

PRODUCT CATALOGUE

Vol. 3

Radio-frequency coaxial cables

Radio-frequency bicoaxial cables for NPPs

Fire alarm cables

Burglar alarm and video surveillance system cables

Automotive wires

Copper wire



The history of the Cheboksary Plant of Cable Products "Chuvashkabel" begins on December 12, 1961, when the first product was produced — a coil of enameled wire ПЭВ-2. The company is known in the cable and wire products market as a manufacturer of high quality products. The enterprise specializes in the manufacture of products for the needs of the industrial complex, is one of the main suppliers of cable and wire products (in terms of miniature and subminiature cables and wires) for the Russian aerospace industry.

Today, JSC "Factory "Chuvashkabel" is a dynamically developing enterprise of the Russian Federation. Flexible pricing policy open to consumers, the desire to satisfy each client, continuous range expansion based on the demands and needs of the market, improvement of processes and quality of cable production are the principles of the enterprise, which steadily ensure an increase in production and expansion of the sales geography throughout the Russian Federation the CIS countries. As a result, more than 1000 companies from Russia and the CIS countries are regular customers of JSC "Factory "Chuvashkabel" today.

At present, JSC "Factory "Chuvashkabel" manufactures and sells cable and wire products in the following stock item groups:

- Onboard wires and cables (including those with insulation of radiation grafted (irradiated) polyethylene and fluorocopolymers).
- Heating cables and wires.
- Installation wires and cables (including those with insulation of radiation grafted (irradiated) fluorocopolymers).
- Signal-blocking cables (including for fire alarms).
- Radio-frequency (coaxial) cables.
- Wires for electric machines' winding terminals.
- Automotive wires (including for ABS systems).
- Uninsulated flexible wires.
- Power cables for fixed laying for voltage up to 1 kV incl. (including those with XLPE insulation).
- Control cables.
- High-frequency winding wires with enamel insulation.
- Ship cables.
- Self-supporting insulated wires (SSIWs) for overhead power lines.
- Uninsulated wires for overhead power lines.
- Lighting wires and cords.
- Wires with PVC insulation for washing machines.
- Power wires for electrical installations.
- Other cable products (including cables for security systems and video surveillance systems, lightweight metal braids, nickel-plated wire).

The company's products are used in energy, automotive, rocket and space, construction, electrical engineering and other industries.

JSC "Factory "Chuvashkabel" independently, as well as in close cooperation with the industry institute Russian Scientific and Research Institute of the Cable Industry (VNIKIP), is developing and putting into production new types of products. Thanks to this interaction, the company develops taking into account the advanced trends of the cable industry, aimed at better satisfying the needs of consumers. The plans of JSC "Factory "Chuvashkabel" is to continue work on the development and assimilation of new products that meet modern safety requirements and consumer needs.

When developing new products, the requirements of national and international standards are taken into account and used to the maximum. The enterprise has licenses for the development and manufacture of cable products for rocket and space equipment and special equipment (weapons and missiles), for the manufacture of cable products for nuclear power plants.

A perfect base, experienced personnel, certified for compliance with the requirements of ISO 9001:2015 in relation to the design, manufacture, supply of cable products, the quality management system enable to manage the quality process at the stages of manufacturing development, before shipping products to consumers and satisfy the needs of the most demanding customers.

The high quality of the products of JSC "Factory "Chuvashkabel" is confirmed, among other things, by the following:

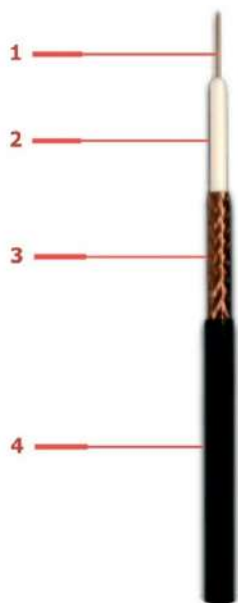
- JSC "Factory "Chuvashkabel" has certificates of type approval of products from the Russian Maritime Register of Shipping, a license for the manufacture of equipment for a nuclear installation (NPP).

The enterprise is equipped with testing equipment that allows for testing and control of all manufactured products, including directly during the manufacture cycle.

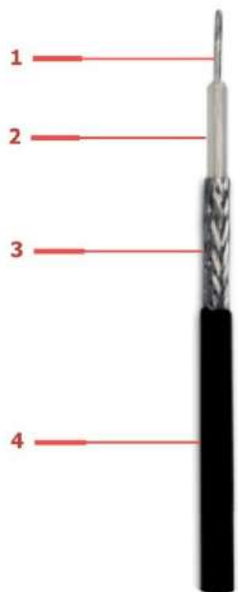
The equipment of the enterprise is continuously updated. In recent years, new process and testing equipment from leading manufacturers such as Niehoff, Dunst, Wardewell, OTOMEC, WTM, Maileffer, etc. has been put into operation at many manufacturing sites and workshops.

Partners of JSC "Factory "Chuvashkabel" can always count on constant information support, fast and accurate order fulfillment, prompt processing of documents for the supply of products. Employees of JSC "Factory "Chuvashkabel" do their best to ensure that consumers are satisfied with the cooperation with the enterprise.

RADIO FREQUENCY CABLES OF STANDARD HEAT RESISTANCE 50 Ω



PK 50-2-11 / PK 50-2-13



PK 50-2-16

DESIGN:

- 1 Inner conductor
- 2 Insulation
- 3 Outer conductor
- 4 Sheath

	PK 50-2-11	PK 50-2-13	PK 50-2-16
Regulatory documentation	GOST 11326.1-79	GOST 11326.15-79	GOST 11326.65-79
National product classification code	35 8811	35 8812	35 8811 2204
Application	The cable is designed to transmit low-frequency signals in vibrometry and vibration testing systems. It is applied with the connectors of types 3.5/1.52 "grad" and SMA developed for this cable.		Cables are designed for mounting devices, bushings, connecting antenna systems of television equipment.
Cable operating temperature, °C	-60 to +85	-40 to +85	-60 to +85

DESIGN PARAMETERS:

	PK 50-2-11	PK 50-2-13	PK 50-2-16
1 Inner conductor	Copper wire, nominal diameter 0.67 mm		Seven tinned copper wires with nominal diameter of 0.24 mm, conductor nominal diameter 0.72 mm
2 Insulation	Solid insulation, low density polyethylene, insulated diameter 2.20±0.10 mm		
3 Outer conductor	Braid of copper wires with a nominal diameter of 0.1 mm; braid density 88-92%		Braid of tinned copper wires with nom. diam. of 0.10 mm, braid density 85÷92%, braid angle 50÷60°
4 Sheath	Light stabilized low density polyethylene; cable outer diameter 3.7±0.20 mm	PVC plastic compound; cable outer diameter 3.7±0.20 mm	Light stabilized low density polyethylene, cable outer diameter 3.2 ^{+0.20} _{-0.10} mm
Estimated cable weight, kg/km	19.1	21.4	16.5

ELECTRICAL PARAMETERS:

	PK 50-2-11 PK 50-2-13	PK 50-2-16
Self-surge impedance, Ω	50±2.0	
Attenuation coefficient at a frequency of max. 200 MHz, dB/m	0.3	0.4
Attenuation coefficient at a frequency of max. 3000 MHz, dB/m	1.60	2.0
Coupling resistance, MΩ/m, max. at relative air humidity up to 98%	320	
Electric capacity, pF/m	100	
Wavelength shorting coefficient	1.52	

OPERATION GUIDELINES:

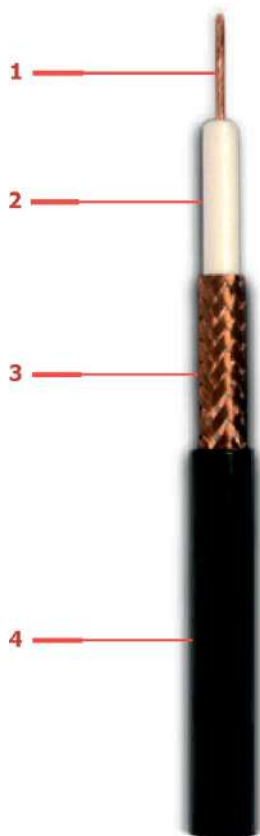
Minimum bending radius

- during transportation and storage — 40 mm;
- when installing at t=5°C and above — 20 mm;
- when installing at t<5°C — 40 mm.

Cable service life:

- PK 50-2-13 — 8 years
- PK 50-2-11, PK 50-2-16 — 15 years.

RADIO FREQUENCY CABLES OF STANDARD HEAT RESISTANCE 50 Ω



DESIGN:

- 1 Inner conductor
- 2 Insulation
- 3 Outer conductor
- 4 Sheath

	PK 50-3-151 (RG 58AU, RG 58U)	PK 50-3-152 (RG 58AU, RG 58U)
Regulatory documentation	TU 16.K05-024-2004	
National product classification code	35 8800	
Application	The cable is intended for transmission of television signals during community reception of television broadcast, for cable and satellite television systems. The design is similar to cables of the RG-58 type. The cable can be used with BNC, TNC, N, FME, SMA, SMB and UHF connector types.	
Cable operating temperature, °C	-40 to +70	-60 to +85

DESIGN PARAMETERS:

	PK 50-3-151 (RG 58AU, RG 58U)	PK 50-3-152 (RG 58AU, RG 58U)
1 Inner conductor	Nineteen copper wires, nominal diameter 0.18 mm	
2 Insulation	Solid insulation, low density polyethylene, insulated diameter 2.95+0.10 mm	
3 Outer conductor	Braid of copper wires with a nominal diameter of 0.10 mm; braid density min. 85%	
4 Sheath	Solid, PVC plastic compound, cable outer diameter 4.95±0.15 mm	Solid, light stabilized low density polyethylene, cable outer diameter 4.95±0.15 mm
Estimated cable weight, kg/km	34.4	29.2

ELECTRICAL PARAMETERS:

Self-surge impedance, Ω	50±2.5	
Electric capacity, pF/m	100	
Maximum power at a frequency of 1 GHz, W	200	
Wavelength shorting coefficient	1.51	
Insulation resistance, min., MΩ × km	5000	
Direct current resistance of inner/outer conductors, max., MΩ/km	33/18	
Coupling resistance, max., MΩ/m	320	
Test insulation voltage with a frequency of 50 Hz, kV	2.5	
Attenuation coefficient at frequency of max., dB/m	100 MHz	0.11
	200 MHz	0.16
	500 MHz	0.27
	800 MHz	0.35
	1000 MHz	0.42

Cable service life:

- PK 50-3-351 — 8 years
- PK 50-3-352 — 15 years.

RADIO FREQUENCY CABLES OF STANDARD HEAT RESISTANCE 50 Ω



DESIGN:

- 1 Inner conductor
- 2 Insulation
- 3 Outer conductor
- 4 Sheath

	PK 50-3,7-351 (RG 8X, H-155)	PK 50-3,7-352 (RG 8X, H-155)
Regulatory documentation	TU 16.K05-024-2004	
National product classification code	35 8800	
Application	The cable is designed to transmit signals in the antenna paths of radio communication systems	
Cable operating temperature, °C	-40 to +70	-60 to +85

DESIGN PARAMETERS:

	PK 50-3,7-351 (RG 8X, H-155)	PK 50-3,7-352 (RG 8X, H-155)
1 Inner conductor	Copper wire, nominal diameter 1.37 mm	
2 Insulation	Porous (S-F-S), low density polyethylene, insulated diameter 3.7±0.12 mm	
3 Outer conductor	Foiled shield + braid of tinned copper wires with a nominal diameter of 0.10 mm; braid density min. 38%	
4 Sheath	PVC plastic compound, cable outer diameter 6.10±0.15 mm	Light stabilized low density polyethylene, cable outer diameter 6.10±0.15 mm
Estimated cable weight, kg/km	44	36

ELECTRICAL PARAMETERS:

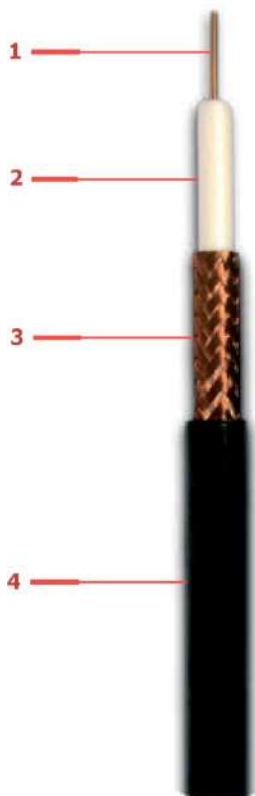
Self-surge impedance, Ω	50±2.5	
Attenuation coefficient at frequency of max., dB/m	100 MHz	0.09
	200 MHz	0.13
	500 MHz	0.20
	800 MHz	0.26
	1000 MHz	0.31
Design electric capacity, pF/m	179.5	

OPERATION GUIDELINES:

The minimum bending radius during installation is min. 30 mm.
Laying and installation of the cable must be carried out at t of min. 0°C.

Cable service life:
PK 50-3,7-351 — 15 years
PK 50-3,7-352 — 8 years.

RADIO FREQUENCY CABLES OF STANDARD HEAT RESISTANCE 50 Ω



DESIGN:

- 1 Inner conductor
- 2 Insulation
- 3 Outer conductor
- 4 Sheath

	PK 50-4-11	PK 50-4-11K
Regulatory documentation	GOST 11326.3-79	TU 5.502.037-97
National product classification code	36 8811	38 8811
Application	The cables are designed to transmit signals in the antenna paths of radio communication systems	
Cable operating temperature, °C	-60 to +85	-60 to +85

DESIGN PARAMETERS:

	PK 50-4-11	PK 50-4-11K
1 Inner conductor	Copper wire, nominal diameter 1.37 mm	
2 Insulation	Solid insulation, low density polyethylene, insulated diameter 4.6±0.12 mm	
3 Outer conductor	Two braids of copper wires, nominal diam. 0.15 mm; density of each braid 88-92%	Braid of copper wires with a nominal diam. 0.15 mm; density of braid 88-92%
4 Sheath	Light stabilized low density polyethylene, cable outer diameter 7.80±0.25 mm	Light stabilized low density polyethylene, cable outer diameter 7.0±0.25 mm
Estimated cable weight, kg/km	97.3	66.2

ELECTRICAL PARAMETERS:

Self-surge impedance for PK 50-4-11, Ω	50±2
Self-surge impedance for PK 50-4-11K, Ω	50±3
Attenuation coefficient at a frequency of max. 3000 MHz, dB/m	1.15
Coupling resistance, MΩ/m, max.	10
Electric capacity, pF/m	100

OPERATION GUIDELINES:

- Minimum bending radius
- when installing at t=5°C and above — 50 mm;
 - when installing at t<5°C — 100 mm.

Cable service life is 15 years.

RADIO FREQUENCY CABLES OF STANDARD HEAT RESISTANCE 50 Ω



**PK 50-5-351
(5D-FB PEEG)**



**PK 50-5-353
(5D-FB PEEG)**

DESIGN:

- 1 Inner conductor
- 2 Insulation
- 3 Outer conductor
- 4 Sheath

	PK 50-5-351 (5D-FB PEEG)	PK 50-5-352 (5D-FB PEEG)	PK 50-5-353 (5D-FB PEEG)	PK 50-5-354 (5D-FB PEEG)
Regulatory documentation	TU 16.K05-024-2004			
National product classification code	35 8800			
Application	The cables are designed to transmit signals in the antenna paths of radio communication systems. The design is similar to cables of the LMR-300 TIMES MICROWAVE and 5DFB RADIOLAB brands. The cables have an increased degree of shielding and can be used with connector types: BNC, TNC, N, FME, SMA, SMB and UHF			
Cable operating temperature, °C	-40 to +70	-60 to +85	-40 to +70	-60 to +85

DESIGN PARAMETERS:

	PK 50-5-351 (5D-FB PEEG)	PK 50-5-352 (5D-FB PEEG)	PK 50-5-353 (5D-FB PEEG)	PK 50-5-354 (5D-FB PEEG)
1 Inner conductor	Copper wire, nominal diameter 1.90 mm		Copper wire, nominal diameter 1.80 mm	
2 Insulation	Porous (S-F-S), low density polyethylene, insulated diameter 5.0±0.15 mm		Porous (S-F-S), low density polyethylene, insulated diameter 5.0±0.12 mm	
3 Outer conductor	Foiled shield + braid of tinned copper wires with nom. diam. 0.10 mm; braid density min. 47%		Foiled shield (two-sided) + braid of tinned copper wires with a nominal diameter of 0.14 mm; braid density min. 90%	
4 Sheath	PVC plastic compound	Light stabilized low density polyethylene	PVC plastic compound	Light stabilized low density polyethylene
	cable outer diameter 7.00±0.15 mm		cable outer diameter 7.50±0.15 mm	
Estimated cable weight, kg/km	61	53	84	75

ELECTRICAL PARAMETERS:

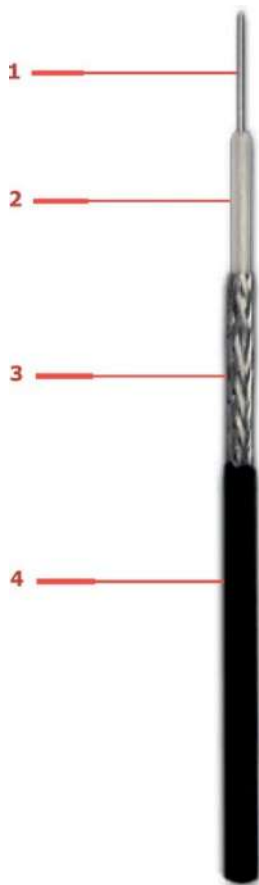
Self-surge impedance, Ω	50±2.5	
	100 MHz	0.06
	200 MHz	0.09
Attenuation coefficient at frequency of max., dB/m	500 MHz	0.16
	800 MHz	0.20
	1000 MHz	0.24
Design electric capacity, pF/m	179.5	

OPERATION GUIDELINES:

The minimum bending radius during installation is min. 30 mm. Laying and installation of the cable must be carried out at t of min. 0°C.

