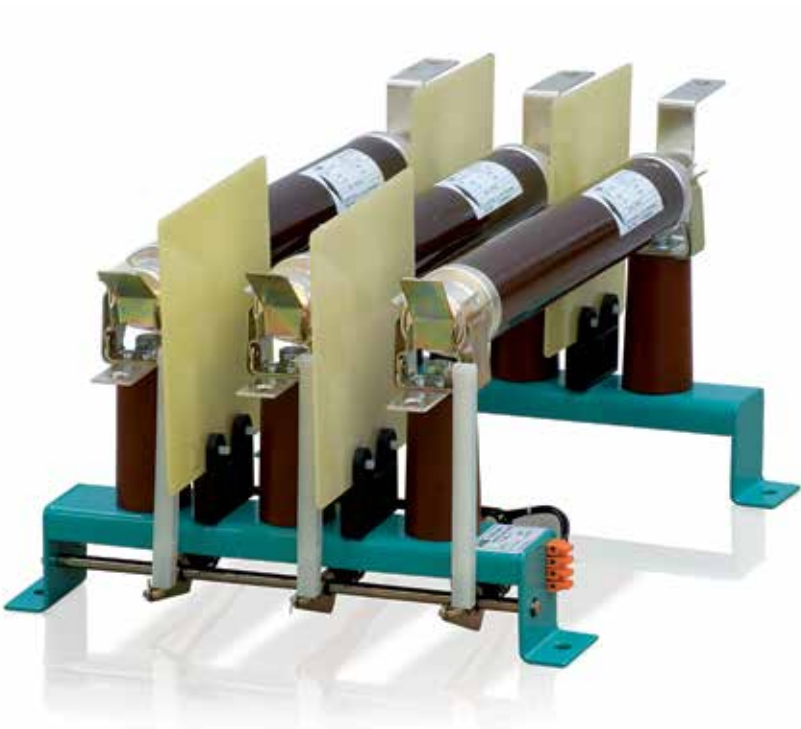


Indoor Fuse bases

Fuse bases type BPS

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1. Features

- suitable for all types of high power fuse links fitted with Ø45mm contact,
- may co-operate with switching station auxiliary and control circuits,
- small overall dimensions.

2. Application

The fuse bases BPS-type are intended for fixing medium-voltage fuse links fitted with a striker. The base can be applied in cases where fuse links are used to protect transformer circuits as well as motor circuits. By using these bases, the signaling circuits in the switching station can see that a particular fuse has blown.

3. Operating conditions

The fuse bases BPS-type are designed for indoor applications where temperate climate conditions exist. The fuse bases BPS-type can be mounted vertically or horizontally, and this enables easy replacement of the fuse link.

4. Versions and marking

The marking denoting a three-pole fuse base with a rated voltage of 7.2 kV is composed of two letter-digit segments: BPS-01.

The two-piece base is powder painted and fitted with a resin insulator. The base pole pitch is 112 mm. The catalogue number of this base is: 1YMB207101M0001.

The table below presents the different versions of single pole BPS-type fuse bases.

Fuse base type	Rated voltage Un [kV]	Version	Coating	Post-insulators	Fuse link dimension e [mm]	Catalogue No.
BPS	7.2	1(*)	zinc	resin	192	1YMB507102M0001
BPS	7.2	1(*)	zinc	resin	292	1YMB507102M0003
BPS	12	1(*)	zinc	resin	292	1YMB507102M0005
BPS	12	1(*)	zinc	resin	442	1YMB507102M0007
BPS	17.5	1(*)	zinc	resin	292	1YMB507102M0009
BPS	24	1(*)	zinc	resin	442	1YMB507102M0013
BPS	24	1(*)	zinc	resin	537	1YMB507102M0015
BPS	27	1(*)	zinc	resin	442	1YMB507102M0017
BPS	36	1(*)	zinc	resin	537	1YMB507102M0021
BPS	7.2	2(**)	zinc	resin	any	1YMB507103M0001
BPS	12	2(**)	zinc	resin	any	1YMB507103M0003
BPS	24	2(**)	zinc	resin	any	1YMB507103M0007
BPS	36	2(**)	zinc	resin	any	1YMB507103M0009

Remarks:

(*)- single pole one-piece fuse base

(**)- single pole two-piece fuse base

The single pole two-piece fuse base makes it possible to use fuse links with any „e” overall dimension.

