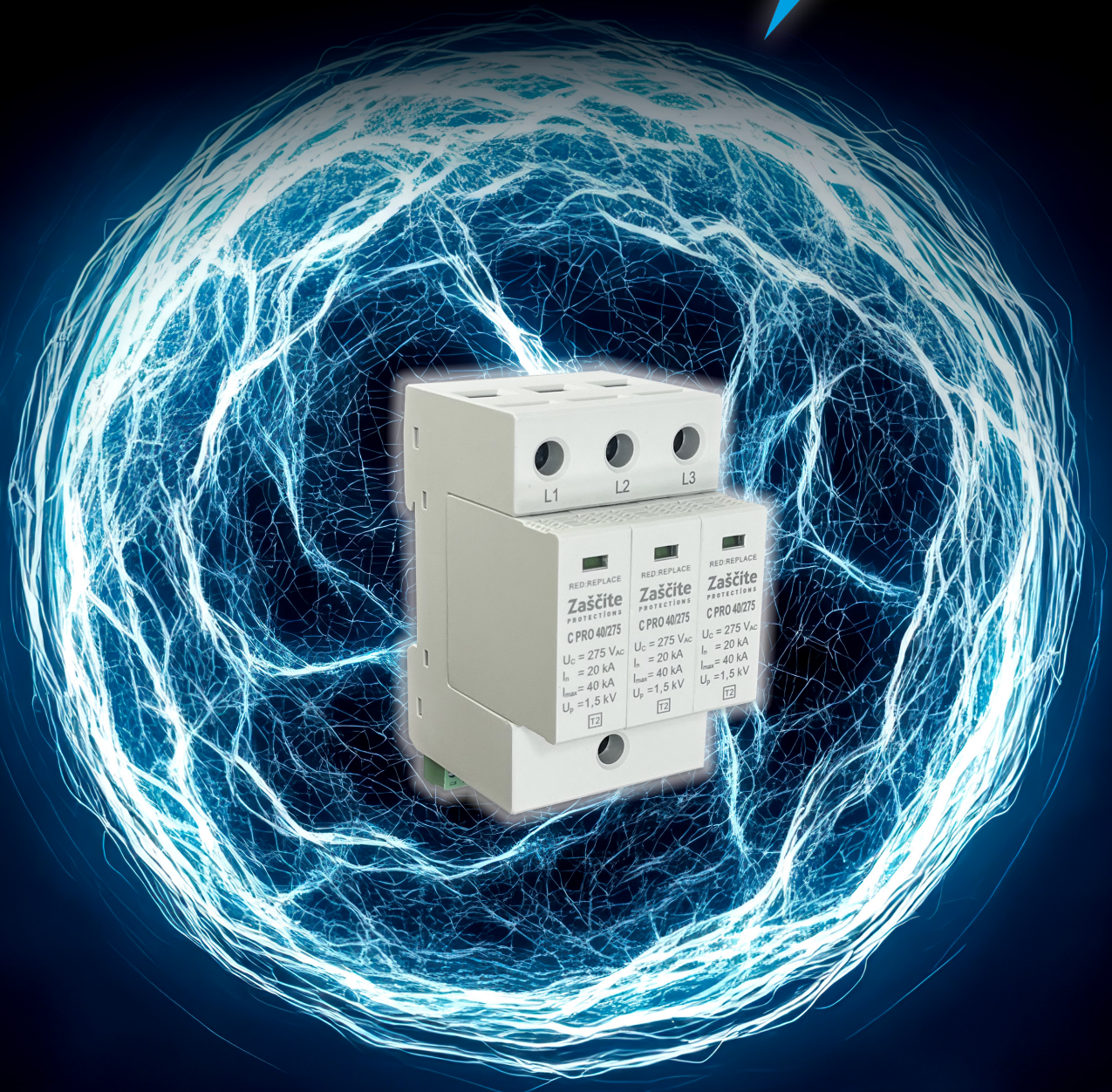
Zaščite

PROTECTIONS



LOW VOLTAGE SURGE PROTECTION SOLUTIONS

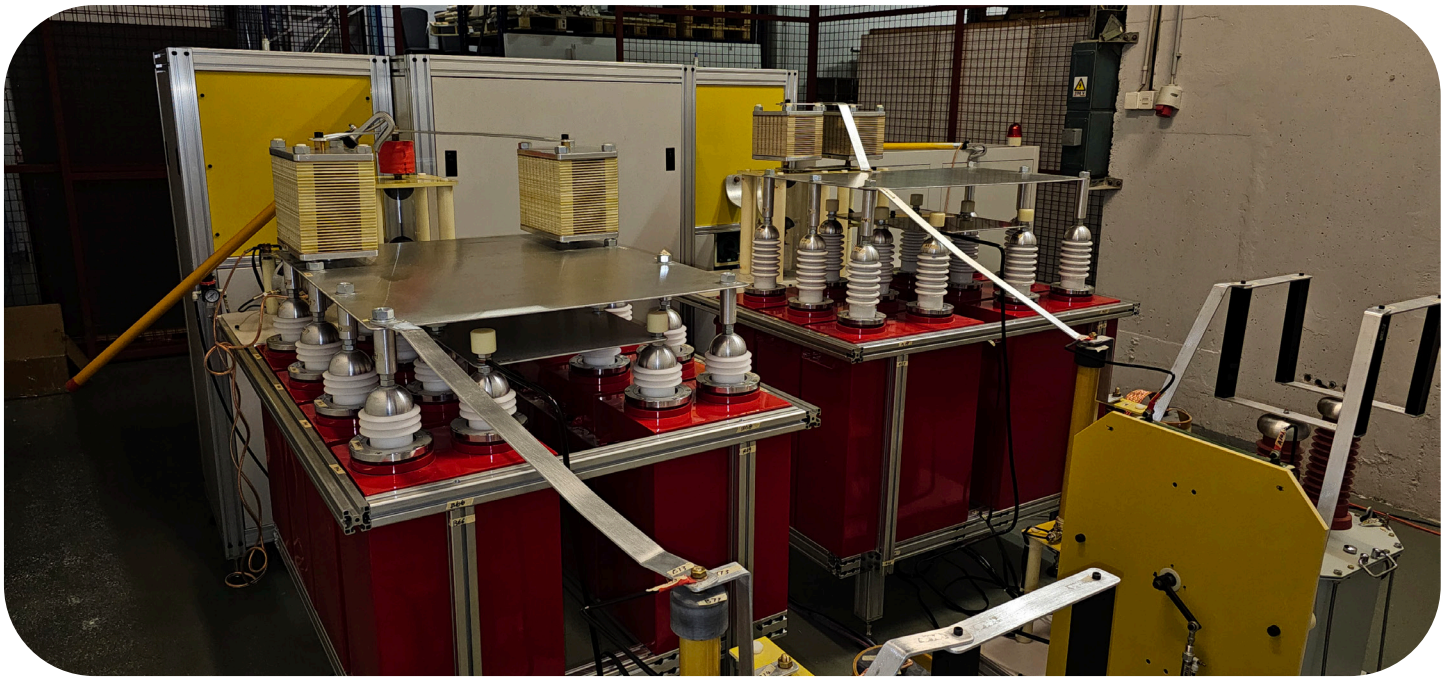
About the brand

Brand ZAŠČITE was founded in 2017 with the aim of development, production, sales and offering comprehensive solutions in the field of surge protection.
The first steps date back to 2017 with our own development of a surge protection device for use on external LV distribution lines, A PRO (type 2 SPD) and continues to this day with the development of DIN rail surge protection devices B-PRO (type 1 SPD) and
C PRO (type 2 SPD) for use in distribution and sub-distribution boards.
The company is also engaged in the production of special distribution boxes for various purposes, such as AC boxes, renewable energy sources, car charging stations and telecommunication boxes.
Important event in the company's history was the purchase of a generator for simulating direct and indirect lightning strikes at the beginning of 2023.
Currently, we can simulate partial direct lightning strikes up to 25 kA (10/350) and indirect lightning strikes up to 80 kA (8/20).

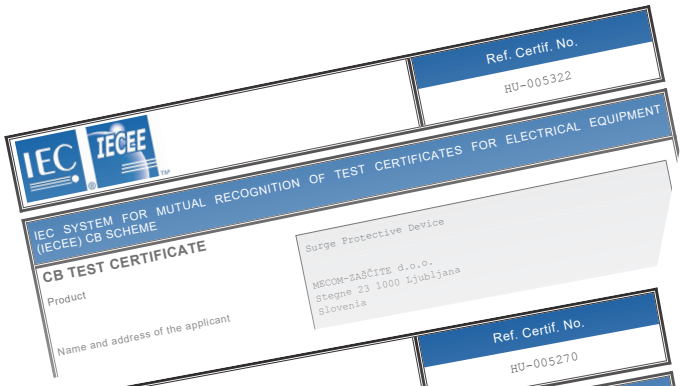
Our vision
With the development of our new product group,we would like to increase our presency on the regional markets and strenght the level of cooperation with end customers.
The company's goal is to strengthen cooperation and integrate our test equipment with local institutes working in the field of surge protection.


8/20 80KA & 10/350 30KA IMPULSE CURRENT GENERATOR
XI'AN HONGDUO ELECTRONIC TECHNOLOGY CO.,LTD
8/20
DECOUPLING NETWORK
10/350
XI'AN HONGDUO ELECTRONIC TECHNOLOGY CO.,LTD.





Test center



IEC SYSTEM FOR MUTUAL RECOGNITION OF TEST CERTIFICATES FOR ELECTRICAL EQUIPMENT (IECEE) CB SCHEME

Ref. Certif. No.
HU-005322

CB TEST CERTIFICATE

Product
Surge Protective Device

Name and address of the applicant
MECOM-ZAŠČITE d.o.o.
Stegne 23 1000 Ljubljana
Slovenia



IEC SYSTEM FOR MUTUAL RECOGNITION OF TEST CERTIFICATES FOR ELECTRICAL EQUIPMENT (IECEE) CB SCHEME

Ref. Certif. No.
HU-005270

CB TEST CERTIFICATE

Product
Surge Protective Device

Name and address of the applicant
MECOM-ZAŠČITE d.o.o.
Stegne 23 1000 Ljubljana
Slovenia

Name and address of the manufacturer
MECOM-ZAŠČITE d.o.o.
Stegne 23 1000 Ljubljana
Slovenia

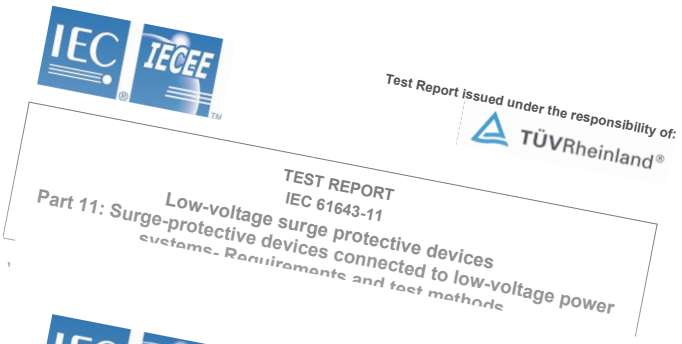
Name and address of the factory
Note: When more than one factory, please report on page 2
MECOM-ZAŠČITE d.o.o.
Stegne 23 1000 Ljubljana
Slovenia

Ratings and principal characteristics
Uc:275V AC(1+1, 3+1 L-N), 255V AC(1+1, 3+1 N-
275V AC(1P, 2P, 3P, 4P L/N-PE)
In:20kA; Imax:40kA; Up:1.5kV; Class II
Iscr:50kA; IP20; Indoor; One port

Trademark / Brand (if any)
ZAŠČITE

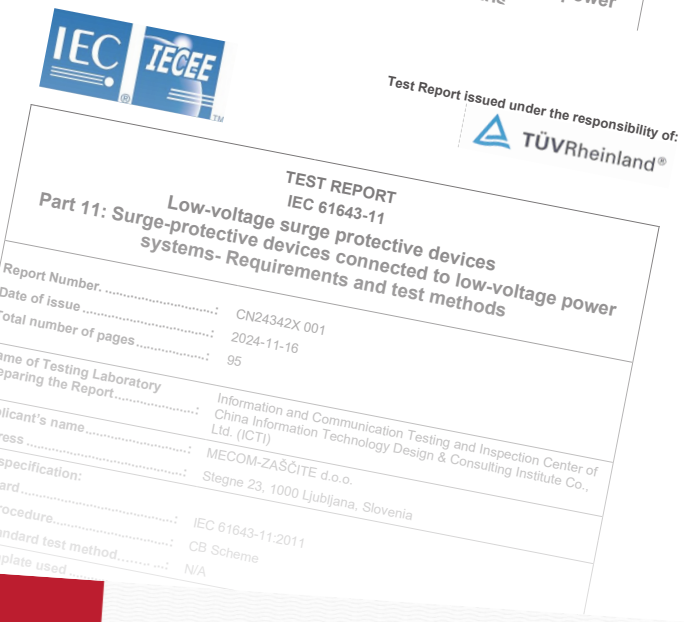
Customer's Testing Facility (CTF) Stage used
N/A

Model / Type Ref.
C PRO (including C PRO 40/275 1P, C
C PRO 40/275 2P, C PRO 40/275 2P-R,
C PRO 40/275 3+1P, C PRO 40/275 3P
C PRO 40/275 3+1P-R, C PRO 40/275 3P
C PRO 40/275 4P-R, C PRO N-PE 255



Test Report issued under the responsibility of:
TÜVRheinland®

TEST REPORT
IEC 61643-11
Low-voltage surge protective devices
Part 11: Surge-protective devices connected to low-voltage power systems- Requirements and test methods



Test Report issued under the responsibility of:
TÜVRheinland®

TEST REPORT
IEC 61643-11
Low-voltage surge protective devices
Part 11: Surge-protective devices connected to low-voltage power systems- Requirements and test methods

Report Number. ..... : CN24342X 001
Date of issue ..... : 2024-11-16
Total number of pages ..... : 95

Name of Testing Laboratory preparing the Report ..... : Information and Communication Testing and Inspection Center of China Information Technology Design & Consulting Institute Co., Ltd. (ICTI)

Applicant's name ..... : MECOM-ZAŠČITE d.o.o.
Address ..... : Stegne 23, 1000 Ljubljana, Slovenia

Test specification:
Standard ..... : IEC 61643-11:2011
Test procedure ..... : CB Scheme
Non-standard test method ..... : N/A
TRF template used ..... :
Test



Bureau Veritas Certification

ZAŠČITE d.o.o.

Stegne 23, 1000 Ljubljana, Slovenia

Bureau Veritas Certification Holding SAS - Italy Branch certifies that the Management Syste
the above organisation has been audited and found to be in accordance with the requiremen
the management system standards detailed below

ISO 9001:2015

Scope of certification

Production of surge protector devices, wiring of electrical boxes, wholesale
lamps and car replacement parts.