Cable service life:
 PK 50-5-352, PK 50-5-354 — 8 years
 PK 50-5-351, PK 50-5-353 — 15 years.

RADIO FREQUENCY CABLES OF STANDARD HEAT RESISTANCE 75 Ω PK 75-1-13C



DESIGN:

- 1 Inner conductor
- 2 Insulation
- 3 Outer conductor
- 4 Sheath

	PK 75-1-13 C
Regulatory documentation	TU 5.502.025–92
National product classification code	37 8811
Application	Special-purpose equipment
Cable operating temperature, °C	–60 to +85

DESIGN PARAMETERS:

1 Inner conductor	Silver-plated wire of БрХЦрК alloy, nominal diameter 0.18 mm
2 Insulation	Solid insulation, low density polyethylene, insulated diameter 1.0±0.1 mm
3 Outer conductor	Braid of silver-plated copper wires with a nominal diameter of 0.08 mm; braid density 75–85%
4 Sheath	Light stabilized low density polyethylene, cable outer diameter 1.9±0.20 mm
Estimated cable weight, kg/km	4.8

ELECTRICAL PARAMETERS:

Self-surge impedance, Ω	75±5.0
Attenuation coefficient at a frequency of max. 100 MHz, dB/m	0.65
Electrical resistance of the inner conductor, Ω/m, max.	1.5
Coupling resistance at a frequency of 0.03 GHz, MΩ/m, max.	5.0

OPERATION GUIDELINES:

Minimum bending radius

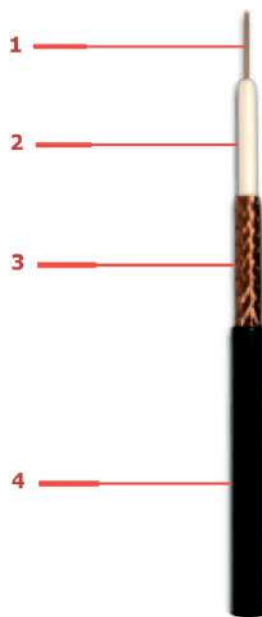
- when installing at t=5°C and above — 10 mm;
- when installing at t<5°C — 20 mm.

Cable service life is 15 years.

RADIO FREQUENCY CABLES OF STANDARD HEAT RESISTANCE 75 Ω


PK 75-1,5-351 (2C2VE)

Certificate of the Ministry
of Digital Development,
Communications and
Mass Media of the
Russian Federation
Д-КБ-1086


PK 75-1,5-31

Certificate of the Ministry
of Digital Development,
Communications and
Mass Media of the
Russian Federation
Д-КБ-1091



DESIGN:

- 1 Inner conductor
- 2 Insulation
- 3 Outer conductor
- 4 Sheath

	PK 75-1,5-14	PK 75-1,5-15	PK 75-1,5-31	PK75-1,5-351 (2C2Ve)	PK75-1,5-352 (2C2Ve)
Regulatory documentation	TU 16.K05-023-2004		TU 16-505.045-86	TU 16.K05-024-2004	
National product classification code	35 8800		38 8811	35 8800	
Application	Special-purpose equipment		Transmission of low-frequency signals in vibrometry and vibration testing systems		
Cable operating temperature, °C	-60 to +85	-40 to +70	-40 to +70	-40 to +70	-60 to +85

DESIGN PARAMETERS:

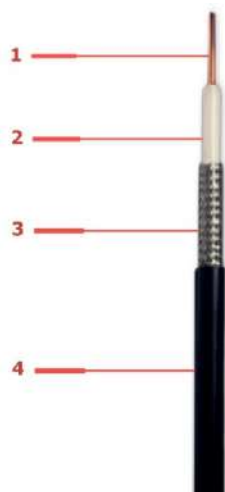
	PK 75-1,5-14	PK 75-1,5-15	PK 75-1,5-31	PK75-1,5-351 (2C2Ve)	PK75-1,5-352 (2C2Ve)
1 Inner conductor	Copper wire, nominal diam. 0.236 mm		Copper wire, nominal diameter 0.37 mm		
2 Insulation	Solid insulation, low density polyethylene		Porous (S-F-S), low density polyethylene,		
	insulated diameter 1.4±0.12 mm		insulated diameter 1.5±0.1 mm	insulated diameter 1.6±0.10 mm	
3 Outer conductor	Shield, braid of copper wires with a nominal diameter of 0.10 mm; braid density min. 55%		Braid of copper wires with a nominal diameter 0.1-0.12 mm; braid density min. 70%	Foiled shield + braid of tinned copper wires with a nominal diameter of 0.10 mm; braid density min. 48%	
4 Sheath	low density LSPE	PVC	low density LSPE	PVC	low density LSPE
	cable outer diameter 2.4±0.25 mm		cable outer diameter 2.5 ^{+0.3} _{-0.1} mm	cable outer diameter 3.7±0.15 mm	
Estimated cable weight, kg/km	6.0	7.0	8.7	15	12

the following abbreviations are given in the table: PVC — polyvinylchloride compound; LSPE — light-stabilized polyethylene

ELECTRICAL PARAMETERS:

	PK 75-1,5-14	PK 75-1,5-15	PK 75-1,5-31	PK 75-1,5-351 (2C2Ve)	PK 75-1,5-352 (2C2Ve)	
Self-surge impedance, Ω	75±5.0	75±5.0	75±3.0	75±3.0	75±3.0	
Attenuation coefficient at a frequency of max., dB/m	100 MHz	0.28	0.28	0.17	0.17	
	200 MHz	0.40	0.40	0.24	0.24	
	500 MHz	0.64	0.64	—	0.40	0.40
	800 MHz	0.83	0.83	—	0.51	0.51
	1000 MHz	0.93	0.93	0.9	0.61	0.61

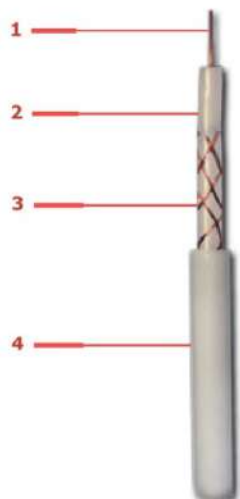
RADIO FREQUENCY CABLES OF STANDARD HEAT RESISTANCE 75 Ω



PK 75-2-11

	PK 75-2-11	PK 75-2-11A	PK 75-2-11БЛ	PK 75-2-153	PK75-2-37 (38)	PK75-2-351 (352) (3C2Ve)
Regulatory documentation	GOST 11326.88-79	ToR No.78/04, GOST 11326.88-79	TU 5.502.034-96	ToR No.12/05, TU 5.502-034-96	TU 16.K05-023-2004	TU 16.K05-024-2004
National product classification code	38 8811	-	38 8811	-	35 8800	35 8800
Application	The cable is intended for transmission of television signals in terrestrial, cable and satellite television systems, video surveillance systems					
Cable operating temperature, °C	-60 to +85	-60 to +85	-60 to +85	-60 to +85	-60 (-40) up to +85 (+70)	-40(-60) up to +70 (+85)

DESIGN PARAMETERS:



PK 75-2-351(352) (3C2VE)

	PK 75-2-11	PK 75-2-11A	PK 75-2-11БЛ	PK 75-2-153	PK75-2-37 (38)	PK75-2-351 (352) (3C2Ve)
1 Inner conductor	material	copper wire				
	nom. Ø, mm	0.37		0.37	0.45	0.50
2 Insulation	type	Solid, low density PE			Porous (S-F-S), low density PE foam	
	Ø, mm	2.2±0.1			2.2±0.12	2.2±0.10
3 Outer conductor	braid	of tinned copper wires	of copper wires			of tinned copper wires + foiled shield
	nom. Ø, mm	0.10	0.12	0.10	0.10	0.10
	density	88-92%	> 40%	88-92%	> 60%	> 40%
4 Sheath	type	LSPEld		LSPEld (PVC)	LSPEld	PVC (LSPEld)
	Ø, mm	3.2 ^{+0.2} _{-0.1}	3.7±0.25	3.2 ^{+0.2} _{-0.1}	3.2 ^{+0.2} _{-0.1}	3.7±0.25
Estimated cable weight, kg/km	14.57	13.78	14.1	11.0	11.0 (13.6)	27 (20)

the following abbreviations are given in the table: PE — solid polyethylene; PE foam — porous polyethylene; PVC — polyvinylchloride compound; LSPEld — light stabilized low density polyethylene

ELECTRICAL PARAMETERS:

DESIGN:

- 1 Inner conductor
- 2 Insulation
- 3 Outer conductor
- 4 Sheath

	PK 75-2-11	PK 75-2-11A	PK 75-2-11БЛ	PK 75-2-153	PK75-2-37(38)	PK75-2-351 (352) (3C2Ve)
Self-surge impedance, Ω	75±3				75±5	75±3
Attenuation coefficient at a frequency of max., dB/m	100 MHz	-	-	-	0.15	0.12
	200 MHz	-	-	-	0.21	0.18
	500 MHz	-	-	-	0.34	0.30
	800 MHz	-	-	-	0.44	0.38
	1000 MHz	-	-	-	0.50	0.46
	3000 MHz	1.80	1.80	1.80	1.80	-
Electric capacity, pF/m	67.00	67.00	67.00	67.00	-	52.68

OPERATION GUIDELINES:

Laying and installation of the cable must be carried out at t of min. 0°C.

Cable service life:

- with sheath of LSPE — 8 years
- with sheath of PVC — 15 years.

RADIO FREQUENCY CABLES OF STANDARD HEAT RESISTANCE 75 Ω PK 75-2-13



DESIGN:

- 1 Inner conductor
- 2 Insulation
- 3 Outer conductor
- 4 Sheath

	PK 75-2-13
Regulatory documentation	GOST 11326.71-79
National product classification code	35 8811
Application	The cable is intended for transmission of television signals in terrestrial, cable and satellite television systems, video surveillance systems
Cable operating temperature, °C	-60 to +85

DESIGN PARAMETERS:

	PK 75-2-13
1 Inner conductor	Seven tinned copper wires with nom. diam. of 0.12 mm, conductor nominal diameter 0.36 mm
2 Insulation	Solid insulation, low density polyethylene, insulated diameter 2.2±0.1 mm
3 Outer conductor	Braid of tinned copper wires with a nominal diameter of 0.10 mm; braid density 85-92%
4 Sheath	Low density LSPE, outer cable diameter 3.2 ^{+0.2} _{-0.1} mm
Estimated cable weight, kg/km	13.9

ELECTRICAL PARAMETERS:

Self-surge impedance, Ω		75±3
Electric capacity, pF/m		67
	100 MHz	-
	200 MHz	0.42
Attenuation coefficient at a frequency of max., dB/m	500 MHz	-
	800 MHz	-
	1000 MHz	-
	3000 MHz	2.00

OPERATION GUIDELINES:

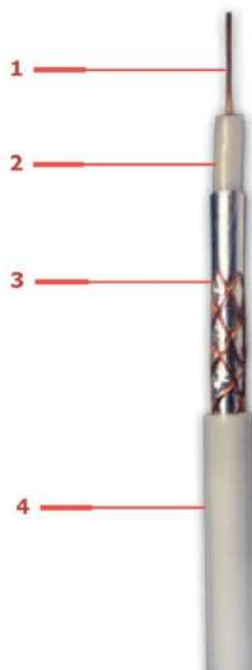
- Minimum bending radius
- when installing at t=5°C and above — 15 mm;
 - when installing at t<5°C — 30 mm.

Cable service life is 15 years.

RADIO FREQUENCY CABLES OF STANDARD HEAT RESISTANCE 75 Ω



PK 75-3-16AYL



PK 75-3-351

Certificate of the Ministry
of Digital Development,
Communications and
Mass Media of the
Russian Federation
Д-КБ-1090



DESIGN:

- 1 Inner conductor
- 2 Insulation
- 3 Outer conductor
- 4 Sheath

	PK 75-3-16AY	PK 75-3-16AYЛ	PK 75-3-351 (RG 59B/U)	PK 75-3-352 (RG 59B/U)
Regulatory documentation	TU 16-705.305-84		TU 16.K05-024-2004	
National product classification code	35 8812		35 8800	
Application	These cables are intended for transmission of television signals in terrestrial, cable and satellite television systems, video surveillance systems			
Cable operating temperature, °C	-40 to +70	-40 to +80	-40 to +70	-60 to +85

DESIGN PARAMETERS:

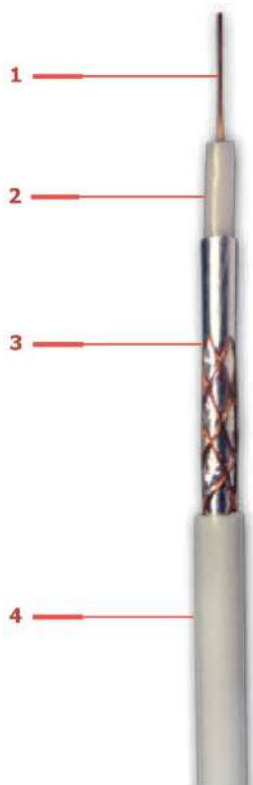
	PK 75-3-16AY	PK 75-3-16AYЛ	PK 75-3-351 (RG 59B/U)	PK 75-3-352 (RG 59B/U)
Inner conductor	Seven copper wires with nominal diameter of 0.16 mm, conductor nominal diameter 0.48±0.01 mm		Copper wire, nominal diameter 0.64 mm	
Insulation	Solid, low density polyethylene, insulated diameter 2.9±0.1 mm		Porous (S-F-S), low density polyethylene, insulated diameter 2.95±0.10 mm	
Outer conductor	Braid of copper wires with nom. diam. 0.12 mm; density of braid 88–92%	Braid of tinned copper wires with nom. diam. 0.12 mm; braid density min. 88%	Foiled shield + braid of copper wires with nom. diam. 0.10 mm; braid density min. 24%	Foiled shield + braid of tinned copper wires with nom. diam. 0.10 mm; braid density min. 24%
Sheath	PVC plastic compound, cable outer diameter 4.4±0.25 mm	Light stabilized low density polyethylene; cable outer diameter 4.2 ^{+0.3} _{-0.1} mm	PVC plastic compound, cable outer diameter 4.70±0.15 mm	Light stabilized low density polyethylene, cable outer diameter 4.70±0.20 mm
Estimated cable weight, kg/km	28.0	28.0	21	17

ELECTRICAL PARAMETERS:

	PK 75-3-16AY	PK 75-3-16AYЛ	PK 75-3-351 (RG 59B/U)	PK 75-3-352 (RG 59B/U)
Self-surge impedance, Ω	75±3		75±3	
Attenuation coefficient at a frequency of max., dB/m	100 MHz	–	–	0.10
	200 MHz	0.30	–	0.14
	500 MHz	–	–	0.23
	800 MHz	–	–	0.30
	1000 MHz	–	–	0.36

Cable service life is 12 years.

RADIO FREQUENCY CABLES OF STANDARD HEAT RESISTANCE 75 Ω



PK 75-3,4-31 (RG-59/U)

DESIGN:

- 1 Inner conductor
- 2 Insulation
- 3 Outer conductor
- 4 Sheath

PK 75-3,4-31 (RG-59/U)	
Regulatory documentation	TU 16.K05-013-2002
National product classification code	35 8811
Application	These cables are intended for transmission of television signals in terrestrial, cable and satellite television systems, video surveillance systems. Design is similar to cables of RG 59/U type
Cable operating temperature, °C	-40 to +70

DESIGN PARAMETERS:

1 Inner conductor	Copper wire, nominal diameter 0.64 mm
2 Insulation	Porous (S-F-S), low density polyethylene, insulated diameter 3.4±0.12 mm
3 Outer conductor	Foiled shield + braid of copper wires with a nominal diameter of 0.10 mm; braid density min. 32%
4 Sheath	Polyvinylchloride compound, cable outer diameter 5.80±0.25 mm
Estimated cable weight, kg/km	34.4

ELECTRICAL PARAMETERS:

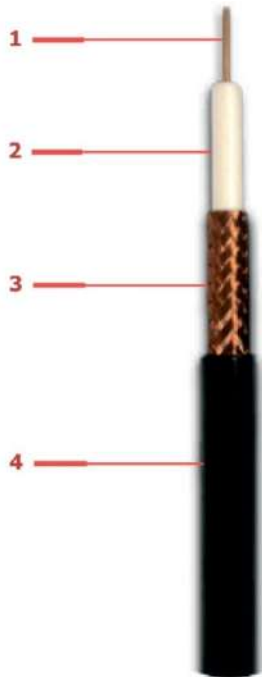
Self-surge impedance, Ω	75±3	
Attenuation coefficient at a frequency of max., dB/m	100 MHz	0.17
	200 MHz	0.20
	500 MHz	0.23
	800 MHz	0.35
	1000 MHz	0.38

OPERATION GUIDELINES:

The minimum bending radius during installation is min. 35 mm.
Laying and installation of the cable must be carried out at t of min. 0°C.

Cable service life is 5 years.

