal screw torque		Nm	max. 4,5				
Back-up fuse gL (if mains > 250 A)		A	250				
Short-circuit withstand current (50 Hz)		kA	25				
Temperature range		° C	-40 ... +80				
Terminal cross section	solid	mm ²	35				
	stranded		25				
Mounting			35 mm wide mounting rail in accordance with EN 60715				
Degree of protection			IP 20				
Housing material			thermoplastic; extinguishing degree UL 94 V-0				
Dimensions DIN 43880			2TE			4TE	
Weight per unit		kg	0,266	0,374	0,374	0,438	0,458



ISPRO BS(R) 50

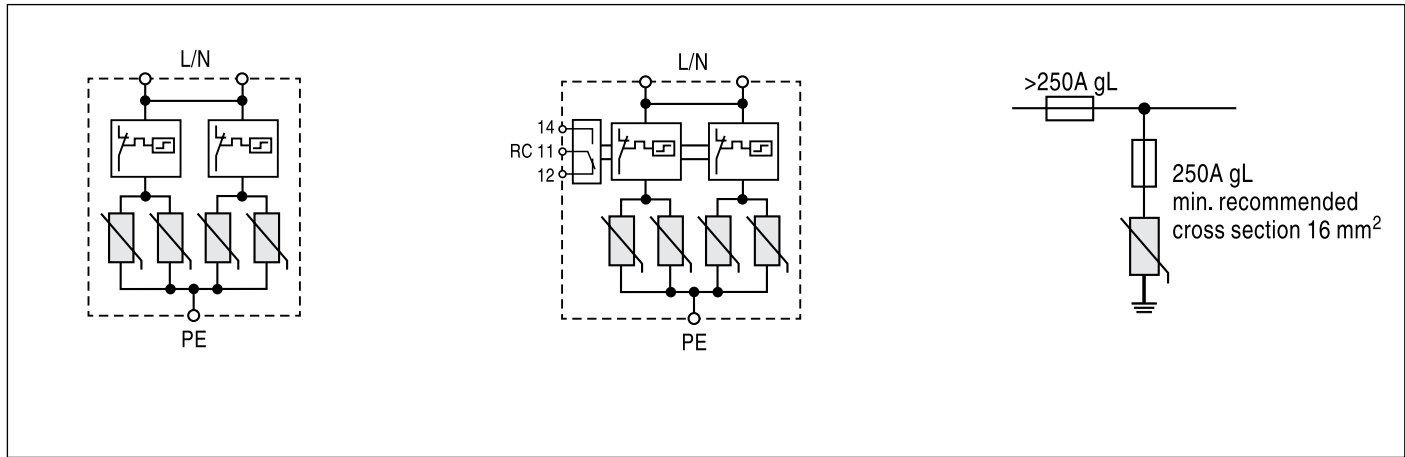
ISPRO BSR 50 (with remote contacts)						
Remote contacts			YES			
Contact ratings AC	250 V	A	0,5			
	125 V		3			
Terminal cross section		mm ²	max. 1,5			
Remote terminal torque		Nm	0,25			
Weight per unit		kg	0,271	0,379	0,379	0,443 0,463

Connection diagram

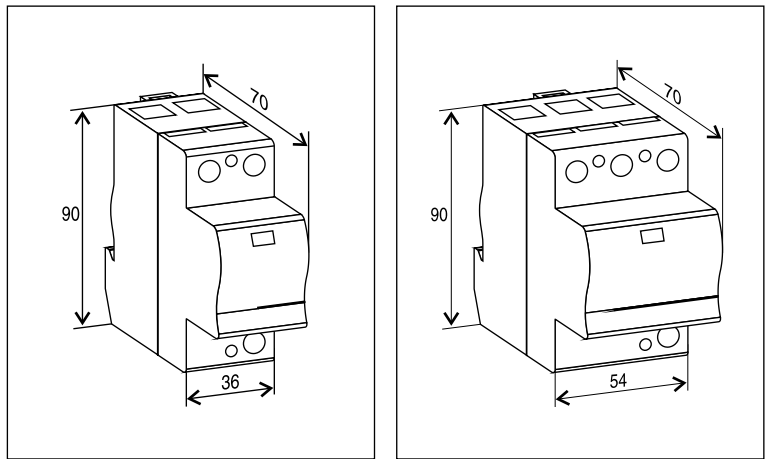
ISPRO BS 50/xxx

ISPRO BSR 50/xxx

Selection of back-up fuse



Dimensions



ISPRO BS(R) 25



The ISPRO BS(R) 25 series of low cost, over voltage surge protective devices has been developed to protect against partial direct and indirect lightning discharges and is intended to provide protection in zones $0_A - 1$ as per IEC 62305.

It consists of two separate, high performance dual MOV blocks, each with a separate disconnection device.

Category IEC/EN/VDE	Class I/Type 1/B+C
Location of use	Main distribution boards
Protection modes	L/N-PE, L-PEN
Protection element	High Energy MOV
High surge discharge ratings	$I_{imp} = 25 \text{ kA}$, $I_{max} = 100 \text{ kA}$
Internal protection and safety	Separate thermal disconnector for each MOV block
Status indication	Mechanical flag + remote contacts (R)
Housing	Compact design



Technical data

Type			ISPRO BS(R) 25/xxx				
			150	275	320	385	440
Standards			IEC-61643-1				
Max. continuous operating voltage (AC/DC)	U_c	V	150/200	275/350	320/420	385/500	440/580
Nominal discharge current (8/20)	I_n	kA	25				
Max. discharge current (8/20)	I_{max}	kA	100				
Impulse current (10/350)	I_{imp}	kA	25				
Specific energy		kJ/Ω	156				
Charge		As	12,5				
Protection level	U_p	kV	< 0,7	< 1,3	< 1,3	< 1,7	< 2,0
Residual Voltage at I_{imp}	U_{res}		< 0,7	< 1,2	< 1,2	< 1,5	< 1,8
Follow current	I_f		NO				
Response time	t_A	ns	25				
Residual current at U_c	I_{PE}	mA	2,5				
Thermal protection			YES				
Terminal screw torque		Nm	max. 4,5				
Back-up fuse gL (if mains > 250 A)		A	250				
Short-circuit withstand current (50 Hz)		kA	25				
Temperature range		° C	-40 ... +80				
Terminal cross section	solid	mm ²	35				
	stranded		25				
Mounting			35 mm wide mounting rail in accordance with EN 60715				
Degree of protection			IP 20				
Housing material			thermoplastic; extinguishing degree UL 94 V-0				
Dimensions DIN 43880			2TE				
Weight per unit		kg	0,200	0,252	0,252	0,268	0,284



ISPRO BS(R) 25

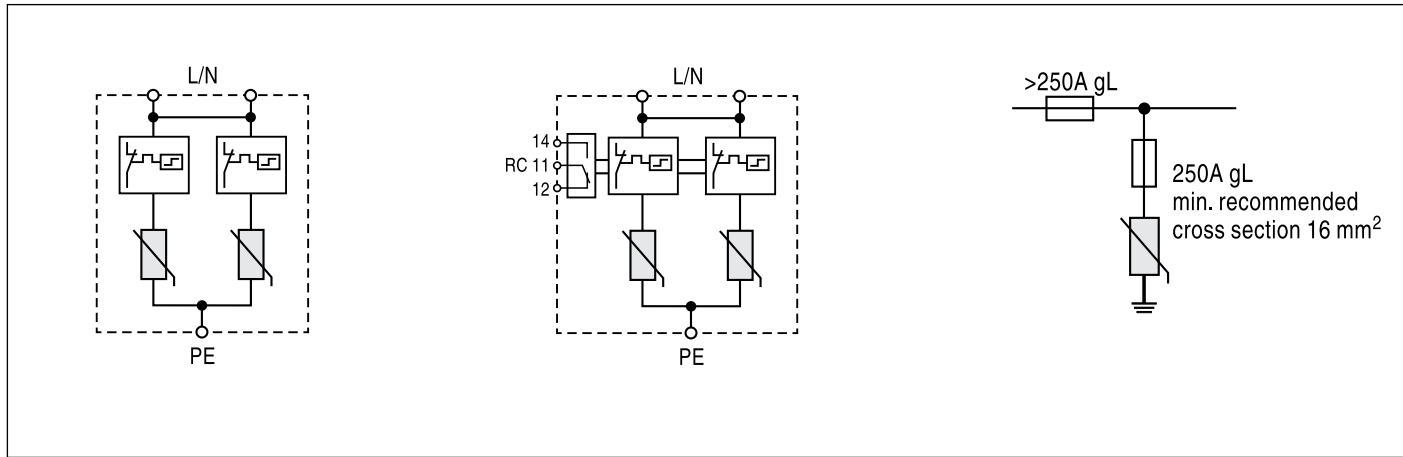
ISPRO BSR 25 (with remote contacts)						
Remote contacts			YES			
Contact ratings AC	250 V	A	0,5			
	125 V		3			
Terminal cross section		mm ²	max. 1,5			
Remote terminal torque		Nm	0,25			
Weight per unit		kg	0,205	0,257	0,257	0,273 0,289

Connection diagram

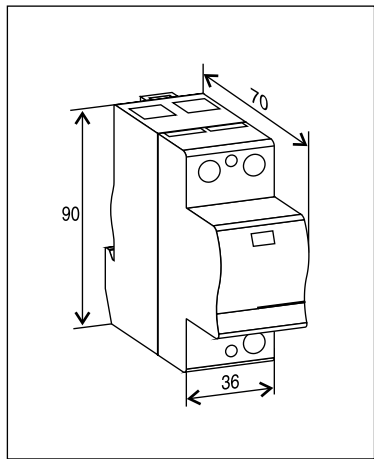
ISPRO BS 25/xxx

ISPRO BSR 25/xxx

Selection of back-up fuse



Dimensions



ISPRO-G BS



The ISPRO-G is an over voltage surge protective devices has been developed to protect against partial direct and indirect lightning discharges and is intended to provide protection in zones 0_A – 1 as per IEC 62305.

It consists of an encapsulated air gap device (GDT), and is used as a galvanic separation between the N-PE conductors in a 1 + 1 or 3 + 1 power distribution system (TT networks).

Category IEC/EN/VDE	Class I/Type 1/B+C
Location of use	Main distribution boards
Protection modes	N-PE
Protection element	High Energy GDT
High surge discharge ratings	$I_{imp} = 100 \text{ kA}$, $I_{max} = 100 \text{ kA}$
Housing	Compact design



Technical data

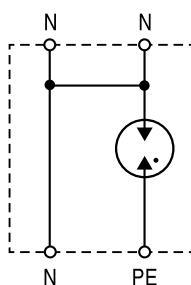
Type	ISPRO-G BS		
Standards			IEC-61643-1
Max. continuous operating voltage (AC/DC)	U_c	V	255
Nominal discharge current (8/20)	I_n	kA	100
Max. discharge current (8/20)	I_{max}	kA	100
Impulse current (10/350)	I_{imp}	kA	100
Specific energy		MJ/Ω	2,5
Charge		As	50
Protection level	U_p	kV	< 1,5
Residual Voltage at I_{imp}	U_{res}		< 1,2
Follow current	I_f	A _{RMS}	100
Response time	t_A	ns	100
Residual current at U_c	I_{PE}	mA	/
Thermal protection			/
Terminal screw torque		Nm	max. 4,5
Back-up fuse gL		A	/
Short-circuit withstand current (50 Hz)		kA	/
Temperature range		° C	-40 ... +80
Terminal cross section	solid	mm ²	35
	stranded		25
Mounting			35 mm wide mounting rail in accordance with EN 60715
Degree of protection			IP 20
Housing material			thermoplastic; extinguishing degree UL 94 V-0
Dimensions DIN 43880			2TE
Weight per unit		kg	0,238



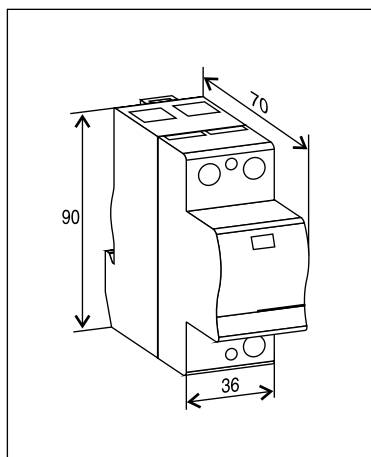
ISPRO-G BS

Connection diagram

ISPRO-G BS



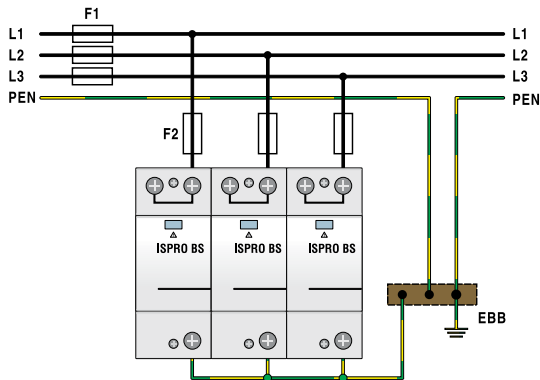
Dimensions



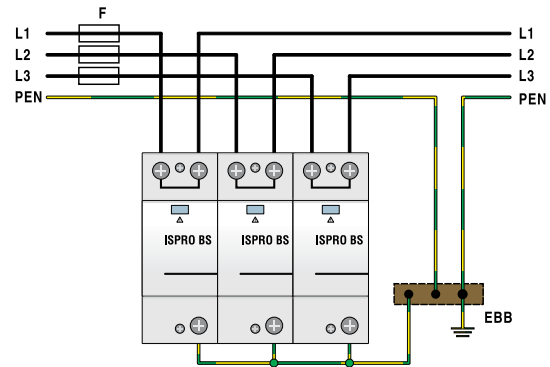


ISPRO BS(R), ISPRO-G BS CONNECTIONS

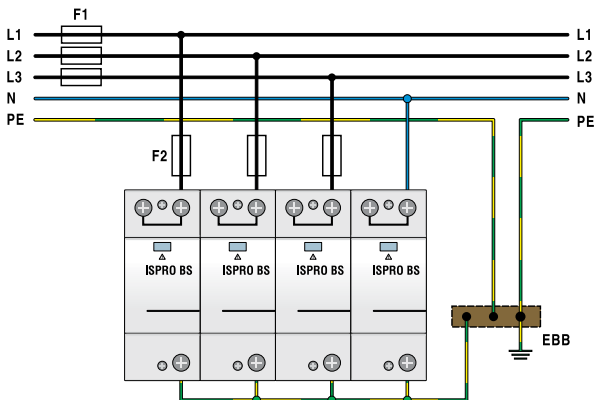
TNC Network - Parallel wiring



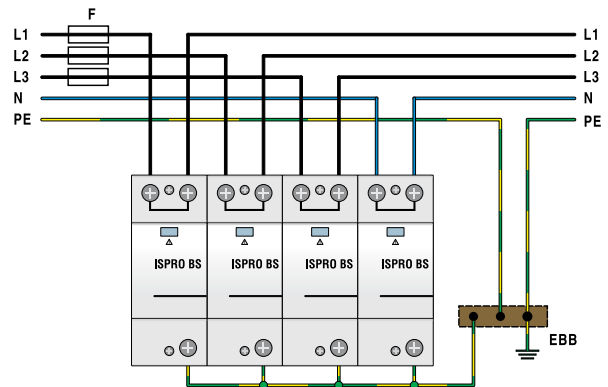
TNC Network - Serial (V-type) wiring



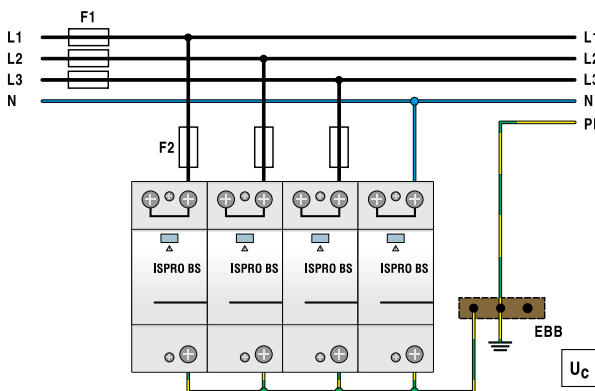
TNS Network - Parallel wiring



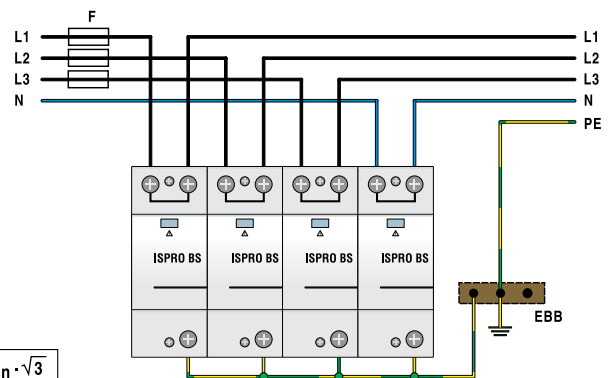
TNS Network - Serial (V-type) wiring



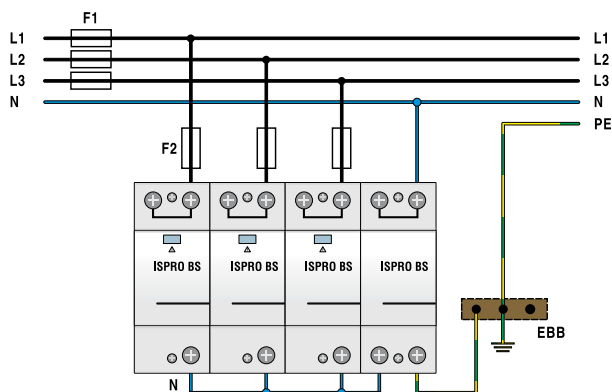
IT Network - Parallel wiring



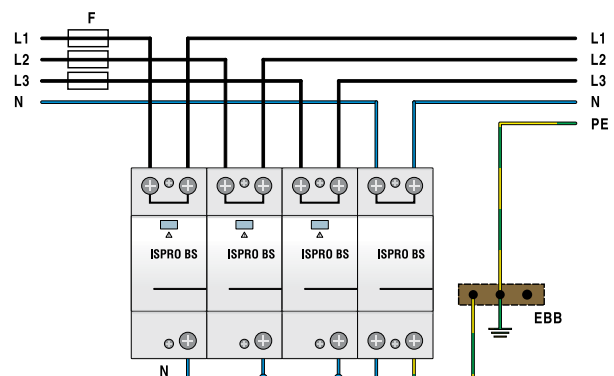
IT Network - Serial (V-type) wiring



TT Network - Parallel wiring



TT Network - Serial (V-type) wiring





MULTI-POLE LIGHTNING CURRENT AND SURGE ARRESTERS

CLASS I / (B+C)

CONNECTIONS: 3+0, 4+0, 3+1

$I_{imp} = 25 \text{ kA (10/350)}/\text{pole}$

COMPACT HOUSING



ISPRO-K BS(R) 75 (3 + 0)



The ISPRO BS(R) 75 (3 + 0) series of over voltage surge protective devices has been developed to protect against partial direct and indirect lightning discharges and is intended to provide protection in zones $O_A - 1$ as per IEC 62305.

