

Operating
since 1950



May 1st
**Electro-technical
Work Co-operative**



Cracow

Dunikowskiego 3, tel./fax: 48 12 648 62 11

e-mail: info@spel.com.pl, www.spel.com.pl



WTA-F/L

Quick-action glass fuse with a small breaking capacity.

Breaking capacity

Rated breaking capacity: I_n 10, but not less than 35 A, tests on alternating current.

Application

Quick-acting fuse is recommended for protecting electrical, telecommunication, electronic systems and equipment from short circuit and overload.

| nominal current I_n | maximum voltage drop in mV |
|--------------------------|----------------------------------|
| 80 mA | 4000 |
| 100 mA | 3500 |
| 125 mA | 2000 |
| 160 mA | 2000 |
| 200 mA | 1700 |
| 250 mA | 1400 |
| 315 mA | 1300 |
| 400 mA | 1200 |
| 500 mA | 1000 |
| 630 mA | 650 |
| 800 mA | 240 |
| 1,0 mA | 200 |
| 1,25 A | 200 |
| 1,6 A | 190 |
| 2,0 A | 170 |
| 2,5 A | 170 |
| 3,15 A | 150 |
| 4,0 A | 130 |
| 5,0 A | 130 |
| 6,3 A | 130 |
| 8,0 A | 130 |
| 10,0 A | 130 |

Fuses and fuse sockets



WTA-T/L

Slow-blow glass fuse
 cameras with small
 breaking capacity
 Breaking capacity
 Rated breaking capacity:
 10 I_n , but not less
 than 35 A, tests on alter-
 nating current.

Application
 Delayed action fuse is
 recommended for
 protecting electrical,
 telecommunication,
 electronic systems and
 equipment from short
 circuit and overload.

| nominal current I_n | maximum voltage drop in mV |
|--------------------------|----------------------------------|
| 50 mA | 3500 |
| 63 mA | 3000 |
| 80 mA | 3000 |
| 100 mA | 2500 |
| 125 mA | 2000 |
| 160 mA | 1900 |
| 200 mA | 1500 |
| 250 mA | 1300 |
| 315 mA | 1100 |
| 400 mA | 1000 |
| 500 mA | 900 |
| 630 mA | 300 |
| 800 mA | 250 |
| 1,0 A | 150 |
| 1,25 A | 150 |
| 1,6 A | 150 |
| 2,0 A | 150 |
| 2,5 A | 120 |
| 3,15 A | 100 |
| 4,0 A | 100 |
| 5,0 A | 100 |
| 6,3A | 100 |
| 8,0 A | 100 |
| 10,0 A | 100 |

Fuses and fuse sockets



WTA-F/H

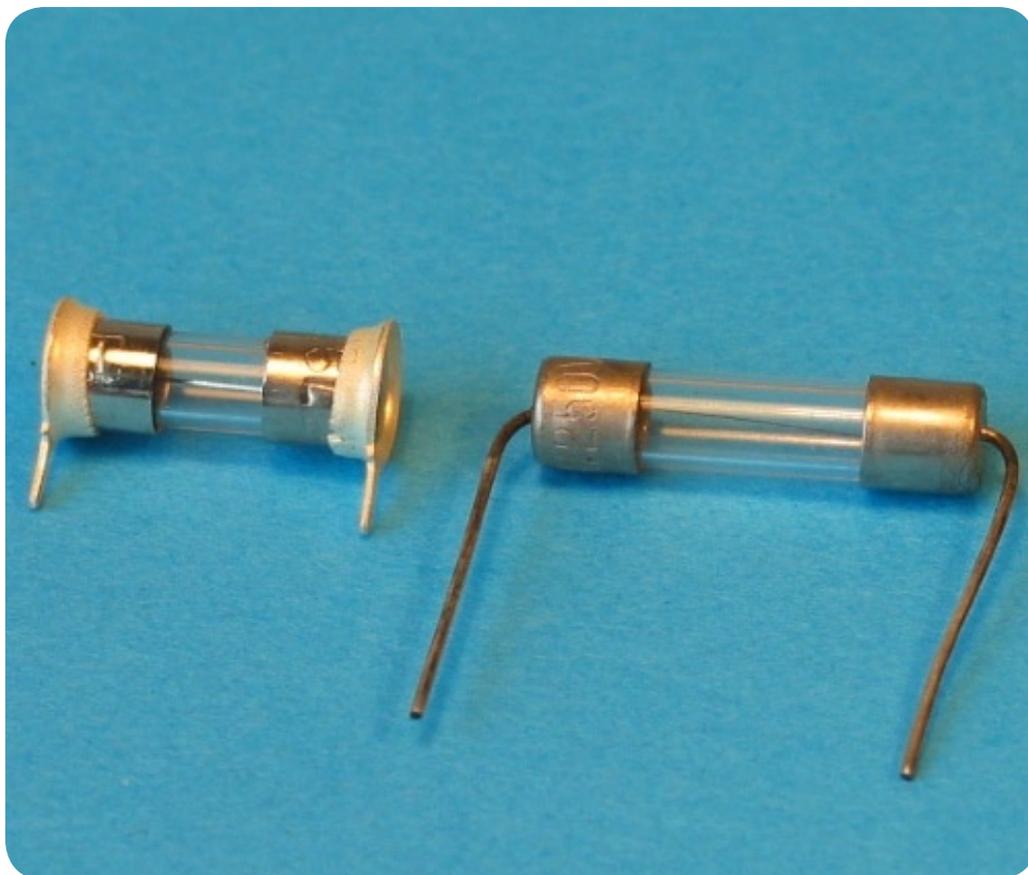
Quick-action glass fuse with a large breaking capacity

Breaking capacity
tested with alternating current - 1500 A

Application
A very quick acting fuse is recommended for protecting electrical, telecommunication, electronic systems and equipment from short circuit and overload.

| nominal current I_n | maximum voltage drop in mV |
|--------------------------|----------------------------------|
| 250 mA | 2000 |
| 315 mA | 2500 |
| 400 mA | 2000 |
| 500 mA | 1800 |
| 630 mA | 1500 |
| 800 mA | 1200 |
| 1,0 mA | 1000 |
| 1,25 A | 800 |
| 1,6 A | 600 |
| 2,0 A | 500 |
| 2,5 A | 400 |
| 3,15 A | 350 |
| 4,0 A | 300 |
| 5,0 A | 250 |
| 6,3 A | 200 |
| 8,0 A | 200 |
| 10,0 A | 200 |

Fuses and fuse sockets



WTA-F/L

Glass fuse with solder tags

Breaking capacity

Rated breaking capacity: $I_n 10$, but not less than 35 A, tests on alternating current.