5. Design and principle of operation

5.1 The three-pole fuse base

The three-pole fuse base, BPS-type, is composed of two separated steel bars fitted with M10 earthing terminals, and three fixed indoor resin post-insulators. Spring contacts and a terminal strip (fitted with M12 screw terminals for easy connection to an electrical circuit) are mounted on these insulators. The insulators are separated by insulating barriers, which ensure appropriate insulation between poles. In addition, these barriers help to reduce the overall dimensions of the fuse base. A tripping mechanism is fixed to one of the bars and consists of a lever system and a separate microswitch for each pole. The NC contact of each microswitch are connected in series, while the circuit ends are connected to terminals 1 and 2 of the terminal strip. If three operating fuse-links are mounted onto the base, the microswitch NC contact are closed and the circuit between terminals 1 and 2 of the terminal strip has continuity.

The NC contacts of each microswitch are connected in parallel, while the circuit ends are connected to terminal 3 and 4 of the terminal strip. If three operational fuse links are mounted onto the fuse base, the microswitch NO contacts are opened and the circuit between terminals 3 and 4 of the terminal strip has no continuity. If any of the fuse links is missing or if the striker of one of the three fuse links is triggered, the circuit between terminals 1 and 2 will open and the circuit between terminals 3 and 4 will simultaneously close.

5.2 The single pole fuse base

Single pole fuse bases, BPS-type, are manufactured in two basic version i.e. as one and two-piece devices. Two-piece bases consist of two steel bars fitted with M10 earthing terminals. Indoor resin post-insulators are fixed to these bars. Spring contacts and a terminal strip (with M12 screw terminals for easy connection to an electrical circuit) are mounted onto these insulators. In the one-piece version, the bars with the insulators are joined to a steel bar to make a single assembly. A tripping mechanism consisting of a lever system and a microswitch is fixed to one of the bars. The NC contacts of the microswitch are connected to terminals 1 and 2, whereas the NO contacts are connected to terminals 3 and 4 of the terminal strip. If an operating fuse link is mounted onto the base, the micro switch NC contacts are closed and the NO contacts are opened. If, however, the fuse link is missing or the fuse link is triggered, the NC contacts will open while the NO contacts will close.

6. Characteristics

Fuse base type	Fuse base voltage	Rated	Frequency	Rated current	Types of suitable fuse links
		Un [kV]	f [Hz]	In [A]	
BPS-01	Three-pole	7.2	50 or 60	315	CEF-7,2/ 6÷200 CMF-7,2/63÷315
BPS7.2	Single pole	7.2		315	CEF-7,2/6-200 CMF-7,2/63-315
BPS12	Single pole	12		200	CEF-12/6-200 CMF-12/63-200 CEF-S-12/10-50 CEF-VT-7,2-12/2-6,3
BPS17.5	Single pole	17.5		125	CEF-17,5/6-63 CEF-VT-10-17,5/2-6,3
BPS24	Single pole	24		125	CEF-24/6-125 CEF-S-24/10-40 CEF-VT-17,5-24/2-6,3
BPS27	Single pole	27		100	CEF-27/6-63
BPS36	Single pole	36		40	CEF-36/6-40

7. Conformity with standards

The BPS fuse bases meet the requirements of the following standards:

- Polish Standard PN-77/E-06110,
- International Standard IEC 60282-1.

8. Ordering method

The order must contain the following information: product name, type symbol, rated voltage, catalogue number and quantity of fuse bases.

All additional requirements not stated in this catalogue sheet must be agreed with the manufacturer. All inquiries must be made in writing and must state the source of the requirements (Regulations, Standards, etc).