The (3 + 0) range is intended to be used on TNC three phase networks with PEN conductor.

The circuit topology consists of three varistor stages each protected by a thermal disconnection device. Each three phase unit comprises a total of three high performance dual MOV blocks, providing a high surge rating suitable for primary service entrance applications.

A unique indicator monitors all disconnectors and brings up a common status flag if any one stage should fail.

Category IEC/EN/VE	Class I/Type 1/B+C
Location of use	Main distribution boards
Protection modes	L-PEN
Protection element	High Energy MOVs
High surge discharge ratings	$I_{imp} = 25 \text{ kA/pole}$, $I_{max} = 100 \text{ kA/pole}$
Internal protection and safety	Separate thermal disconnector for each MOV block
Status indication	Mechanical flag + remote contacts (R)
Housing	Compact design



Technical data

Type			ISPRO-K BS(R) 75/xxx (3 + 0)				
			150	275	320	385	440
Standards			IEC-61643-1				
Max. continuous operating voltage (AC/DC)	U_c	V	150/200	275/350	320/420	385/500	440/580
Nominal discharge current (8/20)	I_n	kA	25 per pole				
Max. discharge current (8/20)	I_{max}	kA	100 per pole				
Impulse current (10/350)	I_{imp}	kA	25 per pole				
Impulse current (L1+L2+L3-PEN)	I_{imp}	kA	75				
Specific energy		kJ/Ω	156 per pole				
Charge		As	12,5				10
Protection level	U_p	kV	< 0,8	< 1,4	< 1,4	< 1,9	< 2,2
Residual Voltage at I_{imp}	U_{res}		< 0,8	< 1,3	< 1,3	< 1,6	< 1,9
Follow current	I_f		NO				
Response time	t_A	ns	25				
Residual current at U_c	I_{PE}	mA	2,5				
Thermal protection			YES				
Terminal screw torque		Nm	max. 4,5				
Back-up fuse gL (if mains > 250 A)		A	250				
Short-circuit withstand current (50 Hz)		kA	25				
Temperature range		°C	-40 ... +80				
Terminal cross section	solid	mm ²	35				
	stranded		25				
Mounting			35 mm wide mounting rail in accordance with EN 60715				
Degree of protection			IP 20				
Housing material			thermoplastic; extinguishing degree UL 94 V-0				
Dimensions DIN 43880			3TE			8TE	
Weight per unit		kg	0,400	0,570	0,570	0,726	0,729



ISPRO-K BS(R) 75 (3 + 0)

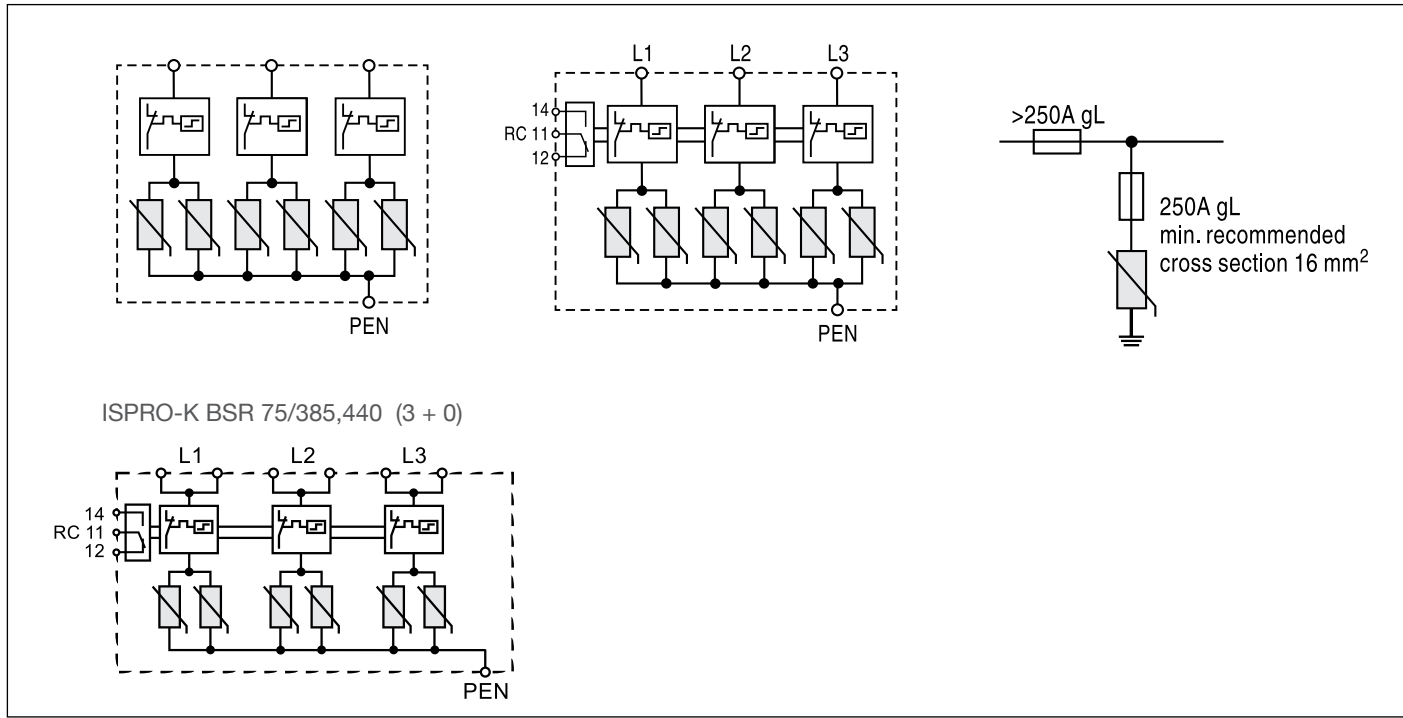
ISPRO-K BSR 75 (3 + 0) (with remote contacts)							
Remote contacts			YES				
Contact ratings AC	250 V	A	0,5				
	125 V		3				
Terminal cross section		mm²	max. 1,5				
Remote terminal torque		Nm	0,25				
Weight per unit		kg	0,405	0,575	0,575	0,731	0,797

Connection diagram

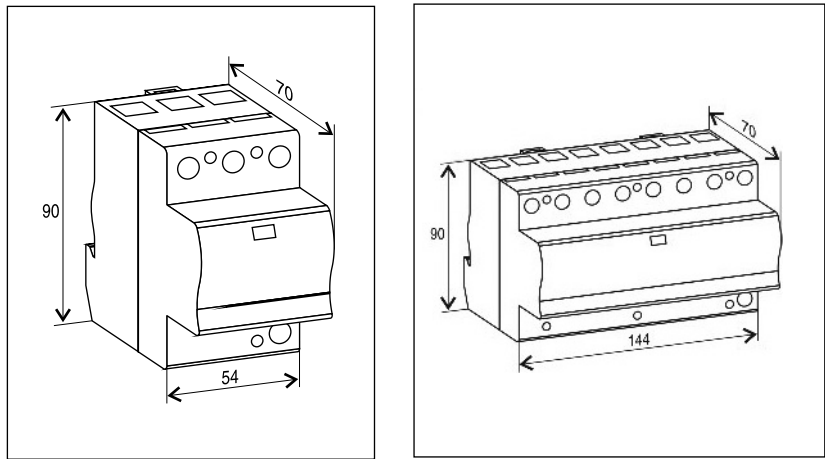
ISPRO-K BS 75/150-320 (3 + 0)

ISPRO-K BSR 75/150-320 (3 + 0)

Selection of back-up fuse



Dimensions



ISPRO-K BS(R) 100 (4 + 0)



The ISPRO-K BS(R) 100 (4 + 0) series of over voltage surge protective devices has been developed to protect against partial direct and indirect lightning discharges and is intended to provide protection in zones $0_A - 1$ as per IEC 62305.

The (4 + 0) range is intended to be used on TNS three phase networks with separate N and PE conductors.

The circuit topology consists of four varistor stages each protected by a thermal disconnection device. Each three phase unit comprises a total of four high performance dual MOV blocks, providing a high surge rating suitable for primary service entrance applications.

A unique indicator monitors all thermal disconnectors and brings up a common status flag if any one stage should fail.

Category IEC/EN/VDE	Class I/Type 1/B+C
Location of use	Main distribution boards
Protection modes	L/N-PE
Protection element	High Energy MOVs
High surge discharge ratings	$I_{imp} = 25 \text{ kA/pole}$, $I_{max} = 100 \text{ kA/pole}$
Internal protection and safety	Separate thermal disconnector for each MOV block
Status indication	Mechanical flag + remote contacts (R)
Housing	Compact design



Technical data

Type			ISPRO-K BS(R) 100/xxx (4 + 0)				
			150	275	320	385	440
Standards			IEC-61643-1				
Max. continuous operating voltage (AC/DC)	U_c	V	150/200	275/350	320/420	385/500	440/580
Nominal discharge current (8/20)	I_n	kA	25 per pole				
Max. discharge current (8/20)	I_{max}	kA	100 per pole				
Impulse current (10/350)	I_{imp}	kA	25 per pole				
Impulse current (L1+L2+L3-PEN)	I_{imp}	kA	100				
Specific energy		kJ/Ω	156 per pole				
Charge		As	12,5				
Protection level	U_p	kV	< 0,8	< 1,4	< 1,4	< 1,9	< 2,2
Residual Voltage at I_{imp}	U_{res}		< 0,8	< 1,3	< 1,3	< 1,6	< 1,9
Follow current	I_f		NO				
Response time	t_A	ns	25				
Residual current at U_c	I_{PE}	mA	2,5				
Thermal protection			NO				
Terminal screw torque		Nm	max. 4,5				
Back-up fuse gL (if mains > 250 A)		A	250				
Short-circuit withstand current (50 Hz)		kA	25				
Temperature range		°C	-40 ... +80				
Terminal cross section	solid	mm²	35				
	stranded		25				
Mounting			35 mm wide mounting rail in accordance with EN 60715				
Degree of protection			IP 20				
Housing material			thermoplastic; extinguishing degree UL 94 V-0				
Dimensions DIN 43880			4TE			8TE	
Weight per unit		kg	0,532	0,756	0,756	0,912	1,000



ISPRO-K BS(R) 100 (4 + 0)

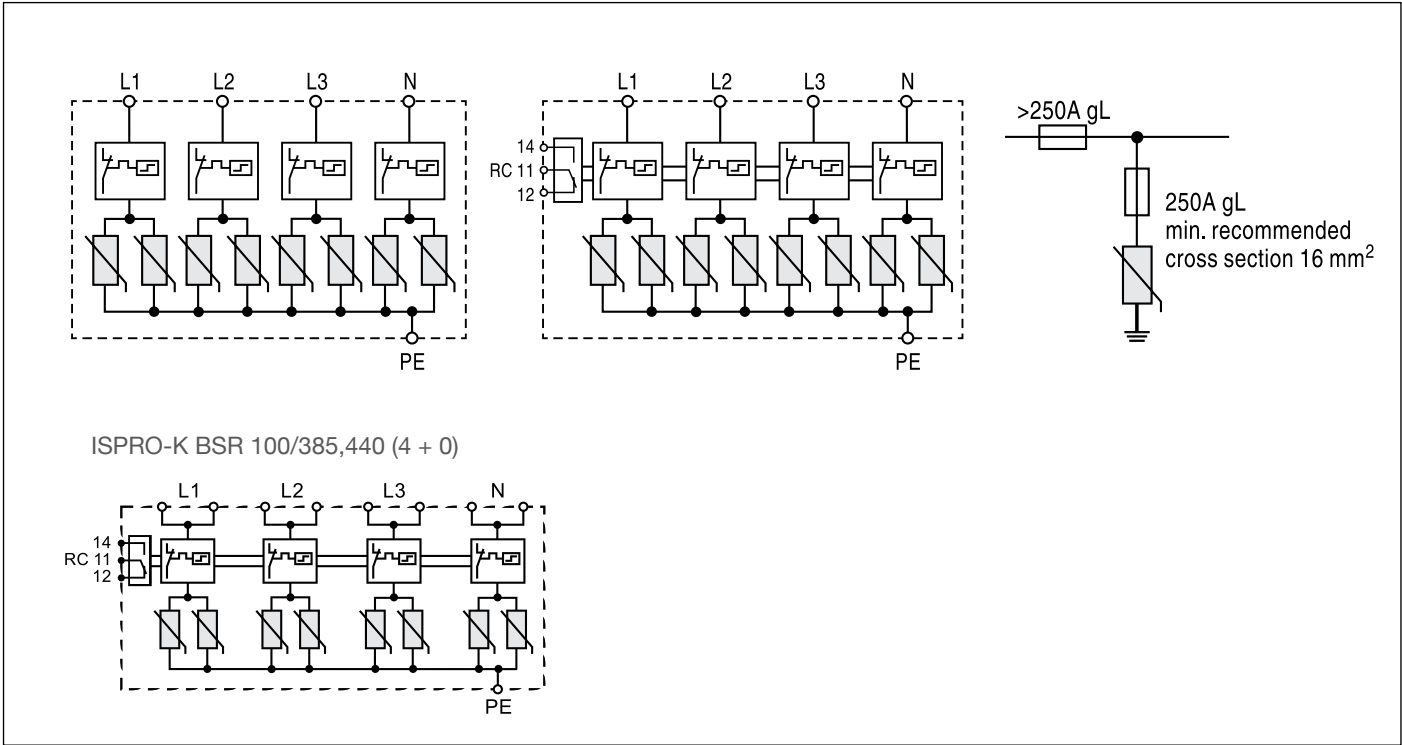
ISPRO-K BSR 100 (4 + 0) (with remote contacts)						
Remote contacts			YES			
Contact ratings AC	250 V	A	0,5			
	125 V		3			
Terminal cross section		mm ²	max. 1,5			
Remote terminal torque		Nm	0,25			
Weight per unit		kg	0,537	0,761	0,761	0,817 1,005

Connection diagram

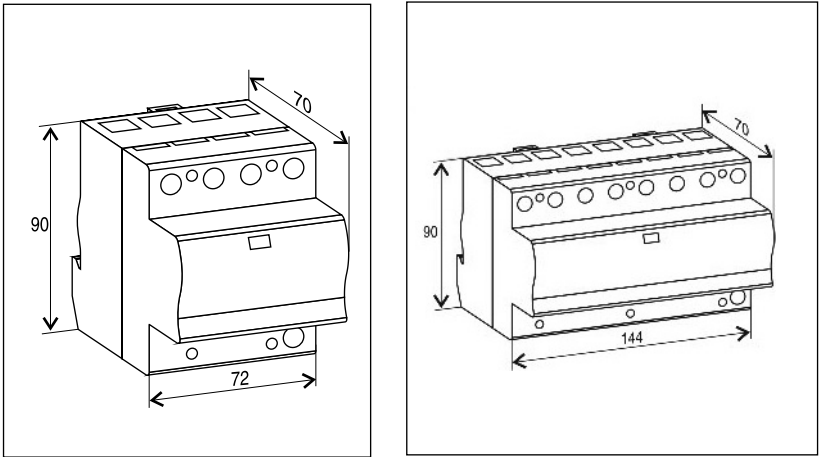
ISPRO-K BS 100/150-320 (4 + 0)

ISPRO-K BSR 100/150-320 (4 + 0)

Selection of back-up fuse



Dimensions



ISPRO-K BS(R) 100 (3 + 1)



The ISPRO-K BS(R) 100 (3 + 1) series of over voltage surge protective devices has been developed to protect against partial direct and indirect lightning discharges and is intended to provide protection in zones 0_A – 1 as per IEC 62305.

The (3 + 1) range is intended to be used on TT three phase networks where N and PE galvanic isolation is required.

The circuit topology consists of three varistor stages each protected by a thermal disconnection device. Each unit comprises a total of three high performance dual MOV blocks, providing a surge rating suitable for branch service entrance applications. An encapsulated air gap (GDT) provides galvanic separation between the N and PE conductors.

A unique indicator monitors all disconnectors and brings up a common status flag if any one stage should fail.

Category IEC/EN/VDE	Class I/Type 1/B+C
Location of use	Main distribution boards
Protection modes	L-N, N-PE
Protection element	High Energy MOVs, high energy GDT
High surge discharge ratings	$I_{imp} = 25 \text{ kA/pole}$, $I_{max} = 100 \text{ kA/pole}$
Internal protection and safety	Separate thermal disconnector for each MOV block
Status indication	Mechanical flag + remote contacts (R)
Housing	Compact design



Technical data

Type			ISPRO-K BS(R) 100/xxx (3 + 1)				
			150	275	320	385	440
Standards			IEC-61643-1				
Max. continuous operating voltage (AC/DC)	U_c	V	150/200	275/350	320/420	385/500	440/580
Nominal discharge current (8/20) (MOV/GDT)	I_n	kA	25/100				
Max. discharge current (8/20) (MOV/GDT)	I_{max}	kA	100/100				
Impulse current (10/350) (MOV/GDT)	I_{imp}	kA	25/100				
Impulse current (L1+L2+L3+N+PE)	I_{imp}	kA	100				
Specific energy (MOV)		kJ/Ω	156				100
		MJ/Ω	2,5				
Charge (MOV/GDT)		As	12,5/50				
Protection level (MOV)	U_p	kV	< 0,9	< 1,5	< 1,5	< 1,9	< 2,2
			(GDT)	< 1,5			
Residual Voltage at I_{imp} (MOV)			< 0,8	< 1,3	< 1,3	< 1,6	< 1,9
Follow current (GDT)	I_f	A_{RMS}	> 100				
Response time (MOV/GDT)	t_A	ns	25/100				
Residual current at U_c (MOV/GDT)	I_{PE}	mA	< 2,5/–				
Thermal protection (MOV/GDT)			YES / –				
Terminal screw torque		Nm	max. 4,5				
Back-up fuse gL (if mains > 250 A) (MOV/GDT)		A	250 / –				
Short-circuit withstand current (50 Hz) (MOV/GDT)		kA	25 / –				
Temperature range		° C	-40 ... +80				
Terminal cross section	solid	mm²	35				
	stranded		25				
Mounting			35 mm wide mounting rail in accordance with EN 60715				
Degree of protection			IP 20				
Housing material			thermoplastic; extinguishing degree UL 94 V-0				
Dimensions DIN 43880			5TE				
Weight per unit		kg	0,568	0,728	0,728	0,834	0,900



ISPRO-K BS(R) 100 (3 + 1)