Application

Quick-acting fuse is recommended for protecting electrical, telecommunication, electronic systems and equipment from short circuit and overload. It is mounted in electrical circuits printed by soldering.

| nominal current I_n | maximum voltage drop in mV |
|--------------------------|----------------------------------|
| 160 mA | 2000 |
| 200 mA | 1700 |
| 250 mA | 1400 |
| 315 mA | 1300 |
| 400 mA | 1200 |
| 500 mA | 1000 |
| 630 mA | 650 |
| 800 mA | 240 |
| 1,0 A | 200 |
| 1,25 A | 200 |
| 1,6 A | 190 |
| 2,0 A | 170 |
| 2,5 A | 170 |
| 3,15 A | 150 |
| 4,0 A | 130 |
| 5,0 A | 130 |
| 6,3 A | 130 |

Fuses and fuse sockets



GBA-zm

Application

The sockets are mounted in housings of machinery, equipment, electrical, telecommunications and electronics systems where protection of circuits from short circuits and overloading is required.

Fuses and fuse sockets

www.spel.com.pl



GBA-zB-5

Application

The sockets are mounted in housings of machinery, equipment, electrical, telecommunications and electronics systems where protection of circuits from short circuits and overloading is required.

Fuses and fuse sockets

www.spel.com.pl



GBA-zB-4

Application

The sockets are mounted in housings of machinery, equipment, electrical, telecommunications and electronics systems where protection of circuits from short circuits and overloading is required.

Fuses and fuse sockets

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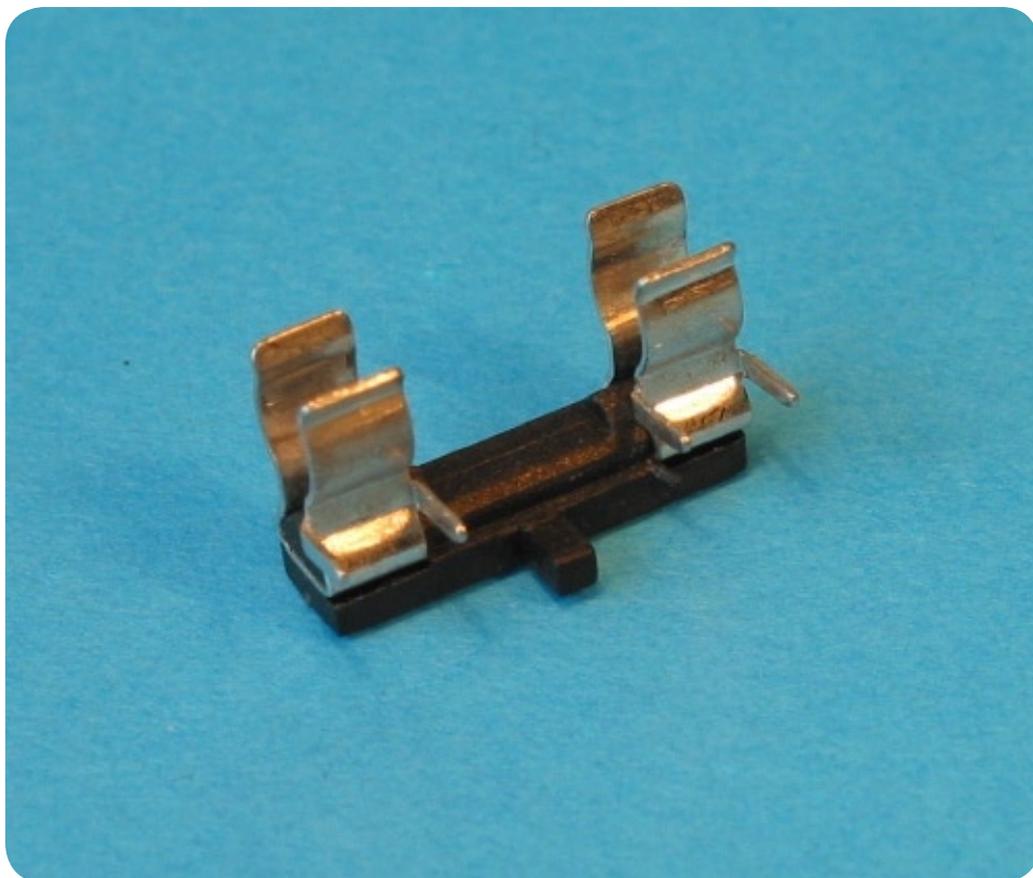
GBAZ-D

Application

The sockets are designed to be mounted on printed circuits of protections of circuits and telecommunication, electrical and electronic equipment.

Fuses and fuse sockets

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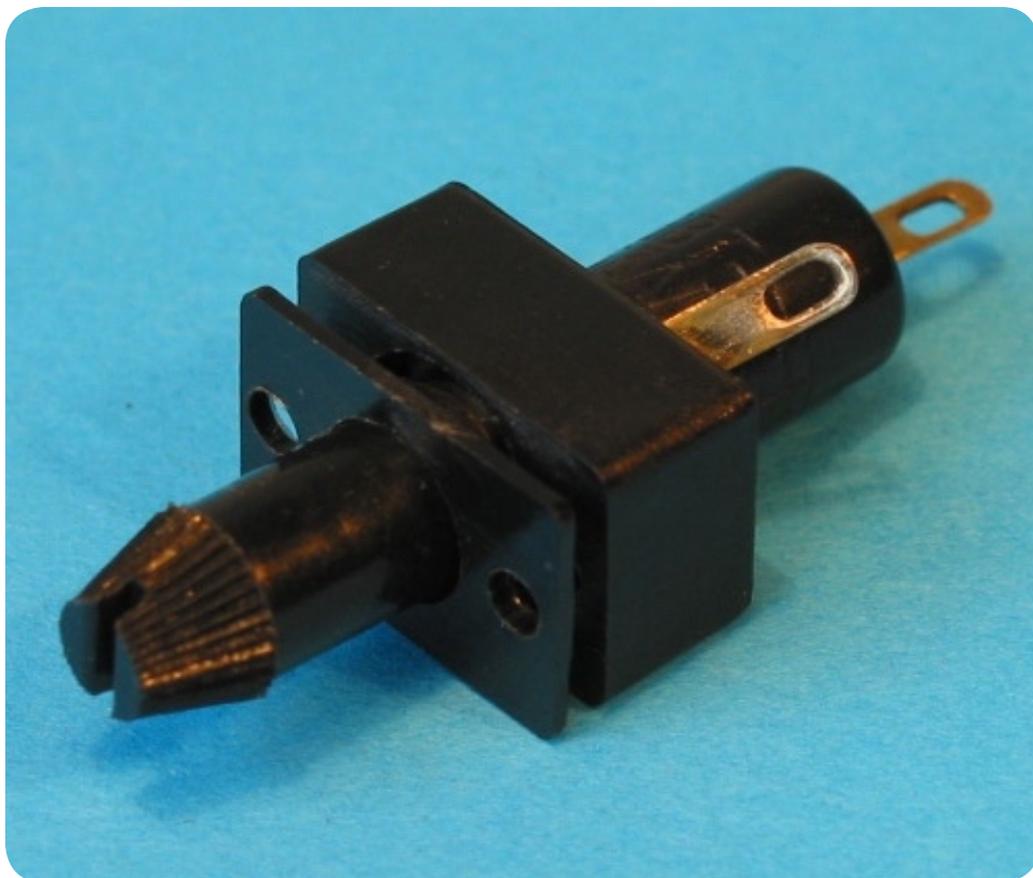


XP

Application

The sockets are designed to be mounted on printed circuits of protections of circuits and telecommunication, electrical and electronic equipment.

