



## INNOVCABLE Instrumentation and Communication 150/250(300)V BU(i) – S13 – SHF2 Resistance – IEC 60331



- 1) Conductor formed by tinned electrolytic copper wires, soft temper, class 5 stranding, in accordance with IEC 60228. \*1
- 2) Application of Mica ceramics and insulation of conductors in special halogen-free compound LSOH – IEC 60331 (Code B)
- 3) Twisted conductors forming Pairs, Triples or Quads.
- 4) Individual shielding in aluminized polyester tape + drain wire (Code (i))
- 5) Pairs or Trios brought together and identified by sequential numbers, non-hygroscopic flame retardant filaments can be used in the construction of the conductor and tapes can be applied to the conductors.
- 6) Final cover in halogen-free polyolefin compound LSOH (SHF2). (U Code)
- 7) Outer cover in gray (Not Intrinsically Safe) or Blue (Intrinsically Safe – IS)

### Identification

Conductors in the colors:

Pair: Black - Light Blue

Trio: Black - Light Blue - Brown

Quad: Black - Light Blue - Brown - Gray

Identification on outer jacket (example): "year" INNOVCABLE 01 BU(c) 250V S13 4 PAIR 0.75 mm2 FLEX - FLAME IEC 60092-376 IEC 60331-1 or IEC 60331-2 IEC 60331-21 IEC 60332-3- 22

### Applicable Specifications

Design: NEK TS 606 and IEC 60092-376

Conductor: IEC 60228 class 2 or 5

Insulation: IEC 60092-360



Coverage: IEC 60092-360

Flame Resistant: IEC 60331-1, -2, -21

Flame Retardant: IEC 60332-1-2 and IEC 60332-3-22

Halogen content: IEC 60754-1.2 0.5%.

Luminosity transmission in smoke: IEC 61034-1.2, 60% > 60

Bending Cold / impact : CSA 22.2 No.0.3-01 (-40°C/-35°C) and IEC 60092-352 Annex E  
NEK-606

#### Applications

Instrumentation, communication, control and alarm cable, for fixed installations in Ex areas (Zone 2) and areas of security, emergency and critical systems where fire resistance is required IEC 60331. Meets the resistance requirement NEK TS 606: 2009 .

Maximum Conductor Temperature  
90°C

#### Notes

1) Tinned copper conductor can be manufactured in class 2.

2) Operating voltage: 150/250(300)V

\*\*Innovcable reserves the right to change this catalog without prior notice.



## Códigos (NOMENCLATURAS)

| Materiais (Nomenclaturas)                                                | Isolamento | Capa Intermediária | Armação / Blindagem | Capa Externa |
|--------------------------------------------------------------------------|------------|--------------------|---------------------|--------------|
| Fire Resistant (IEC 60331) Mica + Isolamento (LSZH) - Livre de Halogênio | B          |                    |                     |              |
| EPR / Especial HEPR                                                      | R          |                    |                     |              |
| XLPE                                                                     | T          |                    |                     |              |
| Composto Termoplástico (Livre de Halogênio)                              | I          |                    |                     |              |
| Composto Elastomérico Livre de Halogênio ou EVA                          | U          |                    |                     |              |
| Capa Intermediária LSZH (Livre de Halogênio)                             |            | F                  |                     |              |
| Anteparo (Enfitamento PE or PP)                                          |            | Y                  |                     |              |
| Não armado                                                               |            |                    | X                   |              |
| Malha de fios cobre nu ou estanhada                                      |            |                    | O                   |              |
| Malha de fios de bronze                                                  |            |                    | B                   |              |
| Malha de fios de aço galvanizado                                         |            |                    | C                   |              |
| Composto (Livre de Halogênio) SHF1                                       |            | I                  |                     | I            |
| Composto (Livre de Halogênio) SHF2                                       |            |                    |                     | U            |
| Composto SHF Resistente a "Mud" - Livre de halogênio                     |            |                    |                     | U            |
| Composto Resistente a "Mud" - Livre de halogênio                         |            |                    |                     | B            |

### Nomenclatura acional

|        |                                                               |
|--------|---------------------------------------------------------------|
| (i)    | Blindagem fita de poliéster aluminizada individual            |
| (c)    | Blindagem fita de poliéster coletiva                          |
| (i& c) | Blindagem fita de poliéster aluminizada individual e coletiva |



### Código cabos tipo NEK 606

| Nomenclatura | Código H-F | Código H-F-M-R |
|--------------|------------|----------------|
| 0.6/1kV RFOU | P1         | P1/P8          |
| 0.6/1kV BFOU | P5         | P5/P12         |
| 0.6/1kV RU   | P18        | -              |
| 0.6/1kV BU   | P17        | -              |
| 0.6/1kV UX   | P15        | P2/P9          |
| 250V RFOU(i) | S1         | S1/S5          |
| 250V RFOU(c) | S2         | S2/S6          |
| 250V BFOU(i) | S3         | S3/S7          |
| 250V BFOU(c) | S4         | S4/S8          |

#### Nota:

H-F - Cabos Livres de Halogênio

H-F-M-R - Cabos Livre de Halogênio e "Mud" Resistente

### Exemplo:



- 1 Voltagem
- 2 Camada "Fire Resisting" + isolamento (EPR)
- 3 Capa intermediária LSZH
- 4 Armação (Cobre)
- 5 Capa Externa (SHF2 ou SHF "mud")