IAF Codes: 19, 29

Original cycle start date by another certification body: 10-07-2006
Expiry date of previous cycle: 19-06-2024
Certification / Recertification Audit date: 12-04-2024
Certification / Recertification cycle start date: 20-06-2024
Subject to the continued satisfactory operation of the organisation's Management System, this certificate expires on: 19-06-20

Certificate No.: SI012747 Version: 1 Issue date: 06-11-20

Marko Koren - Certification Technical Director
Signed on behalf of BVCH SAS Italy Branch
Certification Body Address: Viale Monza, 347 20126 Milano - Italy
Local office: Linhartova cesta 49a, SI - 1000 Ljubljana - Slovenia



Bureau Veritas Certification

ZAŠČITE d.o.o.

Stegne 23, 1000 Ljubljana, Slovenija

Bureau Veritas Certification Holding SAS - Italy Branch potrjuje, da je bila opravljena presoja sistema vodenja v navedeni organizaciji in da je uvedeni sistem vodenja skladen z zahtevami sledečega standarda

ISO 9001:2015

Področje certificiranja

Proizvodnja prenapetostnih zaščit, ožičenje električnih omaric, veleprodaja led svetil in avtomobilskih nadomestnih delov.

IAF kode: 19, 29

Prvotni datum odobritve pri drugi certifikacijski hiši: 10-07-2006
Datum preteka predhodnega certifikacijskega cikla: 19-06-2024
Datum certifikacijske / recertifikacijske presoje: 12-04-2024
Datum začetka certifikacijskega cikla: 20-06-2024
Pod pogojem, da organizacija neprekinjeno zagotavlja zadovoljivo delovanje sistema vodenja, je veljavnost certifikata do: 19-06-2027

Številka certifikata: SI012747 Izdaja: 1 Datum izdaje: 06-11-2025

Marko Koren - tehnični direktor certificiranja
Podpisano v imenu BVCH SAS podružnica Italija
Naslov certifikacijske hiše: Viale Monza, 347 20126 Milano - Italy
Lokalna pisarna: Linhartova cesta 49a, SI 1000 Ljubljana, Slovenija

ACCREDIA 0213B

Za dodatna pojasnila v zvezi s področjem certificiranja ter sistemom vodenja, ki ga pokriva ta Certifikat, pokličite: +386 1 47

Table of contents

Type	Page
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SPD for LED lighting system	29
Type 2 SPD for overhead power lines	31
Type 2 SPD for PV aplications	35
DIN rail Data SPD	39
PV COMBINER BOX	45

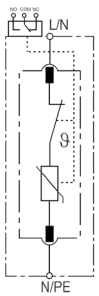
Type 1+2 AC surge protector

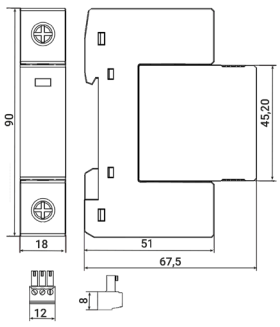


Category IEC / EN:	Type 1+2 surge protection device (SPD)
Location of use:	Main distribution boards
Connections:	TN-C,TN-S,TT and IT
Protection modes:	L/N-PE, L-PEN, L-N
Impulse current discharge rating :	I_{imp}: 7,5 kA
Complies with:	EN 61643-11, IEC 61643-11
Pluggable module	
Remote signaling (option)	
Optimized to TOV	

Technical data: B PRO 7,5/275 1P & B PRO 7,5/275 1P-R (with remote contact)		
System nominal voltage(AC)	U_n	230/400 V(50/60 Hz)
Max.continuos voltage (AC)	U_c	275 V ac
Impulse discharge current (10/350)	I_{imp}	7,5 kA
Specific energy	W/R	14 kJ / Ω
Charge	Q	3,75 As
Nominal discharge current (8/20)	I_n	20 kA
Max.discharge current	I_{max}	40 kA
Voltage protection level at In	U_p	1,5 kV
Voltage protection level at 5kA	U_{res}	1 kV
Response time	t_a	< 25 ns
Temporary overvoltage 5 s	U_{TOV}	335 V- whitstand
Temporary overvoltage 120 min	U_{TOV}	440 V-safe failure
Short circuit whitstand capability with max.overcurrent protection	I_{SCCR}	50 kArms
Max.overcurrent protection		125 AgG
Max.overcurrent protection with V connection		63 AgG
Operating temperature range	T_u	-40 °C ... +80 °C
Operating state / fault indication		green / red
Number of ports		1
Mechnical characteristics		
Min.cross section for terminals	mm²	1,5 mm² solid wire
Max.cross section for terminals	mm²	25 mm² flex. Wire/35 mm² solid wire
Mounting		indoor/35 mm DIN rails acc. to EN 60715
Enclousure material/flammability rate		thermoplastic, gray, UL 94 V-0
Degree of protection		IP 20
Type of remote signalling contact		changeover contact
Switching capacity (a.c.)		250 V / 0.5 A
Switching capacity (d.c.)		250 V / 0.1 A; 125 V / 0.2 A; 75 V / 0.5 A

Order informations	Order Code	Weight
B PRO 7,5/275 1P	600052	118 g
B PRO 7,5/275 1P-R (with remote contact)	600053	121 g
B PRO 7,5/275-M (module)	600054	57 g



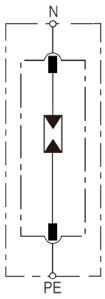


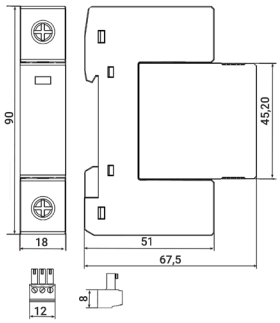


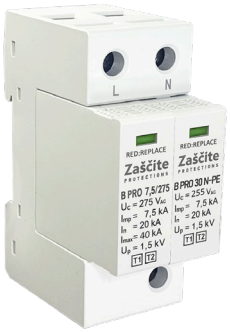
Category IEC / EN:	Type 1+2 surge protection device (SPD)
Location of use:	Main distribution boards
Connections:	TT
Protection modes:	N-PE
Impulse current discharge rating :	I_{imp}: 30 kA
Complies with:	EN 61643-11, IEC 61643-11
Pluggable module	
Remote signaling (option)	
Optimized to TOV	

Technical data: B PRO N-PE 255		
System nominal voltage(AC)	U_n	230/400 (50/60 Hz)
Max.continuos voltage (AC)	U_c	255 Vac
Impulse discharge current (10/350)	I_{imp}	30 kA
Specific energy	W/R	225 kJ / Ω
Charge	Q	15 As
Nominal discharge current (8/20)	I_n	20 kA
Max.discharge current	I_{max}	40 kA
Voltage protection level at In	U_p	1,5 kV
Voltage protection level at 5kA	U_{res}	1,5 kV
Response time	t_a	< 100 ns
Follow current extinguishing capability	I_{fi}	100 A
Temporary overvoltage whitstand	U_{TOV}	1200 V for 200 ms
Operating temperature range	T_u	-40 °C ... +80 °C
Operating state / fault indication		green / red
Number of ports		1
Mechnical characteristics		
Min.cross section for terminals	mm²	1,5 mm2 solid wire
Max.cross section for terminals	mm²	25 mm2 flex. Wire/35 mm2 solid wire
Mounting		indoor/35 mm DIN rails acc. to EN 60715
Enclousure material/flammability rate		thermoplastic, gray, UL 94 V-0
Degree of protection		IP 20
Switching capacity (a.c.)		250 V / 0.5 A
Switching capacity (d.c.)		250 V / 0.1 A; 125 V / 0.2 A; 75 V / 0.5 A

Order informations	**Order Code**	**Weight**
B PRO 30 N-PE 255	600065	105 g
B PRO 30 N-PE 255 (module)	600066	43 g



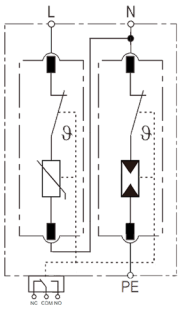


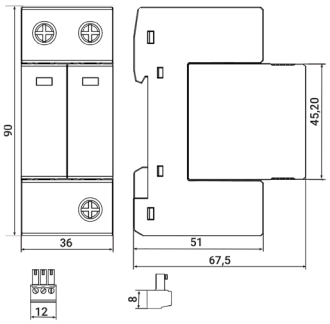


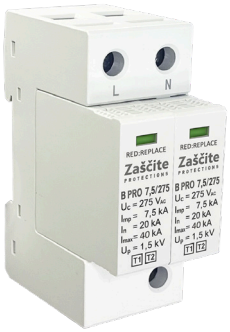
Category IEC / EN:	Type 1+2 surge protection device (SPD)
Location of use:	Main distribution boards
Connections:	TN-S and TT
Protection modes:	L-N, N-PE
Impulse current discharge rating :	I_{imp}: 7,5 kA / 30 kA
Complies with:	EN 61643-11, IEC 61643-11
Pluggable module	
Remote signaling (option)	
Optimized to TOV	

Technical data: B PRO 7,5/275 1+1 & B PRO 7,5/275 1+1-R (with remote contact)				
Protection mode		L-N		N-PE
System nominal voltage(AC)	U_n	230/400 V(50/60 Hz)		
Max.continuos voltage (AC)	U_c	275 Vac		255 Vac
Impulse discharge current (10/350)	I_{imp}	7,5 kA		30 kA
Specific energy	W/R	14 kJ / Ω		225 kJ / Ω
Charge	Q	3,75 As		15 As
Nominal discharge current (8/20)	I_n		20 kA	
Max.discharge current	I_{max}		40 kA	
Voltage protection level at In	U_p	1,5 kV		1,5 kV
Voltage protection level at 5kA	U_{res}	1 kV		1,5 kV
Response time	t_a	< 25 ns		< 100 ns
Temporay overvoltage 5 sec.	U_{TOV}	335 V- whitstand		
Temporary overvoltage 120 min.	U_{TOV}	440 V-safe failure		
Temporary overvoltage 1200 V for 200 ms.	U_{tov}			whitstand
Short circuit whitstand capability with max.overcurrent protection	I_{SCCR}	50 kA rms		
Max.overcurrent protection		160 AgG		
Max.overcurrent protection with V connection		63 AgG		
Follow current extinguishing capability	I_{fi}			100 A
Operating temperature range	T_u	-40 °C ... +80 °C		
Operating state / fault indication		green / red		
Number of ports		1		
Mechnical characteristics				
Min.cross section for terminals	mm²	1,5 mm² solid wire		
Max.cross section for terminals	mm²	25 mm² flex. Wire/35 mm² solid wire		
Mounting		indoor/35 mm DIN rails acc. to EN 60715		
Enclosure material/flammability rate		thermoplastic, gray, UL 94 V-0		
Degree of protection		IP 20		
Type of remote signalling contact		changeover contact		
Switching capacity (a.c.)		250 V / 0.5 A		
Switching capacity (d.c.)		250 V / 0.1 A; 125 V / 0.2 A; 75 V / 0.5 A		

Order informations	Order Code	Weight
B PRO 7,5/275 1+1	600055	179 g
B PRO 7,5/275 1+1-R (with remote contact)	600056	184 g
B PRO 7,5/275-M (module)	600054	57 g
B PRO 30 N-PE 255 (module)	600066	30 g



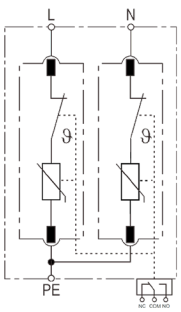


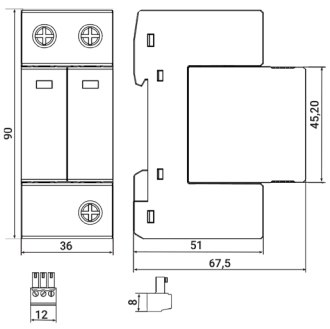


Category IEC / EN:	Type 1+2 surge protection device (SPD)
Location of use:	Main distribution boards
Connections:	TN-C-S and TN-S
Protection modes:	L/N-PE
Impulse current discharge rating :	I_{imp}: 7,5 kA
Complies with:	EN 61643-11, IEC 61643-11
Pluggable module	
Remote signaling (option)	
Optimized to TOV	

Technical data: B PRO 7,5/275 2P & B PRO 7,5/275 2P-R (with remote contact)		
System nominal voltage(AC)	U_n	230/400 V(50/60 Hz)
Max.continuos voltage (AC)	U_c	275 V ac
Impulse discharge current (10/350)	I_{imp}	7,5 kA
Specific energy	W/R	14 kJ / Ω
Charge	Q	3,75 As
Nominal discharge current (8/20)	I_n	20 kA
Max.discharge current	I_{max}	40 kA
Voltage protection level at In	U_p	1,5 kV
Voltage protection level at 5kA	U_{res}	1 kV
Response time	t_a	< 25 ns
Temporary overvoltage 5 s	U_{TOV}	335 V- whitstand
Temporary overvoltage 120 min.	U_{TOV}	440 V-safe failure
Short circuit whitstand capability with max.overcurrent protection	I_{SCCR}	50 kArms
Max.overcurrent protection		125 AgG
Max.overcurrent protection with V connection		63 AgG
Operating temperature range	T_u	-40 °C ... +80 °C
Operating state / fault indication		green / red
Number of ports		1
Mechnical characteristics		
Min.cross section for terminals	mm²	1,5 mm² solid wire
Max.cross section for terminals	mm²	25 mm² flex. Wire/35 mm² solid wire
Mounting		indoor/35 mm DIN rails acc. to EN 60715
Enclousure material/flammability rate		thermoplastic, gray, UL 94 V-0
Degree of protection		IP 20
Type of remote signalling contact		changeover contact
Switching capacity (a.c.)		250 V / 0.5 A
Switching capacity (d.c.)		250 V / 0.1 A; 125 V / 0.2 A; 75 V / 0.5 A

Order informations	Order Code	Weight
B PRO 7,5/275 2P	600057	313 g
B PRO 7,5/275 2P-R (with remote contact)	600058	319 g
B PRO 7,5/275-M (module)	600054	57 g



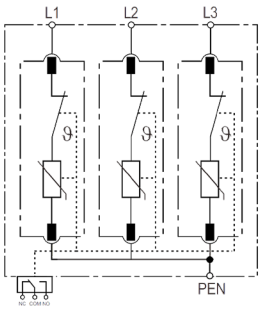


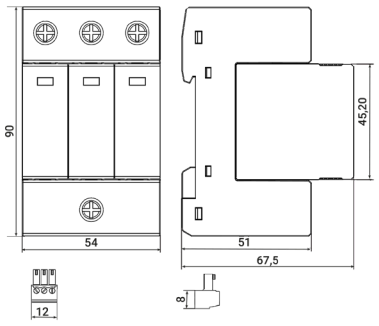


Category IEC / EN:	Type 1+2 surge protection device (SPD)
Location of use:	Main distribution boards
Connections:	TN-C
Protection modes:	L - PEN
Impulse current discharge rating :	I_{imp}: 7,5 kA
Complies with:	EN 61643-11, IEC 61643-11
Pluggable module	
Remote signaling (option)	
Optimized to TOV	