Fuses and fuse sockets



GBT - Z

Telecommunication fuse sockets and fuse sockets printed circuits.

Application

GBT-z sockets are designed for protection of systems and telecommunications, electrical and electronic equipment.

Car and telecommunication fuses and fuse sockets



GBSP

Wired car fuse socket

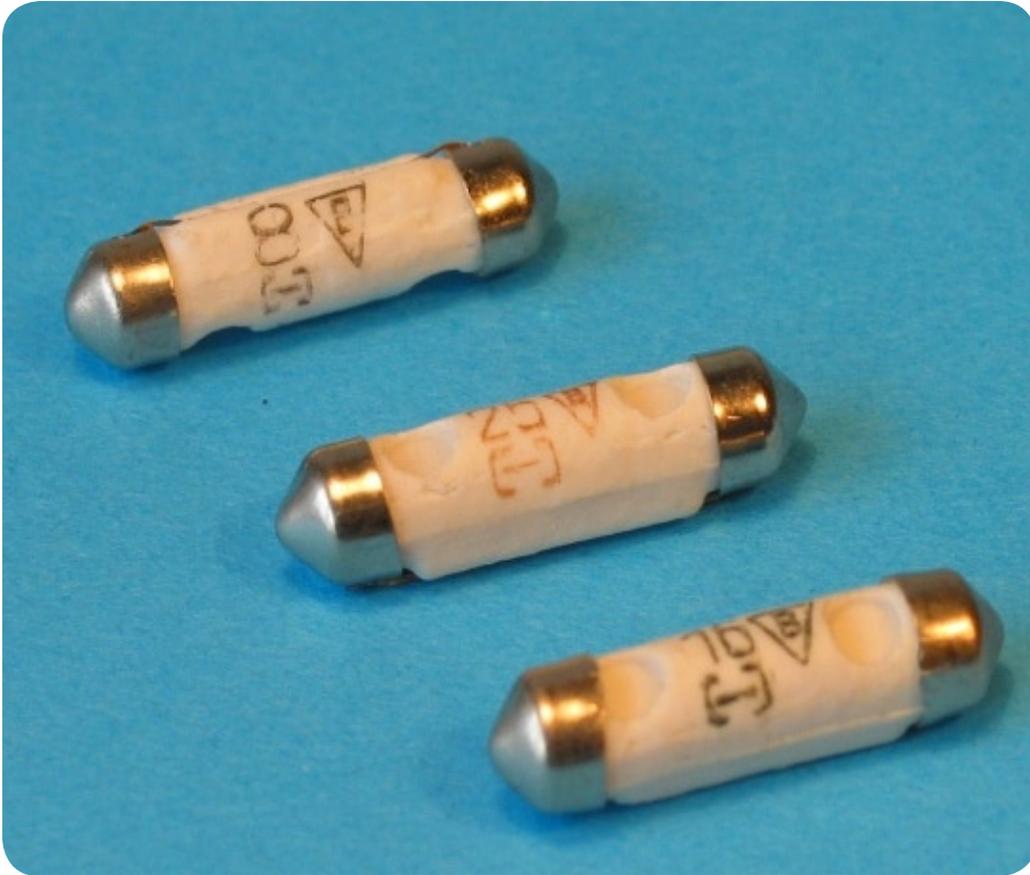
Design

GBSP sockets are made in two versions
a - with cylindrical car fuse holders
25 x 06 mm b - with holders
for glass fuses 20 x 05 mm

Application

GBSP socket is designed to be mounted
(placed) in electric car systems
to hold car fuses
or glass fuses

Car and telecommunication fuses and fuse sockets



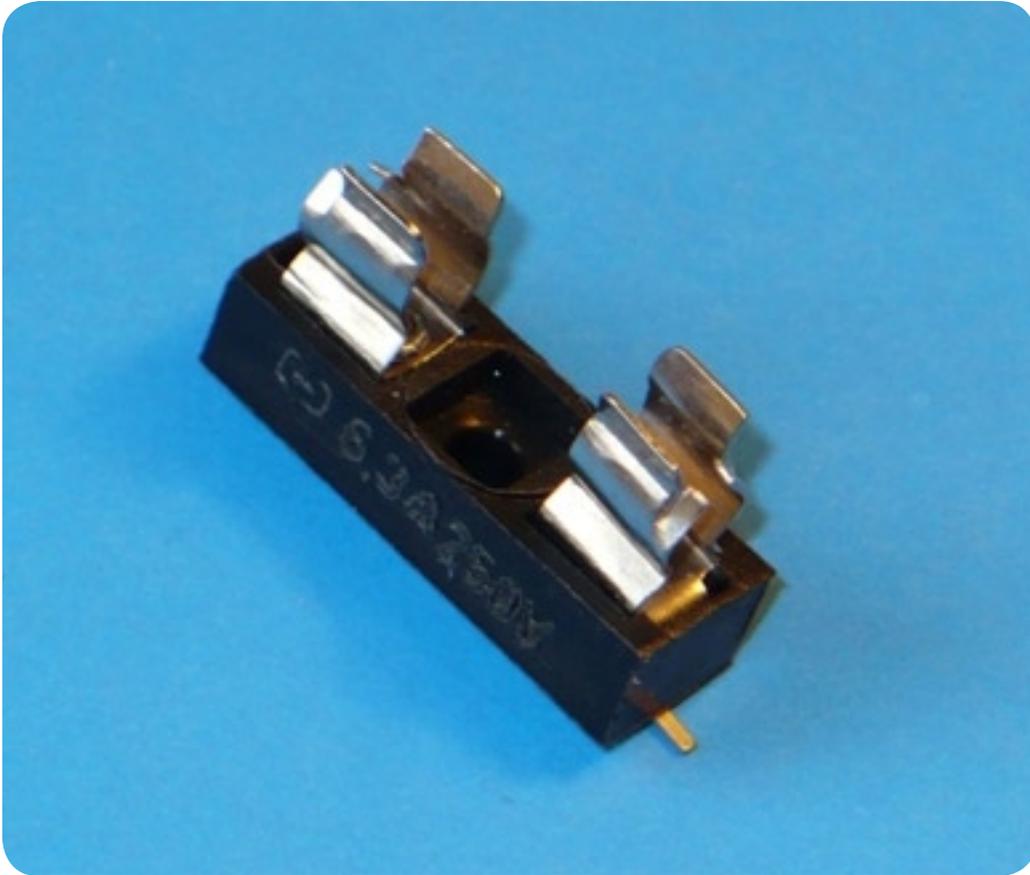
Wb - S

Car Fuse

Application

A Wb-s car fuse is designed to protect circuitry of cars against overload and short circuits.

Car and telecommunication fuses and fuse sockets



PBA-D

Fuse socket for PBA-D printed circuits
6.3 A / 250 V

Application

The PBA-D sockets are designed to be soldered on printed circuits of protections of circuits and telecommunication, electrical and electronic equipment.