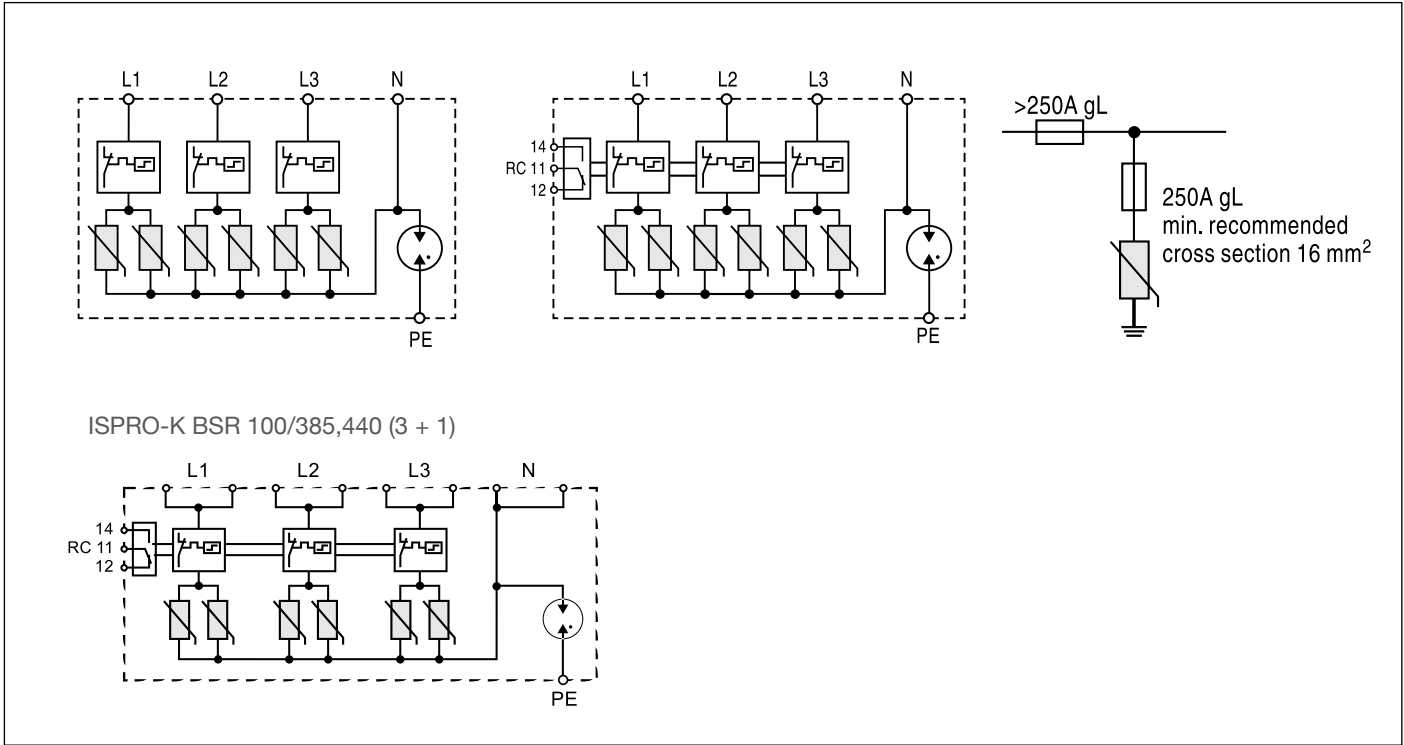
ISPRO-K BSR 100 (3 + 1) (with remote contacts)						
Remote contacts			YES			
Contact ratings AC	250 V	A	0,5			
	125 V		3			
Terminal cross section		mm ²	max. 1,5			
Remote terminal torque		Nm	0,25			
Weight per unit		kg	0,573	0,733	0,733	0,839 0,905

Connection diagram

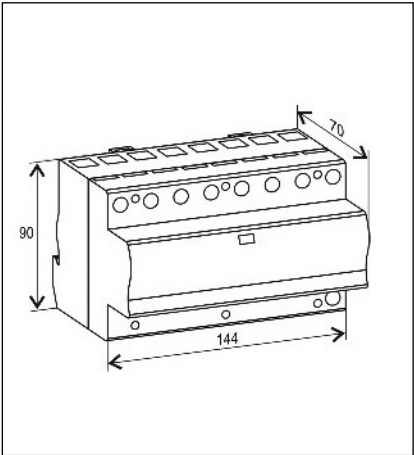
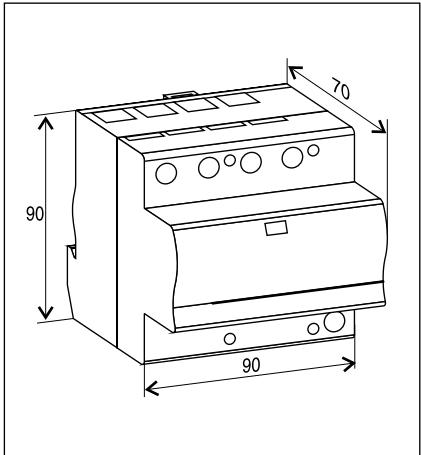
ISPRO-K BS 100/150-350 (3 + 1)

ISPRO-K BSR 100/150-350 (3 + 1)

Selection of back-up fuse



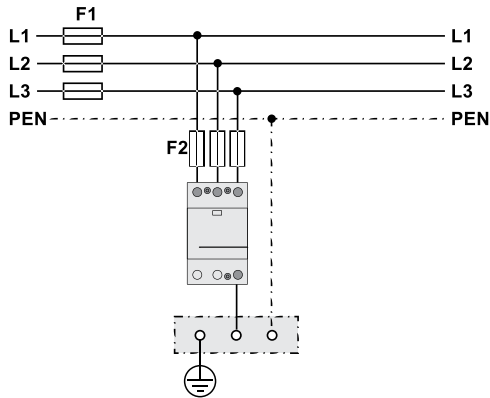
Dimensions



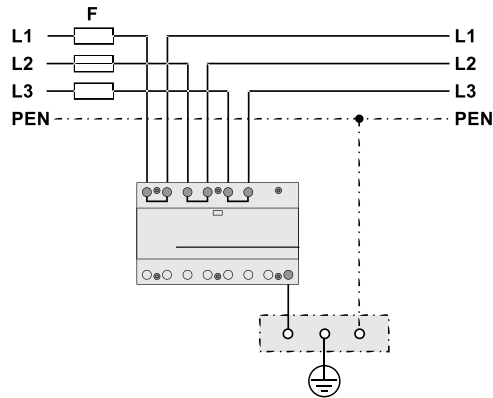
ISPRO-K BS CONNECTIONS



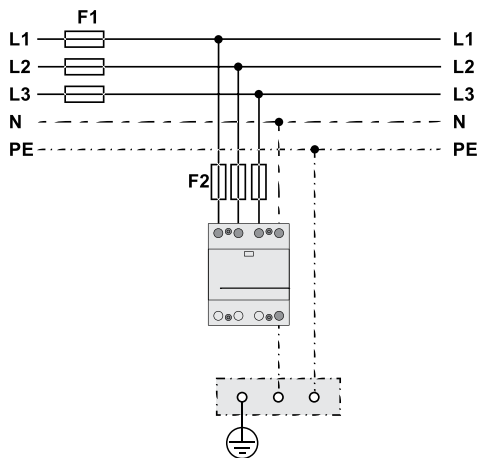
TNC Network-Parallel wiring



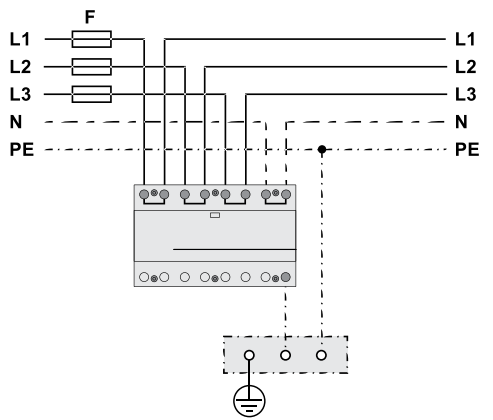
TNC Network-Serial (V-type) wiring



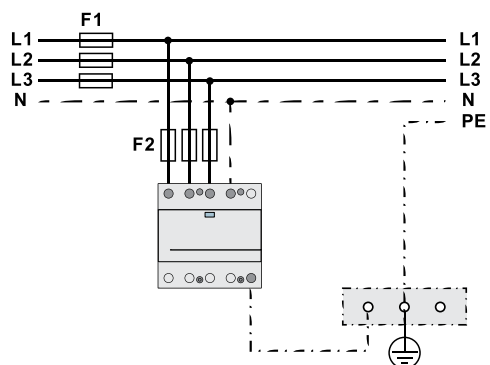
TNS Network-Parallel wiring



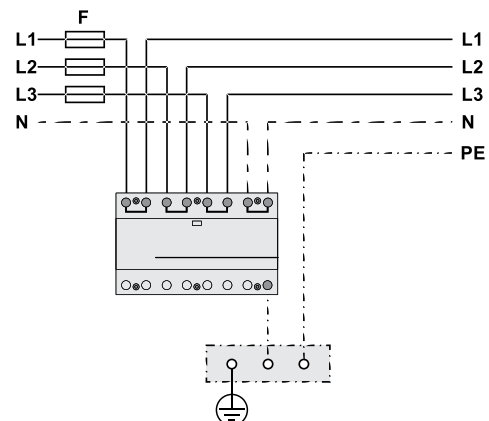
TNS Network-Serial (V-type) wiring



TT Network-Parallel wiring



TT Network-Serial (V-type) wiring





MULTI-POLE LIGHTNING CURRENT AND SURGE ARRESTERS

CLASS I / (B+C)

CONNECTIONS: 3+0, 4+0, 3+1

$I_{imp} = 12,5 \text{ kA (10/350)}/\text{pole}$

COMPACT HOUSING



ISPRO-K BS(R) 37,5 (3 + 0)



The ISPRO-K BS(R) 37,5 (3 + 0) series of over voltage surge protective devices has been developed to protect against partial direct and indirect lightning discharges and is intended to provide protection in zones 0_A – 1 as per IEC 62305.

The (3 + 0) range is intended to be used on TNC three phase networks whit PEN conductor.

The circuit topology consists of three varistor stages each protected by a thermal disconnection device. Each three phase unit comprises a total of three high performance MOV blocks, providing a high surge rating suitable for primary service entrance applications.

A unique indicator monitors all disconnectors and brings up a common status flag if any one stage should fail.

Category IEC/EN/VDE	Class I/Type 1/B+C
Location of use	Main distribution boards
Protection modes	L-PEN
Protection element	High Energy MOVs
High surge discharge ratings	$I_{imp} = 12,5 \text{ kA/pole}$, $I_{max} = 50 \text{ kA/pole}$
Internal protection and safety	Separate thermal disconnector for each MOV block
Status indication	Mechanical flag + remote contacts (R)
Housing	Compact design



Technical data

Type			ISPRO-K BS(R) 37,5/xxx (3 + 0)				
			150	275	320	385	440
Standards			IEC-61643-1				
Max. continuous operating voltage (AC/DC)	U_c	V	150/200	275/350	320/420	385/500	440/580
Nominal discharge current (8/20)	I_n	kA	20 per pole				
Max. discharge current (8/20)	I_{max}	kA	50 per pole				
Impulse current (10/350)	I_{imp}	kA	12,5 per pole				
Impulse current (L1+L2+L3-PEN)	I_{imp}	kA	37,5				
Specific energy		kJ/Ω	39 per pole				
Charge		As	6,25 per pole				
Protection level	U_B	kV	< 0,9	< 1,5	< 1,5	< 1,8	< 2,1
Residual voltage at I_{imp}	U_{res}		< 0,7	< 1,2	< 1,2	< 1,5	< 1,8
Follow current	I_f	A_{RMS}	NO				
Response time	t_A	ns	25				
Residual current at U_c	I_{PE}	mA	< 2,5				
Thermal protection			YES				
Terminal screw torque		Nm	max. 4,5				
Back-up fuse gL (if mains > 250 A)		A	250				
Short-circuit withstand current (50 Hz)		kA	25				
Temperature range		° C	-40 ... +80				
Terminal cross section	solid	mm ²	35				
	stranded		25				
Mounting			35 mm wide mounting rail in accordance with EN 60715				
Degree of protection			IP 20				
Housing material			thermoplastic; extinguishing degree UL 94 V-0				
Dimensions DIN 43880			3TE				
Weight per unit		kg	0,300	0,382	0,382	0,394	0,432



ISPRO-K BS(R) 37,5 (3 + 0)

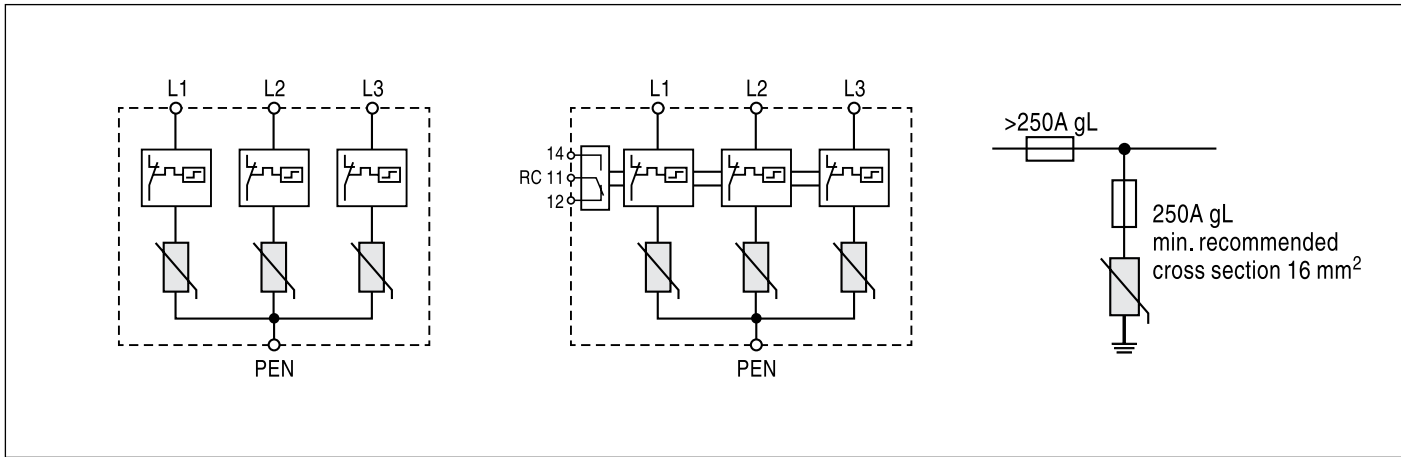
ISPRO-K BSR 37,5 (3 + 0) (with remote contacts)						
Remote contacts			YES			
Contact ratings AC	250 V	A	0,5			
	125 V		3			
Terminal cross section		mm ²	max. 1,5			
Remote terminal torque		Nm	0,25			
Weight per unit		kg	0,305	0,387	0,387	0,399 0,437

Connection diagram

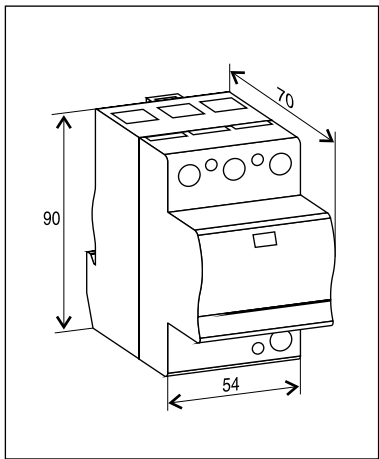
ISPRO-K BS 37,5/xxx (3 + 0)

ISPRO-K BSR 37,5/xxx (3 + 0)

Selection of back-up fuse



Dimensions



ISPRO-K BS(R) 50 (4 + 0)



The ISPRO-K BS(R) 50 (4 + 0) series of over voltage surge protective devices has been developed to protect against partial direct and indirect lightning discharges and is intended to provide protection in zones $0_A - 1$ as per IEC 62305.

The (4 + 0) range is intended to be used on TNS three phase networks with separate N and PE conductors.

The circuit topology consists of four varistor stages each protected by a thermal disconnection device. Each three phase unit comprises a total of four high performance MOV blocks, providing a high surge rating suitable for primary service entrance applications.

A unique indicator monitors all disconnectors and brings up a common status flag if any one stage should fail.

Category IEC/EN/VDE	Class I/Type 1/B+C
Location of use	Main distribution boards
Protection modes	L/N-PE
Protection element	High Energy MOVs
High surge discharge ratings	$I_{imp} = 12,5 \text{ kA/pole}$, $I_{max} = 50 \text{ kA/pole}$
Internal protection and safety	Separate thermal disconnector for each MOV block
Status indication	Mechanical flag + remote contacts (R)
Housing	Compact design



Technical data

Type			ISPRO-K BS(R) 50/xxx (4 + 0)				
			150	275	320	385	440
Standards			IEC-61643-1				
Max. continuous operating voltage (AC/DC)	U_c	V	150/200	275/350	320/420	385/500	440/580
Nominal discharge current (8/20)	I_n	kA	20 per pole				
Max. discharge current (8/20)	I_{max}	kA	50 per pole				
Impulse current (10/350)	I_{imp}	kA	12,5 per pole				
Impulse current (L1+L2+L3+N-PE)	I_{imp}	kA	50				
Specific energy		kJ/Ω	39 per pole				
Charge		As	6,25 per pole				
Protection level	U_p	kV	< 0,9	< 1,5	< 1,5	< 1,8	< 2,1
Residual Voltage at I_{imp}	U_{res}		< 0,7	< 1,2	< 1,2	< 1,5	< 1,8
Follow current	I_f	A_{RMS}	NO				
Response time	t_A	ns	25				
Residual current at U_c	I_{PE}	mA	< 2,5				
Thermal protection			YES				
Terminal screw torque		Nm	max. 4,5				
Back-up fuse gL (if mains > 250 A)		A	250				
Short-circuit withstand current (50 Hz)		kA	25				
Temperature range		° C	-40 ... +80				
Terminal cross section	solid	mm ²	35				
	stranded		25				
Mounting			35 mm wide mounting rail in accordance with EN 60715				
Degree of protection			IP 20				
Housing material			thermoplastic; extinguishing degree UL 94 V-0				
Dimensions DIN 43880			4TE				
Weight per unit		kg	0,366	0,462	0,462	0,494	0,526



ISPRO-K BS(R) 50 (4 + 0)

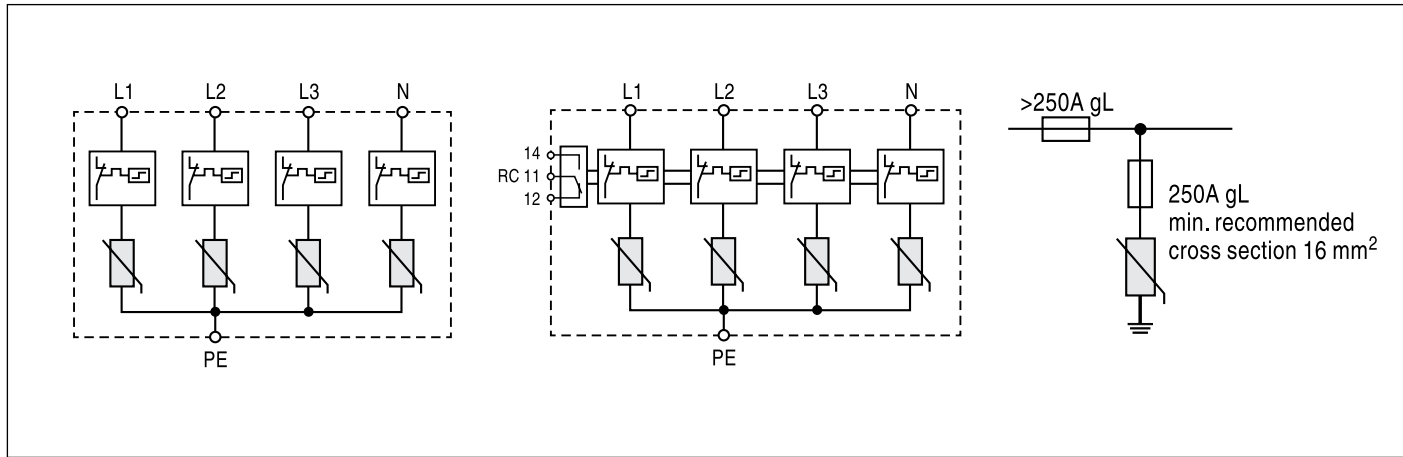
ISPRO-K BSR 50 (4 + 0) (with remote contacts)						
Remote contacts			YES			
Contact ratings AC	250 V	A	0,5			
	125 V		3			
Terminal cross section		mm ²	max. 1,5			
Remote terminal torque		Nm	0,25			
Weight per unit		kg	0,371	0,467	0,467	0,499 0,531

Connection diagram

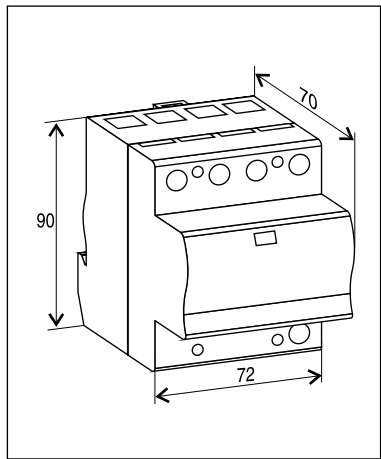
ISPRO-K BS 50/xxx (4 + 0)

ISPRO-K BSR 50/xxx (4 + 0)

Selection of back-up fuse



Dimensions



ISPRO-K BS(R) 50 (3 + 1)



The ISPRO-K BS(R) 50 (3 + 1) series of over voltage surge protective devices has been developed to protect against partial direct and indirect lightning discharges and is intended to provide protection in zones $0_A - 1$ as per IEC 62305.