Technical data: B PRO 7,5/275 3P & B PRO 7,5/275 3P-R (with remote contact)		
System nominal voltage(AC)	U_n	230/400 V(50/60 Hz)
Max.continuos voltage (AC)	U_c	275 V ac
Impulse discharge current (10/350)	I_{imp}	7,5 kA
Specific energy	W/R	14 kJ / Ω
Charge	Q	3,75 As
Nominal discharge current (8/20)	I_n	20 kA
Max.discharge current	I_{max}	40 kA
Voltage protection level at In	U_p	1,5 kV
Voltage protection level at 5kA	U_{res}	1 kV
Response time	t_a	< 25 ns
Temporary overvoltage 5 s	U_{TOV}	335 V- whitstand
Temporary overvoltage 120 min.	U_{TOV}	440 V-safe failure
Short circuit whitstand capability with max.overcurrent protection	I_{SCCR}	50 kArms
Max.overcurrent protection		125 AgG
Max.overcurrent protection with V connection		63 AgG
Operating temperature range	T_u	-40 °C ... +80 °C
Operating state / fault indication		green / red
Number of ports		1
Mechnical characteristics		
Min.cross section for terminals	mm²	1,5 mm² solid wire
Max.cross section for terminals	mm²	25 mm² flex. Wire/35 mm² solid wire
Mounting		indoor/35 mm DIN rails acc. to EN 60715
Enclousure material/flammability rate		thermoplastic, gray, UL 94 V-0
Degree of protection		IP 20
Type of remote signalling contact		changeover contact
Switching capacity (a.c.)		250 V / 0.5 A
Switching capacity (d.c.)		250 V / 0.1 A; 125 V / 0.2 A; 75 V / 0.5 A

Order informations	Order Code	Weight
B PRO 7,5/275 3P	600059	313 g
B PRO 7,5/275 3P-R (with remote contact)	600060	319 g
B PRO 7,5/275-M (module)	600054	57 g



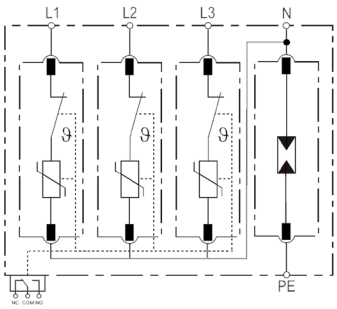


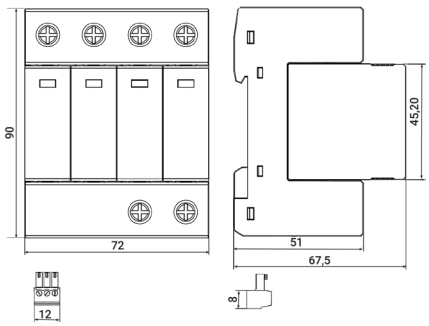


Category IEC / EN:	Type 1+2 surge protection device (SPD)
Location of use:	Main distribution boards
Connections:	TN-S and TT
Protection modes:	N-PE, L-N
Impulse current discharge rating :	I_{imp}: 7,5 kA / 30 kA
Complies with:	EN 61643-11, IEC 61643-11
Pluggable module	
Remote signaling (option)	
Optimized to TOV	

Technical data: B PRO 7,5/275 3+1 & B PRO 7,5/275 3+1-R (with remote contact)				
Protection mode		L-N		N-PE
System nominal voltage(AC)	U_n	230/400 V(50/60 Hz)		
Max.continuos voltage (AC)	U_c	275 Vac		255 Vac
Impulse discharge current (10/350)	I_{imp}	7,5 kA		30 kA
Specific energy	W/R	14 kJ / Ω		225 kJ / Ω
Charge	Q	3,75 As		15 As
Nominal discharge current (8/20)	I_n	20kA		
Max.discharge current	I_{max}	40 kA		
Voltage protection level at In	U_p	1,5 kV		1,5 kV
Voltage protection level at 5kA	U_{res}	1 kV		1,5 kV
Response time	t_a	< 25 ns		< 100 ns
Temporay overvoltage 5 sec.	U_{TOV}	335 V- whitstand		
Temporary overvoltage 120 min.	U_{TOV}	440 V-safe failure		
Temporary overvoltage 1200 V for 200 ms.	U_{TOV}	whitstand		
Short circuit whitstand capability with max.overcurrent protection	I_{SCCR}	50 kA rms		
Max.overcurrent protection		160 AgG		
Max.overcurrent protection with V connection		63 AgG		
Follow current extinguishing capability	I_{fi}			100 A
Operating temperature range	T_u	-40 °C ... +80 °C		
Operating state / fault indication		green / red		
Number of ports		1		
Mechnical characteristics				
Min.cross section for terminals	mm²	1,5 mm² solid wire		
Max.cross section for terminals	mm²	25 mm² flex. Wire/35 mm² solid wire		
Mounting		indoor/35 mm DIN rails acc. to EN 60715		
Enclousure material/flammability rate		thermoplastic, gray, UL 94 V-0		
Degree of protection		IP 20		
Type of remote signalling contact		changeover contact		
Switching capacity (a.c.)		250 V / 0.5 A		
Switching capacity (d.c.)		250 V / 0.1 A; 125 V / 0.2 A; 75 V / 0.5 A		

Order informations	Order Code	Weight
B PRO 7,5/275 3P+1	600061	313 g
B PRO 7,5/275 3P+1-R (with remote contact)	600062	319 g
B PRO 7,5/275-M (module)	600054	57 g
B PRO 30 N-PE 255 (module)	600066	30 g



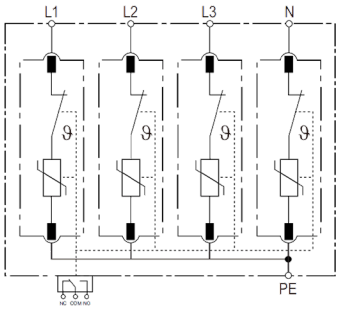


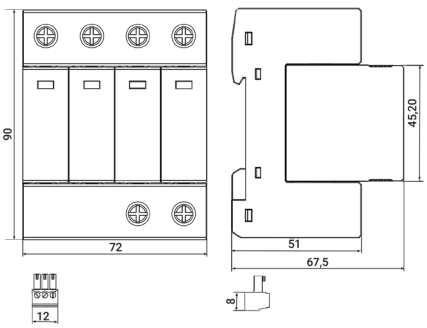


Category IEC / EN:	Type 1+2 surge protection device (SPD)
Location of use:	Main distribution boards
Connections:	TN-C and TN-S
Protection modes:	L-PE, N-PE
Impulse current discharge rating :	I_{imp}: 7,5 kA
Complies with:	EN 61643-11, IEC 61643-11
Pluggable module	
Remote signaling (option)	
Optimized to TOV	

Technical data: B PRO 7,5/275 4P & B PRO 7,5/275 4P-R (with remote contact)		
System nominal voltage(AC)	U_n	230/400 V(50/60 Hz)
Max.continuos voltage (AC)	U_c	275 V ac
Impulse discharge current (10/350)	I_{imp}	7,5 kA
Specific energy	W/R	14 kJ / Ω
Charge	Q	3,75 As
Nominal discharge current (8/20)	I_n	20 kA
Max.discharge current	I_{max}	40 kA
Voltage protection level at In	U_p	1,5 kV
Voltage protection level at 5kA	U_{res}	1 kV
Response time	t_a	< 25 ns
Temporary overvoltage 5 s	U_{TOV}	335 V- whitstand
Temporary overvoltage 120 min.	U_{TOV}	440 V-safe failure
Short circuit whitstand capability with max.overcurrent protection	I_{SCCR}	50 kArms
Max.overcurrent protection		125 AgG
Max.overcurrent protection with V connection		63 AgG
Operating temperature range	T_u	-40 °C ... +80 °C
Operating state / fault indication		green / red
Number of ports		1
Mechnical characteristics		
Min.cross section for terminals	mm²	1,5 mm² solid wire
Max.cross section for terminals	mm²	25 mm² flex. Wire/35 mm² solid wire
Mounting		indoor/35 mm DIN rails acc. to EN 60715
Enclousure material/flammability rate		thermoplastic, gray, UL 94 V-0
Degree of protection		IP 20
Type of remote signalling contact		changeover contact
Switching capacity (a.c.)		250 V / 0.5 A
Switching capacity (d.c.)		250 V / 0.1 A; 125 V / 0.2 A; 75 V / 0.5 A

Order informations	Order Code	Weight
B PRO 7,5/275 4P	600063	461 g
B PRO 7,5/275 3P-R (with remote contact)	600064	468 g
B PRO 7,5/275-M (module)	600054	57 g



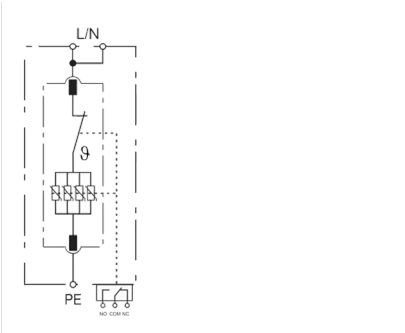


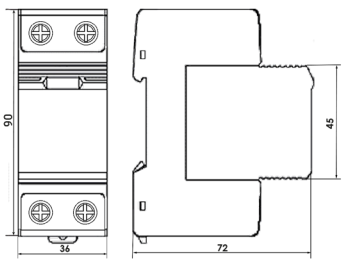


Category IEC / EN:	Type 1+2 surge protection device (SPD)
Location of use:	Main distribution boards
Connections:	TN-C,TN-S,TT and IT
Protection modes:	L/N-PE, L-PEN, L-N
Impulse current discharge rating :	I_{imp}: 25 kA
Complies with:	EN 61643-11, IEC 61643-11
Pluggable module	
Remote signaling (option)	
Optimized to TOV	

Technical data: B PRO 25/275 1P		
System nominal voltage(AC)	U_n	230/400 V(50/60 Hz)
Max.continuos voltage (AC)	U_c	275 V ac
Impulse discharge current (10/350)	I_{imp}	25 kA
Specific energy	W/R	156 kJ / Ω
Charge	Q	12,5 As
Nominal discharge current (8/20)	I_n	20 kA
Max.discharge current	I_{max}	50 kA
Voltage protection level at In	U_p	1,5 kV
Voltage protection level at 5kA	U_{res}	1 kV
Response time	t_a	< 25 ns
Temporary overvoltage 5 s	U_{TOV}	335 V- whitstand
Temporary overvoltage 120 min.	U_{TOV}	440 V-safe failure
Short circuit whitstand capability with max.overcurrent protection	I_{SCCR}	50 kArms
Max.overcurrent protection		250 AgG
Max.overcurrent protection with V connection		100 AgG
Operating temperature range	T_u	-40 °C ... +80 °C
Operating state / fault indication		green / red
Number of ports		1
Mechnical characteristics		
Min.cross section for terminals	mm²	1,5 mm² solid wire
Max.cross section for terminals	mm²	25 mm² flex. Wire/35 mm² solid wire
Mounting		indoor/35 mm DIN rails acc. to EN 60715
Enclousure material/flammability rate		thermoplastic, gray, UL 94 V-0
Degree of protection		IP 20
Type of remote signalling contact		changeover contact
Switching capacity (a.c.)		250 V / 0.5 A
Switching capacity (d.c.)		250 V / 0.1 A; 125 V / 0.2 A; 75 V / 0.5 A

Order informations	Order Code	Weight
B PRO 25/275 1P	600051	310g



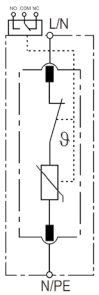


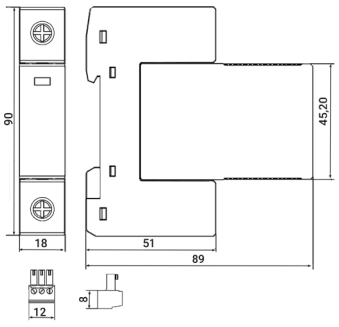


Category IEC / EN:	Type 1+2 surge protection device (SPD)
Location of use:	Main distribution boards
Connections:	TN-C,TN-S,TT and IT
Protection modes:	L/N-PE, L-PEN, L-N
Impulse current discharge rating :	I_{imp}: 12,5 kA
Complies with:	EN 61643-11, IEC 61643-11
Pluggable module	
Remote signaling (option)	
Optimized to TOV	

Technical data: B PRO 12,5/275 1P & B PRO 12,5/275 1P-R (with remote contact)		
System nominal voltage(AC)	U_n	230/400 V(50/60 Hz)
Max.continuos voltage (AC)	U_c	275 V ac
Impulse discharge current (10/350)	I_{imp}	12,5 kA
Specific energy	W/R	39 kJ / Ω
Charge	Q	6.25 As
Nominal discharge current (8/20)	I_n	20 kA
Max.discharge current	I_{max}	50 kA
Voltage protection level at In	U_p	1,5 kV
Voltage protection level at 5kA	U_{res}	1 kV
Response time	t_a	< 25 ns
Temporary overvoltage 5 s	U_{TOV}	335 V- whitstand
Temporary overvoltage 120 min.	U_{TOV}	440 V-safe failure
Short circuit whitstand capability with max.overcurrent protection	I_{SCCR}	50 kArms
Temporary overvoltage 1200 V for 200 ms.	U_{tov}	
Max.overcurrent protection		160 AgG
Max.overcurrent protection with V connection		63 AgG
Operating temperature range	T_u	-40 °C ... +80 °C
Operating state / fault indication		green / red
Number of ports		1
Mechnical characteristics		
Min.cross section for terminals	mm²	1,5 mm² solid wire
Max.cross section for terminals	mm²	25 mm² flex. Wire/35 mm² solid wire
Mounting		indoor/35 mm DIN rails acc. to EN 60715
Enclousure material/flammability rate		thermoplastic, gray, UL 94 V-0
Degree of protection		IP 20
Type of remote signalling contact		changeover contact
Switching capacity (a.c.)		250 V / 0.5 A
Switching capacity (d.c.)		250 V / 0.1 A; 125 V / 0.2 A; 75 V / 0.5 A

Order informations	Order Code	Weight
B PRO 12,5/275 1P	600024	168g
B PRO 12,5/275 1P-R (with remote contact)	600013	171 g
B PRO 12,5/275-M (module)	600033	105 g



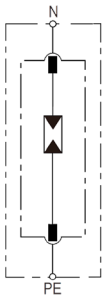


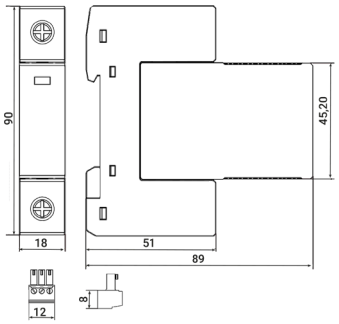


Category IEC / EN:	Type 1+2 surge protection device (SPD)
Location of use:	Main distribution boards
Connections:	TT
Protection modes:	N-PE
High surge discharge rating:	I_{imp} : 50 kA
Complies with:	EN 61643-11, IEC 61643-11
Pluggable module	
Optimized to TOV	