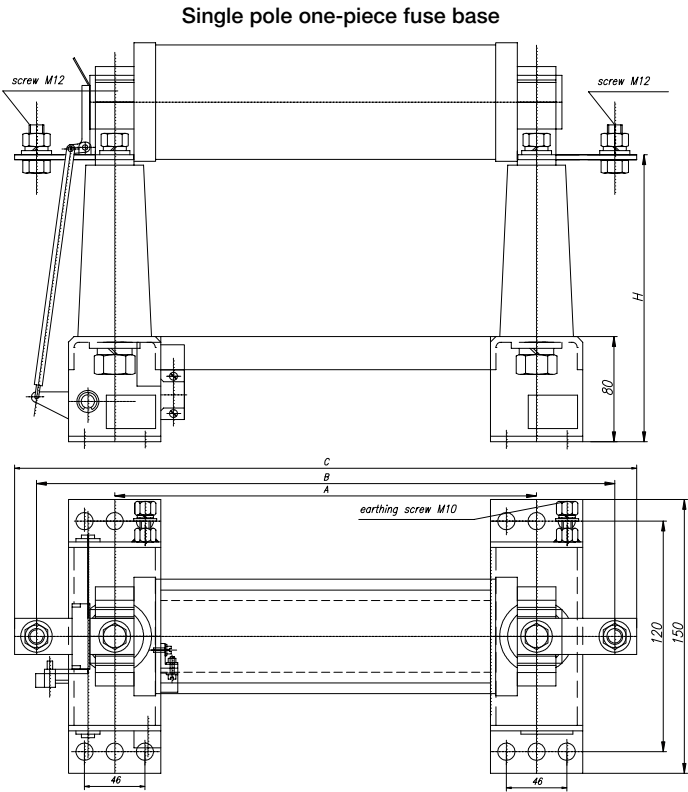
9. Order example

Three pole fuse base BPS-01 type, rated voltage 7.2 kV, catalogue number 1YMB207101M0001 - 20 pcs.

Single pole one-piece fuse base with resin insulators, type BPS 12, rated voltage 12 kV, zinc plated, for fuse links with dimension e=292 mm, catalogue number 1YMB507102M0005, 10 pcs.