The (3 + 1) range is intended to be used on TT three phase networks where N to PE galvanic isolation is required.

The circuit topology consists of three varistor stages each protected by a thermal disconnection device. Each unit comprises a total of three high performance MOV blocks, providing a high surge rating suitable for branch service applications. An encapsulated air gap (GDT) provides galvanic separation between the N and PE conductors.

A unique indicator monitors all disconnectors and brings up a common status flag if any one stage should fail.

Category IEC/EN/VDE	Class I/Type 1/B+C
Location of use	Main distribution boards
Protection modes	L-N, N-PE
Protection element	High Energy MOVs, high energy GDT
High surge discharge ratings	$I_{imp} = 12,5 \text{ kA/pole}$, $I_{max} = 50 \text{ kA/pole}$
Internal protection and safety	Separate thermal disconnector for each MOV block
Status indication	Mechanical flag + remote contacts (R)
Housing	Compact design



Technical data

Type			ISPRO-K BS(R) 50/xxx (3 + 1)				
			150	275	320	385	440
Standards			IEC-61643-1				
Max. continuous operating voltage (AC/DC)	U_c	V	150/200	275/350	320/420	385/500	440/580
Nominal discharge current (8/20) (MOV/GDT)	I_n	kA	20/50				
Max. discharge current (8/20) (MOV/GDT)	I_{max}	kA	50/100				
Impulse current (10/350) (MOV/GDT)	I_{imp}	kA	12,5/50				
Impulse current (L1+L2+L3+N+PE)	I_{imp}	kA	50				
Specific energy	(MOV)	kJ/Ω	39				
	(GDT)		625				
Charge (MOV/GDT)		As	6,25/25				5/25
Protection level	(MOV)	U_p	< 0,9	< 1,5	< 1,5	< 1,8	< 2,1
	(GDT)		< 1,5				
Residual Voltage at I_{imp} (MOV)	U_{res}		< 0,7	< 1,2	< 1,2	< 1,5	< 1,8
Follow current (GDT)	I_f	A_{RMS}	> 100				
Response time (MOV/GDT)	t_A	ns	25/100				
Residual current at U_c (MOV/GDT)	I_{PE}	mA	< 25/-				
Thermal protection (MOV/GDT)			YES / -				
Terminal screw torque		Nm	max. 4,5				
Back-up fuse gL (if mains > 250 A) (MOV/GDT)		A	250 / -				
Short-circuit withstand current (50 Hz) (MOV/GDT)		kA	25 / -				
Temperature range		°C	-40 ... +80				
Terminal cross section	solid	mm ²	35				
	stranded		25				
Mounting			35 mm wide mounting rail in accordance with EN 60715				
Degree of protection			IP 20				
Housing material			thermoplastic; extinguishing degree UL 94 V-0				
Dimensions DIN 43880			5TE				
Weight per unit		kg	0,442	0,538	0,538	0,548	0,577



ISPRO-K BS(R) 50 (3 + 1)

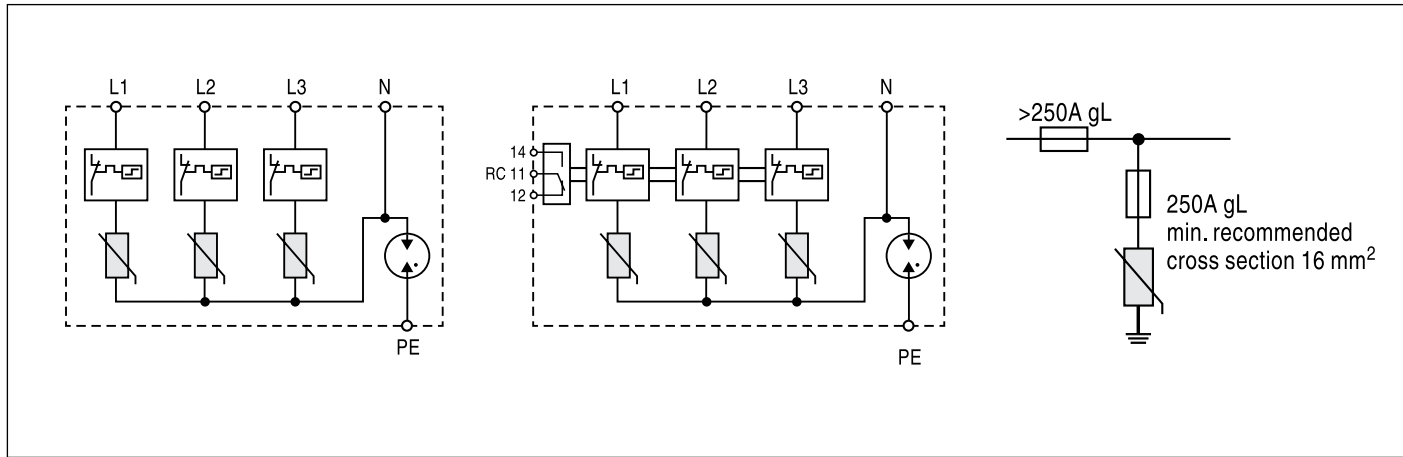
ISPRO-K BS(R) 50 (3 + 1) (with remote contacts)							
Remote contacts			YES				
Contact ratings AC	250 V	A	0,5				
	125 V		3				
Terminal cross section		mm ²	max. 1,5				
Remote terminal torque		Nm	0,25				
Weight per unit		kg	0,447	0,543	0,543	0,553	0,582

Connection diagram

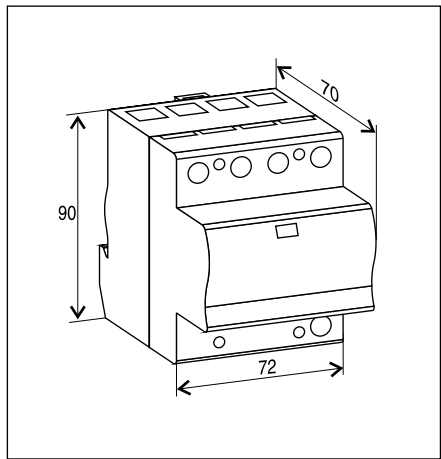
ISPRO-K BS 50/xxx (3 + 1)

ISPRO-K BSR 50/xxx (3 + 1)

Selection of back-up fuse



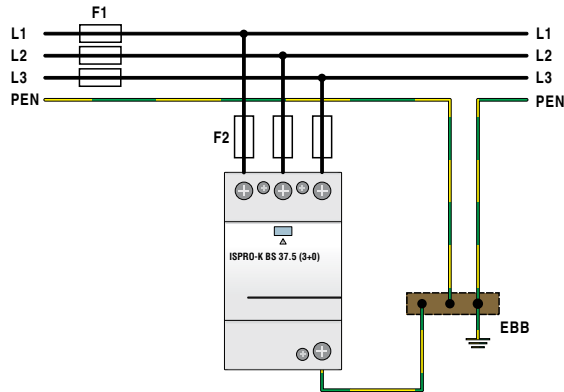
Dimensions



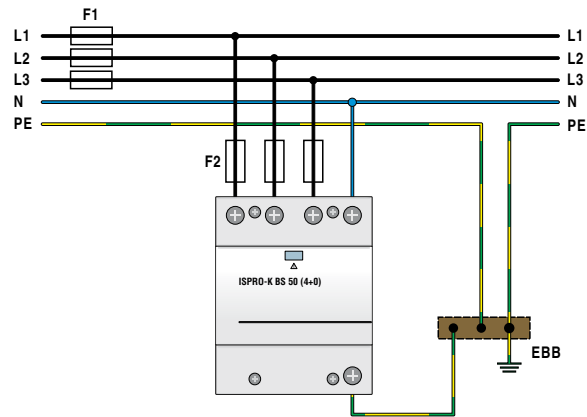
ISPRO-K BS CONNECTIONS



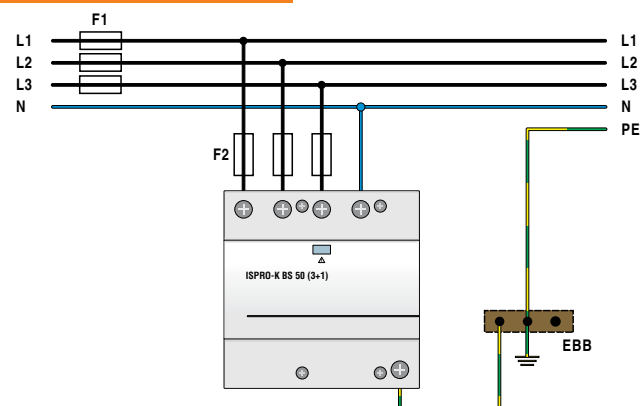
TNC Network



TNS Network



TT Network





SINGLE-POLE LIGHTNING CURRENT AND SURGE ARRESTERS

CLASS I / (B+C)

$I_{imp} = 12,5 \text{ kA (10/350)}/\text{pole}$

COMPACT HOUSING



ISPRO B2N(R) 12,5



The ISPRO B2N(R) 12,5 series of low cost, over voltage surge protective devices has been developed to protect against partial direct and indirect lightning discharges and is intended to provide protection in zones 0_A – 1 as per IEC 62305.

It consists of a high performance varistor block with thermal disconnection device.

Category IEC/EN/VDE	Class I/Type 1/B+C
Location of use	Main distribution boards
Protection modes	L/N-PE, L-PEN
Protection element	High Energy MOV
High surge discharge ratings	$I_{imp} = 12,5 \text{ kA}$, $I_{max} = 50 \text{ kA}$
Internal protection and safety	Separate thermal disconnecter for each MOV block
Status indication	Mechanical flag + remote contacts (R)
Housing	Compact design



Technical data

Type			ISPRO B2N(R) 12,5/xxx				
			150	275	320	385	440
Standards			IEC-61643-1				
Max. continuous operating voltage (AC/DC)	U_c	V	150/200	275/350	320/420	385/500	440/580
Nominal discharge current (8/20)	I_n	kA	20				
Max. discharge current (8/20)	I_{max}	kA	50				
Impulse current (10/350)	I_{imp}	kA	12,5				
Specific energy		kJ/Ω	39				
Charge		As	6,25				
Protection level	U_p	kV	< 0,8	< 1,5	< 1,6	< 1,7	< 2,0
Residual Voltage at I_{imp}	U_{res}		< 0,7	< 1,2	< 1,3	< 1,4	< 1,9
Follow current	I_f	A_{RMS}	NO				
Response time	t_A	ns	25				
Residual current at U_c	I_{PE}	mA	< 2,5				
Thermal protection			YES				
Terminal screw torque		Nm	max. 3,5				
Back-up fuse gL (if mains > 160 A)		A	160				
Short-circuit withstand current (50 Hz)		kA	25				
Temperature range		° C	-40 ... +80				
Terminal cross section	solid	mm ²	35				
	stranded		25				
Mounting			35 mm wide mounting rail in accordance with EN 60715				
Degree of protection			IP 20				
Housing material			thermoplastic; extinguishing degree UL 94 V-0				
Dimensions DIN 43880			1TE				
Weight per unit		kg	0,124	0,150	0,150	0,143	0,146



ISPRO B2N(R) 12,5

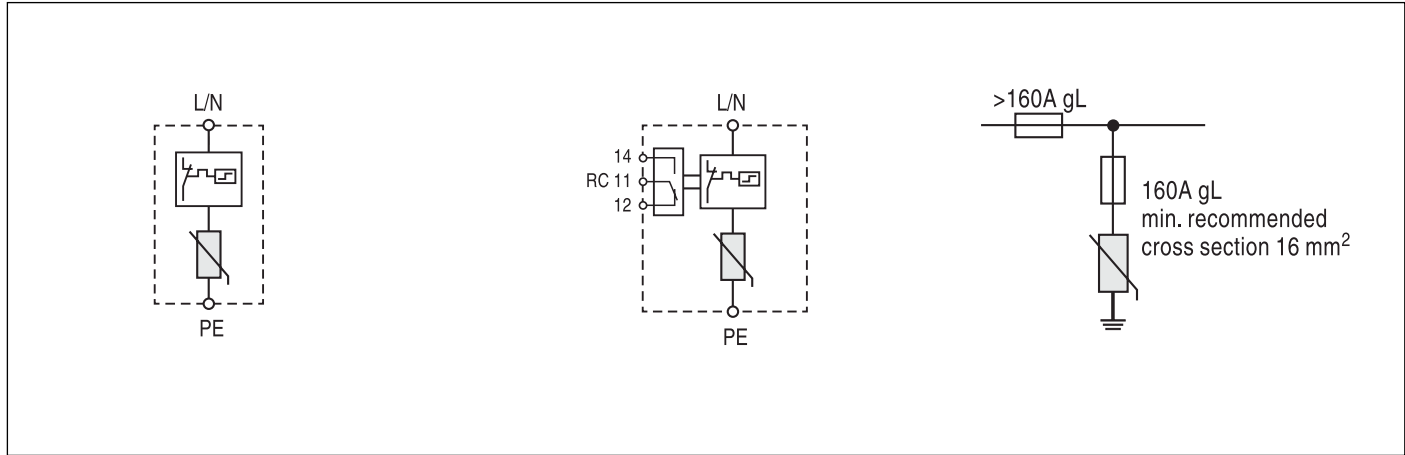
ISPRO B2N(R) 12,5 (with remote contacts)						
Remote contacts			YES			
Contact ratings AC	250 V	A	0,5			
	125 V		3			
Terminal cross section		mm ²	max. 1,5			
Remote terminal torque		Nm	0,25			
Weight per unit		kg	0,129	0,155	0,155	0,148 0,151

Connection diagram

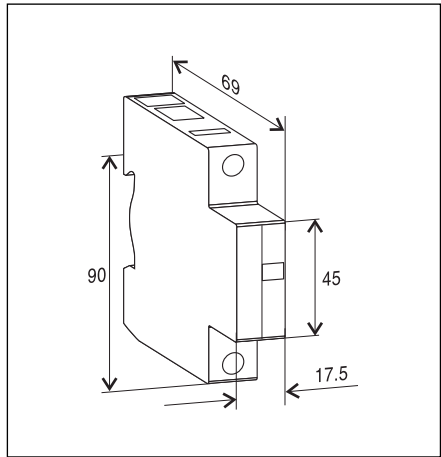
ISPRO B2N 12,5/xxx

ISPRO B2NR 12,5/xxx

Selection of back-up fuse



Dimensions



SINGLE-POLE AND MULTI-POLE SURGE ARRESTERS



CLASS II / (C)

CONNECTIONS: 1+1, 3+0, 4+0, 3+1

$I_{\max} = 20 \text{ kA (8/20)}$

MODULAR HOUSING





ISPRO C(R) 40

The ISPRO C(R) 40 series of low cost, over voltage surge protective devices has been developed to protect against partial direct and indirect lightning discharges and is intended to provide protection in zones 1 – 2 as per IEC 62305.

It consists of a high performance varistor block with thermal disconnection device. The plug-in module/base design facilitates replacement of a failed module without the need to remove system wiring etc.