Technical data: B PRO N-PE 255		
System nominal voltage(AC)	U_n	230/400 (50/60 Hz)
Max.continuos voltage (AC)	U_c	255 Vac
Impulse discharge current (10/350)	I_{imp}	50 kA
Specific energy	W/R	625 kJ / Ω
Charge	Q	25 As
Nominal discharge current (8/20)	I_n	20 kA
Max.discharge current	I_{max}	50 kA
Voltage protection level at In	U_p	1,5 kV
Voltage protection level at 5kA	U_{res}	1,5 kV
Response time	t_a	< 100 ns
Follow current extinguishing capability	I_{fi}	100 A
Temporary overvoltage whitstand	U_{TOV}	1200 V for 200 ms
Operating temperature range	T_u	-40 °C ... +80 °C
Operating state / fault indication		green / red
Number of ports		1
Mechnical characteristics		
Min.cross section for terminals	mm²	1,5 mm2 solid wire
Max.cross section for terminals	mm²	25 mm2 flex. Wire/35 mm2 solid wire
Mounting		indoor/35 mm DIN rails acc. to EN 60715
Enclousure material/flammability rate		thermoplastic, gray, UL 94 V-0
Degree of protection		IP 20
Switching capacity (a.c.)		250 V / 0.5 A
Switching capacity (d.c.)		250 V / 0.1 A; 125 V / 0.2 A; 75 V / 0.5 A

Order informations	Order Code	Weight
B PRO N-PE 255	600019	105 g
B PRO N-PE 255-M (module)	600034	43 g



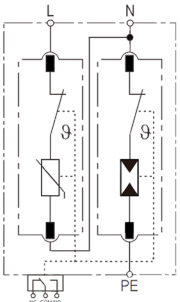


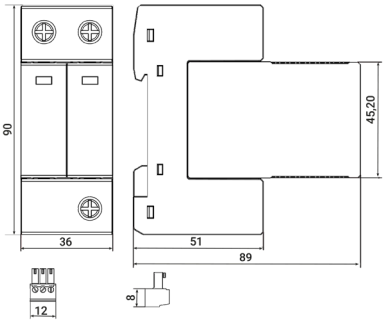


Category IEC / EN:	Type 1+2 surge protection device (SPD)
Location of use:	Main distribution boards
Connections:	TN-S and TT
Protection modes:	L-N, N-PE
Impulse current discharge rating :	I_{imp}: 12,5 kA / 50kA
Complies with:	EN 61643-11, IEC 61643-11
Pluggable module	
Remote signaling (option)	
Optimized to TOV	

Technical data: B PRO 12.5/275 1+1 & B PRO 12,5/275 1+1-R (with remote contact)				
Protection mode		L-N		N-PE
System nominal voltage(AC)	U_n	230/400 V(50/60 Hz)		
Max.continuos voltage (AC)	U_c	275 Vac		255 Vac
Impulse discharge current (10/350)	I_{imp}	12,5 kA		50 kA
Specific energy	W/R	39 kJ / Ω		625 kJ / Ω
Charge	Q	6.25As		25 As
Nominal discharge current (8/20)	I_n		20 kA	
Max.discharge current	I_{max}		50 kA	
Voltage protection level at In	U_p	1,5 kV		1,5 kV
Voltage protection level at 5kA	U_{res}	1 kV		1,5 kV
Response time	t_a	< 25 ns		< 100 ns
Temporay overvoltage 5 sec.	U_{TOV}	335 V- whitstand		
Temporary overvoltage 120 min.	U_{TOV}	440 V-safe failure		
Temporary overvoltage 1200 V for 200 ms.	U_{tov}			whitstand
Short circuit whitstand capability with max.overcurrent protection	I_{SCCR}	50 kA rms		
Max.overcurrent protection		160 AgG		
Max.overcurrent protection with V connection		63 AgG		
Follow current extinguishing capability	I_{fi}			100 A
Operating temperature range	T_u	-40 °C ... +80 °C		
Operating state / fault indication		green / red		
Number of ports		1		
Mechnical characteristics				
Min.cross section for terminals	mm²	1,5 mm² solid wire		
Max.cross section for terminals	mm²	25 mm² flex. Wire/35 mm² solid wire		
Mounting		indoor/35 mm DIN rails acc. to EN 60715		
Enclousure material/flammability rate		thermoplastic, gray, UL 94 V-0		
Degree of protection		IP 20		
Type of remote signalling contact		changeover contact		
Switching capacity (a.c.)		250 V / 0.5 A		
Switching capacity (d.c.)		250 V / 0.1 A; 125 V / 0.2 A; 75 V / 0.5 A		

Order informations	Order Code	Weight
B PRO 12,5/275 1+1	600041	252 g
B PRO 12,5/275 1+1-R (with remote contact)	600042	257 g
B PRO 12,5/275-M (module)	600033	105 g
B PRO N-PE 255-M (module)	600034	43 g



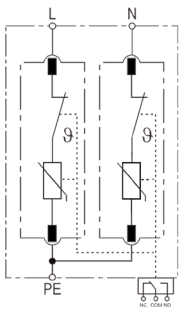


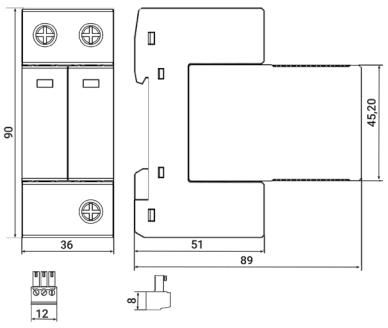


Category IEC / EN:	Type 1+2 surge protection device (SPD)
Location of use:	Main distribution boards
Connections:	TN-C-S and TN-S
Protection modes:	L/N-PE
High surge discharge rating:	I_{imp}: 12,5 kA
Complies with:	EN 61643-11, IEC 61643-11
Pluggable module	
Remote signaling (option)	
Optimized to TOV	

Technical data: B PRO 12,5/275 2P & B PRO 12,5/275 2P-R (with remote contact)		
System nominal voltage(AC)	U_n	230/400 V(50/60 Hz)
Max.continuos voltage (AC)	U_c	275 V ac
Impulse discharge current (10/350)	I_{imp}	12,5 kA
Specific energy	W/R	39 kJ / Ω
Charge	Q	6.25 As
Nominal discharge current (8/20)	I_n	20 kA
Max.discharge current	I_{max}	50 kA
Voltage protection level at In	U_p	1,5 kV
Voltage protection level at 5kA	U_{res}	1 kV
Response time	t_a	< 25 ns
Temporary overvoltage 5 s	U_{TOV}	335 V- whitstand
Temporary overvoltage 120 min.	U_{TOV}	440 V-safe failure
Short circuit whitstand capability with max.overcurrent protection	I_{SCCR}	50 kArms
Max.overcurrent protection		160 AgG
Max.overcurrent protection with V connection		63 AgG
Operating temperature range	T_u	-40 °C ... +80 °C
Operating state / fault indication		green / red
Number of ports		1
Mechnical characteristics		
Min.cross section for terminals	mm²	1,5 mm² solid wire
Max.cross section for terminals	mm²	25 mm² flex. Wire/35 mm² solid wire
Mounting		indoor/35 mm DIN rails acc. to EN 60715
Enclousure material/flammability rate		thermoplastic, gray, UL 94 V-0
Degree of protection		IP 20
Type of remote signalling contact		changeover contact
Switching capacity (a.c.)		250 V / 0.5 A
Switching capacity (d.c.)		250 V / 0.1 A; 125 V / 0.2 A; 75 V / 0.5 A

Order informations	Order Code	Weight
B PRO 12.5/275 2P	600039	313 g
B PRO 12.5/275 2P-R (with remote contact)	600040	319 g
B PRO 12,5/275-M (module)	600033	105 g



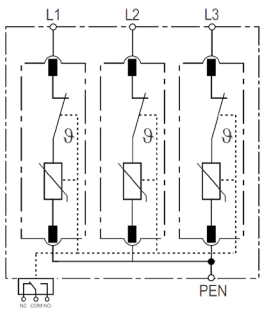


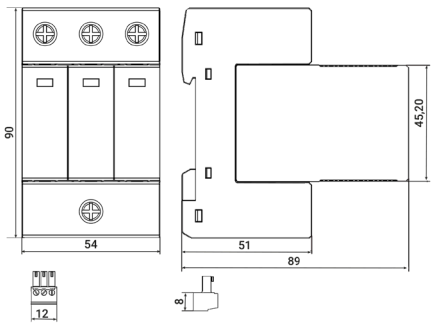


Category IEC / EN:	Type 1+2 surge protection device (SPD)
Location of use:	Main distribution boards
Connections:	TN-C
Protection modes:	L - PEN
Impulse current discharge rating :	I_{imp}: 12,5 kA
Complies with:	EN 61643-11, IEC 61643-11
Pluggable module	
Remote signaling (option)	
Optimized to TOV	

Technical data: B PRO 12,5/275 3P & B PRO 12,5/275 3P-R (with remote contact)		
System nominal voltage(AC)	U_n	230/400 V(50/60 Hz)
Max.continuos voltage (AC)	U_c	275 V ac
Impulse discharge current (10/350)	I_{imp}	12,5 kA
Specific energy	W/R	39 kJ / Ω
Charge	Q	6.25As
Nominal discharge current (8/20)	I_n	20 kA
Max.discharge current	I_{max}	50 kA
Voltage protection level at In	U_p	1,5 kV
Voltage protection level at 5kA	U_{res}	1 kV
Response time	t_a	< 25 ns
Temporary overvoltage 5 s	U_{TOV}	335 V- whitstand
Temporary overvoltage 120 min.	U_{TOV}	440 V-safe failure
Short circuit whitstand capability with max.overcurrent protection	I_{SCCR}	50 kArms
Max.overcurrent protection		160 AgG
Max.overcurrent protection with V connection		63 AgG
Operating temperature range	T_u	-40 °C ... +80 °C
Operating state / fault indication		green / red
Number of ports		1
Mechnical characteristics		
Min.cross section for terminals	mm²	1,5 mm² solid wire
Max.cross section for terminals	mm²	25 mm² flex. Wire/35 mm² solid wire
Mounting		indoor/35 mm DIN rails acc. to EN 60715
Enclousure material/flammability rate		thermoplastic, gray, UL 94 V-0
Degree of protection		IP 20
Type of remote signalling contact		changeover contact
Switching capacity (a.c.)		250 V / 0.5 A
Switching capacity (d.c.)		250 V / 0.1 A; 125 V / 0.2 A; 75 V / 0.5 A

Order informations	Order Code	Weight
B PRO 12,5/275 3P	600025	447 g
B PRO 12,5/275 3P-R (with remote contact)	600014	455 g
B PRO 12,5/275-M (module)	600033	105 g



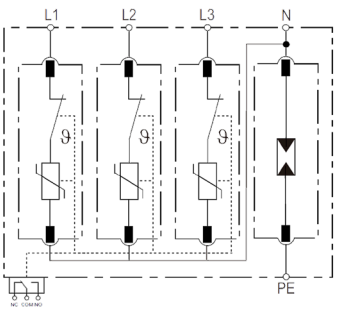


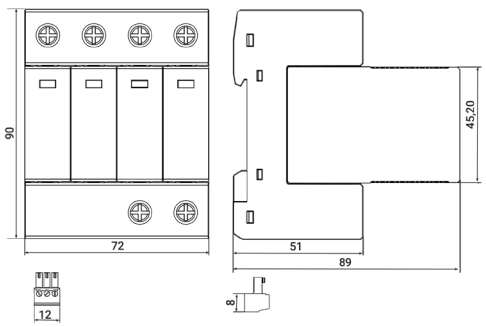


Category IEC / EN:	Type 1+2 surge protection device (SPD)
Location of use:	Main distribution boards
Connections:	TN-S and TT
Protection modes:	L-N, N-PE
High surge discharge rating:	I_{imp}: 12,5 kA / 50 kA
Complies with:	EN 61643-11, IEC 61643-11
Pluggable module	
Remote signaling (option)	
Optimized to TOV	

Technical data: B PRO 12.5/275 3+1 & B PRO 12,5/275 3+1-R (with remote contact)				
Protection mode		L-N		N-PE
System nominal voltage(AC)	U_n	230/400 V(50/60 Hz)		
Max.continuos voltage (AC)	U_c	275 Vac		255 Vac
Impulse discharge current (10/350)	I_{imp}	12,5 kA		50 kA
Specific energy	W/R	39 kJ / Ω		625 kJ / Ω
Charge	Q	6.25As		25 As
Nominal discharge current (8/20)	I_n	20kA		
Max.discharge current	I_{max}	50 kA		
Voltage protection level at In	U_p	1,5 kV		1,5 kV
Voltage protection level at 5kA	U_{res}	1 kV		1,5 kV
Response time	t_a	< 25 ns		< 100 ns
Temporay overvoltage 5 sec.	U_{TOV}	335 V- whitstand		
Temporary overvoltage 120 min.	U_{TOV}	440 V-safe failure		
Temporary overvoltage 1200 V for 200 ms.	U_{TOV}	whitstand		
Short circuit whitstand capability with max.overcurrent protection	I_{SCCR}	50 kA rms		
Max.overcurrent protection		160 AgG		
Max.overcurrent protection with V connection		63 AgG		
Follow current extinguishing capability	I_{fi}			100 A
Operating temperature range	T_u	-40 °C ... +80 °C		
Operating state / fault indication		green / red		
Number of ports		1		
Mechnical characteristics				
Min.cross section for terminals	mm²	1,5 mm² solid wire		
Max.cross section for terminals	mm²	25 mm² flex. Wire/35 mm² solid wire		
Mounting		indoor/35 mm DIN rails acc. to EN 60715		
Enclousure material/flammability rate		thermoplastic, gray, UL 94 V-0		
Degree of protection		IP 20		
Type of remote signalling contact		changeover contact		
Switching capacity (a.c.)		250 V / 0.5 A		
Switching capacity (d.c.)		250 V / 0.1 A; 125 V / 0.2 A; 75 V / 0.5 A		

Order informations	Order Code	Weight
B PRO 12,5/275 3+1	600026	546 g
B PRO 12,5/275 3+1-R (with remote contact)	600027	551 g
B PRO 12,5/275-M (module)	600033	105 g
B PRO N-PE 255-M (module)	600034	43 g



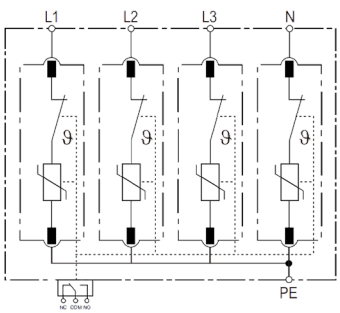


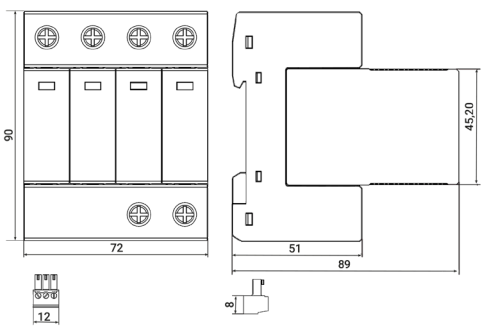


Category IEC / EN:	Type 1+2 surge protection device (SPD)
Location of use:	Main distribution boards
Connections:	TN-C-S and TN-S
Protection modes:	L-PE and N-PE
Impulse current discharge rating :	I_{imp}: 12,5 kA
Complies with:	EN 61643-11, IEC 61643-11
Pluggable module	
Remote signaling (option)	
Optimized to TOV	