Car and telecommunication fuses and fuse sockets



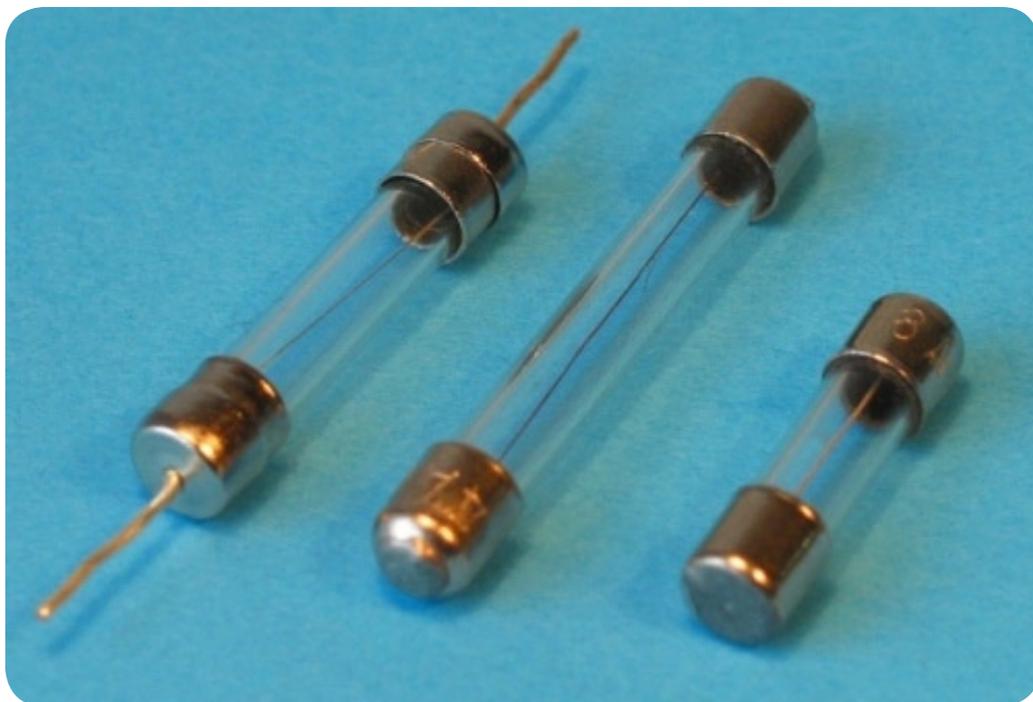
WP1-1

Application

Fuse designed to protect electric circuits from short circuit and overload.

Special fuses and fuse sockets

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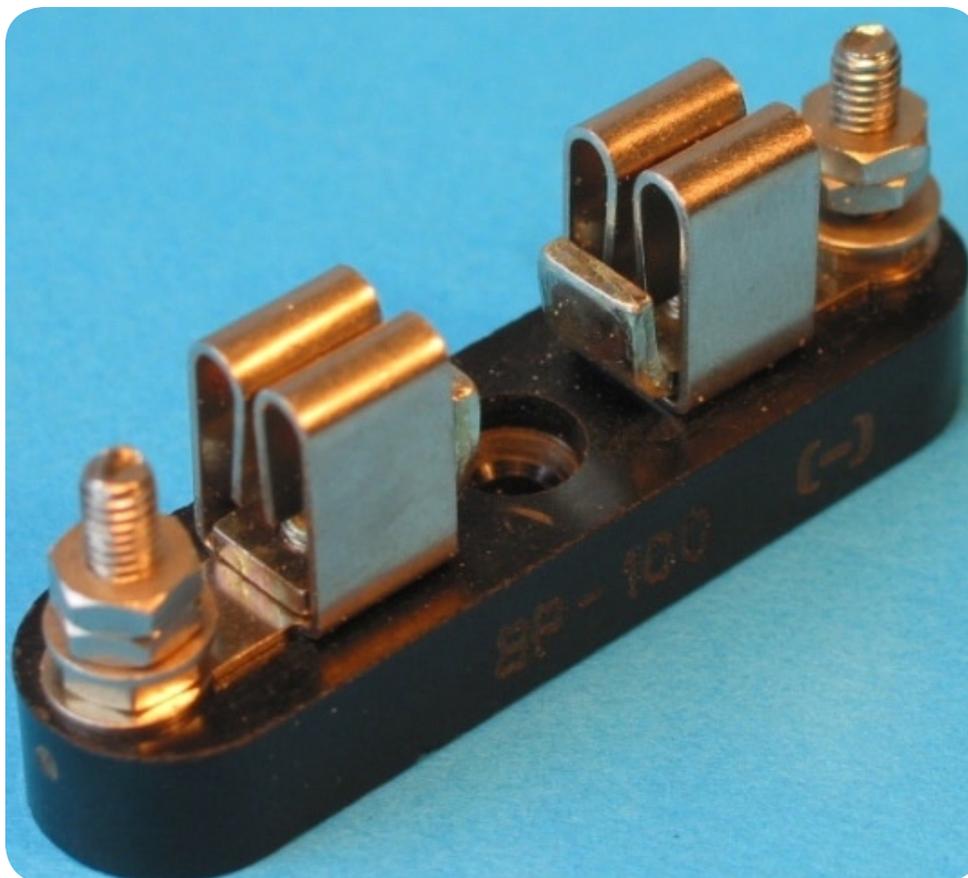
WB-C, WB-K

Tubular fuse with cylindrical tags
Tubular fuse with cone tags

Application

The fuses are designed to protect electric circuits from short circuit and overload.