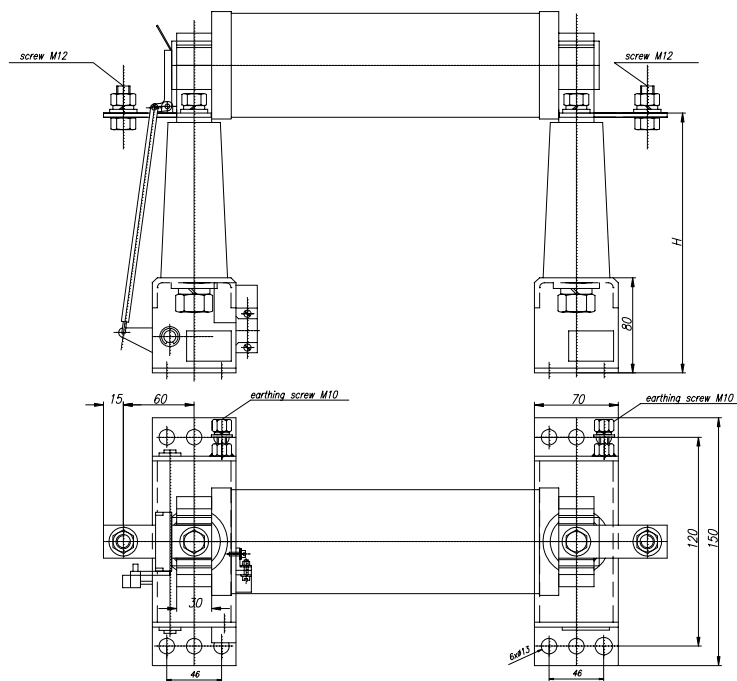
10. Enclosures

1. Dimensional drawings



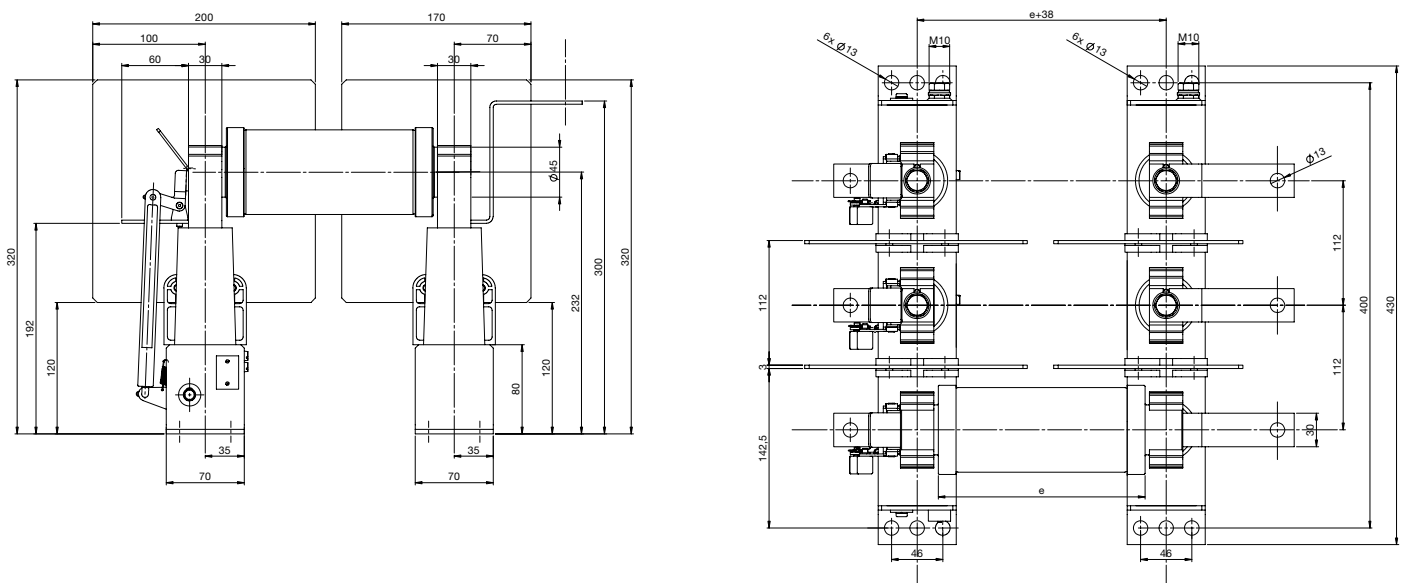
Dimensions					
Un	Fuse link dimension	A	B	C	H
kV	e/D	[mm]	[mm]	[mm]	[mm]
7.2	192/Ø53, 192/Ø65, 192/Ø87	226+2	346+2	376+2	192±1(resin post-insulators)
	292/Ø53, 292/Ø65, 292/Ø87	326+2	446+2	476+2	
12	292/Ø53, 292/Ø65, 292/Ø87	326+2	446+2	476+2	217±1(resin post-insulators)
	442/Ø53, 442/Ø65, 442/Ø87	476+2	596+2	626+2	
17.5	292/Ø53, 292/Ø65, 292/Ø87	326+2	446+2	476+2	297±1(resin post-insulators)
24	442/Ø53, 442/Ø65, 442/Ø87	476+2	596+2	626+2	297±1(resin post-insulators)
	537/Ø65, 537/Ø87	571+2	691+2	721+2	
27	442/Ø65, 442/Ø87	476+2	596+2	626+2	388±1(resin post-insulators)
36	537/Ø65, 537/Ø87	571+2	691+2	721+2	389±1(p)
					388±1(resin post-insulators)