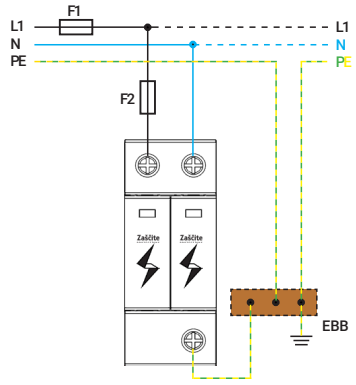
Technical data: B PRO 12,5/275 4P & B PRO 12,5/275 4P-R (with remote contact)		
System nominal voltage(AC)	U_n	230/400 V(50/60 Hz)
Max.continuos voltage (AC)	U_c	275 V ac
Impulse discharge current (10/350)	I_{imp}	12,5 kA
Specific energy	W/R	39 kJ / Ω
Charge	Q	6.25 As
Nominal discharge current (8/20)	I_n	20 kA
Max.discharge current	I_{max}	50 kA
Voltage protection level at In	U_p	1,5 kV
Voltage protection level at 5kA	U_{res}	1 kV
Response time	t_a	< 25 ns
Temporary overvoltage 5 s	U_{TOV}	335 V- whitstand
Temporary overvoltage 120 min.	U_{TOV}	440 V-safe failure
Short circuit whitstand capability with max.overcurrent protection	I_{SCCR}	50kArms
Max.overcurrent protection		160 AgG
Max.overcurrent protection with V connection		63 AgG
Operating temperature range	T_u	-40 °C ... +80 °C
Operating state / fault indication		green / red
Number of ports		1
Mechnical characteristics		
Min.cross section for terminals	mm²	1,5 mm² solid wire
Max.cross section for terminals	mm²	25 mm² flex. Wire/35 mm² solid wire
Mounting		indoor/35 mm DIN rails acc. to EN 60715
Enclousure material/flammability rate		thermoplastic, gray, UL 94 V-0
Degree of protection		IP 20
Type of remote signalling contact		changeover contact
Switching capacity (a.c.)		250 V / 0.5 A
Switching capacity (d.c.)		250 V / 0.1 A; 125 V / 0.2 A; 75 V / 0.5 A

Order informations	Order Code	Weight
B PRO 12,5/275 4P	600043	603 g
B PRO 12,5/275 4P-R (with remote contact)	600044	224 g
B PRO 12,5/275-M (module)	600033	105 g

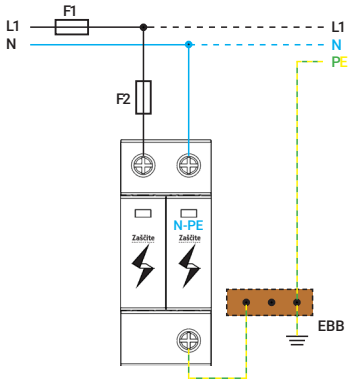




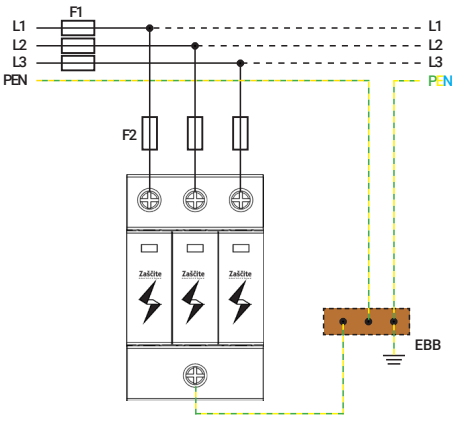
TN-S Network (Single phase)



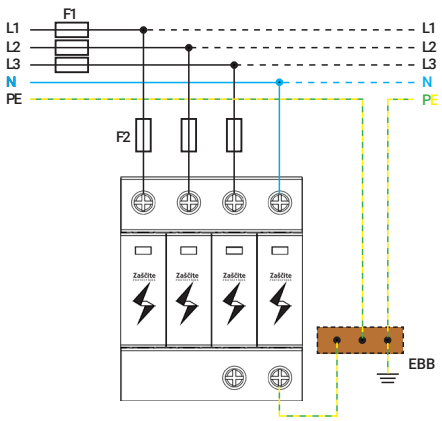
TT Network (Single phase)



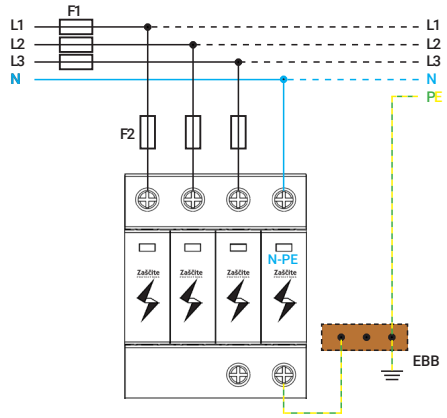
TN-C Network (Three phase)



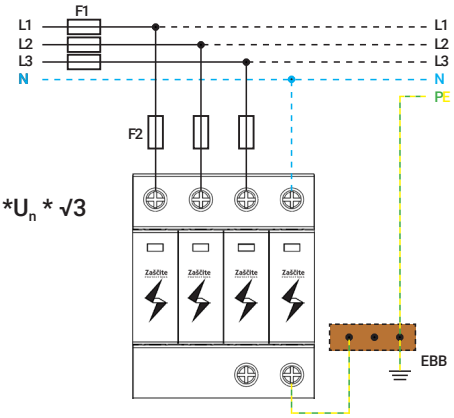
TN-S Network (Three phase)



TT Network (Three phase)



IT Network (Three phase)



$U_c \geq 1.1 * U_n * \sqrt{3}$

Back-up fuse

F1>160 A gL → F2 = 160 A gL

F1≤160 A gL → ~~F2~~

Notes

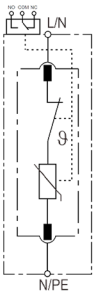
Type 2 AC surge protector

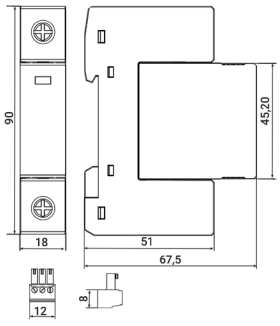


Category IEC / EN:	Type 2 surge protection device (SPD)
Location of use:	Main and sub-distribution boards
Networks:	TN-S, TN-C, TT and IT
Protection modes:	L/N - PE, L-PEN, L-N
High surge discharge rating:	I_{max} : 40 kA
Complies with:	EN 61643-11, IEC 61643-11
Pluggable module	
Optimized to TOV	

Technical data: C PRO 40/275 1P & C PRO 40/275 1P-R (with remote contact)		
System nominal voltage(AC)	U_n	230/400 V (50/60 Hz)
Max.continuos operating voltage (AC)	U_c	275 Vac
Nominal discharge current (8/20)	I_n	20 kA
Max. discharge current (8/20)	I_{max}	40 kA
Voltage protection level at In	U_p	1,5 kV
Voltage protection level at 5kA	U_{res}	1 kV
Response time	t_a	< 25 ns
Temporary overvoltage 5 s	U_{TOV}	335 V- whitstand
Temporary overvoltage 120 min	U_{TOV}	440 V-safe failure
Short circuit whitstand capability with max.overcurrent protection	I_{SCCR}	50kArms
Max.overcurrent protection		125 AgG
Max.overcurrent protection with V connection		63 AgG
Operating temperature range	T_u	-40 °C ... +80 °C
Operating state / fault indication		green / red
Number of ports		1
Mechnical characteristics		
Min.cross section for terminals	mm²	1,5 mm² solid wire
Max.cross section for terminals	mm²	25 mm² flex. Wire/35 mm² solid wire
Mounting		indoor/35 mm DIN rails acc. to EN 60715
Enclousure material/flammability rate		thermoplastic, gray, UL 94 V-0
Degree of protection		IP 20
Type of remote signalling contact		changeover contact
Switching capacity (a.c.)		250 V / 0.5 A
Switching capacity (d.c.)		250 V / 0.1 A; 125 V / 0.2 A; 75 V / 0.5 A

Order informations	Order Code	Weight
C PRO 40/275 1P	600015	108 g
C PRO 40/1P-R (with remote contact)	600021	110 g
C PRO 40/275-M (module)	600029	43 g



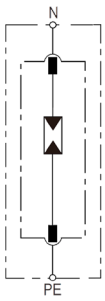


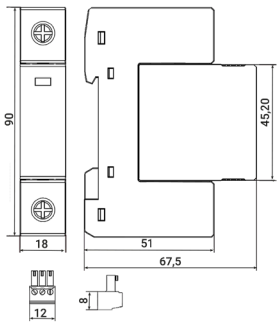


Category IEC / EN:	Type 2 surge protection device (SPD)
Location of use:	Main and sub-distribution boards
Networks:	TT
Protection modes:	N-PE
High surge discharge rating:	I_{max} : 40 kA
Complies with:	EN 61643-11, IEC 61643-11
Pluggable module	
Optimized to TOV	

Technical data: C PRO N-PE 255		
System nominal voltage(AC)	U_n	230/400 V (50/60 Hz)
Max.continuos operating voltage (AC)	U_c	255 Vac
Nominal discharge current (8/20)	I_n	20 kA
Max. discharge current (8/20)	I_{max}	40 kA
Voltage protection level at In	U_p	1,5 kV
Voltage protection level at 5kA	U_{res}	1,5 kV
Response time	t_a	<100 ns
Follow current extinguishing capability	I_{fi}	100 A
Temporary overvoltage whitstand	U_{TOV}	1200V for 200 ms
Operating temperature range	t_a	-40 °C ... +80 °C
Operating state / fault indication		green / red
Number of ports		1
Mechnical characteristics		
Min.cross section for terminals	mm²	1,5 mm2 solid wire
Max.cross section for terminals	mm²	25 mm2 flex. Wire/35 mm2 solid wire
Mounting		indoor/35 mm DIN rails acc. to EN 60715
Enclousure material/flammability rate		thermoplastic, gray, UL 94 V-0
Degree of protection		IP 20
Switching capacity (a.c.)		250 V / 0.5 A
Switching capacity (d.c.)		250 V / 0.1 A; 125 V / 0.2 A; 75 V / 0.5 A

Order informations	Order Code	Weight
C PRO N-PE 255	600018	91 g
C PRO N-PE 255 -M (module)	600030	30 g



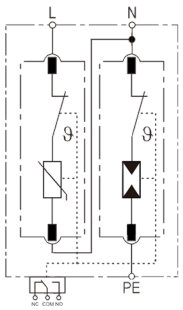


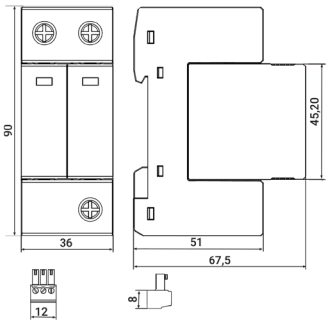


Category IEC / EN:	Type 2 surge protection device (SPD)
Location of use:	Main and sub-distribution boards
Networks:	TN-S and TT
Protection modes:	L-N, N-PE
Impulse current discharge rating :	I_{max} : 40 kA
Complies with:	EN 61643-11, IEC 61643-11
Pluggable module	
Remote signaling (option)	
Optimized to TOV	

Technical data: C PRO 40/275 1+1 & C PRO 40/275 1+1-R (with remote contact)				
Protection mode		L-N		N-PE
System nominal voltage(AC)	U_n	230/400 V(50/60 Hz)		
Max.continuos operating voltage (AC)	U_c	275 Vac		255 Vac
Nominal discharge current (8/20)	I_n	20 kA		
Max. discharge current (8/20)	I_{max}	40 kA		
Voltage protection level at In	U_p	1,5 kV		1,5 kV
Voltage protection level at 5kA	U_{res}	1 kV		1,5 kV
Response time	t_a	< 25 ns		<100 ns
Temporary overvoltage 5 s	U_{TOV}	335 V- whitstand		
Temporary overvoltage 120 min	U_{TOV}	440 V-safe failure		
Temporary overvoltage 1200 V for 200ms	U_{TOV}			whitstand
Short circuit whitstand capability with max.overcurrent protection	I_{SCCR}	50 kArms		
Max.overcurrent protection		125 AgG		
Max.overcurrent protection with V connection	I_L	63 AgG		
Follow current extinguishing capability	I_{fi}			100 A
Operating temperature range	t_a	-40 °C ... +80 °C		
Operating state / fault indication		green / red		
Number of ports		1		
Mechnical characteristics				
Min.cross section for terminals	mm²	1,5 mm² solid wire		
Max.cross section for terminals	mm²	25 mm² flex. Wire/35 mm² solid wire		
Mounting		indoor/35 mm DIN rails acc. to EN 60715		
Enclousure material/flammability rate		thermoplastic, gray, UL 94 V-0		
Degree of protection		IP 20		
Type of remote signalling contact		changeover contact		
Switching capacity (a.c.)		250 V / 0.5 A		
Switching capacity (d.c.)		250 V / 0.1 A; 125 V / 0.2 A; 75 V / 0.5 A		

Order informations	Order Code	Weight
C PRO 40/275 1+1	600037	179 g
C PRO 40/275 1+1-R (with remote contact)	600038	184 g
C PRO 40/275-M (module)	600029	43 g
C PRO N-PE 255-M (module)	600030	30 g



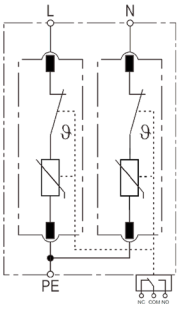


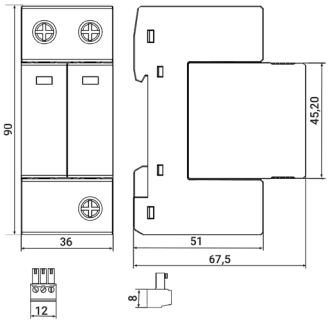


Category IEC / EN:	Type 2 surge protection device (SPD)
Location of use:	Main and sub-distribution boards
Networks:	TN-C and TN-S
Protection modes:	L/N-PE
Impulse current discharge rating :	I_{max} : 40 kA
Complies with:	EN 61643-11, IEC 61643-11
Pluggable module	
Remote signaling (option)	
Optimized to TOV	

Technical data: C PRO 40/275 2P & C PRO 40/275 2P-R (with remote contact)		
System nominal voltage(AC)	U_n	230/400 V (50/60 Hz)
Max.continuos operating voltage (AC)	U_c	275 Vac
Nominal discharge current (8/20)	I_n	20 kA
Max. discharge current (8/20)	I_{max}	40 kA
Voltage protection level at In	U_p	1,5 kV
Voltage protection level at 5kA	U_{res}	1 kV
Response time	t_a	< 25 ns
Temporary overvoltage 5 s	U_{TOV}	335 V- whitstand
Temporary overvoltage 120 min	U_{TOV}	440 V-safe failure
Short circuit whitstand capability with max.overcurrent protection	I_{SCCR}	50 kArms
Max.overcurrent protection		125 AgG
Max.overcurrent protection with V connection		63 AgG
Operating temperature range	T_u	-40 °C ... +80 °C
Operating state / fault indication		green / red
Number of ports		1
Mechnical characteristics		
Min.cross section for terminals	mm²	1,5 mm² solid wire
Max.cross section for terminals	mm²	25 mm² flex. Wire/35 mm² solid wire
Mounting		indoor/35 mm DIN rails acc. to EN 60715
Enclousure material/flammability rate		thermoplastic, gray, UL 94 V-0
Degree of protection		IP 20
Type of remote signalling contact		changeover contact
Switching capacity (a.c.)		250 V / 0.5 A
Switching capacity (d.c.)		250 V / 0.1 A; 125 V / 0.2 A; 75 V / 0.5 A