Category IEC/EN/VDE	Class II/Type 2/C
Location of use	Branch sub-distribution boards
Protection modes	L/N-PE, L-PEN
Protection element	MOV
High surge discharge ratings	$I_n = 20 \text{ kA}$, $I_{max} = 40 \text{ kA}$
Internal protection and safety	Thermal disconnecter
Status indication	Mechanical flag + remote contacts (R)
Housing	Modular design



Technical data

Type			ISPRO C(R) 40/xxx				
			150	275	320	385	440
Standards			IEC-61643-1				
Max. continuous operating voltage (AC/DC)	U_c	V	150/200	275/350	320/420	385/500	440/580
Nominal discharge current (8/20)	I_n	kA	20				
Max. discharge current (8/20)	I_{max}	kA	40				
Protection level	U_p	kV	< 0,85	< 1,25	< 1,45	< 1,65	< 2,1
Follow current	I_f	A_{RMS}	NO				
Response time	t_A	ns	25				
Residual current at U_c	I_{PE}	mA	< 1,5				
Thermal protection			YES				
Terminal screw torque		Nm	max. 4,5				
Back-up fuse gL (if mains > 125 A)		A	125				
Short-circuit withstand current (50 Hz)		kA	25				
Temperature range		°C	-40 ... +80				
Terminal cross section	solid	mm ²	35				
	stranded		25				
Mounting			35 mm wide mounting rail in accordance with EN 60715				
Degree of protection			IP 20				
Housing material			thermoplastic; extinguishing degree UL 94 V-0				
Dimensions DIN 43880			1TE				
Weight per unit		kg	0,122	0,128	0,128	0,129	0,130

ISPRO C(R) 40



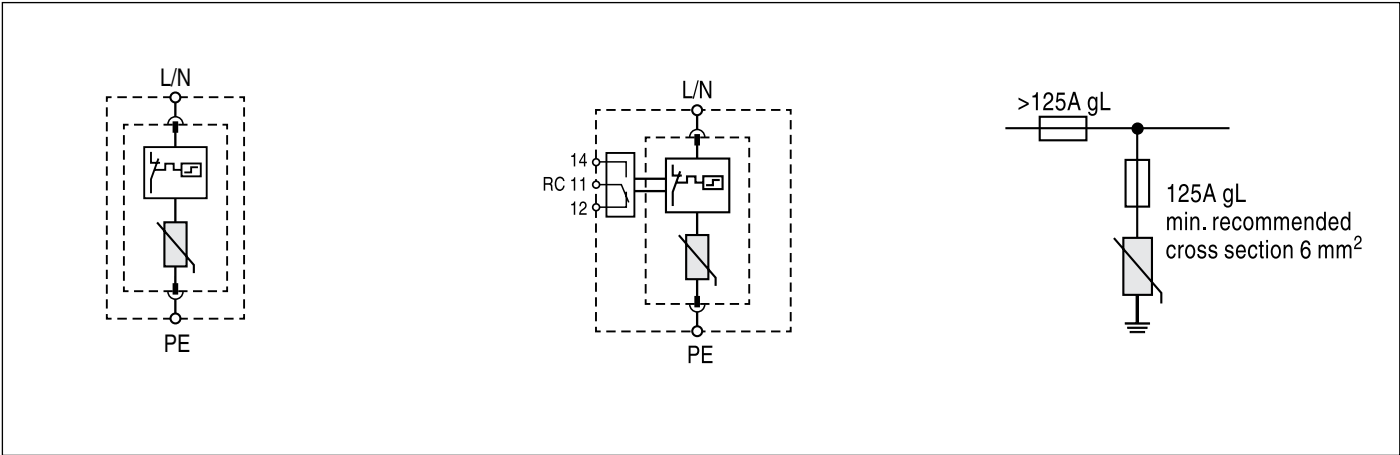
ISPRO C(R) 40 (with remote contacts)							
Remote contacts			YES				
Contact ratings AC	250 V	A	0,5				
	125 V		3				
Terminal cross section		mm ²	max. 1,5				
Remote terminal torque		Nm	0,25				
Weight per unit		kg	0,127	0,133	0,133	0,134	0,135

Connection diagram

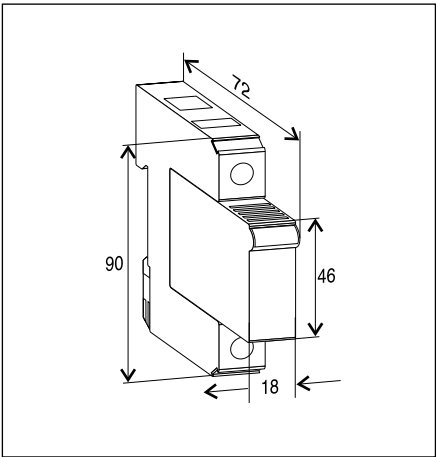
ISPRO C 40/xxx

ISPRO CR 40/xxx

Selection of back-up fuse



Dimensions



Accessory part for ISPRO C(R) 40/xxx

Type	Module ISPRO C(R) 40/xxx				
	150	275	320	385	440





ISPRO C(R) 80 (1 + 1)

The ISPRO C(R) 80 (1+1) series combines a ISPRO C 40 and a ISPRO-G C to provide protection for TT single phase networks, where N to PE galvanic isolation is required.

Category IEC/EN/VDE	Class II/Type 2/C
Location of use	Branch Sub-distribution Boards
Protection modes	L/N-PE, L-PEN, N-PE
Protection element	MOV and GDT
Surge discharge ratings	I_{max} = up to 40kA per pole
Internal protection and safety	Separate thermal disconnecter for each MOV
Status indication	Mechanical flag + remote contacts (R)
Dimensions DIN 43880	1TE, 2TE, 3TE, 4TE



Technical data

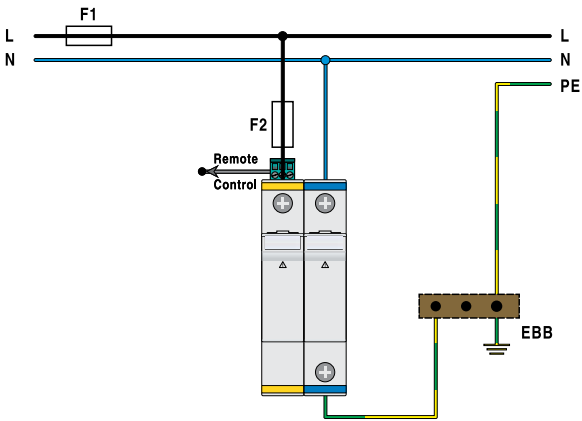
Type				ISPRO C(R) 80/xxx (1+1)				
				150	275	320	385	440
Standards				IEC-61643-1				
Max. continuous operating voltage (AC/DC)	U_c	V		150/200	275/350	320/420	385/500	440/580
Nominal discharge current (8/20)	I_n	kA		20/20				
Max. discharge current (8/20)	I_{max}	kA		40/40				
Protection level	(MOV)	U_p	kV	< 0,90	< 1,50	< 1,50	< 1,90	< 2,2
	(GDT)			< 2,00				
Follow current	I_f	A_{RMS}		>100				
Response time	t_A	ns		25/100				
Residual current at U_c	I_{PE}	mA		< 1,5				
Thermal protection				YES				
Terminal screw torque		Nm		max. 4,5				
Back-up fuse gL (if mains > 125 A)		A		125				
Short-circuit withstand current (50 Hz)		kA		25/50Hz				
Temperature range		° C		-40 ... +80				
Terminal cross section	solid	mm ²		35				
	stranded			25				
Mounting				35 mm wide mounting rail in accordance with EN 60715				
Degree of protection				IP 20				
Housing material				thermoplastic; extinguishing degree UL 94 V-0				
Dimensions DIN 43880				2TE				
Weight per unit		kg		0,221	0,225	0,225	0,226	0,227

ISPRO C(R) 80 (1 + 1)



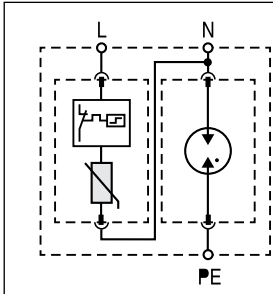
Connections

TT Network (Single-phase)	Dimensions	Weight per unit (kg)
ISPRO C 80/150 (1 + 1)	2TE	0,220
ISPRO C 80/275 (1 + 1)	2TE	0,230
ISPRO C 80/320 (1 + 1)	2TE	0,230
ISPRO C 80/385 (1 + 1)	2TE	0,230
ISPRO C 80/440 (1 + 1)	2TE	0,250
ISPRO CR 80/150 (1 + 1)	2TE	0,230
ISPRO CR 80/275 (1 + 1)	2TE	0,240
ISPRO CR 80/320 (1 + 1)	2TE	0,240
ISPRO CR 80/385 (1 + 1)	2TE	0,240
ISPRO CR 80/440 (1 + 1)	2TE	0,260

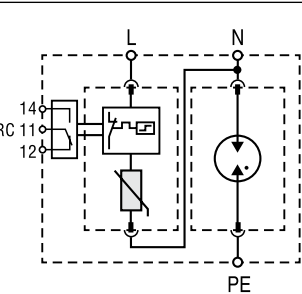


Connection diagram

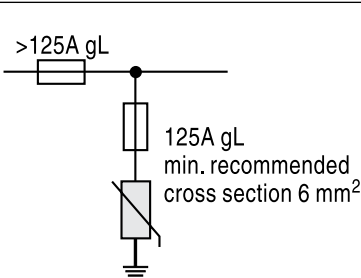
ISPRO C 80/xxx (1 + 1)



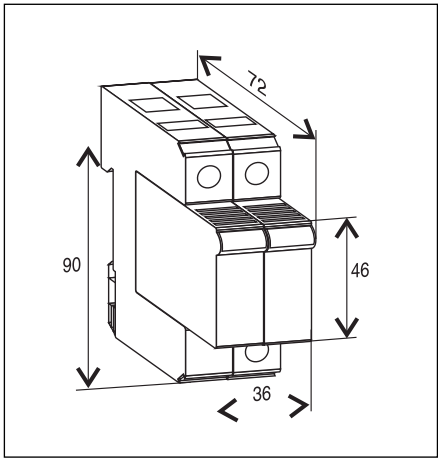
ISPRO CR 80/xxx (1 + 1)



Selection of back-up fuse



Dimensions



Accessory part for ISPRO C(R) 80/xxx (1+1)

Type	Module ISPRO C(R) 40/xxx				
	150	275	320	385	440
Type	Module ISPRO-G C 40/255				





ISPRO C(R) 120 (3 + 0)

The ISPRO C(R) 120 (3+0) series combines a ISPRO C 40 modules to provide protection for TNS three phase networks with separate PE and N conductors.

Category IEC/EN/VDE	Class II/Type 2/C
Location of use	Branch Sub-distribution Boards
Protection modes	L/N-PE, L-PEN, N-PE
Protection element	MOV and GDT
Surge discharge ratings	I_{max} = up to 40kA per pole
Internal protection and safety	Separate thermal disconnecter for each MOV
Status indication	Mechanical flag + remote contacts (R)
Dimensions DIN 43880	1TE, 2TE, 3TE, 4TE



Technical data

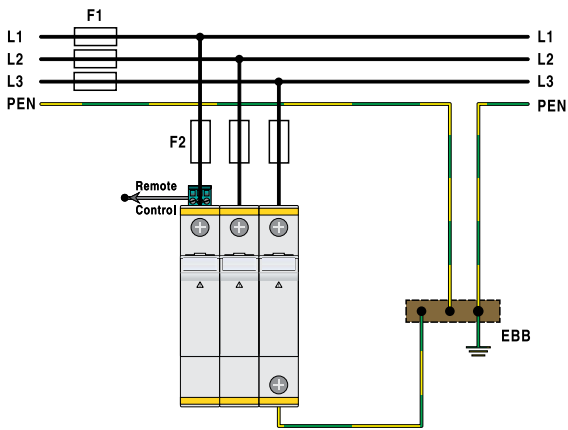
Type			ISPRO C(R) 120/xxx (3+0)				
			150	275	320	385	440
Standards			IEC-61643-1				
Max. continuous operating voltage (AC/DC)	U_c	V	150/200	275/350	320/420	385/500	440/580
Nominal discharge current (8/20)	I_n	kA	20/20				
Max. discharge current (8/20)	I_{max}	kA	40/40				
Protection level (MOV)	U_p	kV	< 0,90	< 1,50	< 1,50	< 1,90	< 2,2
Follow current	I_f	A_{RMS}	NO				
Response time	t_A	ns	25				
Residual current at U_c	I_{PE}	mA	< 1,5				
Thermal protection			YES				
Terminal screw torque		Nm	max. 4,5				
Back-up fuse gL (if mains > 125 A)		A	125				
Short-circuit withstand current (50 Hz)		kA	25/50Hz				
Temperature range		°C	-40 ... +80				
Terminal cross section	solid	mm ²	35				
	stranded		25				
Mounting			35 mm wide mounting rail in accordance with EN 60715				
Degree of protection			IP 20				
Housing material			thermoplastic; extinguishing degree UL 94 V-0				
Dimensions DIN 43880			3TE				
Weight per unit		kg	0,330	0,352	0,352	0,354	0,356

ISPRO C(R) 120 (3 + 0)



Connections

TT Network (Single-phase)	Dimensions	Weight per unit (kg)
ISPRO C 120/150 (3 + 0)	3TE	0,335
ISPRO C 120/275 (3 + 0)	3TE	0,345
ISPRO C 120/320 (3 + 0)	3TE	0,350
ISPRO C 120/385 (3 + 0)	3TE	0,355
ISPRO C 120/440 (3 + 0)	3TE	0,365
ISPRO CR 120/150 (3 + 0)	3TE	0,345
ISPRO CR 120/275 (3 + 0)	3TE	0,355
ISPRO CR 120/320 (3 + 0)	3TE	0,360
ISPRO CR 120/385 (3 + 0)	3TE	0,365
ISPRO CR 120/440 (3 + 0)	3TE	0,375

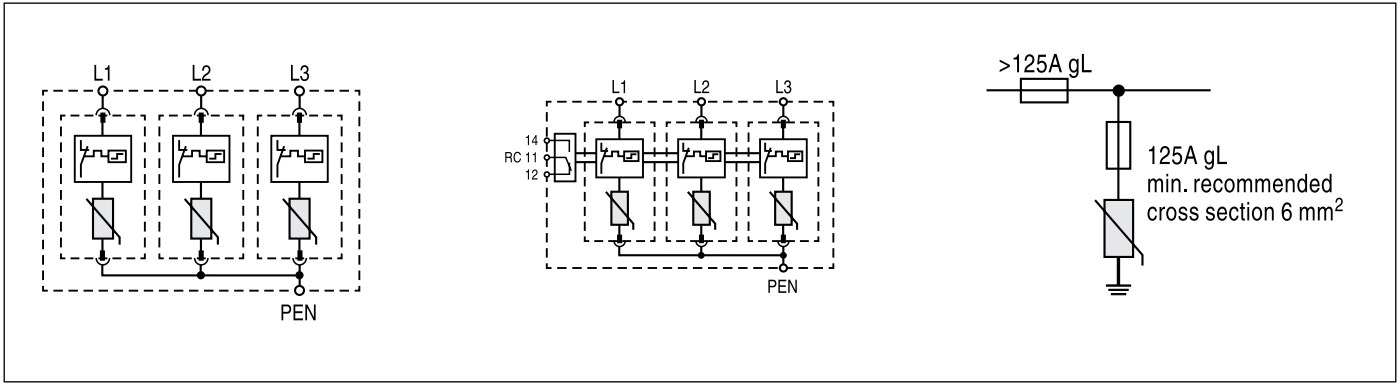


Connection diagram

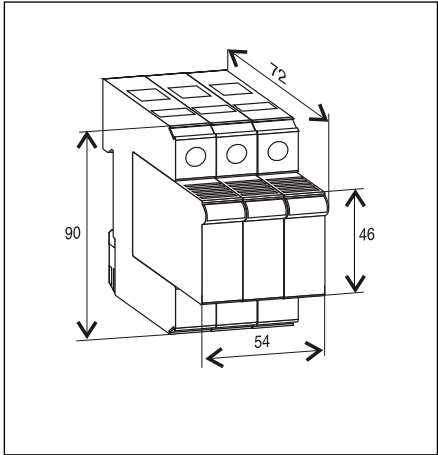
ISPRO C 120/xxx (3 + 0)

ISPRO CR 120/xxx (3 + 0)

Selection of back-up fuse



Dimensions



Accessory part for ISPRO C(R) 40/xxx

Type	Module ISPRO C(R) 40/xxx				
	150	275	320	385	440





ISPRO C(R) 160 (4 + 0)

The ISPRO C(R) 160 (4+0) series combines a ISPRO C 40 modules to provide protection for TNS three phase networks with separate PE and N conductors.

Category IEC/EN/VDE	Class II/Type 2/C
Location of use	Branch Sub-distribution Boards
Protection modes	L/N-PE, L-PEN, N-PE
Protection element	MOV and GDT
Surge discharge ratings	I_{max} = up to 40kA per pole
Internal protection and safety	Separate thermal disconnecter for each MOV
Status indication	Mechanical flag + remote contacts (R)
Dimensions DIN 43880	1TE, 2TE, 3TE, 4TE



Technical data

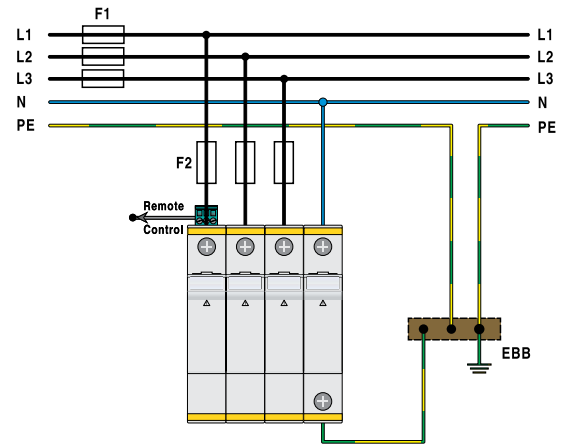
Type			ISPRO C(R) 160/xxx (3+0)				
			150	275	320	385	440
Standards			IEC-61643-1				
Max. continuous operating voltage (AC/DC)	U_c	V	150/200	275/350	320/420	385/500	440/580
Nominal discharge current (8/20)	I_n	kA	20/20				
Max. discharge current (8/20)	I_{max}	kA	40/40				
Protection level (MOV)	U_p	kV	< 0,90	< 1,50	< 1,50	< 1,90	< 2,2
Follow current	I_f	A _{RMS}	NO				
Response time	t_A	ns	25				
Residual current at U_c	I_{PE}	mA	< 1,5				
Thermal protection			YES				
Terminal screw torque		Nm	max. 4,5				
Back-up fuse gL (if mains > 125 A)		A	125				
Short-circuit withstand current (50 Hz)		kA	25/50Hz				
Temperature range		°C	-40 ... +80				
Terminal cross section	solid	mm ²	35				
	stranded		25				
Mounting			35 mm wide mounting rail in accordance with EN 60715				
Degree of protection			IP 20				
Housing material			thermoplastic; extinguishing degree UL 94 V-0				
Dimensions DIN 43880			4TE				
Weight per unit		kg	0,432	0,456	0,456	0,460	0,466

ISPRO C(R) 160 (4 + 0)



Connections

TT Network (Single-phase)	Dimensions	Weight per unit (kg)
ISPRO C 160/150 (4 + 0)	4TE	0,450
ISPRO C 160/275 (4 + 0)	4TE	0,460
ISPRO C 160/320 (4 + 0)	4TE	0,465
ISPRO C 160/385 (4 + 0)	4TE	0,475
ISPRO C 160/440 (4 + 0)	4TE	0,480
ISPRO CR 160/150 (4 + 0)	4TE	0,460
ISPRO CR 160/275 (4 + 0)	4TE	0,470
ISPRO CR 160/320 (4 + 0)	4TE	0,475
ISPRO CR 160/385 (4 + 0)	4TE	0,485
ISPRO CR 160/440 (4 + 0)	4TE	0,490

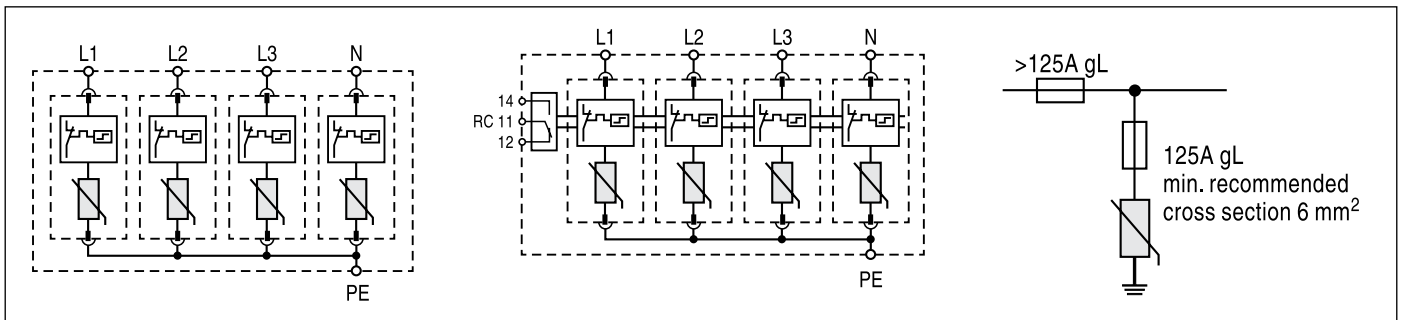


Connection diagram

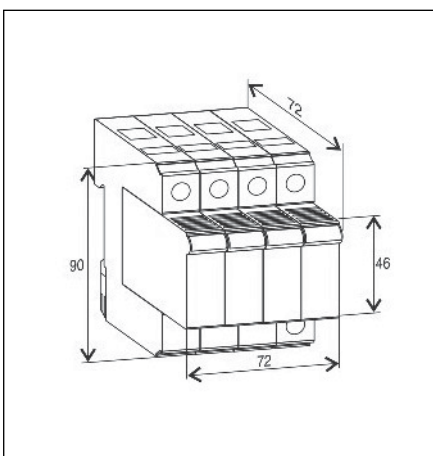
ISPRO C 160/xxx (4 + 0)

ISPRO CR 160/xxx (4 + 0)

Selection of back-up fuse



Dimensions



Accessory part for ISPRO C(R) 160/xxx (4+0)

Type	Module ISPRO C(R) 40/xxx				
	150	275	320	385	440





ISPRO C(R) 160 (3 + 1)

The ISPRO C(R) 160 (4+0) series combines a ISPRO C 40 modules and a ISPRO-G C, to provide protection for TT three phase networks where N to PE galvanic isolation is required.

