

SIGNAL AND BLOCKING CABLES WITH PE INSULATION AND IN PLASTIC SHEATH

СБПу, **СБЗПу,** **СБВГ, СБВГнг,** **СБВБГ,** **СБВБГнг,** **СБВБбШвнг,**
SBP_u, **SBZP_u,** **SBVG, SBVGng,** **SBVBG,** **SBVBGng,** **SBVBbShvng,**

СБПббШв, **СБЗПббШв,** **СБПббШп,** **СБЗПббШп,** **СБПб,** **СБЗПб,** **СБПбГ,**
SBPBbShv, **SBZPBbShv,** **SBPBbShp,** **SBZPBbShp,** **SBPB,** **SBZPB,** **SBPBG,**

СБЗПбГ
SBZPBG

ГОСТ 31995-2012
GOST 31995-2012

Cable type	OKP codes	Fire safety Class	Cable type	OKP codes	Fire safety Class
СБВГнг	35 6555 1100	П16.8.2.5.4	СБПббШп	35 6554 0400	О2.8.2.5.4
СБВБГнг	35 6555 1200		СБЗПббШп	65 6554 1400	
СБВБбШвнг	35 6555 1300		СБПб	35 6554 0200	
СБВГ	35 6555 0100	О1.8.2.5.4	СБЗПб	35 6554 1600	
СБВБГ	35 6555 0300		СБПбГ	35 6554 0300	
СБПббШв	35 6554 2400		СБЗПбГ	35 6554 1500	
СБЗПббШв	35 6554 2300		СБПу	35 6554 0100	
			СБЗПу	35 6554 1700	

APPLICATION

The cables are intended for electrical installations of emergency systems, centralized control and blocking systems, fire alarm systems and automatic systems at nominal voltage 380 VAC with frequency 50 Hz or 700 VDC.

Climatic versions: УХЛ and Т, categories 2, 3, 5 acc. to GOST 15150.

СБПу - for laying in plastic tubing, in ground, in conditions of aggressive environment, in absence of mechanical impacts on the cable.

СБЗПу – the same, in conditions of high humidity.

СБВГ - for single laying indoors, in dry conduits and tunnels, in conditions of aggressive environment, in absence of mechanical impacts on the cable.

СБВГнг – the same, for bunched laying.

СБВБГ - for single laying in dry cable conduits, in tunnels, in cable galleries, in areas of possible mechanical impact to cable including small tension forces.

СБВБГнг – the same, for bunched laying.

СБВБбШвнг - for bunched laying, in dry cable conduits, in tunnels, in cable galleries, in conditions of aggressive environment, in areas of possible mechanical impact to cable including small tension forces.

СБПббШв - for laying in conduits, in tunnels, cable galleries, in plastic tubing, in ground, in conditions of aggressive environment, if the cable is not exposed to considerable tension forces.

СБЗПббШв - the same, in conditions of high humidity.

СБПббШп - for laying in plastic tubing, in ground, in conditions of aggressive environment, if the cable is not exposed to considerable tension forces.

СБЗПббШп - the same, in conditions of high humidity.

СБПб - for laying in ground, in conditions of aggressive environment, if the cable is not exposed to considerable tension forces.

СБЗПб - the same, in conditions of high humidity.

СБПбГ - for laying in conduits, in areas of possible mechanical impact to cable, if the cable is not exposed to considerable tension forces.

СБЗПбГ - the same, in conditions of high humidity.

DESIGN

Conductor – made of soft round copper wire with nominal cross-sections 0,9 or 1,0 mm.

Conductor insulation – insulating PE compound, nominal wall thickness is 0,45 mm.

Cable core – single conductors or pairs are stranded into a cable core.

- pilot conductor, conductor in pilot pair and longitudinally laid colour yarn or tape of pilot sub-unit is red, and the guiding ones are green.

Filler – hydrophobic filler (for cables СБЗПу, СБЗПБШв, СБЗПБШп, СБЗПБ, СБЗПБГ).

Belt wrapping – PETF tape (for filled cables is allowed not to use belt wrapping made of synthetic tapes).