Order informations	Order Code	Weight
C PRO 40/275 2P	600035	194 g
C PRO 40/275 2P-R (with remote contact)	600036	198 g
C PRO 40/275 -M (module)	600029	43 g



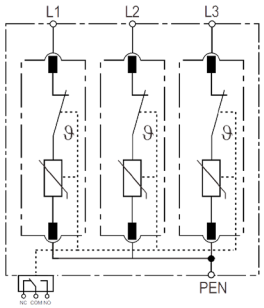


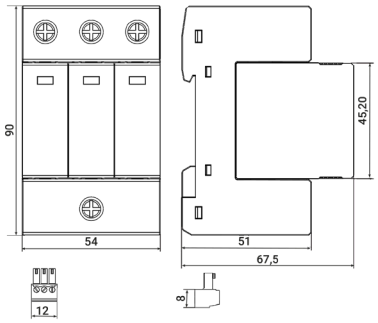


Category IEC / EN:	Type 2 surge protection device (SPD)
Location of use:	Main and sub-distribution boards
Networks:	TN-C
Protection modes:	L-PEN
Impulse current discharge rating :	I_{max} : 40 kA
Complies with:	EN 61643-11, IEC 61643-11
Pluggable module	
Remote signaling (option)	
Optimized to TOV	

Technical data: C PRO 40/275 3P & C PRO 40/275 3P-R (with remote contact)		
System nominal voltage(AC)	U_n	230/400 V (50/60 Hz)
Max.continuos operating voltage (AC)	U_c	275 Vac
Nominal discharge current (8/20)	I_n	20 kA
Max. discharge current (8/20)	I_{max}	40 kA
Voltage protection level at In	U_p	1,5 kV
Voltage protection level at 5kA	U_{res}	1 kV
Response time	t_a	< 25 ns
Temporary overvoltage 5 s	U_{TOV}	335 V- whitstand
Temporary overvoltage 120 min	U_{TOV}	440 V-safe failure
Short circuit whitstand capability with max.overcurrent protection	I_{SCCR}	50kArms
Max.overcurrent protection		125 AgG
Max.overcurrent protection with V connection		63 AgG
Operating temperature range	T_u	-40 °C ... +80 °C
Operating state / fault indication		green / red
Number of ports		1
Mechnical characteristics		
Min.cross section for terminals	mm²	1,5 mm² solid wire
Max.cross section for terminals	mm²	25 mm² flex. Wire/35 mm² solid wire
Mounting		indoor/35 mm DIN rails acc. to EN 60715
Enclousure material/flammability rate		thermoplastic, gray, UL 94 V-0
Degree of protection		IP 20
Type of remote signalling contact		changeover contact
Switching capacity (a.c.)		250 V / 0.5 A
Switching capacity (d.c.)		250 V / 0.1 A; 125 V / 0.2 A; 75 V / 0.5 A

Order informations	Order Code	Weight
C PRO 40/275 3P	600016	276 g
C PRO 40/275 3P-R (with remote contact)	600022	282 g
C PRO 40/275-M (module)	600029	43 g



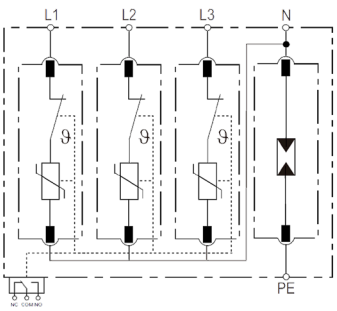


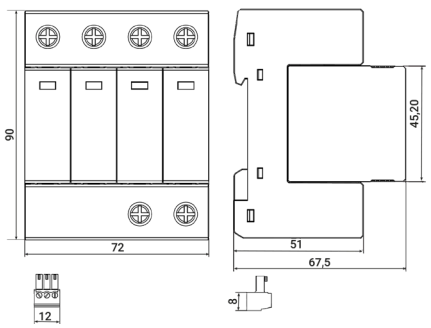


Category IEC / EN:	Type 2 surge protection device (SPD)
Location of use:	Main and sub-distribution boards
Networks:	TN-S and TT
Protection modes:	L-N, N-PE
Impulse current discharge rating :	I_{max} : 40 kA
Complies with:	EN 61643-11, IEC 61643-11
Pluggable module	
Remote signaling (option)	
Optimized to TOV	

Technical data: C PRO 40/275 3+1 & C PRO 40/275 3+1-R (with remote contact)				
Protection mode		L-N		N-PE
System nominal voltage(AC)	U_n	230/400 V(50/60 Hz)		
Max.continuos operating voltage (AC)	U_c	275Vac		255Vac
Nominal discharge current (8/20)	I_n		20kA	
Max. discharge current (8/20)	I_{max}		40kA	
Voltage protection level at In	U_p	1,5 kV		1,5 kV
Voltage protection level at 5kA	U_{res}	1 kV		1,5 kV
Response time	t_a	< 25 ns		<100 ns
Temporary overvoltage 5 s	U_{TOV}	335 V- whitstand		
Temporary overvoltage 120 min	U_{TOV}	440 V-safe failure		
Temporary overvoltage 1200 V for 200ms	U_{tov}			whitstand
Short circuit whitstand capability with max.overcurrent protection	I_{SCCR}	50 kArms		
Max.overcurrent protection		125 AgG		
Max.overcurrent protection with V connection	I_L	63 AgG		
Follow current extinguishing capability	I_{fi}			100 A
Operating temperature range	t_a	-40 °C ... +80 °C		
Operating state / fault indication		green / red		
Number of ports		1		
Mechnical characteristics				
Min.cross section for terminals	mm²	1,5 mm² solid wire		
Max.cross section for terminals	mm²	25 mm² flex. Wire/35 mm² solid wire		
Mounting		indoor/35 mm DIN rails acc. to EN 60715		
Enclousure material/flammability rate		thermoplastic, gray, UL 94 V-0		
Degree of protection		IP 20		
Type of remote signalling contact		changeover contact		
Switching capacity (a.c.)		250 V / 0.5 A		
Switching capacity (d.c.)		250 V / 0.1 A; 125 V / 0.2 A; 75 V / 0.5 A		

Order informations	Order Code	Weight
C PRO 40/275 3+1	600017	361 g
C PRO 40/275 3+1-R (with remote contact)	600023	368 g
C PRO 40/275-M (module)	600029	43 g
C PRO N-PE 255-M (module)	600030	30 g



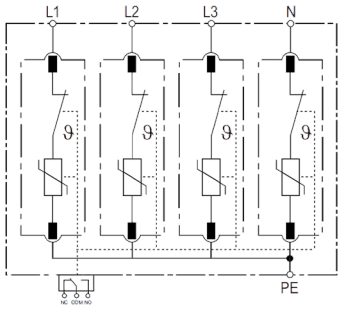


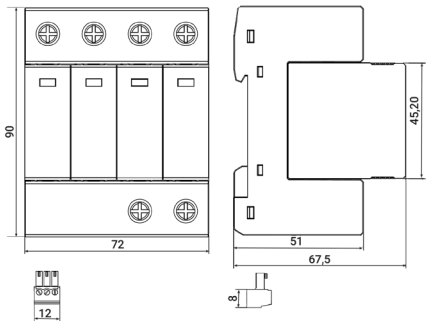


Category IEC / EN:	Type 2 surge protection device (SPD)
Location of use:	Main and sub-distribution boards
Networks:	TN-C-S and TN-S
Protection modes:	L-N, N-PE
Impulse current discharge rating :	I_{max} : 40 kA
Complies with:	EN 61643-11, IEC 61643-11
Pluggable module	
Remote signaling (option)	
Optimized to TOV	

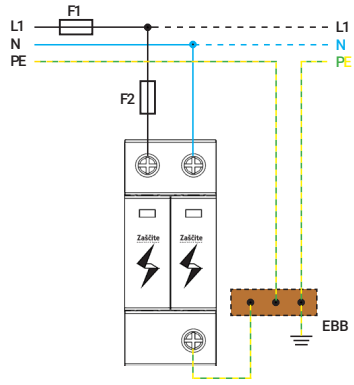
Technical data: C PRO 40/275 4P & C PRO 40/275 4P-R (with remote contact)		
System nominal voltage(AC)	U_n	230/400 V (50/60 Hz)
Max.continuos operating voltage (AC)	U_c	275 Vac
Nominal discharge current (8/20)	I_n	20 kA
Max. discharge current (8/20)	I_{max}	40 kA
Voltage protection level at In	U_p	1,5 kV
Voltage protection level at 5kA	U_{res}	1 kV
Response time	t_a	< 25 ns
Temporary overvoltage 5 s	U_{TOV}	335 V- whitstand
Temporary overvoltage 120 min	U_{TOV}	440 V-safe failure
Short circuit whitstand capability with max.overcurrent protection	I_{SCCR}	50kArms
Max.overcurrent protection		125 AgG
Max.overcurrent protection with V connection		63 AgG
Operating temperature range	T_u	-40 °C ... +80 °C
Operating state / fault indication		green / red
Number of ports		1
Mechnical characteristics		
Min.cross section for terminals	mm²	1,5 mm² solid wire
Max.cross section for terminals	mm²	25 mm² flex. Wire/35 mm² solid wire
Mounting		indoor/35 mm DIN rails acc. to EN 60715
Enclousure material/flammability rate		thermoplastic, gray, UL 94 V-0
Degree of protection		IP 20
Type of remote signalling contact		changeover contact
Switching capacity (a.c.)		250 V / 0.5 A
Switching capacity (d.c.)		250 V / 0.1 A; 125 V / 0.2 A; 75 V / 0.5 A

Order informations	Order Code	Weight
C PRO 40/275 4P	600020	373 g
C PRO 40/275 4P-R (with remote contact)	600028	382 g
C PRO 40/275-M (module)	600029	43 g

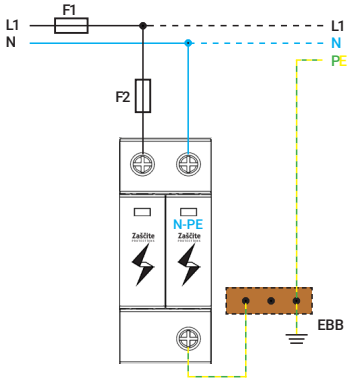




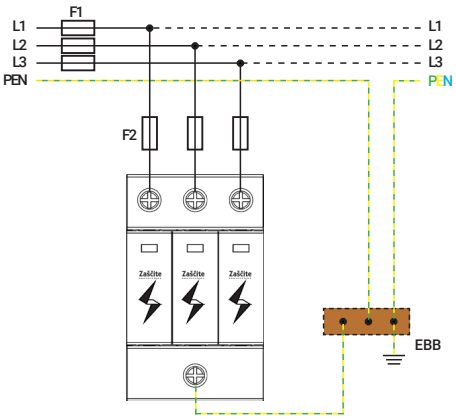
TN-S Network (Single phase)



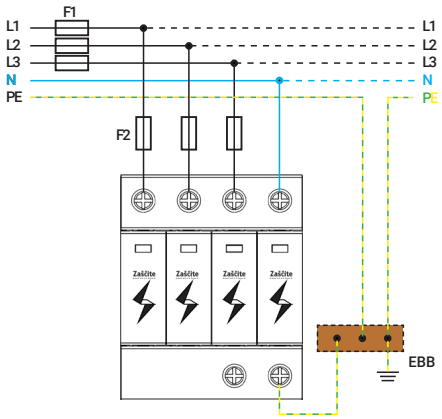
TT Network (Single phase)



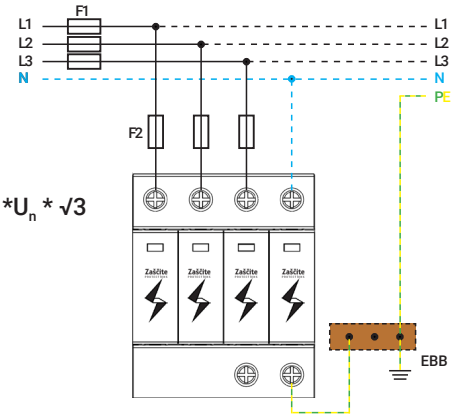
TN-C Network (Three phase)



TN-S Network (Three phase)

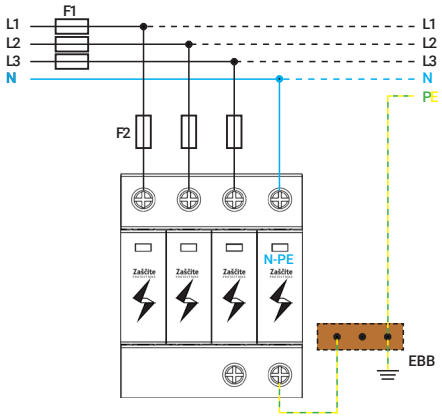


IT Network (Three phase)



$U_C \geq 1.1 * U_n * \sqrt{3}$

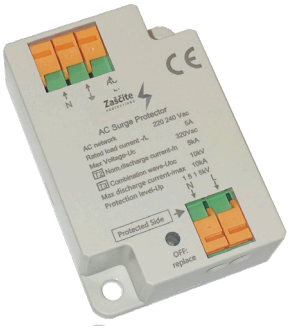
TT Network (Three phase)



Back-up fuse
F1>125 A gL → F2 = 125 A gL
F1≤125 A gL → F2

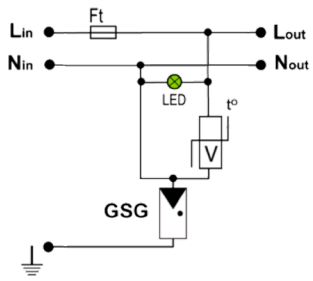
Notes

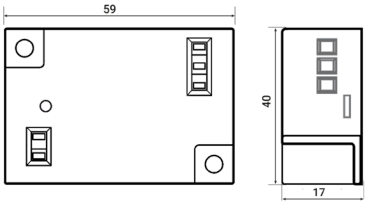
SPD for LED lighting system



Category IEC / EN:	Type 2 (or 3) surge protector for Led lighting
Location of use:	Plate mounting
Connections:	Spring terminal connection
Complies with:	IEC 61643-11 and EN 61643-11 compilance
Status indicator	
End of life AC Disconnection	
Pluggable module	
Very compact	