Special fuses and fuse sockets



BZ-20, BZ-30

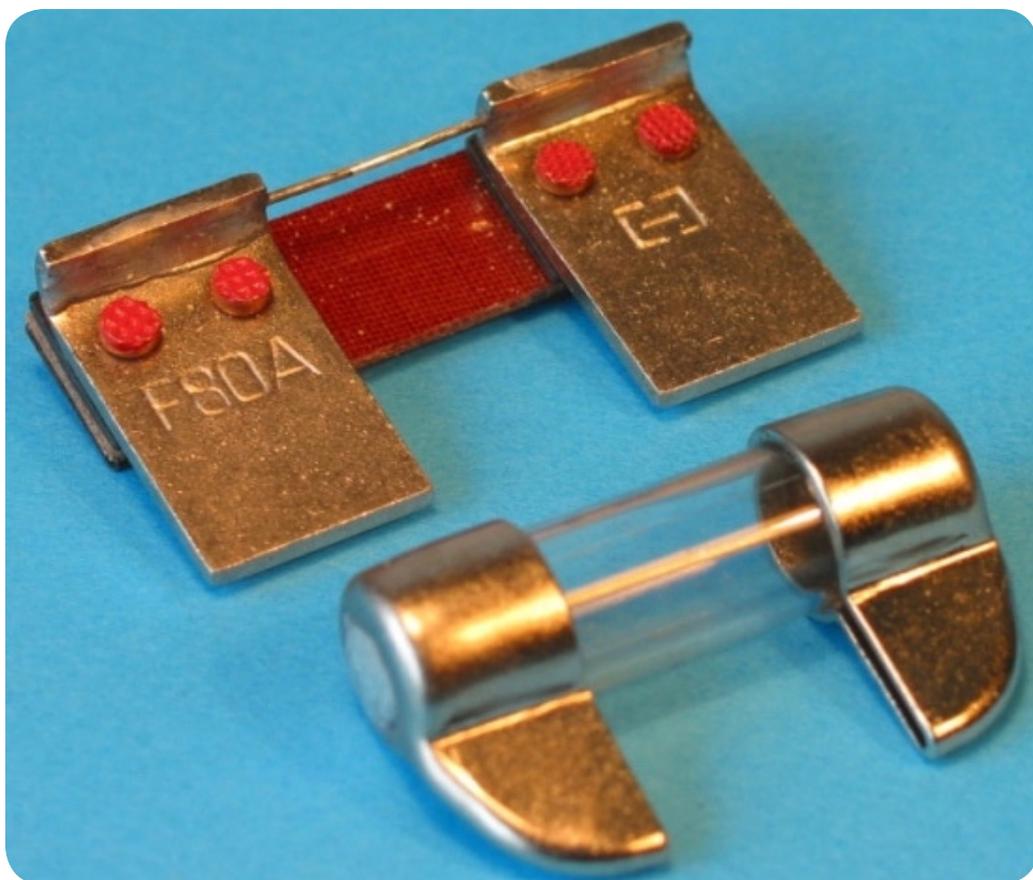
Fuse cases (sockets) type BZ - 20, BZ - 30
(BP - 100, BP - 200)

Application

Bz-20 and Bz-30 fuse cases are applicable
in electrical systems for mounting and connection to the
PW fuses circuits.

Special fuses and fuse sockets

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PW 2 - 100A

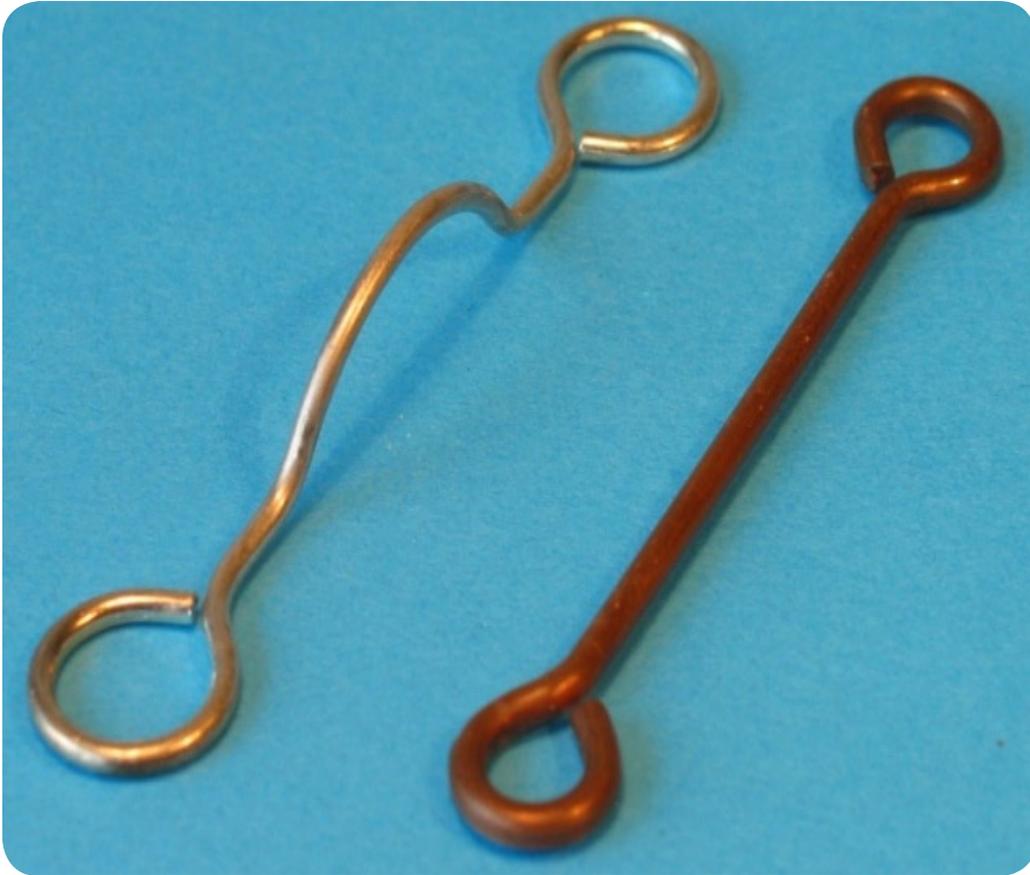
Fuses type:

- a) PW from 2 to 50 A
 - a) PW from 60 to 100 A
- Nominal voltage 30 V

Application

Fuse designed to protect electric circuits from short circuit and overload.

Special fuses and fuse sockets



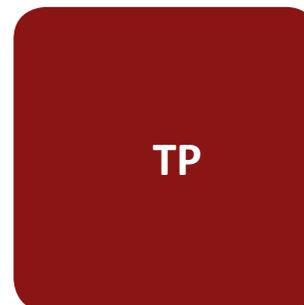
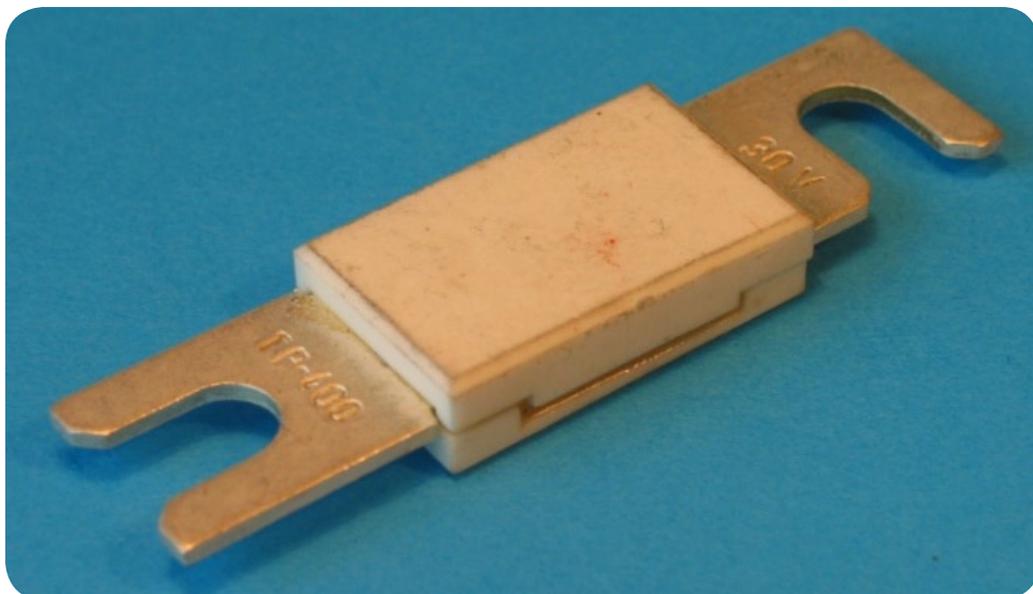
BD

Wire fuses type:
125 A; 140 A; 150 A; 200 A and 250 A
For nominal voltage of 30 V ~

Application

Fuse designed to protect electric circuits
from short circuit and overload.