Single pole two-piece fuse base

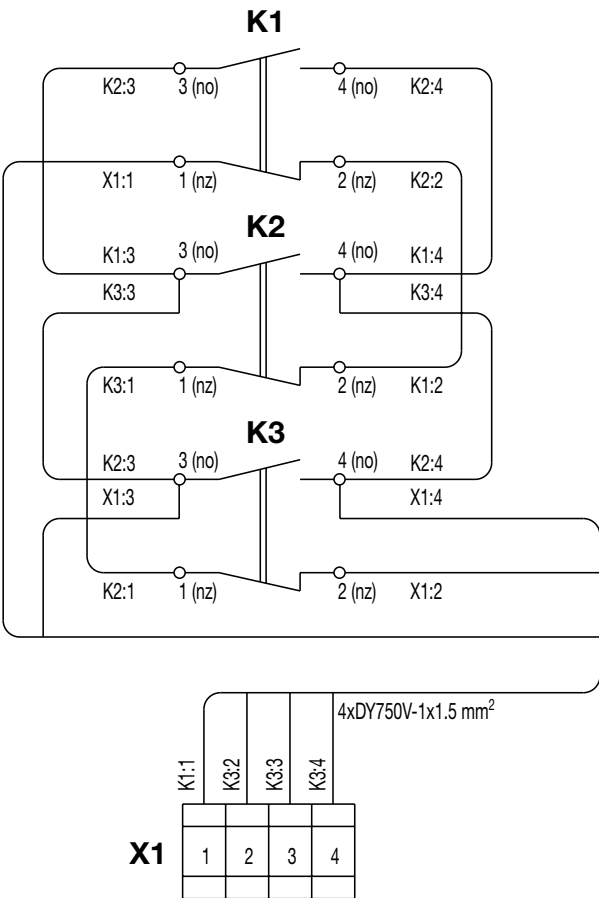
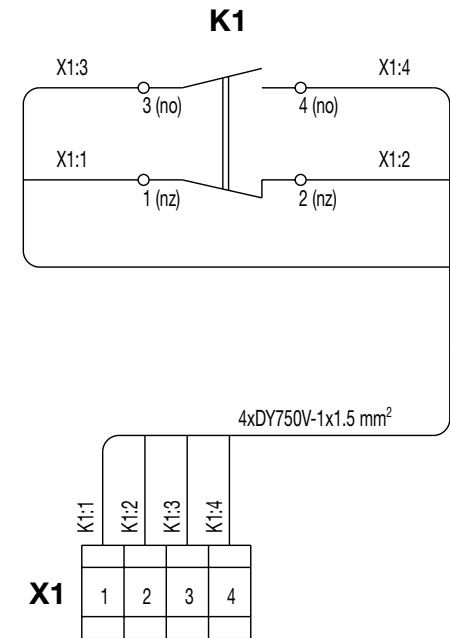
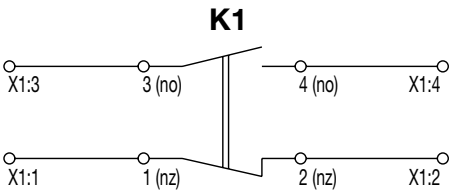


Dimensions		
Un	Fuse link dimension	H
[kV]	e/D	[mm]
7.2	192/Ø53, 192/Ø65, 192/Ø87 292/Ø53, 292/Ø65, 292/Ø87, 367/Ø87	192±1 (resin post-insulators)
12	192/Ø53, 292/Ø53, 292/Ø65, 292/Ø87 442/Ø53, 442/Ø65, 442/Ø87, 537/Ø65, 537/Ø87	217±1 (resin post-insulators)
24	442/Ø53, 442/Ø65, 442/Ø87, 292/Ø53 537/Ø53, 537/Ø87	297±1 (resin post-insulators)
36	537/Ø53, 537/Ø87	388±1 (resin post-insulators)

Three phases fuse base type BPS-01



2. Wiring diagrams of fuse base auxiliary circuits.



- NOTES for single pole BPS
1. Contacts 1 and 2 of one of the auxiliary switches, K1, are open, and contacts 3 and 4 are closed:
a) after the fuse link striker has been triggered,
b) if the fuse link is missing from the fuse holder.
 2. Contacts 1 and 2 of one of the auxiliary switches, K1, are closed, and contacts 3 and 4 are opened when fuse links in the fuse holder are operational.
 3. Use fuse links with striker only.
 4. Install fuse links with striker in the fuse holder in a manner that will allow the striker to be directed to the insulator with pull insulator.
 5. K 1: type 83135, $U_i = 380\text{ V}$; $U_e = 380\text{ V}$, $I_e = 6\text{ A}$, AC15;
 $U_e = 220\text{ V}$, $I_e = 0.25\text{ A}$, DC13.
 6. X1: type LZ-B4/6, $U_i = 500\text{ V}$; 4mm² Cu, IEC 947-7-1.

- NOTES for three poles BPS
1. Contact 1 and 2 of one of the auxiliary switches K1, K2, K3 are open and contacts 3 and 4 are closed:
a) after the fuse link striker has been triggered,
b) if the fuse link is missing from the fuse holder.
 2. Contact 1 and 2 of the auxiliary switches K1, K2, K3 are closed and contacts 3 and 4 are opened when all three fuse links in the fuse holder are operational.
 3. Use fuse links with striker only.
 4. Install fuse links with striker in the fuse holder in a manner that will allow the striker to be directed to the insulator with pull insulator.
 5. K1: type 83135, $U_i = 380\text{ V}$; $U_e = 380\text{ V}$, $I_e = 6\text{ A}$, AC15;
 $U_e = 220\text{ V}$, $I_e = 0.25\text{ A}$, DC13.
 6. X1: type LZ-B4/6, $U_i = 500\text{ V}$; 4mm² Cu, IEC 947-7-1.