Technical data: LED PRO		
Network	U_n	220-240 V single phase
AC system		TT/TN
Max.continuos operating voltage (AC)	U_c	320 Vac
Max. Load current	IL	10A
Residual current - Leakage current at Uc	I_{pe}	None
Temporary Over Voltage (TOV) Charasteristics - 5 sec.	U_{TOV}	355 Vac withstand
Temporary Over Voltage (TOV) Charasteristics - 120 mn	U_{TOV}	440 Vac disconnection
Temporary Over Voltage N/PE (TOV HT)	U_{TOV}	-
Nominal discharge current 15 x 8/20 µs impulses	I_n	5 kA
Max. discharge current max. withstand @ 8/20 µs by pole	I_{max}	10 kA
Total lighting current - max. total withstand @ 8/20 µs	I_{total}	20 kA
Withstand on Combination waveform - Class III test	U_{oc}	10 kV/5 kA
Withstand on overvoltages IEEE C62.41.1		10 kV/10 kA
Protection level CM/DM @In (8/20µs) and @6kV (1.2/50µs)	U_p	1,5 kV
Admissible short-circuit current	I_{SCCR}	10000 A
Associated disconnectors		
Thermal disconnector	internal	
Instalation ground fault breaker	Type «S» or delayed	
Mechnical characteristics		
Connection to Network	0,5 - 2,5mm² spring terminal	
Disconnection indicator	Disconnection and AC line cut-off	
Failsafe behavior	Led green OFF and AC network cut-off	
Remote signaling of disconnection	none	
Mounting	on plate	
Operating temperature range	-40 °C/+85 °C	
Protection rating	IP20	
Voltage/operating indicator	Green LED ON	
Enclosure material	Thermoplastic UL-94-V0	
Order informations	**Order Code**	**Weight**
LED PRO	400001	35 g





Type 2 SPD for overhead power lines

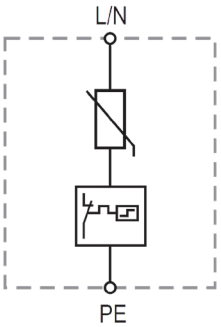


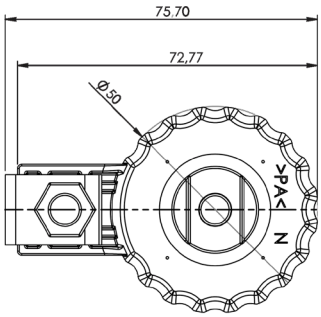
A PRO x xxx

- xxx — Operating voltage
- x — In=10 kA

Technical data:		A PRO 10/275	A PRO 10/440	A PRO 10/670
Network	U_n	230/400 V	230/400 V	230/400 V
Max. AC operating voltage	U_c AC	275 Vac	440 Vac	670 Vac
IEC Test class		Test class II	Test class II	Test class II
Rated frequency	f_n	50/60 Hz	50/60 Hz	50/60 Hz
Temporary Over Voltage (TOV)				
Charasteristics - 5 sec.	UT	330 Vac / 5 sec. Withstand	520 Vac / 5 sec. Withstand	800 Vac / 5 sec. Withstand
Response Time	t_a	< 20 ns	< 20 ns	< 20 ns
Temperature Range	T	-40 °C ... +85 °C	-40 °C ... +85 °C	-40 °C ... +85 °C
"Nominal discharge current 15 x 8/20 µs impulses"	I_n	10 kA	10 kA	10 kA
"Max. discharge current max. @ 8/20 µs by pole"	I_{max}	50 kA	50 kA	50 kA
Apsorption energy	W	4,41 kJ/kVUc	4,39 kJ/kVUc	3,11 kJ/kVUc
Protection level @ In	U_p-I_n	1,0 kV	1,8 kV	2,5 kV
Protection level @ 50 kA	U_p-50kA	1,5 kV	2,5 kV	3,4 kV
Ingress protection level	IP	66	66	66
Coating		Polymer V-O	Polymer V-O	Polymer V-O
Mechnical characteristics				
Ingress protection level	IP	66	66	66
Coating		Polymer V-O	Polymer V-O	Polymer V-O
Order informations	**Order Code**		**Weight**	
A PRO 10/275	800 004		117 g	
A PRO 10/440	800 005		119 g	
A PRO 10/670	800 006		127 g	

CE EAC

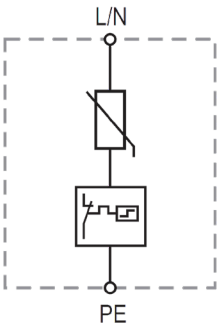


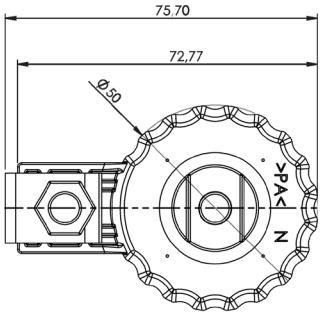


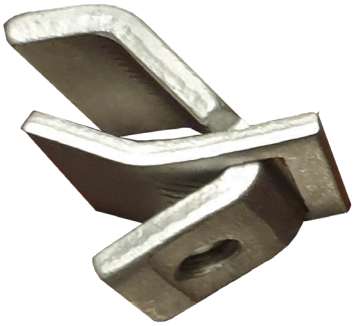


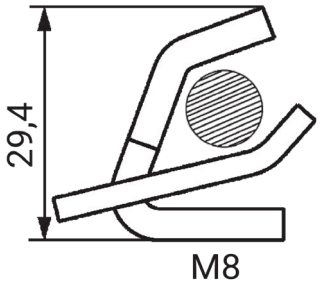
A PRO x xxx
- Operating voltage
- In=15 kA

Technical data:		A PRO 15/275	A PRO 15/440	A PRO 15/670
Network	U_n	230/400 V	230/400 V	230/400 V
Max. AC operating voltage	U_c AC	275 Vac	440 Vac	670 Vac
IEC Test class		Test class II	Test class II	Test class II
Rated frequency	f_n	50/60 Hz	50/60 Hz	50/60 Hz
Temporary Over Voltage (TOV)				
Charasteristics - 5 sec.	UT	330 Vac / 5 sec. Withstand	520 Vac / 5 sec. Withstand	800 Vac / 5 sec. Withstand
Response Time	t_a	< 20 ns	< 20 ns	< 20 ns
Temperature Range	T	-40 °C ... +85 °C	-40 °C ... +85 °C	-40 °C ... +85 °C
"Nominal discharge current 15 x 8/20 µs impulses"	I_n	15 kA	15 kA	15 kA
"Max. discharge current max. @ 8/20 µs by pole"	I_{max}	50 kA	50 kA	50 kA
Apsorption energy	W	4,41 kJ/kVUc	4,39 kJ/kVUc	3,11 kJ/kVUc
Protection level @ In	U_p-I_n	1,2 kV	1,8 kV	2,5 kV
Protection level @ 50 kA	U_p-50kA	1,5 kV	2,5 kV	3,4 kV
Ingress protection level	IP	66	66	66
Coating		Polymer V-O	Polymer V-O	Polymer V-O
Mechnical characteristics				
Ingress protection level	IP	66	66	66
Coating		Polymer V-O	Polymer V-O	Polymer V-O
Order informations	**Order Code**		**Weight**	
A PRO 15/275	800 001		117 g	
A PRO 15/440	800 002		119 g	
A PRO 15/670	800 003		127 g	



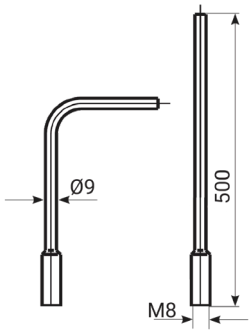






Order informations	Order Code	Weight
Line (top) terminal	800 021	57 g





Order informations	Order Code	Weight
Pipe shaped flexible conductor with terminal screwed in top outlet of surge arrester for piercing clamps not suitable to direct connection to surge arrester.	900 003	37 g

CE EAC

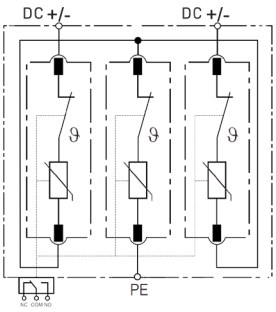
Type 2 SPD for PV aplications

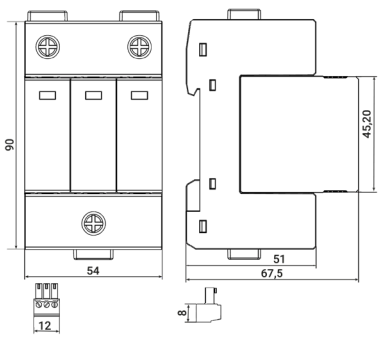


Category IEC / EN:	Type 1+2 PV surge protection device (SPD)
Location of use:	String box, Inverter
Protection modes:	(+)-PE, (-)-PE, (+)-(-)
Complies with:	EN 61643-31:2019, IEC 61643-31:2018
Pluggable module	

Technical data: PV B PRO 12,5/1100		
Maximum continuos operating voltage(PV)	U_{CPV}	1100V DC
Impulse discharge current (10/350)	I_{imp}	6,25 kA
Specific energy	W/R	9.77 kJ/Ω
Charge	Q	3.125As
Nominal discharge current (8/20)	I_n	20 kA
Max.discharge current (8/20)	I_{max}	40 kA
Total discharge current (10/350)	I_{TOTAL}	6,25 kA
Total discharge current (8/20)	I_{TOTAL}	50 kA
Voltage protection level (+)-PE, (-)-PE	U_p	3,8 kV
Voltage protection level (+)-(-)	U_p	3,8 kV
Response time	t_a	< 25 ns
Short-circuit current rating	I_{SCPV}	1000 A
Operating temperature range	T_u	-40 °C ... +80 °C
Operating state / fault indication		green / red
Number of ports		1
Mechnical characteristics		
Min.cross section for terminals	mm²	1,5 mm² solid wire
Max.cross section for terminals	mm²	25 mm² flex. Wire/35 mm² solid wire
Mounting		indoor/35 mm DIN rails acc. to EN 60715
Enclousure material/flammability rate		thermoplastic, gray, UL 94 V-0
Degree of protection		IP 20
Type of remote signalling contact		changeover contact
Switching capacity (a.c.)		250 V / 0.5 A
Switching capacity (d.c.)		250 V / 0.1 A; 125 V / 0.2 A; 75 V / 0.5 A

Order informations	Order Code	Weight
PV B PRO 12,5/1100	600046	466 g
PV B PRO 12,5/1100-R (with remote contact)	600047	469 g
PV B PRO 12,5/1100-M (module)	600048	97 g



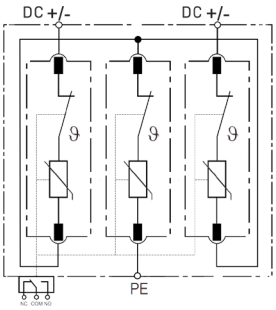


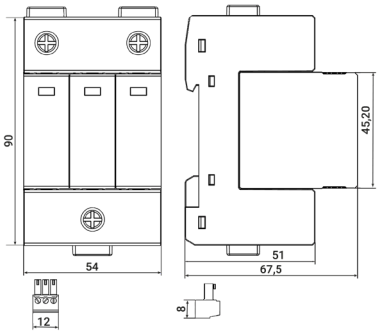


Category IEC / EN:	Type 2 PV surge protection device (SPD)
Location of use:	String box, Inverter
Protection modes:	(+)-PE, (-)-PE, (+)-(-)
High surge discharge rating:	I_{max} : 40 kA
Complies with:	EN 61643-31:2019, IEC 61643-31:2018
Pluggable module	

Technical data: PV C PRO 40/1100		
Max. continuos operating voltage(PV)	U_{CPV}	1100V DC
Nominal discharge current (8/20)	I_n	20 kA
Max.discharge current (8/20)	I_{max}	40 kA
Total discharge current (8/20)	I_{TOTAL}	50 kA
Voltage protection level (+)-PE, (-)-PE	U_p	3,8 kV
Voltage protection level (+)-(-)	U_p	3,8 kV
Short circuit current rating	I_{SCPV}	1000 A
Operating temperature range	T_u	-40 °C ... +80 °C
Response time	t_a	< 25 ns
Operating state / fault indication		green / red
Number of ports		1
Mechnical characteristics		
Min.cross section for terminals	mm²	1,5 mm² solid wire
Max.cross section for terminals	mm²	25 mm² flex. Wire/35 mm² solid wire
Mounting		indoor/35 mm DIN rails acc. to EN 60715
Enclousure material/flammability rate		thermoplastic, gray, UL 94 V-0
Degree of protection		IP 20
Type of remote signalling contact		changeover contact
Switching capacity (a.c.)		250 V / 0.5 A
Switching capacity (d.c.)		250 V / 0.1 A; 125 V / 0.2 A; 75 V / 0.5 A

Order informations	Order Code	Weight
PV C PRO 40/1100	600045	313 g
PV C PRO 40/1100-R (with remote contact)	600049	316 g
PV C PRO 40/1100-M (module)	600050	57 g





Popularity of Solar Energy Systems
Nowadays, solar panel become more and more popular as an alternative or even primary source of household energy. In the last few years, various researches focus on how to improve Photovoltaic (PV) Solar Panel efficiency, reliability, and even availability during all seasons or even at night. Moreover, because installation of photovoltaic solar system is in outdoor it shall also endure outer severe weather condition, animal intervention, and also electrical events such as surge and lightning.

The Importance of Protecting Solar System
PV solar panel can be installed off grid or on grid. Off grid means that the solar system is not connected to the electricity grid. It means that the output power generated by solar PV is consumed or stored on site. On the other hand, on grid PV system means that the system is connected to grid via household connection. Whether on grid or off grid, both systems are equally at risk from lightning strike. In location that lightning protection is properly installed, it is shown that the PV breakdown during the lightning is not caused by poorly designed PV but rather lead by an ineffectual design of the protection. With more photovoltaic power plants being built, the issue for the sector become worse and worse.

This is why **DC surge protection device (SPD)** take into account. As PV system is like other electronic device and also consist of sensitive material, solar PV panels are susceptible to voltage spikes as a minor voltage spike can damage any internal electronic component. The DC SPD works by limiting the transient overvoltage and divert the current waves to earth. Hence the amplitude of the overvoltage values is limited so that it will not harm electrical installation, switchgear, and other electronic device.

Surge overvoltage can affect a PV system installation in a number of ways such as:
- If the lightning hits the PV solar modules, the DC side of the system will be affected.
- If the lightning hits the network after the inverter, the AC system will be affected.
- If the lightning strikes the PV or the structure near it.
- If the lightning strikes the grid network and transferred to the PV solar system.

Whether you plan on installing solar panels or already rely on them, ZAŠČITE is here to provide you with quality protection that you can count on.