RADIO FREQUENCY CABLES OF STANDARD HEAT RESISTANCE 75 Ω



PK 75-3,7-151

DESIGN:

- 1 Inner conductor
- 2 Insulation
- 3 Outer conductor
- 4 Sheath

	PK 75-3,7-151	PK 75-3,7-152
Regulatory documentation	ToR No. 77/04	ToR No. 30/05
National product classification code	–	–
Application	They are used as subscriber cables for cable TV networks, video surveillance and satellite receiver systems with F, BNC, TNC, FME type connectors.	
Cable operating temperature, °C	–60 to +85	–40 to +70

DESIGN PARAMETERS:

	PK 75-3,7-151	PK 75-3,7-152
1 Inner conductor	Copper wire, nominal diameter 0.58 mm	
2 Insulation	Solid insulation, low density polyethylene, insulated diameter 3.7±0.12 mm	
3 Outer conductor	Braid of copper wires with a nominal diameter of 0.12 mm; braid density min. 92%	
4 Sheath	Light stabilized low density polyethylene, cable outer diameter 5.70±0.25 mm	PVC plastic compound, cable outer diameter 5.70±0.25 mm
Estimated cable weight, kg/km	38.8	44.6

ELECTRICAL PARAMETERS:

	PK 75-3,7-151	PK 75-3,7-152
Self-surge impedance, Ω	75±3	75±3
Attenuation coefficient at frequency of max., dB/m	100 MHz	–
	200 MHz	–
	500 MHz	–
	800 MHz	–
	1000 MHz	–

RADIO FREQUENCY CABLES OF STANDARD HEAT RESISTANCE 75 Ω



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DESIGN:

- 1 Inner conductor
- 2 Insulation
- 3 Outer conductor
- 4 Sheath

	PK 75-3,7-351 (RG 59U)	PK 75-3,7-352 (RG 59U)	PK 75-3,7-357	PK 75-3,7-358
Regulatory documentation	TU 16.K05-024-2004		ToR 11/09	
National product classification code	35 8800		-	
Application	They are used as subscriber cables for cable TV networks, video surveillance and satellite receiver systems with F, BNC, TNC, FME type connectors.			
Cable operating temperature, °C	-40 to +70	-60 to +85	-40 to +70	-60 to +85

DESIGN PARAMETERS:

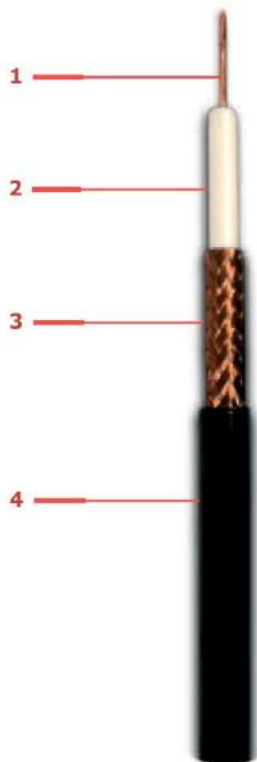
	PK 75-3,7-351 (RG 59U)	PK 75-3,7-352 (RG 59U)	PK 75-3,7-357	PK 75-3,7-358
1 Inner conductor	Copper wire, nominal diameter 0.80 mm		Copper wire, nominal diameter 1.37 mm	
2 Insulation	Porous (S-F-S), low density polyethylene, insulated diameter 3.7±0.12 mm			
3 Outer conductor	Foiled shield + braid of tinned copper wires with a nominal diameter of 0.10 mm; braid density min. 32%		Foiled shield + braid of tinned copper wires with a nominal diameter of 0.10 mm; braid density min. 40%	
4 Sheath	PVC, cable outer diameter 6.10±0.15 mm	LSPEld, cable outer diameter 6.10±0.15 mm	PVC, cable outer diameter 6.10±0.15 mm	LSPEld, cable outer diameter 6.10±0.15 mm
Estimated cable weight, kg/km	37	30	39	30

the following abbreviations are given in the table: PVC — polyvinylchloride compound;
LSPEld — light stabilized low density polyethylene

ELECTRICAL PARAMETERS:

	PK 75-3,7-351 (RG 59U)	PK 75-3,7-352 (RG 59U)	PK 75-3,7-357	PK 75-3,7-358
Self-surge impedance, Ω	75±3		75±3	
Attenuation coefficient at frequency of max., dB/m	100 MHz	0.09	0.09	
	200 MHz	0.12	0.12	
	500 MHz	0.19	0.19	
	800 MHz	0.25	0.25	
	1000 MHz	0.30	0.30	

RADIO FREQUENCY CABLES OF STANDARD HEAT RESISTANCE 75 Ω



PK 75-4-12

DESIGN:

- 1 Inner conductor
- 2 Insulation
- 3 Outer conductor
- 4 Sheath

	PK 75-4-12	PK 75-4-16	PK 75-4-120	PK 75-4-121	PK 75-4-310	PK 75-4-311
Regulatory documentation	GOST 11326.9-79	GOST 11326.23-79	TU 16.K05-023-2004		TU 16.K05-023-2004	
National product classification code	38 8811	35 8812 3104	35 8800		35 8800	
Application	They are used as subscriber cables, as a feeder for multiple connections, for cable TV networks, video surveillance and TV satellite receiver systems with F, BNC, TNC, FME type connectors.					
Cable operating temperature, °C	-60 to +85	-40 to +70	-60 to +85	-40 to +70	-60 to +85	-40 to +70

DESIGN PARAMETERS:

	PK 75-4-12	PK 75-4-16	PK 75-4-120	PK 75-4-121	PK 75-4-310	PK 75-4-311
1 Inner conductor	Seven copper wires with nom. diam. 0.26 mm, conductor nom. diam. 0.78 mm		Seven copper wires with nom. diam. of 0.24 mm		Seven copper wires with nom. diam. of 0.30 mm	
2 Insulation	Solid, low density polyethylene, insulated diameter 4.6±0.12 mm		Solid, low density polyethylene, insulated diameter 4.4±0.12 mm		Porous (S-F-S), low density polyethylene, insulated diameter 4.4±0.12 mm	
3 Outer conductor	Braid of copper wires with diameter of 0.15 mm; braid density 88-92%		Braid of copper wires with nom. diam. 0.10 mm; braid density min. 65%		Braid of copper wires with nom. diam. 0.10 mm; braid density min. 87%	
4 Sheath	LSPEId; cable outer diameter 7.0±0.25 mm	PVC; cable outer diameter 7.00±0.25 mm	LSPEId; cable outer diameter 6.1±0.25 mm	PVC; cable outer diameter 6.1±0.25 mm	LSPEId; cable outer diameter 6.7±0.25 mm	PVC; cable outer diameter 6.7±0.25 mm
Estimated cable weight, kg/km	63.0	65.6	37.0	43.0	41.0	49.0

the following abbreviations are given in the table: PE — solid polyethylene; PE foam — porous polyethylene; PVC — polyvinylchloride compound; LSPEId — light stabilized low density polyethylene

ELECTRICAL PARAMETERS:

	PK 75-4-12	PK 75-4-16	PK 75-4-120	PK 75-4-121	PK 75-4-310	PK 75-4-311
Self-surge impedance, Ω	75±2.5		75±3		75±3.5	
Cable electric capacity, pF/m;	67	67	-	-	-	-
Wavelength shorting coefficient	1.52	1.52	-	-	-	-
Coupling resistance, max., MΩ/m	200	200	-	-	-	-
Attenuation coefficient at a frequency of max., dB/m	100 MHz			0.09		0.08
	200 MHz	0.18	0.18	0.13		0.12
	500 MHz			0.21		0.20
	800 MHz			0.27		0.26
	1000 MHz			0.32		0.30
	3000 MHz	0.90	1.00	-	-	-

OPERATION GUIDELINES:

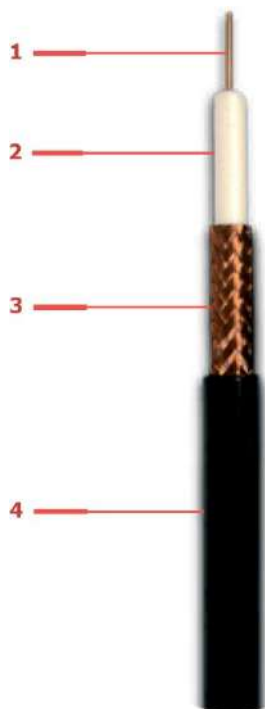
The minimum bending radius during installation at $t > 0^{\circ}\text{C}$ and above is 35 mm;

Cable service life:

with sheath of LSPE — 8 years

with sheath of PVC — 15 years.

RADIO FREQUENCY CABLES OF STANDARD HEAT RESISTANCE 75 Ω



DESIGN:

- 1 Inner conductor
- 2 Insulation
- 3 Outer conductor
- 4 Sheath

	PK 75-4-11	PK 75-4-15	PK 75-4-17	PK 75-4-19	PK 75-4-118	PK 75-4-119
Regulatory documentation	GOST 11326.8-79	GOST 11326.22-79		TU 16.K005-023-2004		
National product classification code	38 8811	35 8812		35 8800		
Application	These cables are intended for transmission of television signals in terrestrial, cable and satellite television systems, video surveillance systems.					
Cable operating temperature, °C	-60 to +85	-40 to +70	-60 to +85	-40 to +70	-60 to +85	-40 to +70

DESIGN PARAMETERS:

	PK 75-4-11	PK 75-4-15	PK 75-4-17	PK 75-4-19	PK 75-4-118	PK 75-4-119
1 Inner conductor	type	Cu		Cu		Cu
	Ø, mm	0.72		0.67		0.71
2 Insulation	type	PE		PE		PE
	Ø, mm	4.6±0.12		4.4±0.12		4.4±0.12
3 Outer conductor	braid	of copper wires Ø=0.15 mm		of copper wires nom. Ø=0.10 mm		
	density	88-92%		min. 70%		min. 65%
4 Sheath	type	LSPE	PVC	LSPE	PVC	LSPE
	Ø, mm	7.00±0.25		6.1±0.25		6.1±0.25
Estimated cable weight, kg/km	63.0	65.9	37.0	42.0	37.5	43.0

the following abbreviations are given in the table: Cu — copper wire; PE — solid polyethylene; PE foam — porous polyethylene; PVC — polyvinylchloride compound; LSPE — light stabilized polyethylene

ELECTRICAL PARAMETERS:

	PK 75-4-11	PK 75-4-15	PK 75-4-17 (19)	PK 75-4-118 (119)
Self-surge impedance, Ω	75±2.5		75±3	
Attenuation coefficient at a frequency of max., dB/m	100 MHz		0.10	0.09
	200 MHz	0.18	0.18	0.13
	500 MHz		0.23	0.22
	800 MHz		0.31	0.28
	1000 MHz		0.35	0.33
	3000 MHz	0.90	1.0	—

OPERATION GUIDELINES:

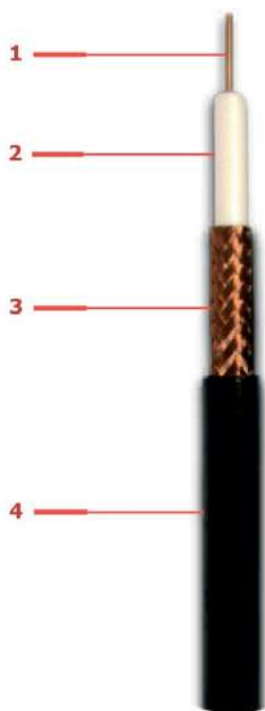
Cable service life: with sheath of LSPE is 8 years; with sheath of PVC is 15 years.
Guaranty period is 2 years.

RADIO FREQUENCY CABLES OF STANDARD HEAT RESISTANCE 75 Ω



PK 75-4-351/352

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PK 75-4-356

DESIGN:

- 1 Inner conductor
- 2 Insulation
- 3 Outer conductor
- 4 Sheath

	PK 75-4-38	PK 75-4-39	PK 75-4-351 (RG 6 U)	PK 75-4-352 (RG 6 U)	PK 75-4-353	PK 75-4-354	PK 75-4-356
Regulatory documentation	-	-	TU 16.K05-024-2004		ToR 12/09	-	ToR No. 69/05
National product classification code	-	-	35 8800		-	-	-
Application	These cables are intended for transmission of television signals in terrestrial, cable and satellite television systems, video surveillance systems.						
Cable operating temperature, °C	-60 to +85	-40 to +70	-40 to +70	-60 to +85	-40 to +70	-60 to +85	-60 to +85

DESIGN PARAMETERS:

	PK 75-4-38	PK 75-4-39	PK 75-4-351	PK 75-4-352	PK 75-4-353	PK 75-4-354	PK 75-4-356
1 Inner conductor	type	Cu	Cu	Cu	Cu	Cu	Cu
	∅, mm	0.85	0.90	0.90	0.90	0.90	1.0±0.02
2 Insulation	type	PE foam	PE foam	PE foam	PE foam	PE foam	PE foam
	∅, mm	4.4±0.12	4.6±0.15	4.6±0.15	4.6±0.15	4.6±0.15	4.6±0.10
3 Outer conductor	braid	of copper wires with nom. ∅=0.10 mm	Foiled shield + braid of copper wires with nom. ∅=0.10 mm	Foiled shield + braid of copper wires with nom. ∅=0.10 mm	Foiled shield + braid of copper wires with nom. ∅=0.10 mm	Foiled shield + braid of copper wires with nom. ∅=0.10 mm	of copper wires with nom. ∅=0.12 mm
	density	min. 40%	min. 22%	min. 22%	min. 40%	min. 40%	min. 88%
4 Sheath	type	LSPE	PVC	PVC	LSPE	PVC	LSPE
	∅, mm	6.1±0.25	6.6±0.15	6.6±0.15	6.6±0.15	6.6±0.15	6.6±0.25
Estimated cable weight, kg/km	26.0	32.0	41	34	41	34	43.9

the following abbreviations are given in the table: Cu — copper wire; PE — solid polyethylene;
PE foam — porous polyethylene; PVC — polyvinylchloride compound; LSPE — light stabilized polyethylene

ELECTRICAL PARAMETERS:

	PK 75-4-38 (39)	PK 75-4-351 (352)	PK 75-4-353 (354)	PK 75-4-356
Self-surge impedance, Ω	75±3.0	75±3.0	75±3.0	-
Attenuation coefficient at a frequency of max., dB/m	100 MHz	0.08	0.07	-
	200 MHz	0.11	0.10	-
	500 MHz	0.19	0.17	-
	800 MHz	0.25	0.22	-
	1000 MHz	0.29	0.27	-
	3000 MHz	-	-	-

OPERATION GUIDELINES:

Cable service life: PK 75-4-38, PK 75-4-354, PK 75-4-356 — 15 years;
PK 75-4-39, PK 75-4-353 — 8 years;
PK 75-4-351, PK 75-4-352 — 5 years.

RADIO FREQUENCY CABLES OF STANDARD HEAT RESISTANCE 75 Ω



PK 75-4,3-31 (RG-6/U)

DESIGN:

- 1 Inner conductor
- 2 Insulation
- 3 Outer conductor
- 4 Sheath

PK 75-4,3-31, analogue — RG-6/U	
Regulatory documentation	TU 16.K05-013-2002
National product classification code	35 8811
Application	They are used as subscriber cables for cable TV networks, video surveillance and satellite receiver systems with F, BNC, TNC, FME type connectors. Design is similar to cables of RG 6 type.
Cable operating temperature, °C	-40 to +70

DESIGN PARAMETERS:

PK 75-4,3-31	
1 Inner conductor	Copper wire, nominal diameter 0.90 mm
2 Insulation	Porous (S-F-S), low density polyethylene, insulated diameter 4.3±0.12 mm
3 Outer conductor	Foiled shield + braid of copper wires with nom. diam. 0.10 mm; braid density min. 24.1%
4 Sheath	Polyvinylchloride compound, cable outer diameter 6.6±0.25 mm
Estimated cable weight, kg/km	41.0

ELECTRICAL PARAMETERS:

Self-surge impedance, Ω	75±3	
Attenuation coefficient at a frequency of max., dB/m	100 MHz	0.10
	200 MHz	0.13
	500 MHz	0.17
	800 MHz	0.24
	1000 MHz	0.32

OPERATION GUIDELINES:

Laying and installation of the cable must be carried out at t of min. 0°C. The minimum bending radius during installation is min. 35 mm.

Cable service life is 5 years.

RADIO FREQUENCY CABLES OF STANDARD HEAT RESISTANCE 75 Ω



PK 75-4,8-35 (SAT 50)

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PK 75-4,8-37 (SAT 703)

DESIGN:

- 1 Inner conductor
- 2 Insulation
- 3 Outer conductor
- 4 Sheath

	PK 75-4,8-35 (SAT 50M, SAT 50MN)	PK 75-4,8-36 (SAT 700, SAT 700N)	PK 75-4,8-37 (SAT 703B, SAT 703N)	PK 75-4,8-353
Regulatory documentation	TU 16.K05-021-2003			ToR No. 44/06
National product classification code	35 8811			–
Application	The cable is used for the construction of house distribution networks and video surveillance systems. Design is similar to cables of SAT type			–
Cable operating temperature, °C	–40 to +70			

DESIGN PARAMETERS:

	PK 75-4,8-35	PK 75-4,8-36	PK 75-4,8-37	PK 75-4,8-353
1 Inner conductor	Copper wire, nom. diam. 1.00 mm	Copper wire, nom. diam. 1.13 mm	Copper wire, nom. diam. 1.13 mm	Nineteen copper wires with nom. diam. 0.23 mm, conductor nom. diam. 1.15 mm
2 Insulation	Porous, low density polyethylene, insulated diameter 4.8±0.12 mm			
3 Outer conductor	Foiled shield + braid of tinned copper wires with nom. diam. 0.10 mm; braid density min. 31%	Foiled shield + braid of tinned copper wires with nom. diam. 0.10 mm; braid density min. 38%	Foiled shield + braid of tinned copper wires with nom. diam. 0.10 mm; braid density min. 45%	Foiled copper shield + braid of copper wires with nom. diam. 0.12 mm; braid density min. 86%
4 Sheath	PVC plastic compound, cable outer diameter 6.60±0.25 mm	PVC plastic compound, cable outer diameter 6.60±0.25 mm	PVC plastic compound, cable outer diameter 6.60±0.25 mm	PVC plastic compound, cable outer diameter 8.00±0.3 mm
Estimated cable weight, kg/km	40.1	40.5	41.5	69.61

ELECTRICAL PARAMETERS:

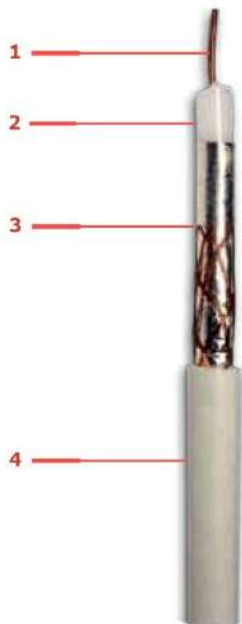
	PK 75-4,8-35	PK 75-4,8-36	PK 75-4,8-37	PK 75-4,8-353
Self-surge impedance, Ω	75±3.0	75±3.0	75±3.0	75±3.0
Cable electric capacity, pF/m;	52±3.0	52±3.0	52±3.0	52±3.0
Wavelength shorting coefficient	–	–	–	–
Coupling resistance, max., MΩ/m	–	–	–	–
Attenuation coefficient at frequency of max., dB/m	100 MHz	–	–	–
	200 MHz	0.084	0.080	0.081
	500 MHz	0.137	0.127	0.126
	800 MHz	0.188	0.178	0.176
	1000 MHz	0.204	0.193	0.191
2000 MHz	0.304	0.286	0.285	–

OPERATION GUIDELINES:

Laying and installation of the cable must be carried out at t of min. 0°C.
The minimum bending radius during installation is min. 35 mm.