Sheath:

- for cables СБПу, СБЗПу, СБПБШв, СБЗПБШв, СБПБШп, СБЗПБШп, СБПБ, СБЗПБ, СБПБГ, СБЗПБГ – polyethylene; cables СБПу, СБЗПу have a double sheath;
- for cables СБВГ, СБВБГ – PVC compound;
- for cables СБВГнг, СБВБГнг, СБВБШвнг – flame-retardant PVC compound.

Bedding:

- for cables СБПБ, СБЗПБ, СБПБГ, СБЗПБГ, bedding consists of two tapes of crepe paper and bitumen;
- for cable СБВБГнг, bedding consists of two tapes of crepe paper

Armour:

- for cables СБПБ, СБЗПБ, СБПБШп, СБЗПБШп – two steel tapes;
- for cables СБПБГ, СБЗПБГ, СБВБГ, СБВБГнг, СБВБШвнг, СБПБШв, СБЗПБШв – two galvanized steel tapes.

Outer covering:

- for cables СБПБ, СБЗПБ - bitumen, fiberglass yarn, bitumen and chalky composition;
- for cables СБПБШп, СБЗПБШп – bitumen and PE sheath;
- for cables СБПБШв, СБЗПБШв – protective jacket of PVC compound;
- for cable СБВБШвнг - protective jacket of flame-retardant PVC compound.

TECHNICAL PROPERTIES

Property	Current frequency, kHz	Standard value
1 Conductor resistance per 1000 m and temperature 20°C, Ohm, max.: - for conductor dia. 0,9 mm - for conductor dia. 1,0 mm	DC	28,8 23,3
2 Conductor insulation resistance per 1000 and temperature 20°C, MOhm, min.: - for unfilled cables - for filled cables	DC	5000 4000
3 Test voltage between conductors during 1 minute, V	0,05	2500
4 Mutual capacitance per 1000 m, nF, max.: - for pairs of paired cables - for single conductors of non-paired cables	0,8 or 1,0	100,0 150,0
5 Pair attenuation factor for paired cables per 1000 and temperature 20°C, dB/km, max.: - for conductor dia. 0,9 mm - for conductor dia. 1,0 mm	0,8	1,04 0,94
6 NEXT between any pairs of paired cables per 300 m, dB, min.: - for 100 % values - for 80 % values	0,8	60,0 62,0
Cable transportation conditions considering climatic factors shall comply with storage conditions 6 acc. to GOST 15150-69.		
Cable storage conditions considering climatic factors shall comply with conditions 8 acc. to GOST 15150-69.		
Tensile load by cable laying shall be max. 50 N/mm ² of total conductor cross-section.		

Laying temperature:	
- for unarmoured cables and for cables with protective covering over armour:	from -10°C up to +60°C
- for other cables:	from -15°C up to +60°C
Operation temperature by fixed installation:	
- for cables with sheath and protective jacket of PE	from -50°C up to +60°C
- for cables with sheath of PVC compound	from -40°C up to +60°C
- for cables with sheath of flame-retardant PVC compound	from -40°C up to +60°C
- relative air humidity at temperature up to +35°C	up to 98 %
Bending radius by laying and installation:	
- for unarmoured cables – not less than 7 max. cable outer diameters	
- for armoured cables – not less than 12 max. cable outer diameters	
Warranty operation period	4,5 years
Manufacturer guarantees the cable compliance with requirements of above specification if user observes the transportation, storage, laying, installation and operation conditions.	
Service life:	
- unfilled cables	min. 12 years
- filled cables	min. 17 years
Cable factory length: not less than 300 m.	
Cable delivery performed on wooden drums acc. to GOST 5151-79.	
The following is possible upon agreement with customer:	
- shield of Al or Al-PE tape. A contact tinned copper wire with nominal dia. 0,4 - 0,6 mm is applied under shield.	
- cables СБВГ, СБВГнр can be manufactured with conductor dia. 0,8 mm.	
- possible conductors number for the cables: 7, 9, 19, 21, 24, 27, 37, 48, 61.	