Category IEC/EN/VDE	Class II/Type 2/C
Location of use	Branch Sub-distribution Boards
Protection modes	L/N-PE, L-PEN, N-PE
Protection element	MOV and GDT
Surge discharge ratings	I_{max} = up to 40kA per pole
Internal protection and safety	Separate thermal disconnecter for each MOV
Status indication	Mechanical flag + remote contacts (R)
Dimensions DIN 43880	1TE, 2TE, 3TE, 4TE



Technical data

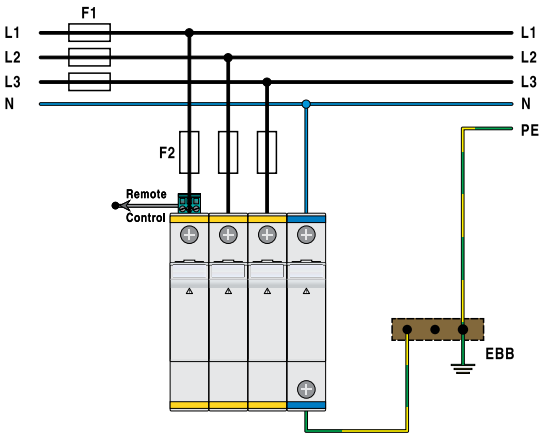
Type				ISPRO C(R) 160/xxx (3+0)				
				150	275	320	385	440
Standards				IEC-61643-1				
Max. continuous operating voltage (AC/DC)	U_c	V		150/200	275/350	320/420	385/500	440/580
Nominal discharge current (8/20)	I_n	kA		20/20				
Max. discharge current (8/20)	I_{max}	kA		40/40				
Protection level	(MOV)	U_p	kV	< 0,90	< 1,50	< 1,50	< 1,90	< 2,2
	(GDT)			< 2,00				
Follow current	I_f	A_{RMS}		NO				
Response time	t_A	ns		25				
Residual current at U_c	I_{PE}	mA		< 1,5				
Thermal protection				YES				
Terminal screw torque		Nm		max. 4,5				
Back-up fuse gL (if mains > 125 A)		A		125				
Short-circuit withstand current (50 Hz)		kA		25/50Hz				
Temperature range		° C		-40 ... +80				
Terminal cross section	solid	mm ²		35				
	stranded			25				
Mounting				35 mm wide mounting rail in accordance with EN 60715				
Degree of protection				IP 20				
Housing material				thermoplastic; extinguishing degree UL 94 V-0				
Dimensions DIN 43880				4TE				
Weight per unit		kg		0,423	0,441	0,441	0,445	0,447

ISPRO C(R) 160 (3 + 1)



Connections

TT Network (Single-phase)	Dimensions	Weight per unit (kg)
ISPRO C 160/150 (3 + 1)	4TE	0,425
ISPRO C 160/275 (3 + 1)	4TE	0,435
ISPRO C 160/320 (3 + 1)	4TE	0,440
ISPRO C 160/385 (3 + 1)	4TE	0,445
ISPRO C 160/440 (3 + 1)	4TE	0,455
ISPRO CR 160/150 (3 + 1)	4TE	0,435
ISPRO CR 160/275 (3 + 1)	4TE	0,445
ISPRO CR 160/320 (3 + 1)	4TE	0,450
ISPRO CR 160/385 (3 + 1)	4TE	0,455
ISPRO CR 160/440 (3 + 1)	4TE	0,465

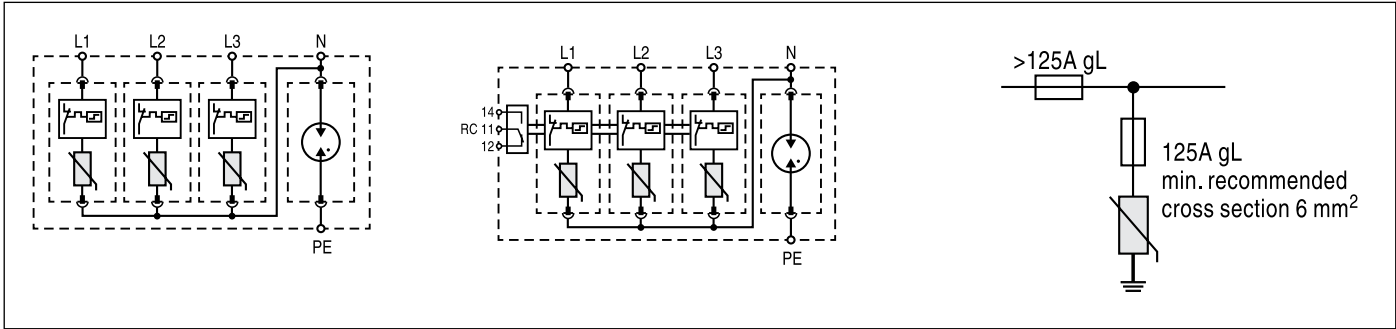


Connection diagram

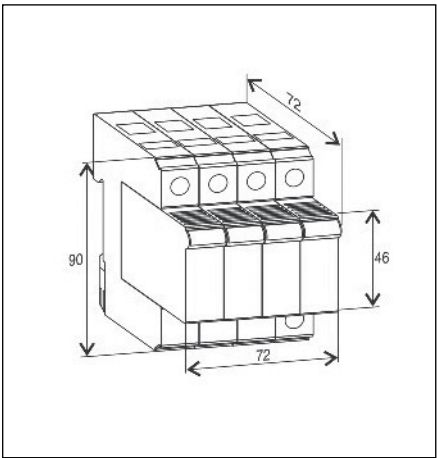
ISPRO C 160/xxx (3 + 1)

ISPRO CR 160/xxx (3 + 1)

Selection of back-up fuse



Dimensions



Accessory part for ISPRO C(R) 160/xxx (3+1)

Type	Module ISPRO C(R) 40/xxx				
	150	275	320	385	440
Type	Module ISPRO-G C 40/255				



T

MULTI-POLE LIGHTNING CURRENT AND SURGE ARRESTERS FOR PHOTOVOLTAIC SYSTEMS

CLASS I / (B+C) AND CLASS II / (C)

COMPACT AND MODULAR HOUSING



PV ISPRO BS(R) 12,5



The PV ISPRO BS(R) 12,5 series of over voltage surge protective devices has been developed to protect against partial direct and indirect lightning discharges and is intended to provide protect photovoltaic system.

The circuit topology consists of two varistor stages each protected by a thermal disconnection device.

Category IEC/EN/VDE	Class I/Type 1/B+C
Location of use	Photovoltaic systems – PV module side
Protection modes	(+)-PE, (-)-PE
Protection element	High Energy MOVs
High surge discharge ratings	$I_{imp} = 12,5$ kA per pole, $I_{max} = 40$ kA per pole
Internal protection and safety	Separate thermal disconnecter for each MOV block
Status indication	Mechanical flag + remote contacts (R)
Housing	Compact design



Technical data

Type			PV ISPRO BS(R) 12,5/xxx	
			550	1000
Standards			IEC-61643-1	
Max. continuous operating voltage (DC)	U_c	V	550	1000
Nominal discharge current (8/20)	I_n	kA	20 per pole	
Max. discharge current (8/20)	I_{max}	kA	40 per pole	
Impulse current (10/350)	I_{imp}	kA	12,5	
Specific energy		kJ/Ω	39	
Charge		As	6,25	
Protection level	U_p	kV	< 2,0	< 2,6
Residual voltage at I_{imp}	U_{res}		< 1,7	< 2,4
Follow current	I_f	A_{RMS}	NO	
Response time	t_A	ns	< 25	
Residual current at U_c	I_{PE}	mA	< 2,5	
Thermal protection			YES	
Terminal screw torque		Nm	max. 4,5	
Back-up fuse gL (if mains > 250 A)		A	250	
Short-circuit withstand current (50 Hz)		kA	25	
Temperature range		° C	-40 ... +80	
Terminal cross section	solid	mm ²	35	
	stranded		25	
Mounting			35 mm wide mounting rail in accordance with EN 60715	
Degree of protection			IP 20	
Housing material			thermoplastic; extinguishing degree UL 94 V-0	
Dimensions DIN 43880			4TE	
Weight per unit		kg	0,370	0,578



PV ISPRO BS(R) 12,5

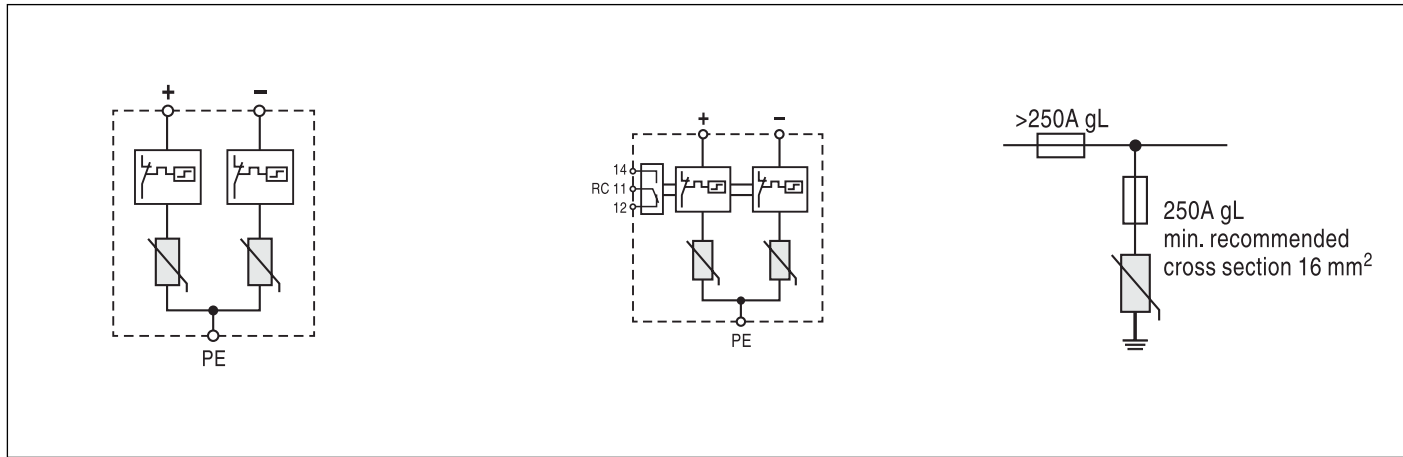
PV ISPRO BSR 12,5 (with remote contacts)				
Remote contacts			YES	
Contact ratings AC	250 V	A	0,5	
	125 V		3	
Terminal cross section		mm ²	max. 1,5	
Remote terminal torque		Nm	0,25	
Weight per unit		kg	0,375	0,583

Connection diagram

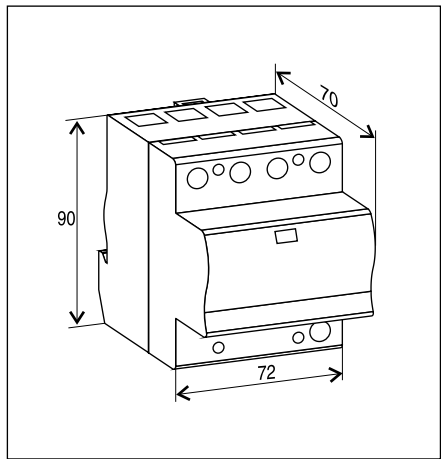
PV ISPRO BS 12,5/xxx

PV ISPRO BSR 12,5/xxx

Selection of back-up fuse



Dimensions



PV ISPRO C(R) 40



The PV ISPRO C(R) 40 series of over voltage surge protective devices has been developed to protect against indirect lightning discharges and is intended to protect photovoltaic system.

The circuit topology consists of two(three) varistor stages each protected by a thermal disconnection device.

Category IEC/EN/VDE	Class II/Type 2/C
Location of use	Branch sub-distribution boards
Protection modes	(+)-PE, (-)-PE
Protection element	High Energy MOVs
High surge discharge ratings	$I_n = 20 \text{ kA}$, $I_{max} = 40 \text{ kA}$
Internal protection and safety	Thermal disconnector
Status indication	Mechanical flag + remote contacts (R)
Housing	Compact design



Technical data

Type			PV ISPRO C(R) 40/xxx	
			550	1000
Standards			IEC-61643-1	
Max. continuous operating voltage (DC)	U_c	V	550	1000
Nominal discharge current (8/20)	I_n	kA	20 per pole	
Max. discharge current (8/20)	I_{max}	kA	40 per pole	
Protection level	U_p	kV	< 2,1	< 4,0
Follow current	I_f	A_{RMS}	NO	
Response time	t_A	ns	< 25	
Residual current at U_c	I_{PE}	mA	< 1,5	
Thermal protection			YES	
Terminal screw torque		Nm	max. 4,5	
Back-up fuse gL (if mains > 125 A)		A	125	
Short-circuit withstand current (50 Hz)		kA	25	
Temperature range		°C	-40 ... +80	
Terminal cross section	solid	mm ²	35	
	stranded		25	
Mounting			35 mm wide mounting rail in accordance with EN 60715	
Degree of protection			IP 20	
Housing material			thermoplastic; extinguishing degree UL 94 V-0	
Dimensions DIN 43880			2TE	3TE
Weight per unit		kg	0,307	0,403



PV ISPRO C(R) 40

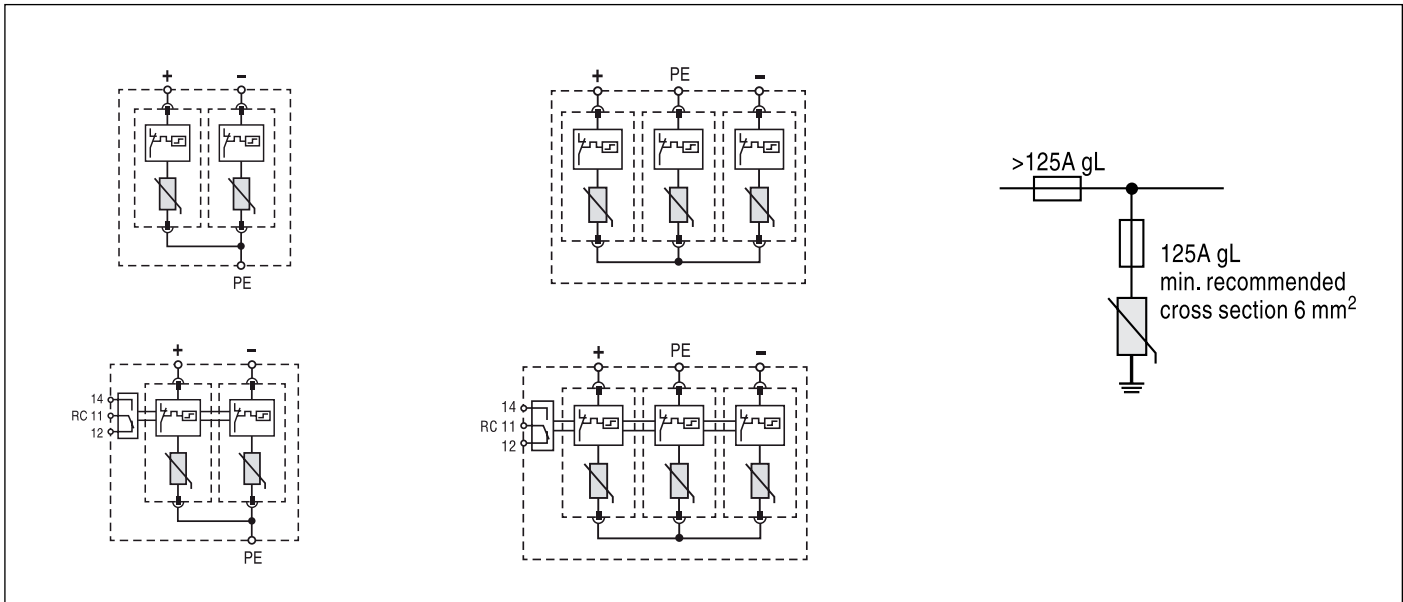
PV ISPRO CR 40 (with remote contacts)				
Remote contacts			YES	
Contact ratings AC	250 V	A	0,5	
	125 V		3	
Terminal cross section		mm ²	max. 1,5	
Remote terminal torque		Nm	0,25	
Weight per unit		kg	0,307	0,403

Connection diagram

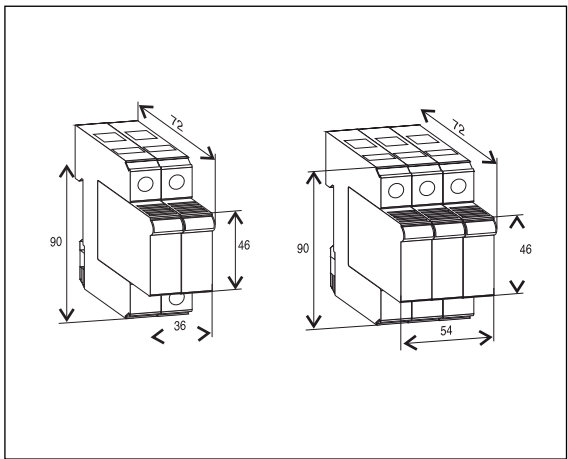
PV ISPRO C 40/500

PV ISPRO CR 40/100

Selection of back-up fuse



Dimensions



Accessory part for PV-ISPRO C(R) 40/xxx (4+0)