Cable service life is 12 years.

RADIO FREQUENCY CABLES OF STANDARD HEAT RESISTANCE 75 Ω


PK 75-5-359 (360) (RG-6)

DESIGN:

- 1 Inner conductor
- 2 Insulation
- 3 Outer conductor
- 4 Sheath

	PK 75-5-359 (RG-6)	PK 75-5-360 (RG-6)
Regulatory documentation	TU 16.K05-024-2004	
National product classification code	35 8800	
Application	These cables are intended for transmission of television signals in terrestrial, cable and satellite television systems, video surveillance systems. Design is similar to cables of RG 6 type	
Cable operating temperature, °C	-40 to +70	-60 to +85

DESIGN PARAMETERS:

	PK 75-5-359 (RG-6)	PK 75-5-360 (RG-6)
1 Inner conductor	Copper wire, nominal diameter 1.12 mm	
2 Insulation	Porous, low density polyethylene, insulated diameter 5.0±0.12 mm	
3 Outer conductor	Foiled shield + braid of tinned copper wires with a nominal diameter of 0.10 mm; braid density min. 46.8%	
4 Sheath	PVC plastic compound, cable outer diameter 7.0±0.15 mm	Light stabilized low density polyethylene, cable outer diameter 7.0±0.15 mm
Estimated cable weight, kg/km	45.5	37.9

ELECTRICAL PARAMETERS:

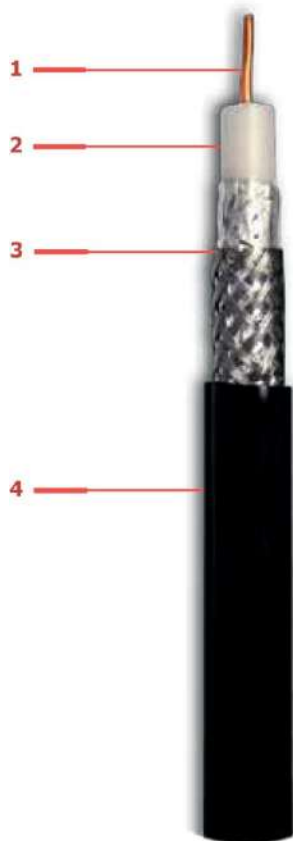
	PK 75-5-359 (RG-6)	PK 75-5-360 (RG-6)
Self-surge impedance, Ω	75±3	
Cable electric capacity, pF/m	55	
Wavelength shorting coefficient	1.25	
Coupling resistance, max., MΩ/m	15	
Attenuation coefficient at frequency of max., dB/m	100 MHz	0.09
	200 MHz	0.10
	500 MHz	0.15
	800 MHz	0.19
	1000 MHz	0.23

OPERATION GUIDELINES:

Laying and installation of the cable must be carried out at t of min. 0°C. The minimum bending radius during installation is min. 30 mm.

Cable service life: PK 75-5-359 — 8 years
PK 75-5-360 — 5 years

RADIO FREQUENCY CABLES OF STANDARD HEAT RESISTANCE 75 Ω



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DESIGN:

- 1 Inner conductor
- 2 Insulation
- 3 Outer conductor
- 4 Sheath

	PK 75-7-351 (RG 11U, CATV-11)	PK 75-7-352 (RG 11U, CATV-11)
Regulatory documentation	TU 16.K05-024-2004	
National product classification code	35 8800	
Application	Used as a distribution and sub-main cable for cable television networks with F, BNC, TNC connectors	
Cable operating temperature, °C	-40 to +70	-60 to +85

DESIGN PARAMETERS:

	PK 75-7-351 (RG 11U, CATV-11)	PK 75-7-352 (RG 11U, CATV-H)
1 Inner conductor	Copper wire, nominal diameter 1.60 mm	
2 Insulation	Porous, low density polyethylene, insulated diameter 7.20±0.15 mm	
3 Outer conductor	Foiled shield + braid of tinned copper wires with a nominal diameter of 0.15 mm; braid density min. 65%	
4 Sheath	PVC plastic compound, cable outer diameter 10.10±0.30 mm	Light stabilized low density polyethylene, cable outer diameter 10.10±0.30 mm
Estimated cable weight, kg/km	106	90

ELECTRICAL PARAMETERS:

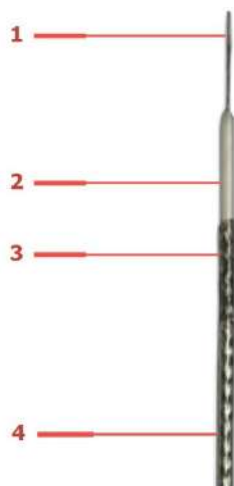
	PK 75-7-351	PK 75-7-352
Self-surge impedance, Ω	75±3	
Attenuation coefficient at frequency of max., dB/m	100 MHz	0.04
	200 MHz	0.06
	500 MHz	0.10
	800 MHz	0.14
	1000 MHz	0.16

OPERATION GUIDELINES:

Laying and installation of the cable must be carried out at t of min. 0°C.
The minimum bending radius during installation is min. 60 mm.

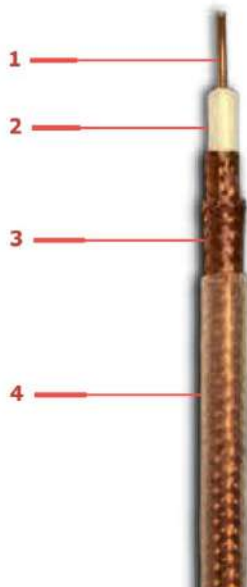
Cable service life: PK 75-7-351 — 8 years;
PK 75-7-352 — 15 years

RADIO FREQUENCY CABLES OF INCREASED HEAT RESISTANCE 50 Ω


PK 50-1-24

	PK 50-0,6-23	PK 50-1-24	PK50-1-24M	PK 50-1,5-21	PK 50-2-22	PK50-2-22Л	PK50-4-22M
Regulatory documentation	TU 16-505.765-80	TU 16-505.766-80	ToR No. 23/05, TU 16-505.766-80	GOST 11326.73-79	GOST 11326.74-79	ToR No. 72/04, GOST 11321.74-79	ToR No. 43/05, GOST 11326.37-79
National product classification code	35 8835	35 8835	–	35 8835	35 8835	–	–
Application	For mounting devices, bushings, connecting antenna systems with RF equipment						
Cable operating temperature, °C	–60 ... +200					–60 ... +155	–60 ... +200

DESIGN PARAMETERS:


PK 50-4-22M

	PK 50-0,6-23	PK 50-1-24	PK50-1-24M	PK 50-1,5-21	PK 50-2-22	PK50-2-22Л	PK50-4-22M	
1 Inner conductor	type	Seven silver-plated wires of БрХЦрК alloy, nom. Ø 0.08 mm	Seven silver-plated wires of БрХЦрК alloy, nom. Ø 0.12 mm	Seven copper wires with nom. Ø 0.12 mm	Seven silver-plated wires of БрХЦрК alloy, nom. Ø 0.18 mm	Seven silver-plated copper wires with nom. Ø 0.26 mm	Seven tinned copper wires with nom. Ø 0.26 mm	Copper wire, nom. Ø 1.5 mm
	nom. Ø conductor	0.24 mm	0.36 mm		0.36 mm	0.78 mm		
2 Insulation	type	Solid, PTFE 4MB			Solid wrapping of PTFE film-4			
	Ø, mm	0.6±0.05	1.0±0.05	1.0±0.05	1.50 ^{+0.15} _{-0.15}	2.2 ^{+0.20} _{-0.15}	2.2 ^{+0.05} _{-0.15}	4.6±0.12
3 Outer conductor	braid	Braid of silver-plated copper wires with nom. Ø 0.06 mm	Braid of copper wires, nom. Ø 0.06 mm	Braid of silver-plated copper wires with nom. Ø 0.08 mm	Braid of silver-plated copper wires with nom. Ø 0.10 mm	Braid of tinned copper wires with nom. Ø 0.10 mm	Two braids of copper wires: the first braid is made of wire, nom. Ø 0.12 mm the second one - of wire, nom. Ø 0.15 mm	
	density	65–75%	75–85%	75–85%	85–92%	85–92%	85–92%	88–92%
	angle, deg.	min. 70°		–	50–60°	50–60°	–	–
4 Sheath	type	PTFE 4MB						PTFE 4MB-B
	Ø, mm	1.2±0.1	1.7 ^{+0.15} _{-0.10}	1.7 ^{+0.15} _{-0.10}	2.4 ^{+0.20} _{-0.15}	3.2+0.25	3.2+0.25	7.4+0.25
Estimated cable weight, kg/km	3.27	6.85	6.5	14	25.10	24.9	110	

ELECTRICAL PARAMETERS:

	PK50-0,6-23	PK50-1-24	PK50-1-24M	PK50-1,5-21	PK50-2-22	PK50-2-22Л	PK50-4-22M
Self-surge impedance, Ω	50±5			50±2			
Attenuation coefficient at a frequency of max. 0.05 GHz, dB/m	0.4	0.3	0.3	–	–	–	–
Attenuation coefficient at frequency of max. 0.2 GHz, dB/m	0.90	0.62	0.62	–	–	–	–
Attenuation coefficient at frequency of max. 3 GHz, dB/m	4.00	2.80	2.80	1.50	1.8	1.8	0.8
Attenuation coefficient at frequency of max. 10 GHz, dB/m	–	–	–	–	–	–	2.1
Attenuation coefficient at frequency of max. 15 GHz, dB/m	12	9	9	–	–	–	–
Coupling resistance, MΩ/m	500	500	500	320	320	320	10
Electric capacity, pF/m	95	95	95	96	96	96	94

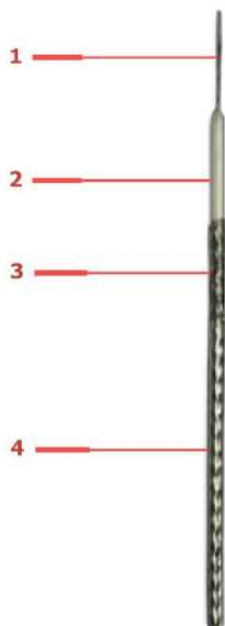
OPERATION GUIDELINES:

Minimum bending radius

- when installing at t=5°C and above — 5 mm;
- when installing at t<5°C — 10 mm.

Cable service life is 20 years.

RADIO FREQUENCY CABLES OF INCREASED HEAT RESISTANCE 75 Ω



PK 75-1-22

DESIGN:

- 1 Inner conductor
- 2 Insulation
- 3 Outer conductor
- 4 Sheath

	PK 75-1-22	PK 75-1-23
Regulatory documentation	TU 16-505.198-81	TU 16-705.010-81
National product classification code	35 8835	35 8838
Application	RF coaxial heat-resistant cables are designed for mounting devices, bushings, connecting antenna systems with radio equipment	
Cable operating temperature, °C	-60 to +200	-60 to +155

DESIGN PARAMETERS:

	PK 75-1-22	PK 75-1-23
1 Inner conductor	Seven silver-plated wires of БрХЦрК alloy with a nominal diameter of 0.07 mm; conductor diameter 0.21 mm	
2 Insulation	Solid, PTFE-4D or 4MB, insulation diameter 1.07±0.07 mm; insulation eccentricity max. 15%	Solid, PTFE-4D or 4MB, insulation diameter 1.10±0.07 mm
3 Outer conductor	Braid of silver-plated copper wires with nominal diameter of 0.06 mm; braid density 85%, braid angle 45-60°	Braid of silver-plated copper wires with nominal diameter of 0.06 mm; braid density 85%, braid angle 45-60°
4 Sheath	PTFE 4MB, cable outer diameter 1.7 ^{+0.15} _{-0.10} mm	W/o sheath, cable outer diameter 1.34 mm
Estimated cable weight, kg/km	6.8	4.8

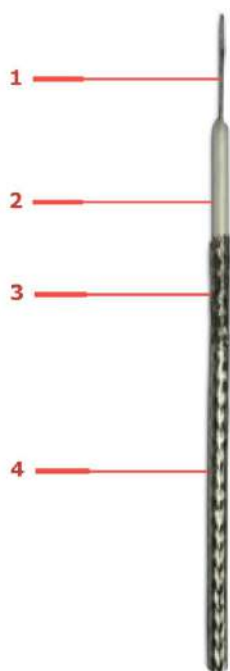
ELECTRICAL PARAMETERS:

	PK 75-1-22	PK 75-1-23
Self-surge impedance, Ω	75±3	75 ⁺⁷ ₋₅
Attenuation coefficient at frequency of max. 3 GHz, dB/m	-	3
Attenuation coefficient at frequency of max. 10 GHz, dB/m	5.5	-
Coupling resistance, MΩ/m	320	320
Electric capacity, pF/m	64	63

OPERATION GUIDELINES:

- Minimum bending radius
- when installing at t=5°C and above — 9 mm;
 - when installing at t<5°C — 18 mm.
- Cable service life is 20 years.

RADIO FREQUENCY CABLES OF INCREASED HEAT RESISTANCE 75 Ω


PK 75-2-22

DESIGN:

- 1 Inner conductor
- 2 Insulation
- 3 Outer conductor
- 4 Sheath

	PK 75-2-22	PK 75-2-22 Л
Regulatory documentation	GOST 11326.77-79	ToR No. 53/03, GOST 11326.77-79
National product classification code	35 8835	-
Application	RF coaxial heat-resistant cables are designed for mounting devices, bushings, connecting antenna systems with radio equipment	
Cable operating temperature, °C	-60 to +200	-60 to +155

DESIGN PARAMETERS:

	PK 75-2-22	PK 75-2-22 Л
1 Inner conductor	Seven silver-plated copper wires with nominal diameter of 0.15 mm, conductor nom. diam. 0.45 mm	Seven tinned copper wires with nominal diameter of 0.15 mm
2 Insulation	Solid wrapping of PTFE film-4, insulated diameter $2.2^{+0.15}_{-0.05}$ mm	
3 Outer conductor	Braid of silver-plated copper wires with nom. diameter of 0.10 mm; braid density 85-92%, braid angle 50-60°	Braid of tinned copper wires with a nominal diameter of 0.10 mm; braid density 85-92%
4 Sheath	PTFE 4MB; cable outer diameter 3.2 ± 0.25 mm	
Estimated cable weight, kg/km	23.5	23.3

ELECTRICAL PARAMETERS:

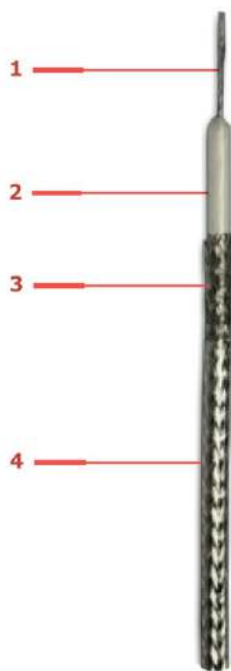
	PK 75-2-22	PK 75-2-22Л
Self-surge impedance, Ω	75±3.0	75±3.0
Attenuation coefficient at frequency of max. 3 GHz, dB/m	1.7	1.7
Coupling resistance, MΩ/m	320	320
Electric capacity, pF/m	64	63

OPERATION GUIDELINES:

- Minimum bending radius
- when installing at $t \geq 5^\circ\text{C}$ and above — 15 mm;
 - when installing at $t < 5^\circ\text{C}$ — 30 mm.

Cable service life is 20 years.

RADIO FREQUENCY CABLES OF INCREASED HEAT RESISTANCE 75 Ω



PK 75-3-22

DESIGN:

- 1 Inner conductor
- 2 Insulation
- 3 Outer conductor
- 4 Sheath

	PK 75-3-22	PK 75-3-23
Regulatory documentation	TU 16-505.768-81	
National product classification code	35 8835	
Application	RF coaxial heat-resistant cables are designed for mounting devices, bushings, connecting antenna systems with radio equipment	
Cable operating temperature, °C	-60 to +200	-60 to +155

DESIGN PARAMETERS:

	PK 75-3-22	PK 75-3-23
1 Inner conductor	Seven silver-plated copper wires with nominal diameter of 0.19 mm, conductor nominal diameter 0.57 mm	
2 Insulation	Solid wrapping of PTFE film-4; insulated diameter 2.95±0.1 mm	
3 Outer conductor	Braid of silver-plated copper wires with nominal diameter of 0.12 mm; braid density 88-92%, braid angle 45-60°	
4 Sheath	PTFE 4MB; cable outer diameter 4.3±0.2 mm	W/o sheath. Cable outer diameter 3.43 mm
Estimated cable weight, kg/km	42.0	30

ELECTRICAL PARAMETERS:

	PK 75-3-22	PK 75-3-23
Self-surge impedance, Ω	75±3	75 ⁺¹ ₋₅
Attenuation coefficient at frequency of max. 3 GHz, dB/m	1.20	1.20
Attenuation coefficient at frequency of max. 10 GHz, dB/m	2.2	-
Coupling resistance, MΩ/m	320	320
Electric capacity, pF/m	63	63

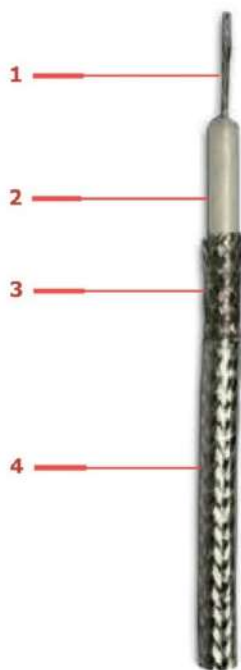
OPERATION GUIDELINES:

Minimum bending radius

- when installing at t=5°C and above — 30 mm;
- when installing at t<5°C — 60 mm.