DIN rail Data SPD

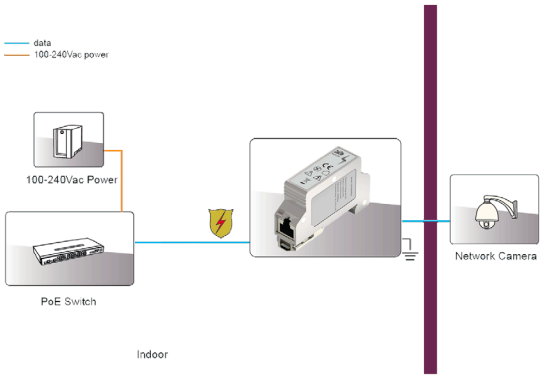


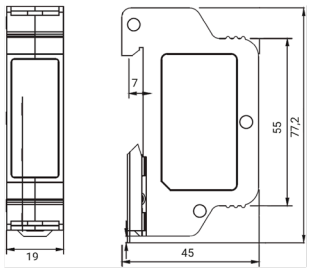
LZ PRO-NET1 is single-port PoE surge protector,which has 1 input port and 1 output port. It supports 8 lines network signals and provides surge protection for PoE wires. The maximum common mode surge voltage is 10KV (10/ 700us) and differential mode surge voltage is 1.5KV(10/700us). It supports 10/100/1000Mbps of date speed. It also supports PoE wires with IEEE802.3af/at/bt or Po-E++ standard and protects your device against surge damage. LZ PRO-NET1 is designed for indoor use with Zinc alloyshell, which works with 60Vdc Max voltage and operates under -40°C to +85°C. It is connected to network over Cat5e/Cat6 cables with RJ45 connector conveniently and tightly. This model equipped standard DIN rail mounting bracket, which can easily jam into the guide rail. The DIN rail as a ground wire to transmit the current to the earth.

Standards and approvals:
IEEE802.3 10Base-T Ethernet; IEEE802.3u 100Base-Tx Fast Ethernet; IEEE802.3ab 1000Base-T Gigabit Ethernet; Support PoE wire with IEEE802.3af/at standards; Support 110W IEEE802.3bt and PoE++ standards; FCC CFR47 Part 15, EN55024, EN55032; IEC60068-2-6(Vibration); IEC60068-2-27 (Impact); IEC60068-2-32(Free Fall);
RoHS Compliance; WEEE Compliance

Technical data: LZ PRO-NET1		
Network	Gigabit Ethernet (Cat.5E / Cat6)	
Max. data rate	0/100/1000Mbps(Gigabit)	
Max Discharge Current	10 kA (8/20us - 1,25kA per line)	
Protected Line	1,2,3,4,5,6,7,8	
Common Mode Protection Level(10/700us)	10 kV	
Differential Mode Protection Level(10/700us)	1,5 kV	
Insertion Loss @10MHz/100MHz	-1 db	
Return Loss @10MHz/100MHz	-20 db	
Response Time	5 ns	
Maximum Operating DC Current	1A for 2 pairs; 2A for 4 pairs; Maximum 110W	
IEC61000-4-2(ESD)	± 6 kV(contact), ±8kV(air)	
IEC61000-4-3(RS)	10V/m(80MHz~2GHz)	
IEC61000-4-4(EFT) Power Port	±2 kV	
IEC61000-4-5(Surge) Power Port	± 1kV/DM, ±2kV/CM	
IEC61000-4-6(CS)	10 V (150kHz~80MHz)	
Mechnical characteristics		
Dimensions	77 x 45 x 19 mm	
Connection to Network	Connector RJ45	
Operating temperature range	-40 °C/+85 °C	
Storage Temperature	-40 °C/+85 °C	
Operating Humidity	20% to 80%, non-condensation	
Storage Humidity	10% to 90%, non-condensation	
Weight	115 g	
Housing material	Zinc alloy	
Mounting	DIN rail mounting	
Degree of protection	IP40	
Order informations	Order Code	Weight
LZ PRO-NET1	500001	128 g

CE EAC



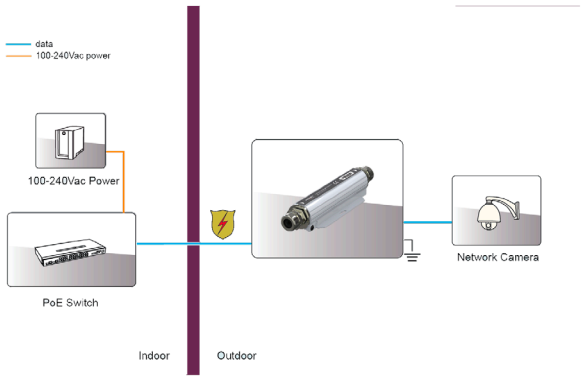


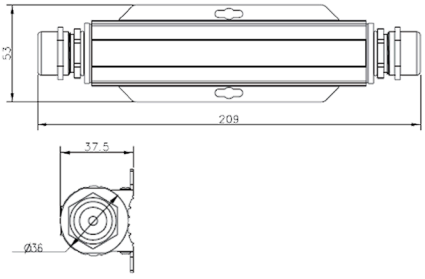


LZ PRO 01G-OT is a single-port surge protector designed for exterior applications with an IP 66 rated Aluminum alloy case. It supports 8 lines network signals and provides surge protection for wires. The maximum common mode surge voltage is 10KV(10/700us) and max differential mode surge voltage is 6KV(10/700us).
It supports 10/100/1000Mbps of data rates. It well protects your device against surge damage.
Designed for outdoor use,the LZ PRO 01G-OT operates from -40°C to +65°C in an IP67 enclosure. Equip port should always be connected to device which you want it to be protected. Both RJ45 ports connect to network over Cat5e/ Cat6 cables which is very conveniently and tightly. It can be easily installed with 2 mounting holes.

Standards and approvals:
FCC CFR47 Part 15; EN55024; EN55032; IEEE802.3 10Base-T Ethernet; IEEE802.3u 100Base-Tx Fast Ethernet; IEEE802.3ab 1000Base-T Gigabit Ethernet;
RoHS Compliance; WEEE Compliance

Technical data: LZ PRO 01G-OT		
Network	Gigabit Ethernet (Cat.5E / Cat6)	
Max. data rate	0/100/1000Mbps(Gigabit)	
Max Discharge Current	20 kA (8/20us - 2,5 kA per line)	
Protected Line	1,2,3,4,5,6,7,8	
Common Mode Protection Level(10/700us)	10 kV	
Differential Mode Protection Level(10/700us)	6 kV	
Clamping Voltage(Line to GND)	300 V	
Clamping Voltage(Line to Line)	10 V	
Insertion Loss @10MHz/100MHz	-1 db	
Return Loss @10MHz/100MHz	-20 db	
Response Time	5ns	
IEC61000-4-2(ESD)	± 6 kV (contact), ±8 kV (air)	
IEC61000-4-3(RS)	10V / m (80 MHz~2 GHz)	
IEC61000-4-4(EFT)	Power Port: ±2 kV	
IEC61000-4-5(Surge)	Power Port:±1 kV/DM, ±2 kV/CM	
IEC61000-4-6(CS)	10 V (150 kHz~80 MHz)	
Mechnical characteristics		
Dimensions	209 x 53 x 37,5 mm	
Connection to Network	Connector RJ45	
Operating temperature range	-40 °C/+65 °C	
Storage Temperature	-40 °C/+85 °C	
Operating Humidity	20% to 80%, non-condensation	
Storage Humidity	10% to 95%, non-condensation	
Operating Altitude	up to 5000 m	
Weight	380 g	
Housing material	Aluminium alloy	
Mounting	Wall mounting	
Degree of protection	IP67	
Order informations	Order Code	Weight
LZ PRO 01G-OT	500002	382 g

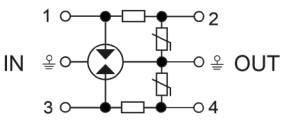




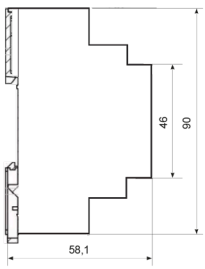


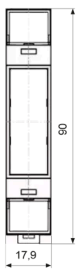
Category IEC / EN:	**D1/C1/C2/C3**
Design:	**comapct design**
Protection	**1 line (2 conductors)**
Voltage ratings:	**170 VDC**
Frequency Range:	**30 MHz**
Complies with:	**EN 61643-31:2019, IEC 61643-31:2018**

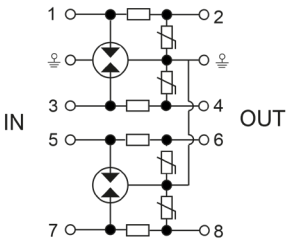
Technical data: DAT PRO2-170		DAT PRO1-170	DAT PRO2-170
Protected line(s)		1	2
Nominal operating voltage	U_n	110 Vdc	
Maximum continuos operating voltage	U_c	170 Vdc	
Nominal discharge current (8/20)	I_n	10 kA	
Maximum discharge current (8/20)	I_{max}	20 kA	
Rated load current	IL	1 A	
Residual voltage at 5 kA (8/20)	U_{res}	> 450V	
Response time	t_a	< 25 ns	
Mechnical characteristics			
Dimensions	90 x 58,1 x 17,9 mm		
Max.cross section for terminals	2,5 mm² flex		
Terminal torque (max.)	0,5 Nm		
Operating temperature range	-40 °C/+80 °C		
Degree of protection (IEC/EN 60529)	IP20		
Housing material	Thermoplastic, gray		
Mounting	DIN rail mounting		
Order informations	**Order Code**	**Weight**	
DAT PRO2-170	100001	64 g	
DAT PRO1-170	100002	52 g	



DAT PRO1-170







DAT PRO2-170

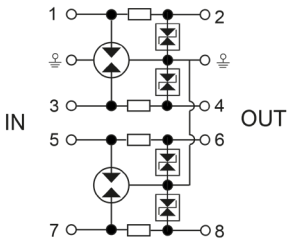


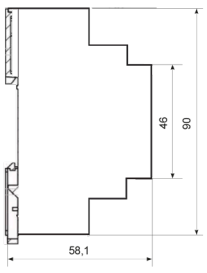
Category IEC / EN: D1/C1/C2/C3
Design: comapct design
Protection 1 line (2 conductors)
Voltage ratings: 5, 12, 24, 48, 60 VDC
Frequency Range: 30MHz
Complies with: EN 61643-31:2019, IEC 61643-31:2018

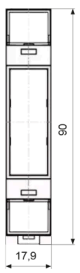
Technical data:		DAT PRO2-5	DAT PRO2-12	DATA PRO2-24	DATA PRO2-48	DATA PRO2-60
Protected line(s)		2				
Nominal operating voltage	U_n	5 Vdc	12 Vdc	24 Vdc	48 Vdc	60 Vdc
Maximum continuos operating voltage	U_c	6 Vdc	15 Vdc	28 Vdc	52 Vdc	64 Vdc
Nominal discharge current (8/20)	I_n	10 kA				
Maximum discharge current (8/20)	I_{max}	20 kA				
Rated load current	IL	1 A				
Residual voltage at 5kA (8/20)	U_{res}	< 25V	< 40 V	< 70 V	< 140 V	< 160 V
Response time	t_a	< 25 ns				

Mechnical characteristics		
Dimensions	90 x 58,1 x 17,9 mm	
Max.cross section for terminals	2,5 mm² flex	
Terminal torque (max.)	0,5 Nm	
Operating temperature range	-40 °C/+80 °C	
Degree of protection (IEC/EN 60529)	IP20	
Housing material	Thermoplastic, gray	
Mounting	DIN rail mounting	
Order informations	**Order Code**	**Weight**
DAT PRO2-5	100016	64 g
DAT PRO2-12	100011	64 g
DAT PRO2-24	100012	64 g
DAT PRO2-48	100013	64 g
DAT PRO2-60	100014	64 g

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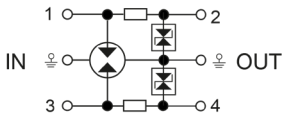


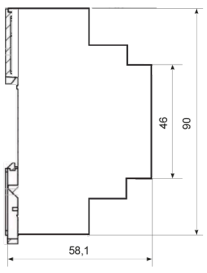


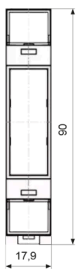
Category IEC / EN:	D1/C1/C2/C3
Design:	comapct design
Protection	1 line (2 conductors)
Voltage ratings:	5, 12, 24, 48, 60 VDC
Frequency Range:	30MHz
Complies with:	EN 61643-31:2019, IEC 61643-31:2018

Technical data:		DAT PRO1-5	DAT PRO1-12	DATA PRO1-24	DATA PRO1-48	DATA PRO1-60
Protected line(s)		1				
Nominal operating voltage	U_n	5 Vdc	12 Vdc	24 Vdc	48 Vdc	60 Vdc
Maximum continuos operating voltage	U_c	6 Vdc	15 Vdc	28 Vdc	52 Vdc	64 Vdc
Nominal discharge current (8/20)	I_n	10 kA				
Maximum discharge current (8/20)	I_{max}	20 kA				
Rated load current	IL	1 A				
Residual voltage at 5 kA (8/20)	U_{res}	< 25V	< 40 V	< 70 V	< 140 V	< 160 V
Response time	t_a	< 25 ns				

Mechnical characteristics		
Dimensions	90 x 58,1 x 17,9 mm	
Max.cross section for terminals	2,5 mm² flex	
Terminal torque (max.)	0,5 Nm	
Operating temperature range	-40 °C/+80 °C	
Degree of protection (IEC/EN 60529)	IP20	
Housing material	Thermoplastic, gray	
Mounting	DIN rail mounting	
Order informations	**Order Code**	**Weight**
DAT PRO1-5	100015	52 g
DAT PRO1-12	100003	52 g
DAT PRO1-24	100004	52 g
DAT PRO1-48	100005	52 g
DAT PRO1-60	100006	52 g







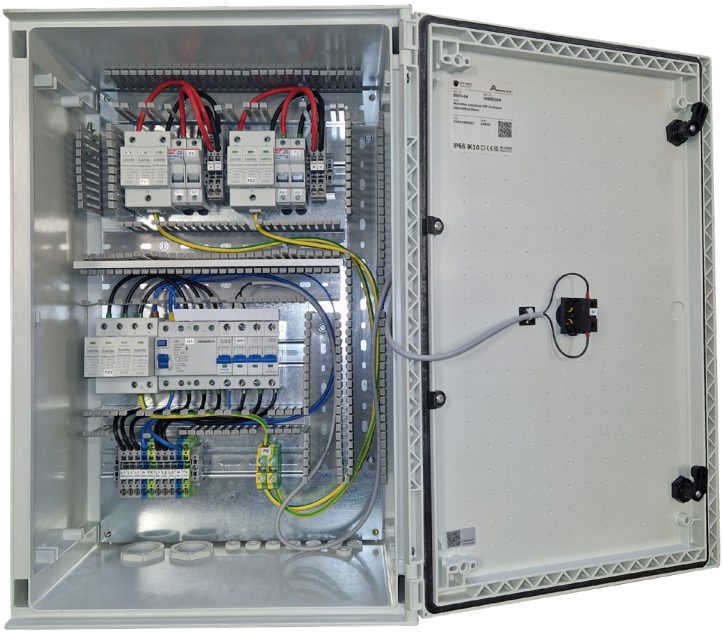
String combiner for photovoltaic systems

Our company specializes in the production of low-voltage electrical cabinets and electrical cabinets for the protection of photovoltaic systems according to your wishes and needs. Based on our experience, we offer technical support and advice in all phases of cabinet production.
We also advise on the installation of the highest quality components.
We manufacture cabinets quickly and reliably.

Our advantages:

- We are a manufacturer of surge protectors - we install our own, tested, top-quality surge protectors in the cabinets.
- We use quality components from well-known manufacturers (Eti, Weidmuller, Schrack,...).
- Enough space for wiring, enough cable glands.
- We also manufacture cabinets with components and in accordance with the customer's project.







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Notes

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