Special fuses and fuse sockets

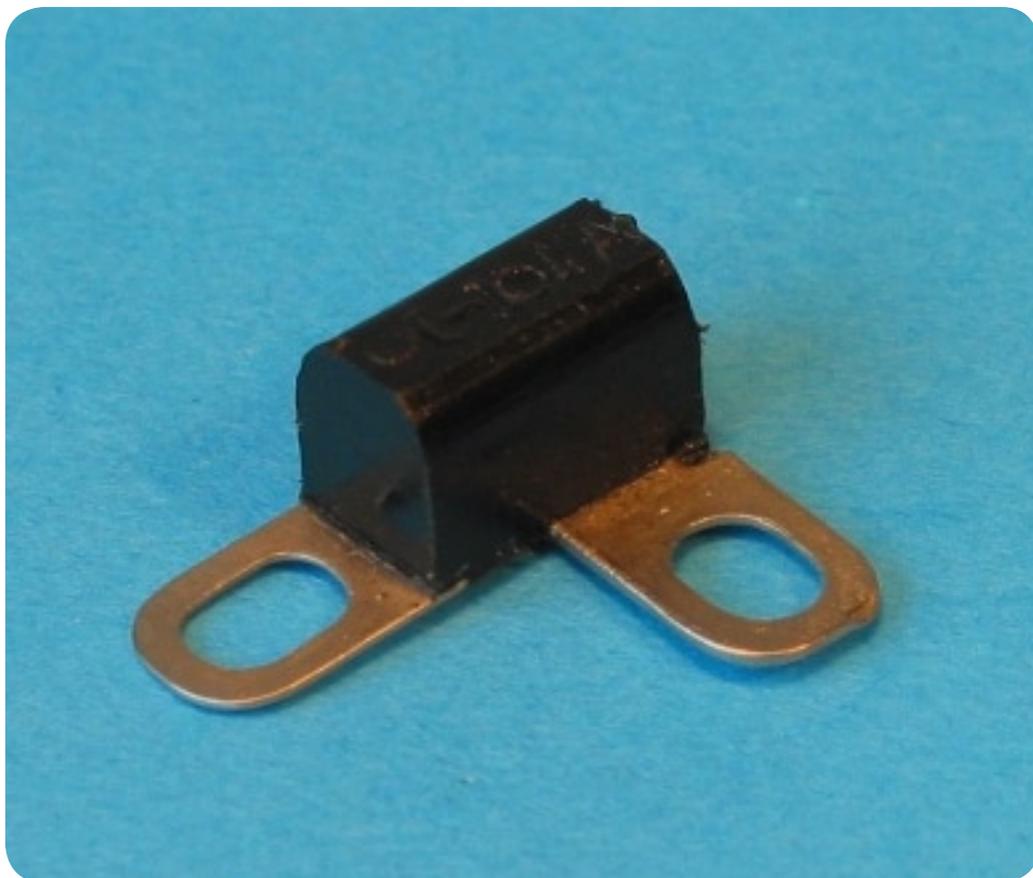


Application

Fuse designed to protect electric circuits from short circuit and overload.

Special fuses and fuse sockets

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WBO-W

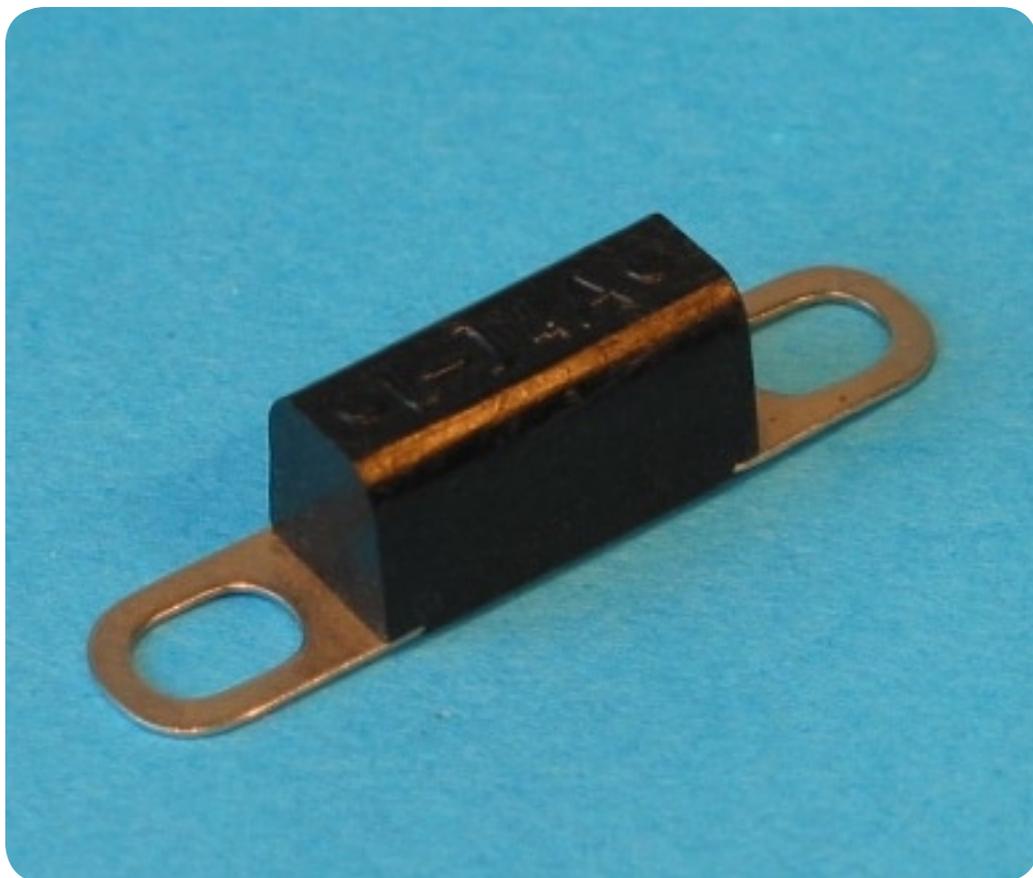
Insulated fuses

Application

The fuse is designed to work in mining lamps and for short circuit and overload protection of operating and charging systems of the lamp battery.

Special fuses and fuse sockets

www.spel.com.pl



WBO

Insulated fuses

Application

The fuse is designed to work in mining lamps and for short circuit and overload protection of operating and charging systems of the lamp battery.