Cable service life: PK 75-3-22 — 20 years,
PK 75-3-23 — 15 years.

RADIO FREQUENCY CABLES OF INCREASED HEAT RESISTANCE 75 Ω


PK 75-4-21M
DESIGN:

- 1 Inner conductor
- 2 Insulation
- 3 Outer conductor
- 4 Sheath

	PK 75-4-21M	PK 75-4-22M
Regulatory documentation	ToR No. 53/05, GOST 11326.42-79	ToR No. 54/05, GOST 11326.43-79
National product classification code	–	–
Application	RF coaxial heat-resistant cables are designed for mounting devices / bushings, connecting antenna systems with radio equipment	
Cable operating temperature, °C	–60 to +200	

DESIGN PARAMETERS:

	PK 75-4-21M	PK 75-4-22M
1 Inner conductor	Silver-plated copper wire with nominal diameter of 0.85 mm	Seven silver-plated copper wires with nominal diameter of 0.30 mm, conductor nom. diam. 0.90 mm
2 Insulation	Solid wrapping of PTFE film-4, insulated diameter 4.60±0.12 mm	
3 Outer conductor	Braid of silver-plated copper wires with a nominal diameter of 0.12 mm; braid density 88–92%	
4 Sheath	PTFE 4MB-B; cable outer diameter 6.6±0.25 mm	
Estimated cable weight, kg/km	74	74

ELECTRICAL PARAMETERS:

	PK 75-4-21M	PK 75-4-22M
Self-surge impedance, Ω	75±3	
Attenuation coefficient at frequency of max. 0.2 GHz, dB/m	0.16	0,16
Attenuation coefficient at frequency of max. 3 GHz, dB/m	0.9	0,95
Coupling resistance, MΩ/m	200	200
Electric capacity, pF/m	63	63

OPERATION GUIDELINES:

- Minimum bending radius
- when installing at t=5°C and above — 30 mm;
 - when installing at t<5°C — 60 mm.
- Cable service life is 20 years.

RADIO FREQUENCY CABLES, FLAME RETARDANT, WITH INSULATION AND SHEATH OF HALOGEN-FREE POLYMER COMPOUNDS



PK 75-2-16hr(A)-HF

DESIGN:

- 1 Inner conductor
- 2 Insulation
- 3 Outer conductor
- 4 Thermal barrier
- 5 Sheath

Regulatory documentation	TU 16.K71-336-2004
National product classification code	35 8812 3215
Application	Designed to connect various radio devices and RF installations in control, communications circuits and inter-instrument connections during operation at NPPs, including inside the containment area of NPPs
Cable operating temperature, °C	-50 to +60

DESIGN PARAMETERS:

		PK 50-2-19 hr(A)-HF	PK 50-2-18 hr(A)-HF	PK 50-4-17 hr(A)-HF	PK 75-1,5-13 hr(A)-HF	PK 75-2-14 hr(A)-HF	
1	Inner conductor	type	Cu	Cu	Cu	Cu	
		number of wires	1 x 0.67 mm	7 x 0.24 mm	1 x 1.37 mm	1 x 0.24	1 x 0.37
		nom. Ø, mm	0.67	0.72	1.37	0.24	0.37
2	Insulation	type	CLPE	CLPE	CLPE	CLPE	CLPE
		Ø, mm	2.2±0.10	2.2±0.10	4.6±0.20	1.5±0.07	2.2±0.10
3	Outer conductor	braid	of tinned copper wires				
		nom. Ø, mm	0.10	0.10	0.15	0.10	0.10
		density	88–92%				
		braid angle	50–60°				
4	Thermal barrier	Wrapping with mica tape at least 0.12 mm thick, overlapping of min. 40 %					
5	Sheath	type	halogen-free polymer compound				
		Ø, mm	4.45±0.25	4.45±0.25	7.50±0.25	3.55±0.25	4.45±0.25
Estimated cable weight, kg/km		30.5	30.5	89.5	19.5	28.5	

the following abbreviations are given in the table:
Cu — copper wire, CLPE — solid cross-linked polyethylene;

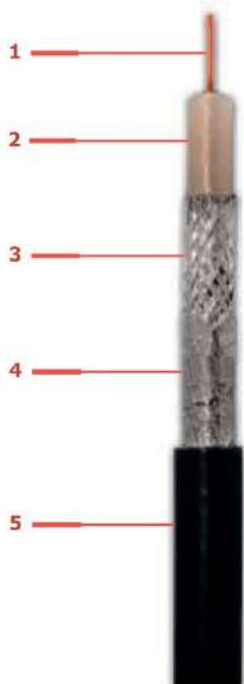
ELECTRICAL PARAMETERS:

		PK 50-2-19 hr(A)-HF	PK 50-2-18 hr(A)-HF	PK 50-4-17 hr(A)-HF	PK 75-1,5-13 hr(A)-HF	PK 75-2-14 hr(A)-HF	
Self-surge impedance		50±2.5			75±3.0		
Attenuation coefficient, dB/m, max.	during acceptance	0.2 GHz	0.3	–	–	0.3	
		3 GHz	1.8	1.85	1.15	2.6	1.8
		10 GHz	–	–	3.0	–	–
	during operation and storage period	0.2 GHz	–	–	–	–	–
		3 GHz	2.5	2.85	–	3.5	2.5
		10 GHz	–	–	4.5	–	–

OPERATION GUIDELINES:

Cable service life is 15 years.
Guaranty period is 2 years.

RADIO FREQUENCY CABLES FLAME RETARDANT, WITH INSULATION AND SHEATH OF HALOGEN-FREE POLYMER COMPOUNDS


PK 75-7-17Hr(A)-HF

DESIGN:

- 1 Inner conductor
- 2 Insulation
- 3 Outer conductor
- 4 Thermal barrier
- 5 Sheath

Regulatory documentation	TU 16.K71-336-2004
National product classification code	35 8812 3215
Application	Special-purpose equipment
Cable operating temperature, °C	-50 to +60

DESIGN PARAMETERS:

	PK 75-2-16 Hr(A)-HF	PK 75-4-17 Hr(A)-HF	PK 75-4-19 Hr(A)-HF	PK 75-7-17 Hr(A)-HF	PK 100-7-15 Hr(A)-HF	
1 Inner conductor	type	Cu	Cu	Cu	Cu	
	number of wires	7 x 0.24 mm	1 x 0.72 mm	7 x 0.26 mm	1 x 1.12 mm	1 x 0.6 mm
	nom. Ø, mm	0.36	0.72	0.78	1.2	0.60
2 Insulation	type	CLPE	CLPE	CLPE	CLPE	CLPE
	Ø, mm	2.2±0.10	4.6±0.20	4.6±0.20	7.25±0.25	7.25±0.25
3 Outer conductor	braid	of tinned copper wires				
	nom. Ø, mm	0.10	0.15	0.15	0.20	0.20
	density	88-92%				
	braid angle	50-60°				
4 Thermal barrier	Wrapping with mica tape at least 0.12 mm thick, overlapping of min. 40 %					
5 Sheath	type	halogen-free polymer compound				
	Ø, mm	4.45±0.25	7.50±0.60	7.50±0.60	10.80±0.60	10.80±0.60
Estimated cable weight, kg/km	28.5	75.0	75.0	164.0	155.0	

the following abbreviations are given in the table:
Cu — copper wire, CLPE — solid cross-linked polyethylene;

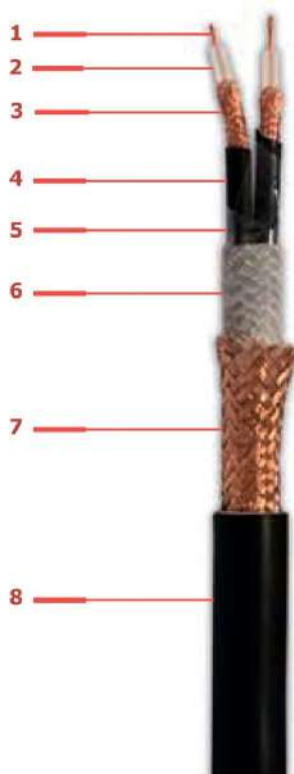
ELECTRICAL PARAMETERS:

	PK 75-2-16 Hr(A)-HF	PK 75-4-17 Hr(A)-HF	PK 75-4-19 Hr(A)-HF	PK 75-7-17 Hr(A)-HF	PK 100-7-15 Hr(A)-HF		
Self-surge impedance	75±3.0				100±8.0		
Attenuation coefficient, dB/m, max.,	During acceptance	0.2 GHz	0.3	0.18	0.18	0.14	0.13
		3 GHz	1.8	1.5	1.5	0.85	0.85
		10 GHz	-	-	-	-	-
	during operation and storage period	0.2 GHz	-	-	-	-	-
		3 GHz	2.5	1.9	1.9	1.5	1.5
		10 GHz	-	-	-	-	-

OPERATION GUIDELINES:

Cable service life is 15 years.
Guaranty period is 2 years.

BICOAXIAL RADIO-FREQUENCY CABLE, FLAME RETARDENT, WITH INSULATION AND SHEATH OF HALOGEN-FREE POLYMER COMPOUNDS



DESIGN:

- 1 Inner conductor
- 2 Insulation
- 3 Outer conductor
- 4 Sheath
- 5 Wrapping
- 6 Filling
- 7 Collective shield
- 8 Outer sheath

2PK 50-3-11 нр(А)-HF

Regulatory documentation	TU 3588-409-00217053-2009
National product classification code	35 8819
Application	Designed for transmission of low power electrical signals, connection of various devices in control circuits, inter-instrument connections for general industrial use and at nuclear power plants (NPPs), including inside the containment area of NPPs
Cable operating temperature, °C	-60 to +70

DESIGN PARAMETERS:

2PK 50-3-11 нр(А)-HF

1 Inner conductor	Central wire - corrosion-resistant steel, nom. diam. 0.30 mm, outer lay – copper wires, nominal diameter 0.30 mm.
2 Insulation	Solid, made of cross-linked polyethylene, insulation diameter 2.95±0.10 mm
3 Outer conductor	Braid of copper wires with a nominal diameter of 0.10 mm, braid density min. 90%
4 Sheath	Halogen-free polymer compound, thickness 0.65±0.2 mm
Number of coaxial pairs	Two pairs twisted into a core
5 Wrapping	PET-E polyethylene terephthalate film with a nominal thickness of 0.25 mm with an overlap of at least 30%
6 Filling	Halogen-free polymer compound, min. thickness 0.30 mm
7 Collective shield	Braid of copper-steel wires with a nominal diameter of 0.20 mm; braid density min. 90%
8 Outer sheath	Halogen-free polymer compound, nominal thickness 1.4 mm

ELECTRICAL PARAMETERS:

Self-surge impedance of each coaxial pair must be 50±2 Ω.

Electrical insulation resistance, calculated for a temperature of 20°C and length of 1 m, must be at least 1 TΩ.

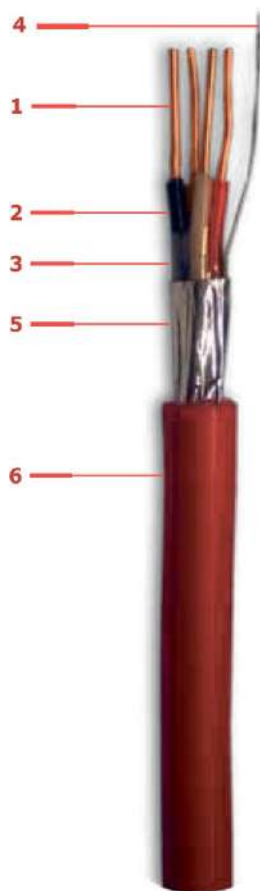
Coaxial pairs in the finished cable must withstand the test with alternating voltage of 3.0 kV with a nominal frequency of 50 Hz for 5 minutes.

The voltage of the internal discharge start in the insulation at frequency of 50 Hz must be at least 1.5 kV.

The cable service life, provided that the consumer observes the conditions of transportation, storage, laying (installation) and operation specified in these technical specifications, must be at least 40 years.

Service life is calculated from the date of manufacture of the cable.

FIRE ALARM CABLES КСПВЭВ



DESIGN:

- 1 Conductor** (Class 1) of copper wire,
- 2 Conductor** insulation of PVC plastic compound, insulated conductors are twisted into a core (for a cable КСПВЭВ 2x2x0.50, four insulated conductors are twisted together);
- 3 Bonding wrap** of polyethylene terephthalate film
- 4 Drain conductor;**
- 5 Shield** of aluminum-lavsan tape;
- 6 PVC plastic compound sheath,** applied by compression

КСПВЭВ	
Regulatory documentation	TU 16.K05-027-2005
National product classification code	35 8200
Application	The cables are intended for transmission of signals and data indoors, as well as outdoors with fixed laying along the outer walls of buildings and structures, including in fire hazardous areas, designed for operation in a temperate climate at ambient temperature
Cable operating temperature, °C	-40 to +70

DESIGN PARAMETERS:

Number of pairs and conductor cross section, mm ²	Nominal cross section of conductor, mm ²	Maximum outer diameter, mm	Estimated cable weight, kg/km
1×2×0.50	0.50	5.85	40.6
2×2×0.50	0.50	6.50	53.8
3×2×0.50	0.50	8.00	71.6
4×2×0.50	0.50	8.90	89.4

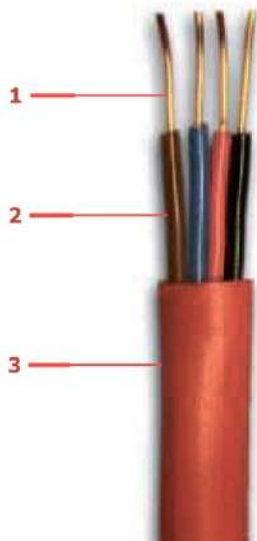
ELECTRICAL PARAMETERS:

Operating voltage, max., V	300
Test voltage with frequency of 50 Hz for 5 minutes after soaking in water, V	1000
Electrical insulation resistance, calculated per 1 km of length, max., MΩ	100
Service capacitance of КСПВЭВ cables at frequency of 800 Hz, nF/km, max. Capacitance exceedance up to 120 nF/km is allowed for cables with conductor number of 2, 4, 6	100
Electrical resistance of 1 km of conductor at 20°C, max, Ω	36.0

INSTALLATION CONDITIONS:

1. Cable must be laid at ambient temperature of -5°C to +50°C.
2. Cable service life is 15 years.

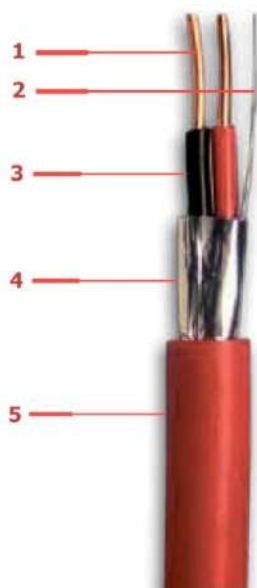
FIRE ALARM CABLES KMBB, KMBЭB



KMBB

DESIGN:

- 1 **Conductor** (Class 1) of copper wire
- 2 **Conductor** insulation of PVC plastic compound. Insulated conductors are twisted in pairs, pairs are laid in parallel
- 3 **Sheath** of PVC plastic compound



KMBЭB

DESIGN:

- 1 **Conductor** (Class 1) of copper wire
- 2 **Drain conductor**
- 3 **Conductor insulation** of PVC plastic compound. Insulated conductors are twisted in pairs, pairs are laid in parallel
- 4 **Shield** of aluminum-lavsan tape
- 5 **Sheath** of PVC plastic compound

KMBB, KMBЭB	
Regulatory documentation	TU 16.K05-033-2007
National product classification code	35 6500
Application	The cables are intended for transmission of signals and data indoors, as well as outdoors with fixed laying along the outer walls of buildings and structures, including in fire hazardous areas, designed for operation in a temperate climate at ambient temperature
Cable operating temperature, °C	-40 to +25

DESIGN PARAMETERS:

Number of pairs and conductor cross section, mm ²	Nominal cross section of conductor, mm ²	Estimated outer dimension, mm		Estimated cable weight, kg/km		Electrical resistance of 1 km of conductor at 20°C, max., Ω
		KMBB	KMBЭB	KMBB	KMBЭB	
1x2x0.50	0.50	5.20	5.35	31.7	33.7	36.0
1x2x0.75	0.75	5.54	5.69	38.0	40.0	24.5
1x2x1.0	1.0	5.84	5.99	44.3	46.3	18.1
1x2x1.5	1.5	6.36	6.51	56.6	58.8	12.1
1x2x2.5	2.5	7.16	7.31	79.2	81.4	7.41
2x2x0.5	0.50	5.20 x 8.40	5.35 x 8.55	53.9	56.1	36.0
2x2x0.75	0.75	5.54 x 9.08	5.69 x 9.23	65.9	68.1	24.5
2x2x1.0	1.0	5.84 x 9.68	5.99 x 9.83	77.9	80.1	18.1
2x2x1.5	1.5	6.36 x 10.72	6.51 x 10.87	101.7	104.1	12.1
2x2x2.5	2.5	7.16 x 12.32	7.31 x 12.47	145.6	148.1	7.41

ELECTRICAL PARAMETERS:

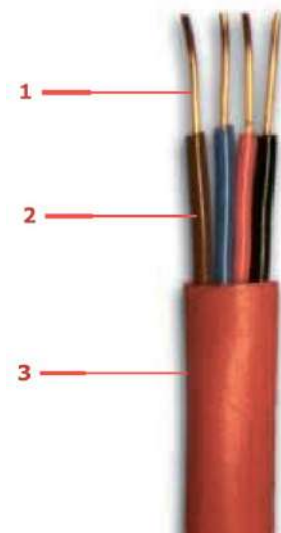
Operating voltage, max., V	300
Test voltage with frequency of 50 Hz for 5 minutes after soaking in water, V	1000
Electrical insulation resistance, calculated per 1 km of length, max., MΩ	100
Service capacitance of cables at frequency of 800 Hz, nF/km, max. Capacitance exceedance up to 120 nF/km is allowed for cables with conductor number of 2, 4, 6	100

INSTALLATION CONDITIONS:

Cable must be laid
at an ambient temperature of -5°C to +50°C.