## Range and dimensions

| Number of elements | No of cores in element | Cross section core, mm² | Conductor Diameter, mm | Insulation Thickness, mm | Thickness Outer Sheath, mm | Weight of Cable Approx. (Kg/Km) | Copper content Approx. (kg/km) |
|--------------------|------------------------|-------------------------|------------------------|--------------------------|----------------------------|---------------------------------|--------------------------------|
| 1                  | 2                      | 0.75                    | 1.1                    | 0.6                      | 1                          | 95                              | 17                             |
| 1                  | 2                      | 0.75                    | 1.1                    | 0.6                      | 1                          | 95                              | 17                             |
| 2                  | 2                      | 0.75                    | 1.1                    | 0.6                      | 1.2                        | 165                             | 34                             |
| 2                  | 2                      | 0.75                    | 1.1                    | 0.6                      | 1.2                        | 165                             | 34                             |
| 4                  | 2                      | 0.75                    | 1.1                    | 0.6                      | 1.2                        | 260                             | 67                             |
| 8                  | 2                      | 0.75                    | 1.1                    | 0.6                      | 1.4                        | 490                             | 133                            |
| 12                 | 2                      | 0.75                    | 1.1                    | 0.6                      | 1.6                        | 700                             | 199                            |
| 12                 | 2                      | 0.75                    | 1.1                    | 0.6                      | 1.6                        | 700                             | 199                            |
| 16                 | 2                      | 0.75                    | 1.1                    | 0.6                      | 1.7                        | 900                             | 265                            |
| 24                 | 2                      | 0.75                    | 1.1                    | 0.6                      | 1.9                        | 1300                            | 397                            |
| 1                  | 3                      | 0.75                    | 1.1                    | 0.6                      | 1                          | 105                             | 23                             |
| 2                  | 3                      | 0.75                    | 1.1                    | 0.6                      | 1.2                        | 200                             | 46                             |
| 4                  | 3                      | 0.75                    | 1.1                    | 0.6                      | 1.3                        | 340                             | 92                             |
| 8                  | 3                      | 0.75                    | 1.1                    | 0.6                      | 1.5                        | 640                             | 184                            |
| 12                 | 3                      | 0.75                    | 1.1                    | 0.6                      | 1.7                        | 900                             | 276                            |
| 16                 | 3                      | 0.75                    | 1.1                    | 0.6                      | 1.8                        | 1170                            | 368                            |
| 24                 | 3                      | 0.75                    | 1.1                    | 0.6                      | 2                          | 1690                            | 552                            |
| 1                  | 2                      | 1.5                     | 1.6                    | 0.7                      | 1                          | 130                             | 34                             |
| 1                  | 2                      | 1.5                     | 1.6                    | 0.7                      | 1                          | 130                             | 34                             |
| 2                  | 2                      | 1.5                     | 1.6                    | 0.7                      | 1.3                        | 250                             | 68                             |
| 2                  | 2                      | 1.5                     | 1.6                    | 0.7                      | 1.3                        | 250                             | 68                             |
| 4                  | 2                      | 1.5                     | 1.6                    | 0.7                      | 1.4                        | 420                             | 136                            |
| 4                  | 2                      | 1.5                     | 1.6                    | 0.7                      | 1.4                        | 420                             | 136                            |
| 8                  | 2                      | 1.5                     | 1.6                    | 0.7                      | 1.6                        | 770                             | 271                            |
| 8                  | 2                      | 1.5                     | 1.6                    | 0.7                      | 1.6                        | 770                             | 271                            |
| 12                 | 2                      | 1.5                     | 1.6                    | 0.7                      | 1.7                        | 1100                            | 406                            |
| 12                 | 2                      | 1.5                     | 1.6                    | 0.7                      | 1.7                        | 1100                            | 406                            |
| 16                 | 2                      | 1.5                     | 1.6                    | 0.7                      | 1.9                        | 1440                            | 541                            |
| 24                 | 2                      | 1.5                     | 1.6                    | 0.7                      | 2.2                        | 2120                            | 812                            |
| 24                 | 2                      | 1.5                     | 1.6                    | 0.7                      | 2.2                        | 2120                            | 812                            |
| 1                  | 3                      | 1.5                     | 1.6                    | 0.7                      | 1.1                        | 165                             | 48                             |
| 1                  | 3                      | 1.5                     | 1.6                    | 0.7                      | 1.1                        | 165                             | 48                             |
| 2                  | 3                      | 1.5                     | 1.6                    | 0.7                      | 1.3                        | 310                             | 96                             |
| 4                  | 3                      | 1.5                     | 1.6                    | 0.7                      | 1.4                        | 530                             | 192                            |
| 8                  | 3                      | 1.5                     | 1.6                    | 0.7                      | 1.7                        | 1020                            | 384                            |
| 12                 | 3                      | 1.5                     | 1.6                    | 0.7                      | 1.9                        | 1470                            | 575                            |
| 16                 | 3                      | 1.5                     | 1.6                    | 0.7                      | 2                          | 1910                            | 767                            |
| 24                 | 3                      | 1.5                     | 1.6                    | 0.7                      | 2.4                        | 2860                            | 1150                           |
| 1                  | 2                      | 2.5                     | 2                      | 0.7                      | 1.1                        | 170                             | 55                             |