Special fuses and fuse sockets



Quick-action tubular fuses

Application

Fuse designed to protect electric circuits from short circuit and overload.

Special fuses and fuse sockets



BP-G

Flexible wire fuse

Application

Fuse designed to protect electric circuits and fiscal cash register circuits from overloading and short circuits

Special fuses and fuse sockets

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**On
/Off WABO
Switch
(door-bell
+ push-button)**

Application

On/off WABO switch (door-bell + push-button) is designed for turning on and off electric circuits . These are monostable switches.

Push-button and sliding switches



WABO Switch

Build-in push-button switches 1-2,5 A/250 V ~

Application

A WABO switch is designed for switching on and off electrical circuits and lamp circuits . It is a bistable switch.

Push-button and sliding switches



**Push-button
switch
in a pear
case
2,5A/250V**

Application

Push-button switch in pear case is designed for turning on and off electric circuits lamp and wall lamp circuits. It can be in monostable and bistable version.

Push-button and sliding switches



**Sliding,
Through,
Bipolar switch
2,5A/250V**

Application

The sliding through bipolar switch 2.5 A/250V is designed to turn on/off electrical circuits, lamps circuits, and wall lamps circuits.

Push-button and sliding switches

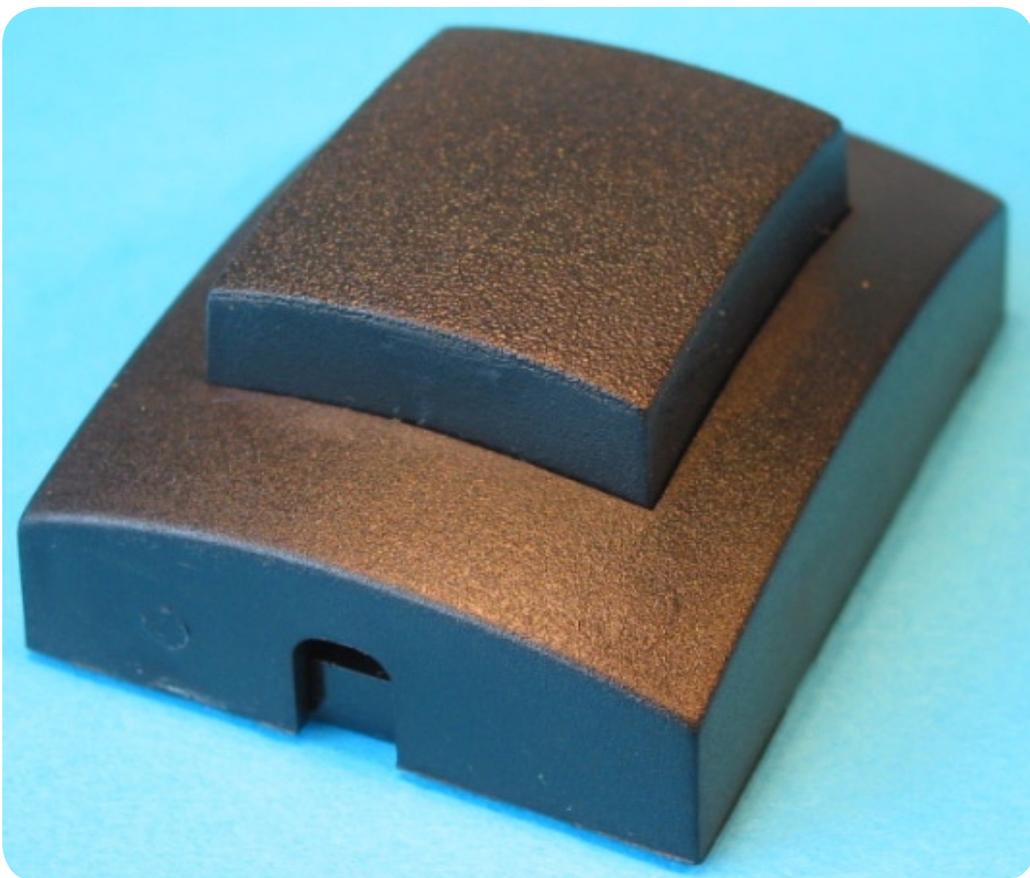


**Through ,
push-button
foot-operated
round switch
2,5A/250V**

Application

The through, push-button, foot-operated round switch is designed for turning on and off electric circuits, lamp and wall lamp circuits. It can be in monostable and bistable version.

Push-button and sliding switches



**Through ,
push-button
foot-operated,
rectangular switch
2,5A/250V**

Application

The through, push-button, foot-operated rectangular switch is designed for turning on and off electric circuits, lamp and wall lamp circuits. It can be in monostable and bistable version.

Push-button and sliding switches



**Laboratory clip
handles
“Crocodile
clips”**

Application

Laboratory “Crocodile clip” handles are designed for connecting cables ending with banana plugs, as well as cable connection directly to the “crocodile” tightening with a screw.

Electro-technical products

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KD-6

Clip handle (crocodile)

Galvanization: Nickel

The handle can hold a pin with Φ max = 20 mm

Application

Kd-6 clip handle is designed for connection cables for example, connecting the charger with the battery.

Electro-technical products

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WB-1

Banana plug

- Body color: black, red, white, and others.
- Operating voltage: 250 V
- current of load: max. 10 A

Application

Banana plugs are designed for connecting cables and laboratory wires.

Electro-technical products

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Soldering tags

Design

- 0.5mm brass band
- galvanisation: silver

Application

Soldering tags are designed for connecting cables

Electro-technical products

www.spel.com.pl



Fuse holder WTA i WB-C

Application

Fuse holder is designed for mounting in PCBs in order to hold a fuse.

Electro-technical products

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Connecting cables - laboratory

Dimension "L" - 350, 500, 600, 1000 mm and the other according to the order.

Cable colour - black, red, blue, green and other according to the order.

Colour of insulation of banana plugs and spade plugs - as above.

NOTE:

When ordering, please specify:

- the type of manufacturing, the length of the "L", the diameter and the colour of the wire.

Application

-The laboratory connecting cables are designed for connecting into electrical circuits.

Electro-technical products

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CDS Sensor

Application

A CDS sensor is used in twilight switches and cooperating systems with a photo-resistance sensor. It can be used in confined spaces and outside (degree of protection IP 64).

Electro-technical products

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Connection module for printed circuits

Application

A PCB connection module is designed for mounting on printed circuits in order to connect wires.

Electro-technical products

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Garden Palisade

Application

a Garden palisade is used in squares, gardens to fence off lawns, plants, flower beds, etc.

Garden palisade and knobs

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Knobs

Knobs made of plastic. Designed for door locks.
It is possible to produce various knobs on request.

Garden palisade and knobs

www.spel.com.pl



**LK-5, LK-10,
LK-20**

Application

a Garden palisade is used in squares, gardens to fence off lawns, plants, flower beds, etc.

Lamps and bulbs



LS-D

Technical data:

- * Power supply voltage: 12V and 24V - or other agreed.
- * Power consumption - max 0.25 W.
- * Lamps are manufactured in the following colours: red, green, orange or other, chosen by the customer.