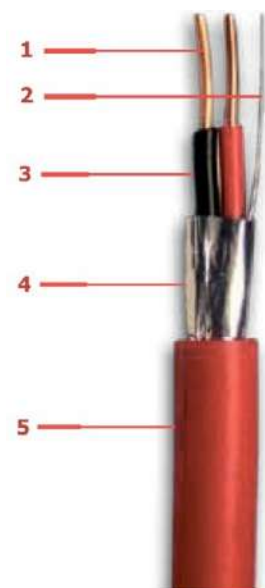
Cable service life is 15 years.

FIRE ALARM CABLES КМББНГ-LS, КМБЭБНГ-LS


КМББНГ-LS

DESIGN:

- 1 **Conductor** (Class 1) of copper wire
- 2 **Core insulation** of low fire risk PVC plastic compound with low gas and smoke emission. Insulated conductors are twisted in pairs, pairs are laid in parallel
- 3 **Sheath** of low fire risk PVC plastic compound with low gas and smoke emission


КМБЭБНГ-LS

DESIGN:

- 1 **Conductor** (Class 1) of copper wire
- 2 **Drain conductor**
- 3 **Core insulation** of low fire risk PVC plastic compound with low gas and smoke emission. Insulated conductors are twisted in pairs, pairs are laid in parallel
- 4 **Shield** of aluminum-lavsan tape
- 5 **Sheath** of low fire risk PVC plastic compound with low gas and smoke emission

КМББНГ-LS, КМБЭБНГ-LS	
Regulatory documentation	TU 16.K05-033-2007
National product classification code	35 6500
Application	The cables are intended for transmission of signals and data indoors, as well as outdoors with fixed laying along the outer walls of buildings and structures, including in fire hazardous areas, designed for operation in a temperate climate at ambient temperature
Cable operating temperature, °C	-40 to +70

DESIGN PARAMETERS:

Number of pairs and conductor cross section, mm ²	Nominal cross section of conductor, mm ²	Estimated outer dimension, mm		Estimated cable weight, kg/km		Electrical resistance of 1 km of conductor at 20°C, max., Ω
		КМББНГ-LS	КМБЭБНГ-LS	КМББНГ-LS	КМБЭБНГ-LS	
1x2x0.50	0.50	5.20	5.35	36.2	38.3	36.0
1x2x0.75	0.75	5.54	5.69	43.0	45.0	24.5
1x2x1.0	1.0	5.84	5.99	49.7	51.7	18.1
1x2x1.50	1.5	6.36	6.51	62.7	65.0	12.1
1x2x2.50	2.5	7.16	7.31	86.4	88.7	7.41
2x2x0.5	0.50	5.20 x 8.40	5.35 x 8.55	61.4	63.7	36.0
2x2x0.75	0.75	5.54 x 9.08	5.69 x 9.23	74.33	76.6	24.5
2x2x1.0	1.0	5.84 x 9.68	5.99 x 9.83	87.1	89.35	18.1
2x2x1.5	1.5	6.36 x 10.72	6.51 x 10.87	112.2	114.7	12.1
2x2x2.5	2.5	7.16 x 12.32	7.31 x 12.47	158.2	160.6	7.41

ELECTRICAL PARAMETERS:

Operating voltage, max., V	300
Test voltage with frequency of 50 Hz for 5 minutes after soaking in water, V	1000
Electrical resistance of cable insulation, calculated per 1 km of length, max., MΩ	100
Service capacitance of cables at frequency of 800 Hz, nF/km, max. Capacitance exceedance up to 120 nF/km is allowed for cables with conductor number of 2, 4, 6	100

INSTALLATION CONDITIONS:

Cable must be laid at ambient temperature of -5°C to +50°C.
Cable service life is 15 years.

COMBINED CABLES FOR VIDEO SURVEILLANCE SYSTEMS



DESIGN:

- 1 **Radio-frequency cable**
- 2 **Power wire HB**
- 3 **Sheath:**
 - of PVC plastic compound for KBOC-B, KBOC-BA, KBOC-П-B cables;
 - of light-stabilized polyethylene for KBOC-Y, KBOC-П-Y cables.
- 4 **Sheath color is white or grey.**
By agreement with the consumer, the sheath can be of any color

	KBOC-B, KBOC-BA, KBOC-П-B	KBOC-Y, KBOC-П-Y
Regulatory documentation	TU 16.K05-019–2002	
National product classification code	35 8811	
Application	Cables are designed for simultaneous connection of power and video signal circuits of CCTV cameras in security and fire alarm systems. Designed for indoor laying.	Cables are designed for simultaneous connection of power and video signal circuits of CCTV cameras in security and fire alarm systems. Designed for outdoor laying.
Cable operating temperature, °C	–40 to +70	–60 to +85

DESIGN PARAMETERS:

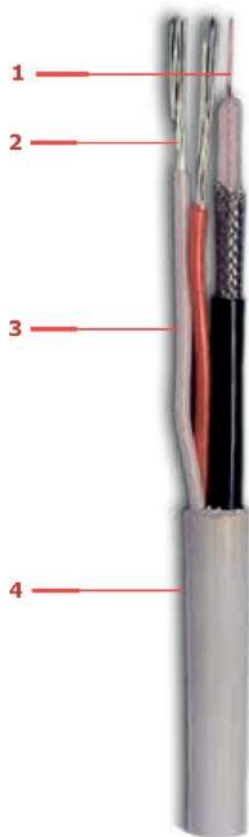
Cable grade	Maximum outer diameter	Design elements of video signal, power and control circuits	Estimated weight, kg/km
KBOC-B1	5.6	PK 75-1,5-31+two connecting wires HB-0,35 4 600 in PVC plastic compound sheath (applied with compression)	36.4
KBOC-B1A		PK 75-1,5-31+two connecting wires HB-0,35 4 600 in PVC plastic compound sheath (applied with extrusion)	30.7
KBOC-Y1	6.4	PK 75-1,5-31+two connecting wires HB-0,35 4 600 in sheath of light stabilized polyethylene	26.2
KBOC-B2		PK 75-2-11+two connecting wires HB-0,50 4 600 in PVC plastic compound sheath (applied with compression)	50.7
KBOC-B2A	7.8	PK 75-2-11+two connecting wires HB-0,50 4 600 in PVC plastic compound sheath (applied with extrusion)	42.7
KBOC-Y2		PK 75-2-11+two connecting wires HB-0,50 4 in sheath of light stabilized polyethylene	37.5
KBOC-B3	7.8	PK 75-3-16AY+two connecting wires HB-0,50 4 600 in PVC plastic compound sheath (applied with compression)	73.1
KBOC-B3A		PK 75-3-16AY+two connecting wires HB-0,50 4 600 in PVC plastic compound sheath (applied with extrusion)	63.4
KBOC-Y3	7.8	PK 75-3-16AY+two connecting wires HB-0,50 4 600 in sheath of light stabilized polyethylene	54.7
KBOC-B4		PK 75-3-16AY+two connecting wires HB-0,50 4 600 + two connecting wires HB-0,20 4 600 in PVC plastic compound sheath (applied with compression)	78.6
KBOC-B4A	4.3x9.6	PK 75-3-16AY+two connecting wires HB-0,50 4 600 + two connecting wires HB-0,20 4 600 in PVC plastic compound sheath (applied with extrusion)	70.5
KBOC-Y4		PK 75-3-16AY+two connecting wires HB-0,50 4 600 + two connecting wires HB-0,20 4 600 in sheath of light stabilized polyethylene	61.8
KBOC-П-B1	4.7x10.4	PK 75-1,5-31+two connecting wires HB-0,35 4 600 in sheath of PVC plastic compound	37.6
KBOC-П-Y1		PK 75-1,5-31+two connecting wires HB-0,35 4 600 in sheath of light stabilized polyethylene	28.1
KBOC-П-B2	5.0x11.0	PK 75-2-11+two connecting wires HB-0,50 4 600 in sheath of PVC plastic compound	51.1
KBOC-П-Y2		PK 75-2-11+two connecting wires HB-0,50 4 600 in sheath of light stabilized polyethylene	43.2
KBOC-П-B3	5.0x11.0	PK 75-3-16AY+two connecting wires HB-0,50 4 600 in sheath of PVC plastic compound	61.0
KBOC-П-Y3		PK 75-3-16AY+two connecting wires HB-0,50 4 600 in sheath of light stabilized polyethylene	51.0
KBOC-П-B4	5.0x11.0	PK 75-3-16AY+two connecting wires HB-0,50 4 600 + two connecting wires HB-0,20 4 600 in PVC plastic compound sheath	65.6
KBOC-П-Y4		PK 75-3-16AY+two connecting wires HB-0,50 4 600 + two connecting wires HB-0,20 4 600 in sheath of light stabilized polyethylene	56.4

ELECTRICAL PARAMETERS:

Self-surge impedance, Ω	75+3
AC test voltage for HB, V	2000

Cable service life is 15 years.

COMBINED CABLES FOR VIDEO SURVEILLANCE SYSTEMS



DESIGN:

- 1 **Radio-frequency cable**
- 2 **Power wire** HB
- 3 **Sheath:**
of PVC plastic compound for KBOC-B cables;
of light-stabilized polyethylene for KBOC-Y cables.
- 4 **Sheath color** is white or grey.
By agreement with the consumer, the sheath can be of any color

	KBOC-B	KBOC-Y
Application	Cables are designed for simultaneous connection of power and video signal circuits of CCTV cameras in security and fire alarm systems. Designed for indoor laying.	Cables are designed for simultaneous connection of power and video signal circuits of CCTV cameras in security and fire alarm systems. Designed for outdoor laying.
Cable operating temperature, °C	-40 to +70	-60 to +85

DESIGN PARAMETERS:

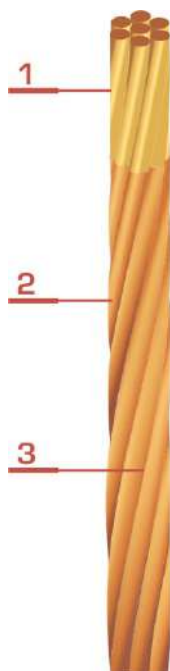
Cable grade	Regulatory documentation, TV	Maximum outer diameter	Design elements of video signal, power and control circuits	Estimated weight, kg/km
KBOC-B7	06/08	6.40	PK 75-2-11 (braid density 80%) + 2 connecting wires HBO,50 4 600 in PVC plastic compound sheath (applied with compression)	49.4
KBOC-Y7			The same in sheath of light stabilized polyethylene	36.2
KBOC-B8	06/08	6.60	PK 75-2-11 (braid density 80%) + 2 connecting wires HB-0,75 3 600 in PVC plastic compound sheath (applied with compression)	56.2
KBOC-Y8			The same in sheath of light stabilized polyethylene	41.8
KBOC-B11	28/10	7.6	PK 75-2-351 + 2 connecting wires HBM 0,75 3 600 in sheath of PVC plastic compound (applied with compression)	67.5
KBOC-Y11			PK 75-2-351 + 2 connecting wires HBM 0,75 3 600 in PE sheath (applied on extrusion)	56.3
KBOC-B12	22/10	9.00	PK 75-3,4-31 + 2 connecting wires HBM 0,75 3 600 in PVC plastic compound sheath (applied with compression)	75.5
KBOC-Y12			PK 75-3,4-31 + 2 connecting wires HBM 0,75 3 600 in PE sheath (applied on extrusion)	67.8
KBOC-B14	23/10	8.90	PK 75-3,7-357 + 2 connecting wires HBM 0,75 3 600 in PVC plastic compound sheath (applied with compression)	71.3
KBOC-Y14			PK 75-3,7-357 + 2 connecting wires HBM 0,75 3 600 in PE sheath (applied on extrusion)	63.8
KBOC-B15	24/10	6.40	PK 75-2-153 + 2 connecting wires HBM 0,50 4 600 in PVC plastic compound sheath (applied with compression)	46.9
KBOC-Y15			PK 75-3,7-357 + 2 connecting wires HBM 0,50 4 600 in PE sheath (applied on extrusion)	33.5
KBOC-B16	25/10	6.60	PK 75-2-153 + 2 connecting wires HBM 0,75 3 600 in PVC plastic compound sheath (applied with compression)	53.8
KBOC-Y16			PK 75-3,7-357 + 2 connecting wires HBM 0,75 3 600 in PE sheath (applied on extrusion)	39.5
KBOC-B17	26/10	5.70	PK 75-1,5-31 + 2 connecting wires HBM 0,50 4 600 in PVC plastic compound sheath (applied with compression)	40.0
KBOC-Y17			PK 75-1,5-31 + 2 connecting wires HBM 0,50 4 600 in PE sheath (applied on extrusion)	33.3
KBOC-B18	27/10	5.80	PK 75-1,5-31 + 2 connecting wires HBM 0,35 4 600 and sound circuit HBMЭ 0,20 4 600 in PVC plastic compound sheath (applied on extrusion)	37.4
KBOC-Y18			PK 75-1,5-31 + 2 connecting wires HBM 0,35 4 600 and sound circuit HBMЭ 0,20 4 600 in PE sheath (applied on extrusion)	32.6

ELECTRICAL PARAMETERS:

Self-surge impedance, Ω	75+3
AC test voltage for HB, V	2000

Cable service life is 15 years.

HIGH FREQUENCY LITZ WIRE WITH ENAMEL INSULATION ЛЭП



DESIGN:

Conductor of copper wire

- 1 Insulation of polyurethane enamel
- 2 Insulated conductors are twisted

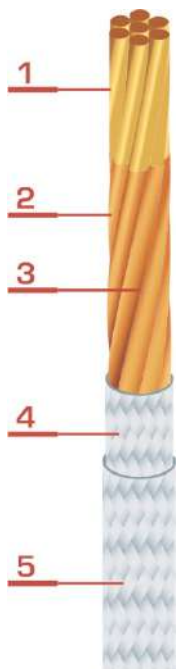
ЛЭП

Regulatory documentation	TU 16.K80-03-89
National product classification code	35 9150
Description	Round wire with a conductor of twisted copper wires insulated with polyurethane varnish
Application	<input type="checkbox"/> The wires are intended for the manufacture of windings of electrical machines, devices and high-frequency alternating current devices <input type="checkbox"/> The wire is serviced without first removing the insulation
Temperature index	120

BASIC PARAMETERS AND CHARACTERISTICS:

Design conductor cross section, mm ²	Inner conductor (enameled wire ПЭВТЛ-2)		Cable outer diameter, mm	Estimated weight, kg/km	Maximum electrical resistance of 1 m of conductor at 20°C, Ω
	Number of wires	Wire nominal diameter, mm			
0.0093	3	0.063	0.17	0.0934	2.0500
0.0119	3	0.071	0.19	0.1190	1.5780
0.0156	5	0.063	0.22	0.1560	1.2300
0.0317	8	0.071	0.29	0.3170	0.5920
0.0396	10	0.071	0.33	0.3950	0.4730
0.0475	12	0.071	0.37	0.4750	0.3960
0.0633	16	0.071	0.44	0.6330	0.3030
0.0707	9	0.100	0.46	0.6840	0.2650
0.0791	20	0.071	0.46	0.7990	0.2370
0.1100	14	0.100	0.56	1.0700	0.1670
0.1260	16	0.100	0.60	1.2300	0.1490
0.1650	21	0.100	0.68	1.6100	0.1130
0.1880	24	0.100	0.73	1.8400	0.0990
0.2200	28	0.100	0.79	2.1500	0.0876
0.2200	7	0.200	0.71	2.1200	0.0809
0.2510	32	0.100	0.84	2.4600	0.0766
0.2750	35	0.100	0.85	2.6800	0.0690
0.3850	49	0.100	1.12	3.8000	0.0500
0.5500	70	0.100	1.32	5.4300	0.0350
0.6590	84	0.100	1.44	6.5100	0.0292
0.8240	105	0.100	1.62	8.1500	0.0234
0.9340	119	0.100	1.68	9.2300	0.0206
0.9890	250	0.071	1.94	9.8100	0.0200
1.1540	147	0.100	2.04	11.400	0.0167
1.3740	175	0.100	2.23	13.5600	0.0140

HIGH FREQUENCY LITZ WIRES WITH ENAMEL INSULATION ЛЭПКО AND ЛЭПШД



DESIGN:

- 1 Conductor of copper wire
- 2 Insulation of polyurethane enamel
- 3 Insulated conductors are twisted
- 4 Wrapping:
 - Of capron thread for ЛЭПКО wire
 - Of natural silk for ЛЭПШД wire
- 5 Additional wrapping is of natural silk for ЛЭПШД wire

	ЛЭПКО	ЛЭПШД
Regulatory documentation	TU 16.K80-03-89	
National product classification code	35 9150	
Description	Round wire with a conductor of twisted copper wires insulated with polyurethane varnish, with a single-layer wrapping of capron threads	Round wire with a conductor of twisted copper wires insulated with polyurethane varnish, with a two-layer wrapping of natural silk
Application	<input type="checkbox"/> The wires are intended for the manufacture of windings of electrical machines, devices and high-frequency alternating current devices <input type="checkbox"/> The wire is serviced without first removing the insulation	
Temperature index	120	105

BASIC PARAMETERS AND CHARACTERISTICS:

Grade	Design conductor cross section, mm ²	Inner conductor (enameled wire ПЭВТЛ-1)		Cable outer diameter, mm	Estimated weight, kg/km	Electrical resistance of 1 m of conductor at 20°C, Ω	
		Number of wires	Wire nominal diameter, mm			min	max
ЛЭПКО	0.0317	8	0.071	0.36	0.3380	0.499	0.5920
	0.0396	10	0.071	0.39	0.4160	0.399	0.4730
	0.0475	12	0.071	0.43	0.4830	0.335	0.3960
	0.0633	16	0.071	0.47	0.6730	0.251	0.3030
	0.0791	20	0.071	0.50	0.8280	0.200	0.2370
	0.0942	12	0.100	0.54	0.9350	0.170	0.1960
	0.0707	9	0.100	0.52	0.7130	0.230	0.2650
	0.1100	14	0.100	0.61	1.0900	0.148	0.1670
	0.1260	16	0.100	0.65	1.2700	0.129	0.1490
	0.1650	21	0.100	0.72	1.6600	0.098	0.1130
	0.1880	24	0.100	0.76	1.8900	0.0863	0.0990
	0.2200	28	0.100	0.82	2.1900	0.0740	0.0876
	0.2510	32	0.100	0.88	2.5100	0.0647	0.0766
	0.2750	35	0.100	0.89	2.7400	0.0580	0.0690
	0.3850	49	0.100	1.14	3.8600	0.0423	0.0500
	0.5500	70	0.100	1.34	5.4800	0.0296	0.0353
	0.6590	84	0.100	1.45	6.5600	0.0247	0.0292
	0.8240	105	0.100	1.58	8.1900	0.0195	0.0234
	0.9340	119	0.100	1.70	9.2500	0.0174	0.0206
0.9890	250	0.071	1.87	9.8200	0.0161	0.0200	
1.3740	175	0.100	2.25	13.6000	0.0118	0.0140	
ЛЭПШД	0.980	500	0.050	1.90	10.60	0.0158	0.0180
	1.960	1000	0.050	2.55	20.80	0.0079	0.0092

Automotive wires with PVC insulation ПВА, ПГВА

Regulatory documentation TU 16.K17-021-94

National product classification code 35 5212

Application

designed to connect automotive electrical equipment and devices with rated voltage of up to 48 V.