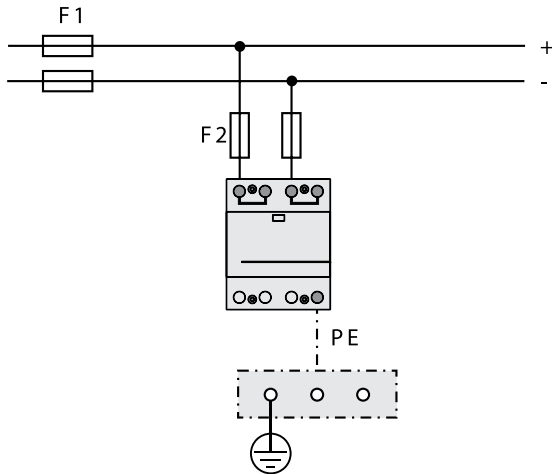
Type	Module ISPRO C(R) 40/xxx				
	150	275	320	385	440



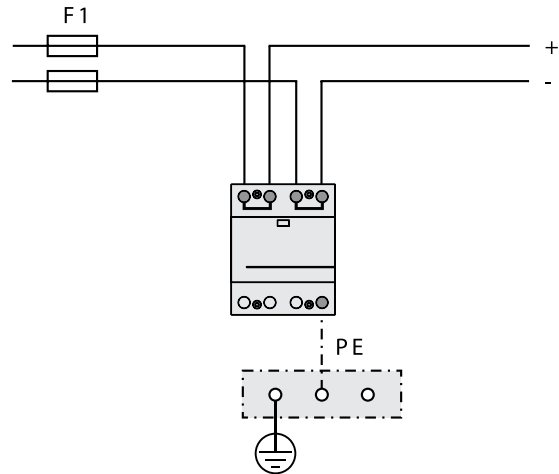
PHOTOVOLTAIC SYSTEMS CONNECTIONS



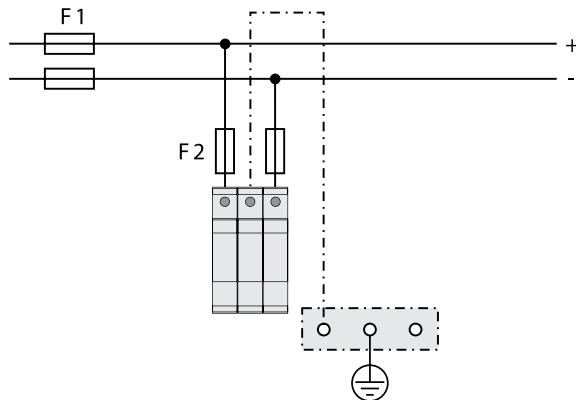
Parallel wiring



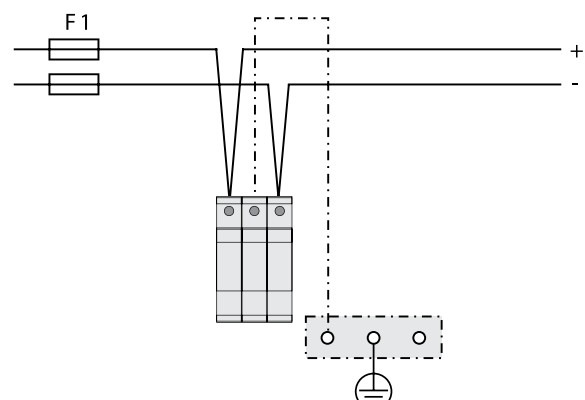
Serial (V-type) wiring



Parallel wiring



Serial (V-type) wiring





SINGLE AND MULTI-POLE SURGE ARRESTERS

CLASS III / (D)

$U_{oc} / I_{sc} = 10 \text{ kV} / 5 \text{ kA}$ per pole (1.2/50, 8/20)

MODULAR HOUSING



ISPRO D(R) 10



The ISPRO D series of overvoltage surge protective devices has been developed to protect against indirect lightning discharges and induced voltages. It is intended to provide protection in zones 2 - 3 as per IEC 62305.

The plug-in module / base design facilitate replacement of a failed module without the need to remove system wiring etc.

ISPRO D consists of a high performance varistor block with thermal disconnection device.

Category IEC/EN/VDE	Class III/Type 3/D
Location of use	Branch sub-distribution boards
Protection modes	L/N -PE
Protective element	MOV
Surge discharge ratings	$U_{oc} / I_{sc} = 10\text{kV}/5\text{kA}$
Housing	Modular design



Technical data

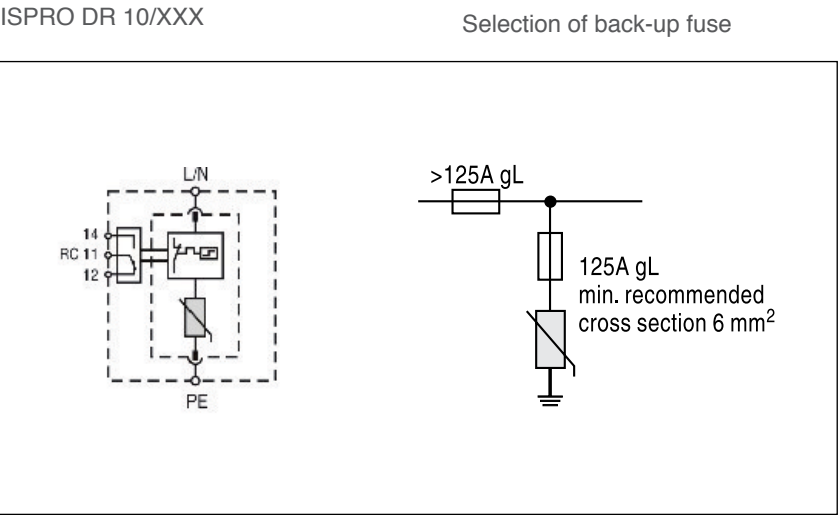
Type			ISPRO D(R) 10/xxx				
			150	275	320	385	440
Standards			IEC-61643-1				
Max. continuous operating voltage (AC/DC)	U_c	V	150/200	275/350	320/420	385/500	440/580
Combination wave (1.2/50, 8/20)	I_n	kA	10kV/5kA				
Max. discharge current (8/20)	I_{max}	kA	10kA				
Protection level at U_{oc} / I_{sc}	U_p	kV	< 0.8	< 1.2	< 1.2	< 1.6	< 2.0
Follow current	I_t	A_{RMS}	NO				
Response time	t_A	ns	< 25				
Residual current at U_c	I_{PE}	mA	< 1,5				
Thermal protection			YES				
Terminal screw torque		Nm	max. 4.5				
Back-up fuse gL (if mains > 125 A)		A	125gL				
Short-circuit withstand current		kA	10kA/50Hz				
Temperature range		° C	-40 ... +80				
Terminal cross section	solid	mm ²	35				
	stranded		25				
Mounting EN 60715			35 mm top-hat rail				
Degree of protection			IP 20				
Housing material			thermoplastic; extinguishing degree UL 94 V-0				
Dimensions DIN 43880			1TE				
Weight per unit		kg	0,124	0,130	0,130	0,131	0,132



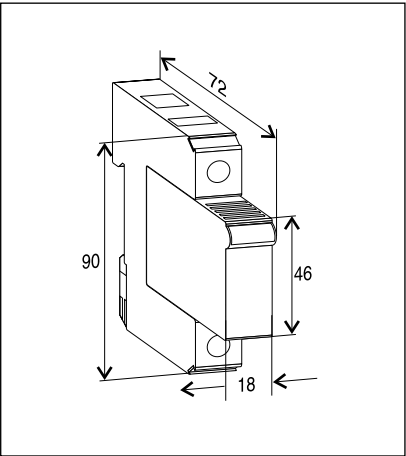
ISPRO D(R) 10

ISPRO DR 10/xxx (with remote contacts)						
Remote contacts				YES		
Contact ratings	250 V		A	0,5		
	125 V			3		
Terminal cross section			mm²	max. 1.5		
Remote terminal torque			Nm	0.25Nm		
Weight per unit			kg	0,129	0,135	0,135
Packing dimensions (single unit)				0,136	0,137	
				108 x 74 x 24		

Connection diagram



Dimensions



Accessory part for ISPRO D(R) 10/xxx

Type	Module ISPRO D(R) 10/xxx				
	150	275	320	385	440



ISPRO DM(R) (2+0)



The ISPRO DM series of overvoltage surge protective devices has been developed to protect against indirect lightning discharges and induced voltages. It is intended to provide protection in zones 2 - 3 as per IEC 62305.

The plug-in module / base design facilitate replacement of a failed module without the need to remove system wiring etc.

ISPRO DM consists of two performance varistor blocks with thermal disconnection devices configured to provide multi-pole protection to L-PE and N-PE in one enclosure.

Category IEC/EN/VE	Class III/Type 3/D
Location of use	Branch sub-distribution boards
Protection modes	L/N -PE
Protective element	MOV
Surge discharge ratings	$U_{oc} / I_{sc} = 10kV/5kA/pole$
Housing	Modular design



Technical data

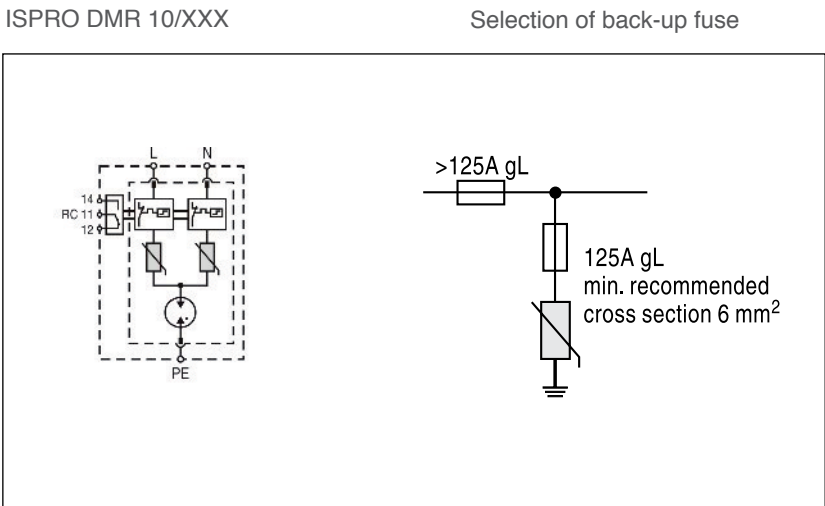
Type			ISPRO DM(R) 10/xxx(2+0)				
			150	275	320	385	440
Standards			IEC-61643-1				
Max. continuous operating voltage (AC/DC)	U_c	V	150/200	275/350	320/420	385/500	440/580
Combination wave (1.2/50, 8/20))	I_n	kA	10kV/5kA per pole				
Max. discharge current (8/20)	I_{max}	kA	10kA per pole				
Protection level at I_n	U_p	kV	< 0.8	< 1.2	< 1.2	< 1.6	< 2.0
Follow current	I_f	A_{RMS}	NO				
Response time	t_A	ns	< 25				
Residual current at U_c	I_{PE}	mA	< 1.5				
Thermal protection			YES				
Terminal screw torque	Upper terminals	Nm	max.2				
	Lower terminals		max. 3.5				
Back-up fuse gL (if mains > 63 A)		A	63A gL				
Short-circuit withstand current		kA	10kA/50Hz				
Temperature range		° C	-40 ... +80				
Terminal cross section	Upper terminals	mm ²	35				
	Lower terminal		25				
Mounting EN 60715			35 mm top-hat rail				
Degree of protection			IP 20				
Housing material			thermoplastic; extinguishing degree UL 94 V-0				
Dimensions DIN 43880			1TE				
Weight per unit		kg	0,136	0,140	0,150	0,153	0,155



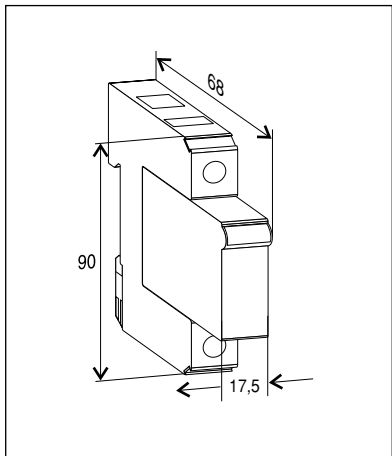
ISPRO DM(R) (2+0)

ISPRO DR 10/xxx (with remote contacts)								
Remote contacts				YES				
Contact ratings	250 V		A	0,5				
	125 V			3				
Terminal cross section			mm²	max. 1.5				
Remote terminal torque			Nm	0.25Nm				
Weight per unit			kg	0,141	0,145	0,155	0,158	0,160

Connection diagram



Dimensions



Accessory part for ISPRO DM (R) 10/xxx (2+0)

Type	Module ISPRO DM(R) 10/xxx (2+0)				
	150	275	320	385	440



ISPRO DMG(R) (2+0)



The PROTEC DMG series of overvoltage surge protective devices has been developed to protect against indirect lightning discharges and induced voltages. It is intended to provide protection in zones 2 - 3 as per IEC 62305. The plug-in module / base design facilitate replacement of a failed module without the need to remove system wiring etc. ISPRO DMG consists of two performance varistor blocks with thermal disconnection devices and galvanic isolation N to PE for TT single phase networks.

Category IEC/EN/VDE	Class III/Type 3/D
Location of use	Branch sub-distribution boards
Protection modes	L/N -PE
Protective element	MOV and GDT
Surge discharge ratings	$U_{oc} / I_{sc} = 10kV/5kA/pole$
Housing	Modular design



Technical data

Type			ISPRO DMG(R) (2+0)
			320
Standards			IEC-61643-1
Max. continuous operating voltage (AC/DC)	U_c	V	320/420
Combination wave (1.2/50, 8/20))	I_n	kA	10kV/5kA per pole
Max. discharge current (8/20)	I_{max}	kA	10kA per pole
Protection level at I_n	U_p	kV	< 1.0
Follow current	I_t	A_{RMS}	NO
Response time	t_A	ns	100
Residual current at U_c	I_{PE}	mA	/
Thermal protection			YES
Terminal screw torque	Upper terminals	Nm	max.2
	Lower terminals		max. 3.5
Back-up fuse gL (if mains > 63 A)		A	63A gL
Short-circuit withstand current		kA	10kA/50Hz
Temperature range		° C	-40 ... +80
Terminal cross section	Upper terminals	mm ²	6mm ² (solid) / 4mm ² (stranded)
	Lower terminal		35mm ² (solid) / 25mm ² (stranded)
Mounting EN 60715			35 mm wide mounting rail in accordance with EN 60715
Degree of protection			IP 20
Housing material			thermoplastic; extinguishing degree UL 94 V-0
Dimensions DIN 43880			1TE
Weight per unit		kg	0,118



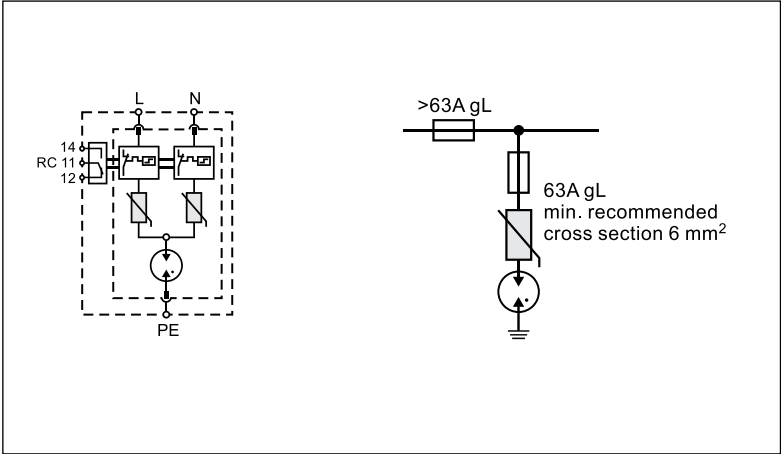
ISPRO DMG(R) (2+0)

ISPRO DMGR 10/xxx (with remote contacts)			
Remote contacts			YES
Contact ratings	250 V	A	0,5
	125 V		3
Terminal cross section		mm²	max. 1.5
Remote terminal torque		Nm	0.25
Weight per unit		kg	0,123

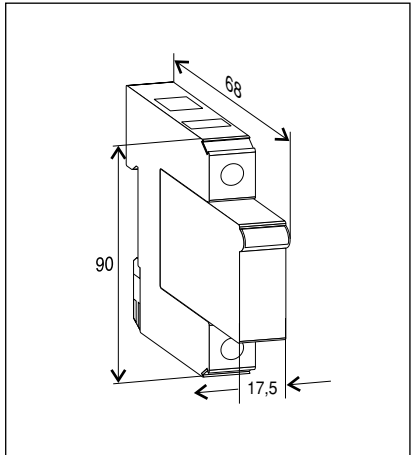
Connection diagram

ISPROT DMGR 20

Selection of back-up fuse



Dimensions



Accessory part for ISPRO DMG(R) (2+0)

Type	Module ISPRO DMG(R) 10/xxx (2+0)
	320



SURGE ARRESTERS FOR OVERHEAD POWER LINES

CLASS II / (A)

I_{MAX} : up to 40kA (8/20)

COMPACT HOUSING





ISPRO AQ 40

The ISPRO AQ 40 series of over voltage surge protective devices has been developed to protect against indirect lightning discharges on overhead power lines.

It consists of a high performance varistor block protected by a thermal disconnection device.

Category IEC/EN/VDE	Class II/Type 2/A
Location of use	Overhead power lines
Protection modes	L/N-PE
Protection element	MOV
High surge discharge ratings	$I_{\max} = 40 \text{ kA}$
Internal protection and safety	Thermal disconnector
Status indication	Compact design
Housing	Compact design



Technical data

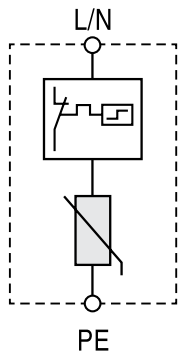
Type			ISPRO AQ 40/xxx				
			150	275	320	385	440
Standards			IEC-61643-11				
Max. continuous operating voltage (AC/DC)	U_c	V	150/200	275/350	320/420	385/500	440/580
Normal Discharge Current (0/20)	I_n	kA	20				
Max. discharge current (8/20)	$I_{\max}$	kA	40				
Impulse current (10/350)	I_{imp}	kA	/				
Specific energy		kJ/Ω	/				
Charge		As	/				
Protection level at U_{oc}/I_{sc}	U_p	kV	< 1,2	< 1,7	< 1,8	< 2,1	< 2,3
Follow current	I_f	A _{RMS}	NO				
Response time	t_A	ns	< 25				
Residual current at U_c	I_{PE}	mA	< 2				
Thermal protection			YES				
Terminal screw torque		Nm	max. 3,5				
Back-up fuse gL		A	NO				
Temperature range		° C	-40 ... +80				
Terminal cross section	L/N		M8				
	PE	mm ²	6 (stranded)				
Mounting			outdoors				
Housing material			thermoplastic; extinguishing degree UL 94 V-0				
Dimensions DIN 43880			/				
Weight per unit		kg	0,144	0,146	0,149	0,154	0,157

ISPRO AQ 40

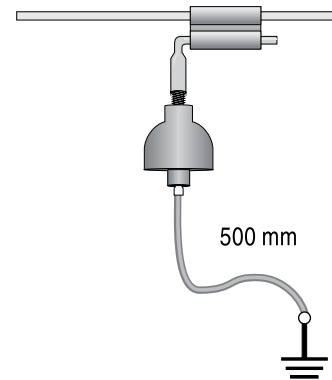


Connection diagram

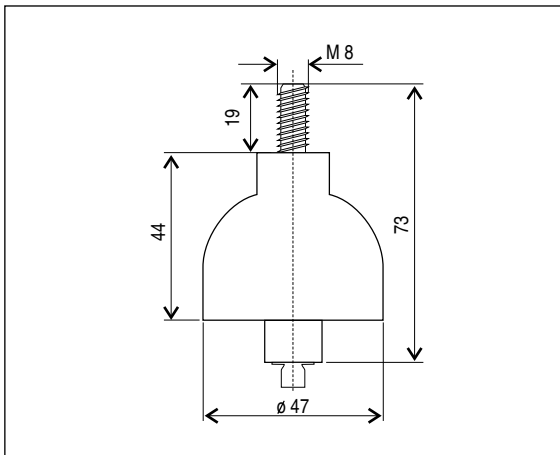
ISPRO AQ 40/xxx



Mounting



Dimensions





SINGLE-POLE AND MULTI-POLE LIGHTING AND SURGE ARRESTERS FOR WIND GENERATION SYSTEM

CLASS II / (B+C)

$I_{IMP} = 25 \text{ kA}$ per pole, $I_{MAX} = 40 \text{ kA}$ per pole

COMPACT AND MODULAR DESIGN



WT ISPRO BS(R) 25



The WT ISPRO series has been developed to meet the growing needs of wind generation facilities where exposure to direct and indirect lightning discharges is well known problem, primarily due to the often exposed location of such facilities e.g. on hill tops and open land topography.

