



## ОБГПН \* 12 – 3.5 ТУ У 31.3-00214534-036-2004

Fiber optic module-core cables, corrugated steel-tape armoured, with polymer compound flame-retardant outer sheath

### Mark formation:

ОБГПН-[a]-[b] [c]12(12x[e])-3.5

[a] central strength element

- C – steel
- No marks – dielectric

[b] quantity of optical fibers in the cable, possible values

- 72, 96, 120, 144, 156, 168, 180, 192

[c] type of optical fiber

- E – single-mode (ITU-T G.652B)
- A – single-mode with extended wavelength band (ITU-T G.652D, ITU-T G.657A1)
- C – single-mode with non-zero shifted dispersion (ITU-T G.655)
- M – multimode with core and sheath diameter ratio 50 : 125 mm (ITU-T G.651)
- B – multimode with core and sheath diameter ratio 62.5 : 125 mm (IEC 60793-2)

[e] quantity of optical fibers in the module:

- 1 ... 16

Manufacturing of cables in climate version F is possible

Manufacturing of cables with steel strength element is possible

Manufacturing of cables with dielectric armour (of glass fiber rod) is possible

It is possible to manufacture cables with gel-filled core or dry core (with water-blocking yarns and tapes)

It is possible to manufacture cables with a number of core elements up to and including 18

Order placing: sample of indication (corresponds to configuration pattern)

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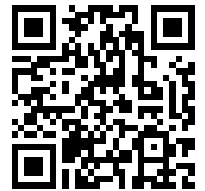
Cables are used for:

- installation in pipes (including air installation method), blocks, collectors at risk of damage by rodents, as well as in soil by mechanical method
- in areas with exclusive fire safety requirements

Fire safety code in accordance with ДСТУ 4809:2007: ПБ130122000

Products of this mark meet the requirements:

- single wire cable flame retardance
- bunched cable flame retardance category B
- class ДТк1 on smoke-forming ability by smouldering of non-metallic elements (coefficient of smoke formation from 50 to 500 m<sup>2</sup>/kg)
- class ДПк2 on smoke-forming ability by combustion (minimum luminous flux more than 60 %)
- corrosive class Kk2 of combustion products of non-metallic elements (the number of halogen hydrides less than 150 mg/g, pH more than 4.3, specific conductivity less than 10 µS/mm)



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**TECHNICAL SPECIFICATIONS**

Number of cable core elements	units	12
Number of optical fibers in cable	units	72 ... 192
Electrical resistance of sheath insulation, not less than	MOhm · km	2000
Permissible tensile force	kN	3.5
Permissible crushing force, no less than	N/10 sm	3000
Operating temperature range	°C	-40 ... +60
Operating temperature range (in climate version F)	°C	-60 ... +60
Cable weight (approximate, depending on construction)	kg/km	410 ... 500
Rated outer diameter of the cable (for reference only, depending on construction) **	mm	20 ... 22
Minimum bending radius during laying	mm	440

Notes:

When ordering it is necessary to agree the factory length of the product with the manufacturer

\*\* The external diameter may differ from the rated up to  $\pm 10\%$

**CONSTRUCTION**

**1. Central dielectric strength element**

Note: Manufacturing of cables with steel strength element is possible

**2. Optic fibers**

**3. Tube of fiber optic module**

**4. PET film winding**

**5. Polymer compound inner sheath**

**6. Lapping layer of water-blocking tape or thread**

**7. Armour of corrugated steel tape, polyethylene-laminated**

Note: Manufacturing of cables with dielectric armour (of glass fiber rod) is possible

**8. Flame-retardant polymer compound outer sheath**

Notes:

- Optical module twisting is not illustrated.
- It is possible to manufacture cables with gel-filled core or dry core (with water-blocking yarns and tapes)
- It is possible to manufacture cables with a number of core elements up to and including 18