Design:

- | | |
|----------------------|--------------------------|
| 1. Conductor | copper, round, multiwire |
| 2. Insulation | of PVC plastic compound |

Wire insulation has a solid or combined color, which is specified in the order. Combined coloring is performed by a combination of parallel stripes of two colors, one of which is the main one. The total width of the secondary color stripes is less than the total width of the primary color stripes. The designation of the combined coloring includes the designation of the main and auxiliary colors, and the designation of the main color should be the first. In the absence of an indication of specific colors in the order, it is possible to supply a wire of any color.

Specifications:

Temperature range of use:

for wires ПВА:

-40°C to +105°C

for wires ПГВА:

-40°C (for ХЛ -60°C) to +70°C

Wires are resistant to diesel fuel, oil and gasoline.

Wires are resistant to cracking.

Wires are resistant to mold fungi.

The wires are flame-retarding when laid alone.

Wires ПГВА in ХЛ version are resistant to multiple shocks with an acceleration of 1470 m/s² with a shock duration of 1–5 ms at a temperature of -60°C.

Wires ПВА are resistant to puncturing at a temperature of +110°C for 8 hours.

Wires ПГВА in the ХЛ version are resistant to the effects of installation and operational bends

with bending radius of at least ten maximum outer diameters of the wire at temperatures not lower than -60°C;

wires ПГВА in the Т and У version, ПВА in the У version — at temperature not lower than -30°C.

Flexibility coefficient of ПГВА wires in ХЛ version

when the ambient temperature changes from -60°C to +(25±10)°C:

max. 10

Minimum operating time of wires in the modes and conditions allowed by the technical specifications, min.:

for wires ПВА

at +105°C

5000 h

+90°C

10 000 h

+70°C

20 000 h

for wires ПГВА at +70°C

20 000 h

The service life of the wires, within which the operating time is provided, is:

10 years

Test voltage with frequency of 50 Hz after soaking in water:

1000 V

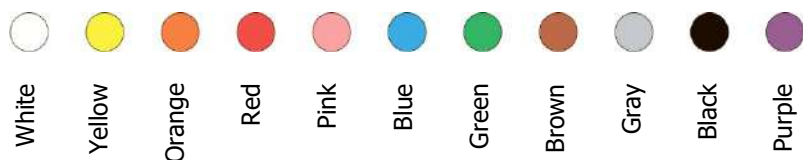
Wires ПВА, ПГВА are manufactured according to the technical specifications (TS), agreed with the technical development center of AvtoVAZ OJSC.

Automotive wires with PVC insulation ПВА, ПГВА

Design and characteristics:

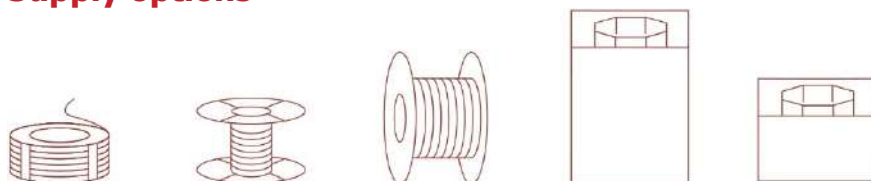
Nominal cross section of conductor, mm ²	Conductor flexibility class			Nominal insulation thickness, mm			Maximum outer diameter, mm			Estimated weight of 1 km of wire, kg			Direct current electrical resistance of 1 km of conductor at 20°C, Ω, max.		
	ПВА	ПГВА	ПГВА-ХЛ	ПВА	ПГВА	ПГВА-ХЛ	ПВА	ПГВА	ПГВА-ХЛ	ПВА	ПГВА	ПГВА-ХЛ	ПВА	ПГВА	ПГВА-ХЛ
0.20	–	4	–	0.35	–	–	–	1.5	–	–	3.37	–	–	89.1	–
0.35	–	4	–	0.35	–	–	–	1.7	–	–	4.67	–	–	57.0	–
0.50	5	4	4	0.6	0.6	0.6	2.3	2.3	2.3	8.2	8.34	8.2	39.0	40.5	40.5
0.75	5	5	4	0.6	0.6	0.6	2.6	2.6	2.6	11.4	11.32	11	26.0	25.2	25.2
1.00	5	5	4	0.6	0.6	0.6	2.7	2.7	2.7	13.2	13.16	13	19.5	19.8	19.8
1.50	5	5	4	0.6	0.6	0.6	3.0	3.0	3.0	18.3	18.16	19	13.2	13.2	13.2
2.50	5	5	4	0.7	0.7	0.7	3.9	3.8	3.8	30.1	29.97	32	7.98	7.98	8.05
4.00	5	5	–	0.8	0.8	–	4.5	4.5	–	45.8	45.61	–	4.95	4.89	–
6.00	5	5	3	0.8	0.8	0.8	5.5	5.3	5.3	67.5	67.24	70	3.3	3.11	3.11
8.00	5	5	–	0.8	0.9	–	5.5	5.5	–	84.7	86.5	–	2.55	2.40	–
10.00	5	5	–	1.0	1.0	–	6.7	6.7	–	106.6	103.9	–	1.91	1.99	–
16.00	5	5	–	1.35	1.0	–	9.0	8.6	–	178.1	164.7	–	1.21	1.21	–
25.00	5	5	–	1.2	1.2	–	10.8	10.8	–	277	250.2	–	0.78	0.809	–
35.00	–	5	–	–	1.2	–	–	11.6	–	–	346.2	–	–	0.551	–
50.00	–	3	–	–	1.4	–	–	14.5	–	–	499.5	–	–	0.394	–
70.00	–	3	–	–	1.4	–	–	17.0	–	–	673	–	–	0.277	–
95.00	–	3	–	–	1.6	–	–	19.0	–	–	946.2	–	–	0.203	–

Wire colors



Wires can be solid or combined colors. Combined coloring is performed by a combination of parallel stripes of two colors, one of which is taken as the main one.

Supply options



Automotive wire ПГВАЭ

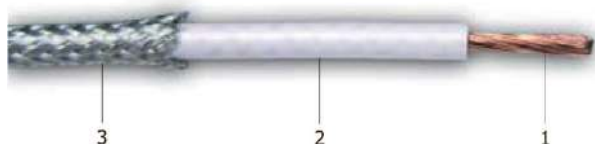
wire of increased flexibility with a copper core, single-core with PVC insulation, shielded

Regulatory documentation TU 16.K17-021-94

National product classification code 35 5212

Application

designed to connect automotive electrical equipment and devices with rated voltage of up to 48 V.



Design:

- | | |
|----------------------|---------------------------------|
| 1. Conductor | copper, round, multiwire |
| 2. Insulation | of PVC plastic compound |
| 3. Shield | as braid of tinned copper wires |

Specifications:

Temperature range of use:	-40°C to +70°C
Wires are resistant to diesel fuel, oil and gasoline.	
Wires are resistant to mold fungi.	
The wires are flame-retarding when laid alone.	
Minimum operating time of wires in the modes and conditions allowed by the technical specifications, at +70°C, min.:	20 000 h
Test voltage with frequency of 50 Hz after soaking in water:	1000 V
The service life of the wires, within which the operating time is provided, is:	10 years

Design and characteristics:

Nominal cross section of conductor, mm ²	Conductor flexibility class	Nominal insulation thickness, mm	Maximum outer diameter, mm	Estimated weight of 1 km of wire, kg	Direct current electrical resistance of 1 km of conductor at 20°C, Ω, max.
0.50	4	0.6	2.9	24	40.5
0.75	4	0.6	3.2	30	25.2
1.00	4	0.6	3.3	35	19.8
1.20	4	0.6	3.5	38	16.0
1.50	4	0.6	3.6	43	13.2
2.00	4	0.7	4.2	49	9.97
2.50	4	0.7	4.6	54	8.05
3.00	4	0.7	4.7	62	6.52
4.00	4	0.8	5.2	77	4.89
5.00	3	0.8	5.6	90	3.83
6.00	3	0.8	6.0	101	3.11

Supply options



Automotive wires with thin-wall PVC insulation ПВАМ, ПВАМТ, ПВАМЭ, ПВАМЭВ, ПВАМБ

According to their characteristics, ПВАМ wires comply with the requirements of DIN 72551, ISO 6722, BOSCH 5 998 340.

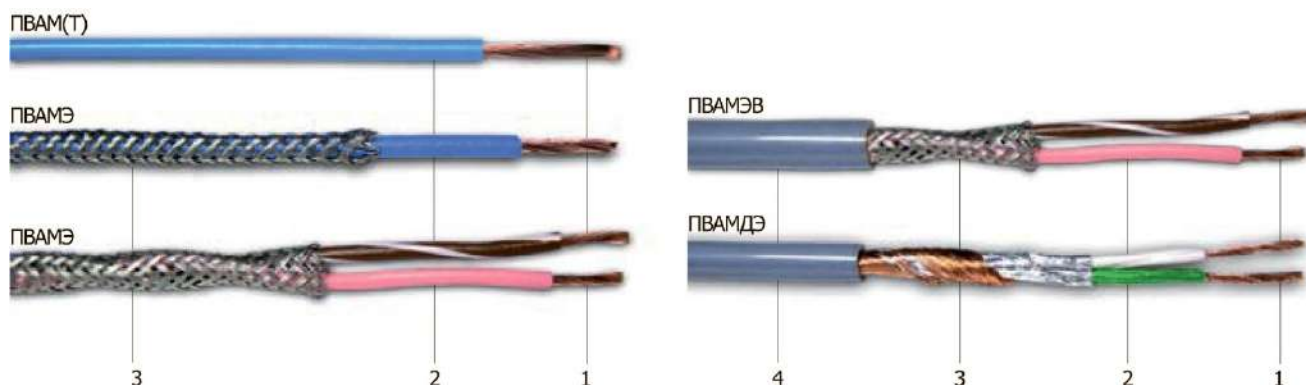
Wire grade	Regulatory documentation	National product classification code
ПВАМ, ПВАМЭ, ПВАМЭВ	TU 16.K05-015-2002	35 5200
ПВАМБ 2x0.75, 3x0.75	ToR No. 01/08	
ПВАМЭ 2x0.50	ToR No. 22/07	
ПВАМЭ 2x0.75 and ПВАМЭ 3x0.75	ToR No. 51/07	
ПВАМТ	ТТ	
ПВАМДЭ	TU 16.K17-021-94	35 5200

Application:

The wires are designed for flexible connection of automotive electrical equipment and devices with rated voltage of up to 48 V, manufactured for vehicles designed for operation in temperate and tropical climates at ambient temperatures from -40°C to $+45^{\circ}\text{C}$ and relative air humidity up to 90% at temperatures up to $+27^{\circ}\text{C}$.

Description

- ПВАМ wire with a copper core of increased flexibility, with thin-walled PVC insulation, single-core
- ПВАМЭ wire with a copper core of increased flexibility, with thin-walled PVC insulation, single-core, thermal resistant, shielded
- ПВАМЭВ wire with a copper core of increased flexibility, with thin-walled PVC insulation, single- and two-core shielded, in a PVC sheath, thermal resistant
- ПВАМТ wire with a copper core of increased flexibility, with thin-walled PVC insulation, single-core, thermal resistant, shielded, thermal resistant
- ПВАМБ wire with a copper core of increased flexibility, with thin-walled PVC insulation, two- and triple-core shielded, in a PVC sheath, thermal resistant
- ПВАМДЭ high-flexibility wire with copper conductors, with PVC insulation, two-core, shielded, in a PVC sheath, thermal resistant



Design:

1. **Conductor** copper, round, multiwire
2. **Insulation** of PVC plastic compound
3. **Shield** of tinned copper wires, for wires ПВАМЭ, ПВАМЭВ, ПВАМДЭ
4. **Sheath** of polyvinylchloride plastic compound, for wires ПВАМЭВ, ПВАМБ, ПВАМДЭ

Specifications:

Temperature range of use:

for wires ПВАМ, ПВАМЭ, ПВАМЭВ, ПВАМБ, ПВАМДЭ:

-40°C to $+105^{\circ}\text{C}$

for wires ПВАМТ:

-40°C to $+125^{\circ}\text{C}$

Wires are resistant to mold fungi.

The service life of the wires, within which the operating time is provided, is:

8 years

The actual service life is not limited to the specified one, but is determined by the technical condition of the wire.

Test voltage with frequency of 50 Hz after soaking in water:

1000 V

Wires ПВАМ, ПВАТ are manufactured according to the technical specifications (TS), agreed with the technical development center of AvtoVAZ OJSC.

Automotive wires with thin-wall PVC insulation ПВАМ, ПВАМТ, ПВАМЭ, ПВАМЭВ, ПВАМБ

Design characteristics for wires ПВАМ, ПВАМЭ, ПВАМТ:

Nominal cross section of conductor, mm ²	CONDUCTOR flexibility class	Nominal insulation thickness, mm			Maximum outer diameter, mm max.		Estimated weight of 1 km of wire, kg			Conductor electrical resistance, Ω		
		ПВАМ	ПВАМЭ	ПВАМТ	ПВАМ, ПВАМТ	ПВАМЭ	ПВАМ	ПВАМЭ	ПВАМТ	ПВАМ	ПВАМЭ	ПВАМТ
0.35	4	0.268	0.265	0.265	1.4	2.4	4.6	9.2	5	57.0	57.0	52
0.50	5	0.30	0.30	0.3	1.6	2.9	6.2	11.3	6.2	39.0	39.0	37.1
0.75	5	0.327	0.32	0.32	1.9	3.2	9	15.3	9	26.0	26.0	24.7
1.00	5	0.338	0.33	0.33	2.1	3.3	11.8	18.4	11.5	19.5	19.5	18.5
1.50	5	0.355	0.35	0.35	2.4	3.4	16.5	24.4	16.2	13.3	13.3	12.7
2.50	5	0.385	0.375	0.375	3.0	3.9	26.5	35.9	26.1	7.98	7.98	7.6
4.00	5	0.472	0.47	0.47	3.7	4.6	43.2	55.3	43	4.95	4.95	4.7
6.00	5	0.425	0.425	0.425	4.3	4.8	61.3	75.5	60.2	3.3	3.3	3.11
2x0.50 (for ПВАМЭ)	5	–	0.30	–	–	3.6	–	22.1	–	–	39.0	–
2x0.75 (for ПВАМЭ)	5	–	0.32	–	–	4.3	–	30.0	–	–	26.0	–
3x0.75 (for ПВАМЭ)	5	–	0.32	–	–	4.6	–	40.3	–	–	26.0	–

Design characteristics for wires ПВАМДЭ:

Wire grade	Number and design cross section of conductor, mm ²	CONDUCTOR flexibility class	Nominal thickness, mm		Maximum outer diameter, mm	Estimated weight of 1 km of wire, kg	Electrical resistance of 1 km of conductor at 20°C, max., Ω
			of insulation	of sheath			
ПВАМДЭ TU 16.K05-015-2002	2x0.50	5	0.3	0.6	6.2	32.4	111.3
ПВАМДЭ TU 16.K17-021-94	2x0.50	5	0.4	0.6	6.2	52.0	39.0
	2x0.75	5	0.4	0.7	6.8	66.0	26.0
	2x1.0	5	0.5	0.8	7.8	79.0	19.5

Design characteristics for wires ПВАМЭВ, ПВАМБ:

Number and design cross section of conductor, mm ²	Conductor flexibility class	Nominal thickness, mm		Maximum outer diameter, mm		Estimated weight of 1 km of wire, kg		Electrical resistance of 1 km of conductor at 20°C, max., Ω	
		of insulation	of sheath	ПВАМЭВ	ПВАМБ	ПВАМЭВ	ПВАМБ	ПВАМЭВ	ПВАМБ
1x0.35	4	0.265	0.6	3.5	–	16.9	–	52.0	–
1x0.50	5	0.30	0.6	3.7	–	21.3	–	37.1	–
1x0.75	5	0.32	0.7	4.0	–	25.9	–	24.7	–
1x1.0	5	0.33	0.8	4.5	–	31.9	–	18.5	–
1x1.5	5	0.35	0.8	4.9	–	41.2	–	12.7	–
1x2.5	5	0.375	0.8	5.5	–	55.7	–	7.6	–
1x4.0	5	0.47	0.8	6.2	–	77.8	–	4.7	–
1x6.0	5	0.425	0.8	6.8	–	100.7	–	3.1	–
2x0.50	5	0.30	0.6	5.0	–	34.7	–	111.3	–
2x0.75	5	0.32	0.7	5.8	5.3	44.3	39.0	74.1	26.0
2x1.0	5	0.33	0.8	6.1	–	51.3	–	55.5	–
3x0.75	5	0.32	0.7	6.1	–	58.1	–	26.0	–
2x0.75	5			6.8	–	66.0	–	26.0	–
2x1.0	5			7.8	–	79.0	–	19.5	–

Supply options: any type of package

Automotive wires KBBA, KBYA

for vehicles' ABS (anti block) systems

Regulatory documentation TU 16.K05-028-2005

National product classification code 35 5200

Application

Cables are designed for flexible connection of automotive electrical equipment and devices manufactured for vehicles designed for operation in temperate and tropical climates.