Application

Indicator lamps with Ls-d LED have an application for signalling the following states: on - off of devices, electrical equipment and circuits. The advantage of LEDs is their long life and low power consumption.

NOTE: Supplying the lamp with direct current requires appropriate connection of the lamp in relation to the polarity of the supply voltage.

Lamps and bulbs

www.spel.com.pl



LS-1

Nominal voltage 220 V consumed power ~ 1.5 mA

Application

Indicator lamps with Ls-1 neon diode have an application for signalling the following states: on - off of devices, electrical equipment and circuits.

The advantage of the lamps is their low power consumption.

Colours:

red, green, orange

Note: On request, the neon diode can be replaced with LED.

Lamps and bulbs



LS-2

Indicator light with LED

Manufactured with:

- connection module
- connectors
- wires

Technical data:

Power supply voltage: 12V, 24V, 48V, 230V, or any other voltage, according to customer requirements.

Power consumption - max 1W.

The lamps are manufactured in the following colours: yellow, red, orange, green, blue, white

Application

Indicator lamps with Ls-2 diode have an application for signalling the following states: on - off of devices, electrical equipment and circuits.

The advantage of LEDs is their long life and low power consumption.

Lamps and bulbs

www.spel.com.pl



UZ-90

Technical Data

- * Power supply Voltage 65V - AC, 85V - DC
- * Resistance - 180/220 kOhm
- * Power consumption - 0.6 mA

Application

- * Indicator of the presence of voltage in an electrical circuit
- * ON-OFF indicator of electrical equipment

Lamps and bulbs

www.spel.com.pl



LED lighting lamp

Application

- 12V, 3W can be used in machine tools, assembly tables, etc.

Lamps and bulbs



Tubular LED bulbs

Characteristics:

- * Very long life
- * Minimum power consumption (at least 25 times smaller)
- * They do not heat up
- * They are resistant to shock

Application

- * Interior lighting
- * Lighting the luggage compartment
- * Lighting the license plates

They are replacements for the C5W/C10W bulbs.

Lamps and bulbs

www.spel.com.pl



LED Bulbs - R10/T10

LED bulbs in socket R10/T10 12V, 0,2W 24V, 0,3W

Characteristics:

- * Very long life
- * Minimum power consumption (at least 15 times smaller)
- * They do not heat up
- * They are resistant to shock

Application

- * Parking lights
- * Licence plates
- * Lighting doors and drawers
- * Side directions
- * Car interior lighting
- * Cockpit and clocks lighting

They are alternatives for W3W and W5W bulbs.

Lamps and bulbs

www.spel.com.pl



LED Bulbs - R5/T5

LED bulbs in socket R5/T5 12V, 0,2W 24V, 0,3W

Characteristics:

- * Very long life
- * Minimum power consumption (at least 6 times smaller)
- * They do not heat up
- * They are resistant to shock

Application

- * Car interior lighting
- * Lighting dashboards
- * Lighting cockpits
- * Lighting clocks

Lamps and bulbs

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Racks

Application

Racks are used for decorations, Christmas decorations, banners. They are made of brass, shined to golden colour or nickel-plated.

Racks

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Bialecki Rings

Application

It is used to fill the columns and process equipment in chemical and metallurgical industries and many more. Columns filled with Bialecki rings are characterized by:

- * Low resistance to flowing gas
- * Steady flow of liquids and gases in the entire cross-section of the column
- * The possibility of tripling of the flow of gases and liquids
- * Ideal conditions for producing emulsion regime
- * Increase in mass transfer coefficient

Bialecki rings apply:

- * In biological waste-water treatment plants
- * Aeration of water and sewage
- * Potable and boiler water treatment
- * As a static mixer for liquids and gases
- * In areators in absorption and desorption processes,

Bialecki rings, window anchors and sections

Window anchors



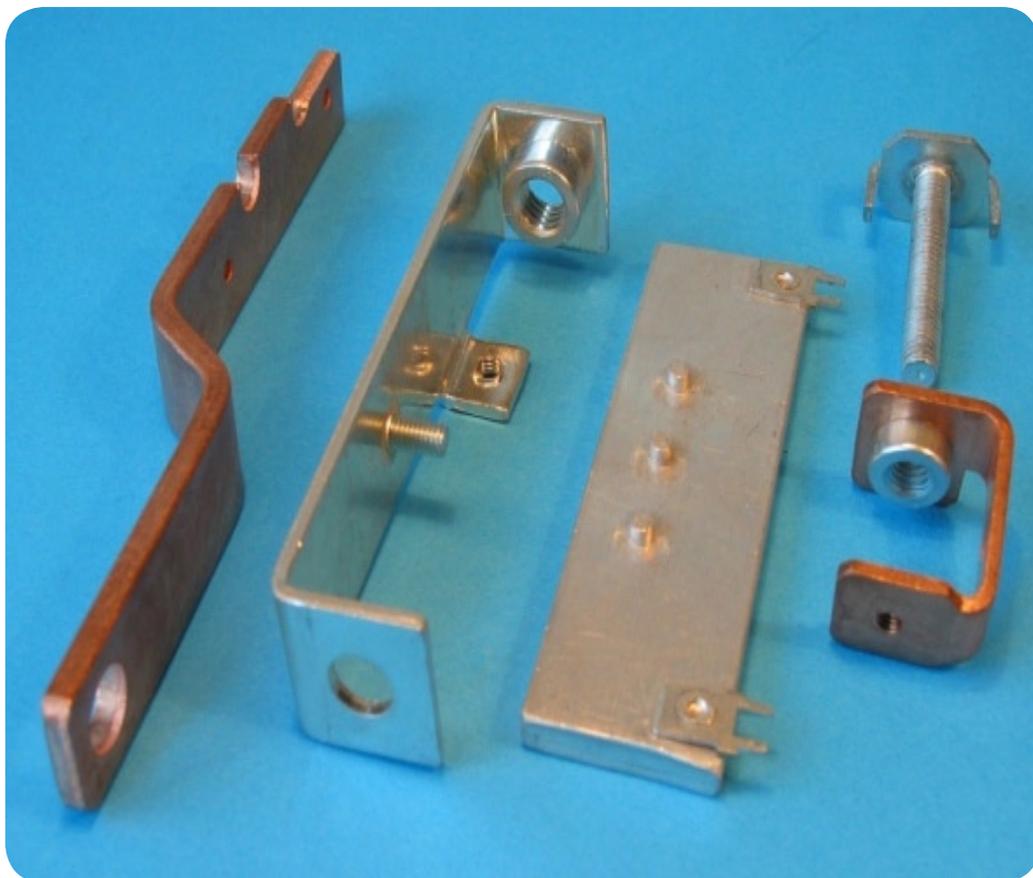
The Anchors are manufactured from steel sheets, galvanized for window frames, PVC and wood.

Application

Window anchors are used to attach various types of windows.

Bialecki rings, window anchors and sections

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Sections

The plant produces a variety of profiles of such materials as: steel, copper, brass, aluminium.

Bialecki rings, window anchors and sections

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