Category IEC/EN/VDE	Class II/Type 1,2/B+C
Location of use	Man distribution boards
Protection modes	L/N -PE
Protective elements	High Energy MOV
High surge discharge ratings	$I_{imp}=25kA$
Internal protection and safety	Compact design



Technical data

Type			WT ISPRO BS(R) 25/690
Standards			IEC-61643-1
Max. continuous operating voltage (AC/DC)	U_c	V	690/900
Nominal discharge current (8/20)	I_n	kA	40
Max. discharge current (8/20)	I_{max}	kA	80
Impulse current (10/350)	I_{imp}	kA	25
Specific energy		kJ/Ω	156
Charge		As	12.5
Protection level	U_p	kV	< 2.5
Residual voltage at I_{imp}	U_{res}	kV	< 2.0
Follow current	I_f	A_{RMS}	NO
Response time	t_A	ns	< 25
Residual current at U_c	I_{PE}	mA	< 3.5
Thermal protection			YES
Terminal screw torque		Nm	max. 4.5
Back-up fuse gL (if mains > 250 A)		A	250A gL
Short-circuit withstand current		kA	25kA/50Hz
Temperature range		° C	-40 ... +80
Terminal cross section	Solid	mm ²	35mm ²
	Stranded		25mm ²
Mounting EN 60715			35 mm top-hat rail
Degree of protection			IP 20
Housing material			thermoplastic; extinguishing degree UL 94 V-0
Dimensions DIN 43880			4TE
Weight per unit		kg	0,494



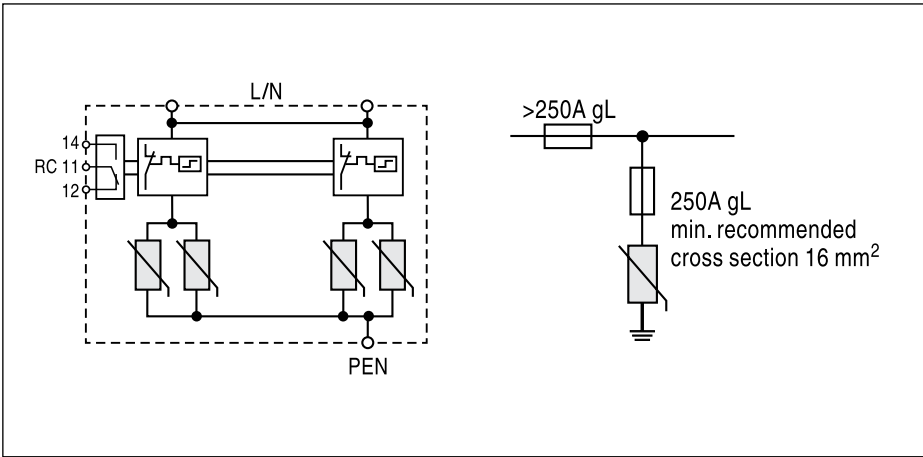
WT ISPRO BS(R) 25

ISPRO DMGR 10/xxx (with remote contacts)			
Remote contacts			YES
Contact ratings	250 V	A	0,5
	125 V		3
Terminal cross section		mm²	max. 1.5
Remote terminal torque		Nm	0.25
Weight per unit		kg	0,499

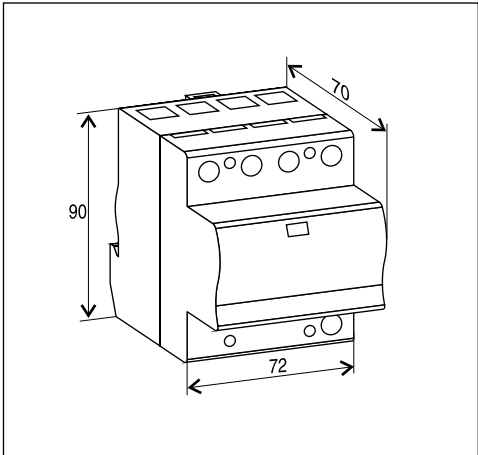
Connection diagram

WT ISPRO BSR 25/690

Selection of back-up fuse



Dimensions



WT ISPRO BS(R) 12.5



The WT ISPRO series has been developed to meet the growing needs of wind generation facilities where exposure to direct and indirect lightning discharges is well known problem, primarily due to the often exposed location of such facilities e.g. on hill tops and open land topography.

Category IEC/EN/VDE	Class II/Type 1,2/B+C
Location of use	Man distribution boards
Protection modes	L/N -PE
Protective elements	High Energy MOV
High surge discharge ratings	$I_{imp}=25kA$ per pole
Internal protection and safety	Compact design



Technical data

Type				WT ISPRO BS(R) 12.5/690
Standards				IEC-61643-1
Max. continuous operating voltage (AC/DC)	U_c	V		690/900
Nominal discharge current (8/20)	I_n	kA		20
Max. discharge current (8/20)	I_{max}	kA		40
Impulse current (10/350)	I_{imp}	kA		12.5
Specific energy		kJ/Ω		39
Charge		As		6.25
Protection level	U_p	kV		< 2.5
Residual voltage at I_{imp}	U_{res}	kV		< 2.0
Follow current	I_f	A_{RMS}		NO
Response time	t_A	ns		< 25
Residual current at U_c	I_{PE}	mA		< 2.5
Thermal protection				YES
Terminal screw torque		Nm		max. 4.5
Back-up fuse gL (if mains > 250 A)		A		250A gL
Short-circuit withstand current		kA		25kA/50Hz
Temperature range		°C		-40 ... +80
Terminal cross section	Solid	mm^2		35mm ²
	Stranded			25mm ²
Mounting EN 60715				35 mm top-hat rail
Degree of protection				IP 20
Housing material				thermoplastic; extinguishing degree UL 94 V-0
Dimensions DIN 43880				3TE
Weight per unit		kg		0,319



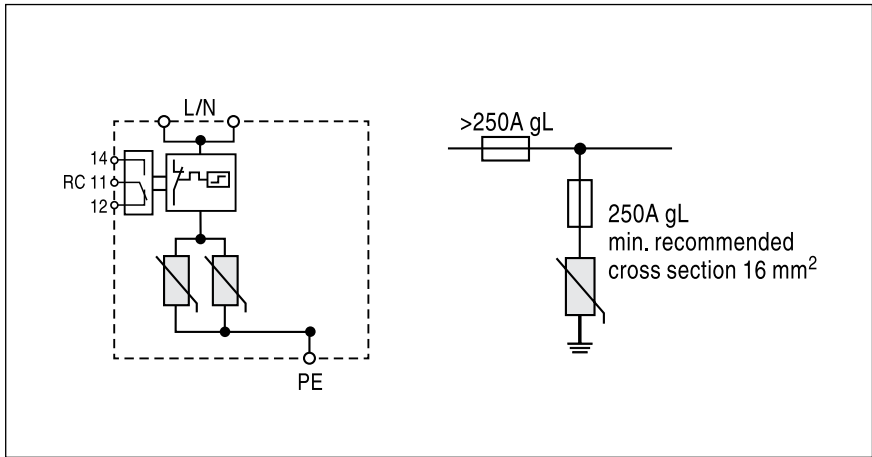
WT ISPRO BS(R) 12.5

ISPRO BSR 12.5 (with remote contacts)			
Remote contacts			YES
Contact ratings	250 V	A	0,5
	125 V		3
Terminal cross section		mm²	max. 1.5
Remote terminal torque		Nm	0.25
Weight per unit		kg	0,324

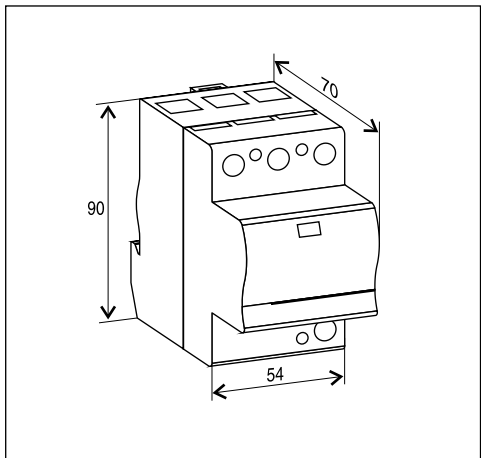
Connection diagram

WT ISPRO BSR 12.5/690

Selection of back-up fuse



Dimensions



WT ISPRO C(R) 40



The WT ISPRO series has been developed to meet the growing needs of wind generation facilities where exposure to direct and indirect lightning discharges is well known problem, primarily due to the often exposed location of such facilities e.g. on hill tops and open land topography.

Category IEC/EN/VDE	Class II/Type 2/C
Location of use	Branch sub-distribution boards
Protection modes	L/N -PE, L-PEN
Protective elements	MOV
High surge discharge ratings	$I_{imp}=40\text{kA}$ per pole
Internal protection and safety	Modular design



Technical data

Type				WT ISPRO C(R) 40/690
Standards				IEC-61643-1
Max. continuous operating voltage (AC/DC)	U_c	V		690/900
Nominal discharge current (8/20)	I_n	kA		20
Max. discharge current (8/20)	I_{max}	kA		40
Protection level	U_p	kV		< 3.0
Follow current	I_f			NO
Response time	t_A	ns		< 25
Residual current at U_c	I_{PE}	mA		< 1.5
Thermal protection				YES
Terminal screw torque		Nm		max. 4.5
Back-up fuse gL (if mains > 125 A)		A		125A gL
Short-circuit withstand current		kA		25kA/50Hz
Temperature range		°C		-40 ... +80
Terminal cross section	Solid	mm ²		35mm ²
	Stranded			25mm ²
Mounting EN 60715				35 mm top-hat rail
Degree of protection				IP 20
Housing material				thermoplastic; extinguishing degree UL 94 V-0
Dimensions DIN 43880				1TE
Weight per unit		g		142



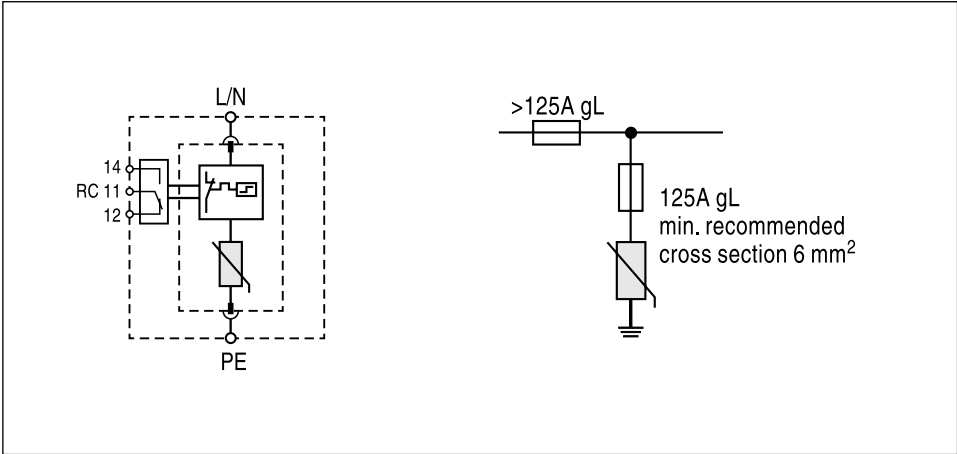
WT ISPRO C(R) 40

WT ISPRO CR 40 (with remote contacts)			
Remote contacts			YES
Contact ratings	250 V	A	0,5
	125 V		3
Terminal cross section		mm²	max. 1.5
Remote terminal torque		Nm	0.25
Weight per unit		kg	0,147

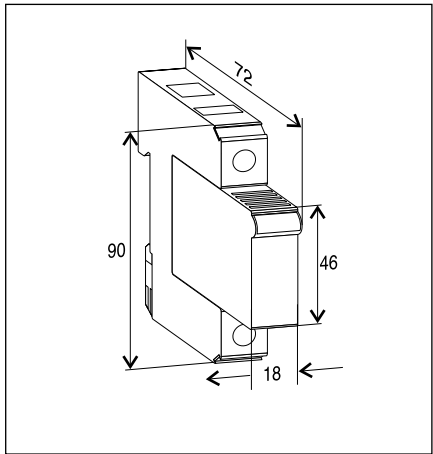
Connection diagram

WT ISPRO CR 40/690

Selection of back-up fuse



Dimensions



Accessory part for WT ISPRO C(R) 40

Type	Module WT ISPRO C(R) 40/xxx
	690



WT ISPRO C(R) 120 (3+0)



The WT ISPRO series has been developed to meet the growing needs of wind generation facilities where exposure to direct and indirect lightning discharges is well known problem, primarily due to the often exposed location of such facilities e.g. on hill tops and open land topography.

Category IEC/EN/VE	Class II/Type 2/C
Location of use	Branch sub-distribution boards
Protection modes	L/N -PE, L-PEN
Protective elements	MOV
High surge discharge ratings	$I_{imp}=40\text{kA}$ per pole
Internal protection and safety	Modular design



Technical data

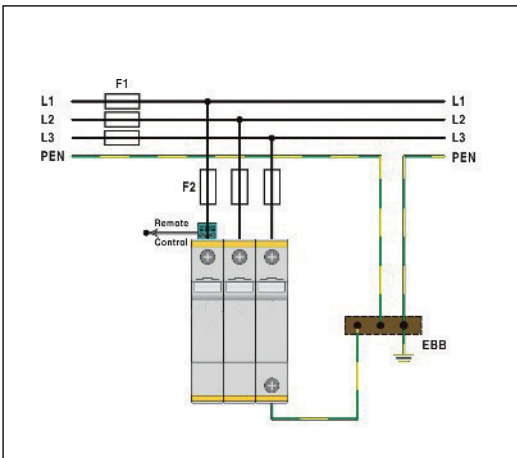
Type			WT ISPRO C(R) 120/690 (3+0)
Standards			IEC-61643-1
Max. continuous operating voltage (AC/DC)	U_c	V	690/900
Nominal discharge current (8/20)	I_n	kA	20 per pole
Max. discharge current (8/20)	I_{max}	kA	40 per pole
Protection level	U_p	kV	< 3.0
Follow current	I_f		NO
Response time	t_A	ns	< 25
Residual current at U_c	I_{PE}	mA	< 1.5
Thermal protection			YES
Terminal screw torque		Nm	max. 4.5
Back-up fuse gL (if mains > 125 A)		A	125A gL
Short-circuit withstand current		kA	25kA/50Hz
Temperature range		°C	-40 ... +80
Terminal cross section	Solid	mm ²	35mm ²
	Stranded		25mm ²
Mounting EN 60715			35 mm top-hat rail
Degree of protection			IP 20
Housing material			thermoplastic; extinguishing degree UL 94 V-0
Dimensions DIN 43880			3TE
Weight per unit		kg	0,364



WT ISPRO C(R) 120 (3+0)

WT ISPRO C(R) 120 (with remote contacts)			
Remote contacts			YES
Contact ratings	250 V	A	0,5
	125 V		3
Terminal cross section		mm²	max. 1.5
Remote terminal torque		Nm	0.25
Weight per unit		kg	0,369

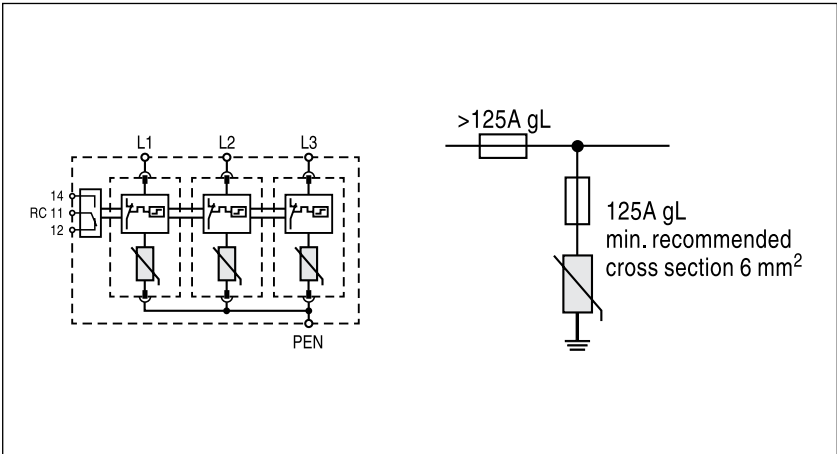
TN-C Network (Three-Phase)



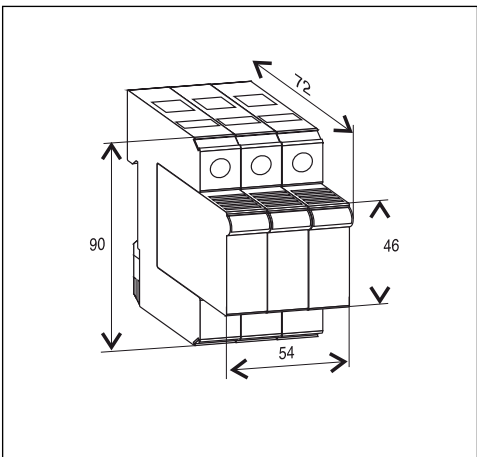
Connection diagram

WT ISPRO CR 120/690 (3+0)

Selection of back-up fuse



Dimensions



Accessory part for WT ISPRO C(R) 40/690

Type	Module WT ISPRO C(R) 40/xxx
	690



NOTES



Iskra MIS, d. d.
Ljubljanska c. 24a
SI-4000 Kranj, Slovenia

Tel.: +386 4 237 21 12
Fax: +386 4 237 21 29

E-mail: info@iskra-mis.si
www.iskra-mis.si