Design:

1. **Inner conductor** insulated blank, wire ПВМ TU 16.K05-015-2002.
2. **Insulation** for wires KBBA— ПВХ; for wires KBYA— polyurethane

Specifications:

Cable resistant to puncturing.

The cable is resistant to vibration loads with frequency of 50 to 250 Hz with acceleration of 10g.

The cable is resistant to shock loads of 10 000 shocks with acceleration of 15g.

Temperature range of use:

for cables KBYA: **-45°C to +130°C**

for cables KBBA: **-45°C to +70°C**

The cable is resistant to aggressive media: gasoline, diesel fuel, motor oil, coolant, brake fluid and their vapors.

Service life of cables, including installation and operation time:

Test voltage applied between conductors with frequency of 50 Hz in water for 5 minutes:

8 years
1.5 kV

Design parameters:

Cable grade	Number and nominal cross section of conductor, mm ²	Thickness, mm		Maximum outer diameter, mm	Estimated weight of 1 km of cable, kg	Electrical resistance of 1 km of conductor at +20°C max., Ω
		Insulation (nominal)	Sheath (minimum)			
KBBA	2x0.75	0.32	0.75	5.6	41.70	24.95
	3x1.5	0.35	0.3	6.1	69.53	12.83
KBYA	2x0.50	0.30	0.50	4.6	27.36	37.47
	2x0.75	0.32	0.75	5.6	40.83	24.95
	2x1.0	0.33	0.50	5.7	46.26	18.7
	2x2.5	0.38	0.50	7.5	89.56	7.68
	3x1.0	0.33	0.45	5.8	54.9	18.69
	3x1.5	0.35	0.3	6.1	68.8	12.83

Supply options



Wires KBBA, KBYA are manufactured according to the technical specifications (TS), agreed with the technical development center of Pavlovskiy Avtobusniy Zavod.

Copper non-insulated braided wire АМГ, АМГЛ

Regulatory documentation TU 16.505-398-76

National product classification code 35 1715

Application

The wire is designed to connect the electrical equipment of vehicles and tractors with the body. Operating temperature range is from minus 60 to plus 50°C.



Design:

АМГ wire copper wire MM
АМГЛ wire tinned copper wire

Design and characteristics:

АМГ wire

Wire grade	АМГ
Regulatory documentation	TU 16-505.398-76
National product classification code	35 1715
Application	Designed to connect the electrical equipment of vehicles and tractors with the body

Basic parameters and characteristics:

Grade	Nominal cross section, mm ²	Number of strands	Number of wires in strand	Wire nominal diameter, mm	Pitch of braiding, max. mm	Nominal outside dimensions, mm		Electrical resistance of 1 km of wire, Ω, max.	Estimated weight, kg/km
						Width	Thickness		
АМГ-8	8	24	19	0.15	52.72	8.00	1.5	2.26	77.577
АМГ-16	16	24	21	0.2	115	15.0	2.5	1.24	150
АМГ-25	25	24	34	0.196	120	18.00	2.5	0.79	236.78
АМГ-35	35	24	21	0.296	120	24.0	2.5	0.56	336.67

АМГЛ wire

Nominal cross section, mm ²	Wire nominal diameter, mm	Number of strands	Number of wires in strand	Electrical resistance of 1 km of wire, Ω, max.	Estimated weight, kg/km
0.20	0.10	8	3	104.4	2.0

Breaking force of min. 29.4 N (3 kgf).

Supply options



WIRE FOR BRUSHES OF ELECTRIC MACHINES ПЦ

Wire grade	ПЦ
Regulatory documentation	TU 16-705.467-87
National product classification code	27.32.13
Description	Wires for brushes of electric machines
Application	For brushes of electric machines
Operating temperature range	Climatic version B, placement category 2 -60°C to +50°C

WIRE PARAMETERS

Wire cross section, mm ²	ПЦ				Estimated weight of 1 km of wire, kg
	Minimum weight of a piece of wire, kg	Electrical resistance of wire, Ω, max.	Wire breaking force, N, min.	Design wire diameter, mm	
0.75	0.180	27	139.6	1.50	7.14
1.00	0.220	21	170.9	1.80	8.79
1.50	0.346	14	279.2	2.20	14.18
2.00	0.490	9.3	384.6	2.40	19.57
2.50	0.565	8.0	448.7	2.70	22.80

SPECIFICATIONS:

Type of wire climatic version B,
placement category 2
as per GOST 15150-69
Service life: 16 years

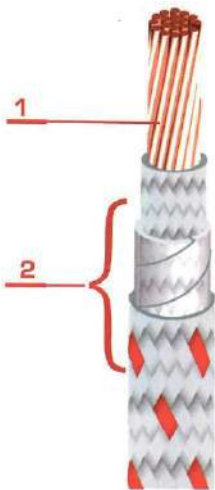
EXAMPLES OF SYMBOLS:

Wire ПЦ 2.5 TU 16-705.467-87 —
example of the symbol of a wire ПЦ with
cross section of 2.5 mm²

DESIGN:

ПЦ
ПЦ wire is made of wire MM

FLEXIBLE COLD-RESISTANT WIRE ПГХ



Wire grade	ПГХ
Regulatory documentation	TU 16.K05-004-94
National product classification code	35 5415
Application	Designed for use as winding leads for electric motors of compressors in domestic refrigerators with operating voltage up to 600 VAC, frequency 50–60 Hz and continuous permissible operating temperature of the wire of 120°C. Resistant to coolants R12, R22, RB4, R134A
Temperature index	–60...+120°C

DESIGN:

- 1 Conductor** — copper, 6 flexibility class
- 2 Insulation** — combined of polyester threads and polyethylene terephthalate film

Electrical resistance of 1 km of wire, Ω, max.	26.0
Test voltage with frequency of 50 Hz for 1 minute, V	3000
Flexibility test by deformation method, min.	102 mm
Resistance to extraction in trichlorethylene, max. %	1
Outer diameter, mm	2.03±0.20
Estimated weight, kg/km	8.36

HIGH-VOLTAGE LEAD-OUT THERMAL RESISTANT WIRES ПМПИФ AND ПМПСФ



Wire grade	ПМПИФ ПМПИФ
Regulatory documentation	TU 16.K05-008-2001
National product classification code	35 5400
Application	Designed for operation in oil-filled electric motors and other electrical devices operating at voltages up to 2.5 kV AC, frequency 50 Hz
Temperature index	-40...+120°C

DESIGN:

1 Conductor — flexible of copper wires

2 Insulation — combined: the first layer is a sintered polyimide-fluoroplastic film (ПМПИФ) or a sintered film of PTFE 4D (ПМПСФ), the second layer is a fluoro-elastomer

Wire grade	Nominal cross section of conductor, mm ²	Insulation thickness, mm		Nominal outside dimensions, mm		Estimated weight of wire, kg/km
		Min	Max	Min	Max	
ПМПИФ	6.0	0.95	1.1	5.3	5.8	96.58
	10.0			6.5	7.0	144.14
	16.0			7.5	8.2	208.46
ПМПСФ	6.0	0.95	1.25	5.7	6.1	104.95
	10.0			6.8	7.3	154.44
	13 (ToR No. 79/05)			7.3	8.1	188.91
	16.0			7.8	8.5	220.68

Design conductor cross section, mm ²	6.0	10.0	13.0	16.0
Direct current electrical resistance of 1 km of conductor at 20°C, Ω, max.	3.3	1.91	1.49	1.21
Electrical insulation resistance, calculated per 1 m of length, at voltage of 2 kV DC, mΩ, min.				
a) under normal climatic conditions	1x10 ⁵			
b) at temperature of 200°C	1x10 ⁴			
AC breakdown voltage, frequency 50 Hz, min., kV	20			
Number of bends at ±90° on rollers with a diameter of 10 mm, min.	5			

ROUND COPPER ELECTRICAL WIRE MM, MMЭ, MT, MTЭ



Wire grade	MM	MMЭ	MT	MTЭ
Regulatory documentation	TU 16-705.492-2005			
National product classification code	18 4490			
Application	Copper round electrical wire is designed for the manufacture of wires, cables, cords and other electrical purposes			

Wire nominal diameter, mm	Electrical resistivity 0 m x m x 10 ⁻⁶ , max.		Ultimate tensile strength of wire MT and MTЭ, MPa (kgf/cm ³), min.	Elongation of wires MM and MMЭ, %, min.
	MT, MTЭ	MT, MMЭ		
0.05–0.063	0.0180	–	441(45)	–
over 0.063 to 0.100	0.0180	0.01724	422(43)	16
over 0.100 to 0.120	0.0180	0.01724	422(43)	17
over 0.120 to 0.150	0.0180	0.01724	422(43)	18
over 0.150 to 0.190	0.0180	0.01724	422(43)	19
over 0.190 to 0.580	0.0180	0.01724	422(43)	20
over 0.580 to 0.970	0.0180	0.01724	422(43)	25
1.00	0.0180	0.01724	422(43)	30
over 1.00 to 2.44	0.0178	0.01724	422(43)	30
over 2.44 to 2.50	0.0177	0.01724	422(43)	30

DESIGN:

MT — copper hard

MM — copper mild

MTЭ — copper hard for enameling

MMЭ — copper mild for enameling

TINNED COPPER ROUND WIRE ММЛ, МТЛ

Wire grade	ММЛ	МТЛ
Regulatory documentation	TU 16-505.850–75	
National product classification code	18 4490	
Application	Tinned copper wire for electrical purposes is intended for the manufacture of conductors of cables, cords, wires, braids	

Wire nominal diameter, mm	Electrical resistivity to direct current at 20°C, Ωxm, max.		Ultimate tensile strength, N/mm ³ (kg), min.	Elongation, %, min.
	МТЛ	ММЛ		
up to 0.09	0.018x10 ⁻⁶	0.0176x10 ⁻⁸	196 (20)	–
0.10–0.14				5
0.15–0.24				5
0.25–0.39				13
0.40–0.59				15
0.60–1.00				17
1.01–1.25			206 (21)	20

DESIGN:

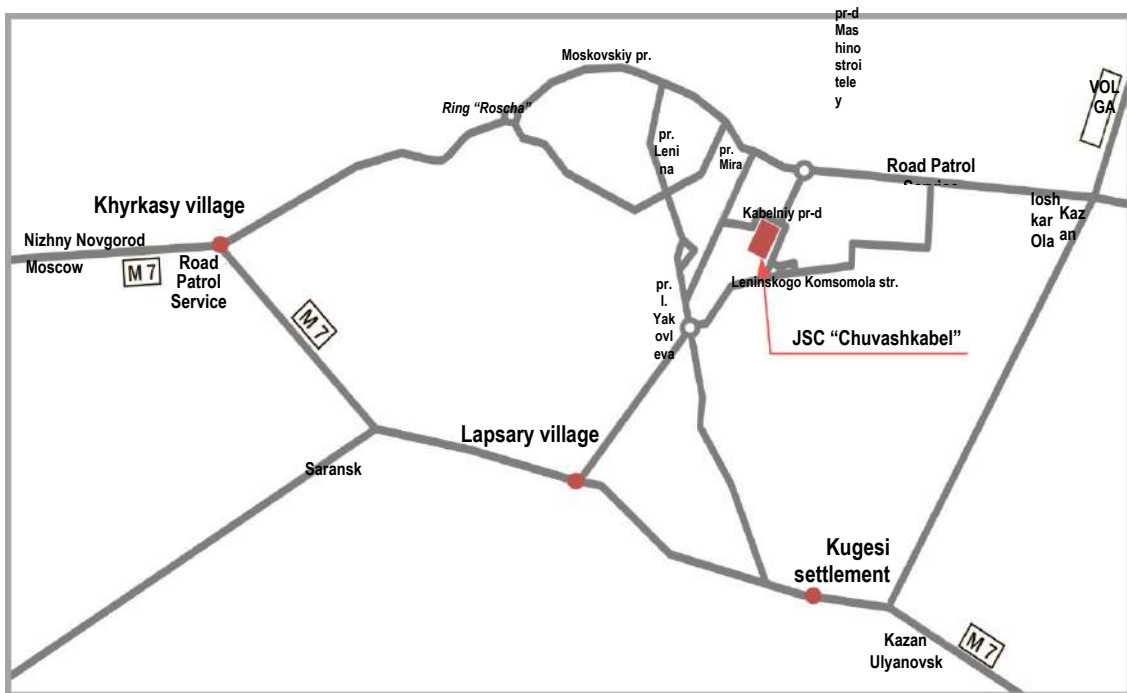
ММЛ — copper mild tinned

МТЛ — copper hard tinned

TABLE OF CONTENT

Introduction	3
Radio-frequency coaxial cables	
PK 50-2-11, PK 50-2-13, PK 50-2-16	4
PK 50-3-151 (RG 58AU, RG 58U), PK 50-3-152 (RG 58AU, RG 58U)	5
PK 50-3,7-351 (RG 8X, H-155), PK 50-3,7-352 (RG 8X, H-155)	6
PK 50-4-11, PK50-4-11K.....	7
PK 50-5-351 (5D-FB PEEG), PK 50-5-352 (5D-FB PEEG), PK 50-5-353 (5D-FB PEEG), PK 50-5-354 (5D-FB PEEG).....	8
PK 75-1-13 C.....	9
PK 75-1,5-14, PK 75-1,5-15, PK 75-1,5-31, PK 75-1,5-351 (2C2Ve), PK 75-1,5-352 (2C2Ve)	10
PK 75-2-11, PK 75-2-11A, PK 75-2-11БЛ, PK 75-2-37 (38), PK 75-2-153, PK 75-2-351 (352) (3C2Ve).....	11
PK 75-2-13	12
PK 75-3-16AY, PK 75-3-16AYЛ, PK 75-3-351 (RG 59B/U), PK 75-3-352 (RG 59B/U)	13
PK 75-3,4-31 (RG-59/U)	14
PK 75-3,7-151, PK 75-3,7-152	15
PK 75-3,7-351 (RG 59U), PK 75-3,7-352 (RG 59U), PK 75-3,7-357, PK 75-3,7-358.....	16
PK 75-4-12, PK 75-4-16, PK 75-4-120, PK 75-4-121, PK 75-4-310, PK 75-4-311	17
PK 75-4-11, PK 75-4-15, PK 75-4-17, PK 75-4-19, PK 75-4-118, PK 75-4-119	18
PK 75-4-38, PK 75-4-39, PK 75-4-351 (RG 6U), PK 75-4-352 (RG 6U), PK 75-4-353, PK 75-4-354, PK 75-4-356	19
PK 75-4,3-31 (RG-6/U).....	20
PK 75-4,8-35 (SAT 50M, SAT 50MN), PK 75-4,8-36 (SAT 700, SAT 700N), PK 75-4,8-37 (SAT 703B, SAT 703N), PK 75-4,8-353	21
PK 75-5-359 (RG-6), PK 75-5-360 (RG-6)	22
PK 75-7-351 (RG 11U, CATV-11), PK 75-7-352 (RG 11U, CATV-11).....	23
PK 50-0,6-23, PK 50-1-24, PK 50-1-24M, PK 50-1,5-21, PK 50-2-22, PK 50-2-22Л, PK 50-4-22M	24
PK 75-2-22, PK 75-1-23.....	25
PK 75-2-22, PK 75-2-22 Л	26
PK 75-3-22, PK 75-3-23.....	27
PK 75-4-21M, PK 75-4-22M	28
Radio-frequency flame retardant cables	
PK 50-2-19 нг(A)-HF, PK 50-2-18 нг(A)-HF, PK 50-4-17 нг(A)-HF, PK 75-1,5-13 нг(A)-HF, PK 75-2-14 нг(A)-HF	29
PK 75-2-16 нг(A)-HF, PK 75-4-17 нг(A)-HF, PK 75-4-19 нг(A)-HF, PK 75-7-7 нг(A)-HF, PK 100-7-15 нг(A)-HF	30
2PK 50-3-11 нг(A)-HF	31
Fire alarm cables	
КСПВЭВ	32
КМВВ, КМВЭВ	33
КМВВНГ-LS, КМВЭВНГ-LS	34
Security and video surveillance system cables	
КВОС-В, КВОС-ВА, КВОС-П-В, КВОС-У, КВОС-П-У	35
КВОС-В7/8/11/12/14/15/16/17/18, КВОС-У7/8/11/12/14/15/16/17/18	36
High-frequency winding wires with enamel insulation.....	37
ЛЭП	37
ЛЭПКО, ЛЭПШД.....	38
Automotive wires	39
Wires ПВА, ПГВА	39
Wires ПГВАЭ	41
Wires ПВАМ, ПВАМТ, ПВАМЭ, ПВАМЭВ, ПВАМВ	42
Cables КВВА, КВУА	44
Copper non-insulated wire АМГ, АМГЛ	45
Wire ПЩ	46
Wire ПГХ.....	47
Wires ПМПИФ and ПМПФСФ	48
Copper wire ММ, ММЭ, МТ, МТЭ, ММЛ, МТЛ	49

Location map



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