Tecnikabel

WHERE FUTURE FLOWS

CABLES FOR

NAV80 DEFENSE MARINE CABLES

DEFENSE SECTOR

Introduction

Tecnikabel is a leading European manufacturer of high-performance special cables designed for a wide range of industrial and technical applications. The ongoing globalisation of supply chains has accelerated the evolution of the maritime sector, including the emergence of new non-European players. We are observing a steady increase in electrification on board, with growing demand for power, control and instrumentation systems.

Modern defence systems — naval, airborne and ground-based — demand cable solutions engineered to perform without compromise. Data transmission, radar, tactical countermeasures, surveillance and combat systems all rely on continuous, interference-free signal integrity in the most hostile operating conditions. Tecnikabel designs and manufactures copper and fibre-optic cables for the full range of defence applications, fully compliant with NATO, NAV and MIL standards. Each solution is developed in close collaboration with our partners' engineering teams, qualified through rigorous in-house testing for mechanical stress, extreme temperatures, vibration and electromagnetic interference. Our aeronautical laboratory is equipped to simulate real operational environments, as confirmed by our qualifications for the Eurofighter and Panavia consortia and our ongoing partnership with Leonardo. Precision, durability and mission-critical reliability — engineered into every cable we produce.

OUR SECTORS

- TRANSPORTATION
- AUTOMATION
- TELECOMMUNICATION
- DEFENSE
- MARINE OIL & GAS
- SUBSEA
- BUILDING TECHNOLOGY
- CUSTOM MADE

In today's technological landscape, many applications demand performance and engineering characteristics that exceed standard cable solutions. When off-the-shelf products cannot meet extreme or unconventional requirements, our custom design capability becomes essential. Tecnikabel acts as a technical partner, developing and manufacturing highly specialised cables engineered for critical functions and challenging operating environments.

Tecnikabel is focused on constant product innovation to get competitive advantages with endless commitment to research and development.

PRODUCTION
Updated production systems, rigorous process controls and skilled operators ensure an efficient, flexible and reliable manufacturing flow. Over nearly half a century of activity, we have engineered and produced more than 26,000 different cable configurations.

FINAL INSPECTIONS
At the end of every production cycle, each cable undergoes full electrical, optical and physical verification to ensure complete compliance with the customer's technical specifications.

LABORATORY TESTS
Our cables are subjected to demanding laboratory tests that replicate critical application conditions. Beyond the standard evaluations required by current regulations, we have developed dedicated equipment for mechanical, environmental, electrical and optical testing to validate performance in extreme scenarios.

MATERIALS RESEARCH AND DEVELOPMENT
With nearly fifty years of experience, we continue to research and develop advanced materials aimed at improving performance, optimising costs and meeting the evolving technical requirements of our customers.

QUALITY SYSTEM
Since 1978, our commitment to Quality has earned Tecnikabel recognition from major American and European authorities, ensuring compliance with the most rigorous international manufacturing and quality standards.

Guaranteed excellence

Tecnikabel's constant commitment to quality has earned recognition from leading American and European authorities, ensuring full compliance with the most demanding international manufacturing and quality standards.

COMPANY MANAGEMENT SYSTEM CERTIFICATION

PRODUCT CERTIFICATION

All cables in this sector are certified:

Reliability you can trust

Safety-driven cable innovation

ADDRESSING NEW HOMOLOGATION REQUIREMENTS: EXTENDED FIRE DURATION

Engineers are continuously designing powerful systems with extensive cabling infrastructures, where high-speed transmission protocols must handle massive volumes of data—including signals and images. These critical communication systems demand maximum stability and peak performance, utilizing both optical fiber and copper cables. Tecnikabel proactively meets the latest offshore and shipbuilding requirements set by homologation bodies. We ensure full-circuit integrity during fire scenarios, complying with IEC 60331 standards for an extended duration of up to 180 minutes. We transform these stringent technical challenges into reliable, future-ready solutions.

GAS-TIGHT RESISTANCE FOR SAFER OPERATIONS IN EXPLOSIVE ENVIRONMENTS

The demand for high-quality data connections between explosive areas and safe zones is growing. Gas-permeable cavities in cables can allow explosive mixtures to migrate to densely populated areas, making strict adherence to technical specifications essential. This need is increasingly important with the expanded use of LNG (Liquefied Natural Gas) for vessel propulsion, storage, and transportation. Tecnikabel, as a co-designer and problem solver, has developed a complete range of copper data cables specifically for such environments. These solutions comply with IEC 60079-14, meeting not only the mechanical, chemical, and thermal requirements for explosive areas but also the critical standards for gas migration. Our cables can therefore be installed in offshore applications without restrictions, providing the optimal solution for safety and reliability.

ENHANCED CABLE PERFORMANCE FOR ARCTIC ENVIRONMENTS

Our cable range is engineered for superior performance in extremely cold conditions. They are suitable for installation at temperatures down to –30 °C, with permanent operating capability as low as –62 °C. The performance of our TKSEA cables in Arctic conditions is validated through cold bend and cold impact tests, in accordance with the North American (Canadian) standard CSA 22/2. Through continuous innovation and proven reliability, Tecnikabel contributes significantly to enhancing safety and operational longevity on board ships and offshore structures worldwide.

Passion flows through our cables.

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- FLAME RETARDANT BUNCHED WIRES (IEC 60332-3)
- FIRE RESISTANCE (IEC 60331 – EN50200 - BS6387 CWZ)
- REDUCED EMISSION OF FUMES AND HALOGEN ACID GASES (IEC 60754-1)
- SMOKE DENSITY (IEC 61034-1/2)
- LOW ACIDITY AND CORROSIVITY OF EVOLVED GASES (IEC 60754-2)
- WEATHERING TEST RESISTANCE (OUTDOOR)
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- WATER RESISTANCE
- RODENT RESISTANCE
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CHEMICAL PROPERTIES

- MUD RESISTANCE
- MINERAL OIL RESISTANCE
- HYDROCARBONS RESISTANCE
- ARCTIC TEMPERATURES

MECHANICAL PROPERTIES

- MECHANICAL RESISTANCE
- REDUCED BENDING RADIUS

FIRE PERFORMANCE

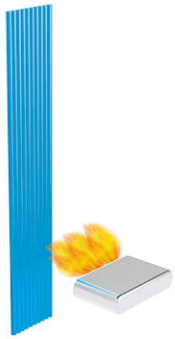
These images are for illustrative purposes.

International testing norms for fire-resistant cable performance

IEC 60332-1-2 / EN 50265 / BS 4066

FIRE PROPAGATION ON A VERTICAL SINGLE CABLE

The single cable is mounted vertically and flamed with a Bunsen burner. The flame must extinguish itself, at least 50 mm below the upper fixing clamp. Power of burner, duration and angle of flame application, are described in the reference standards.



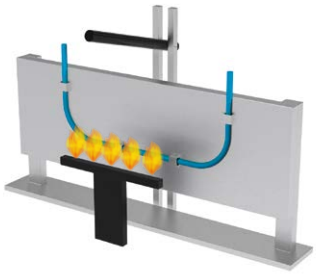
IEC 60332-3 / EN 50266

FIRE PROPAGATION ON A VERTICAL CABLES BUNDLE

A certain number of cable samples are fixed on a 3.5 m long ladder, and flamed with an appropriate burner. The sample number, the duration of flame application, and the power/temperature of burner are described in the reference standards. After flame application, the visible area of fire damage must not exceed 2.5 m in height from the bottom of the burner.

The volume of tested material define a differentiation in categories:

A F/R Part 3-21	7 l/m
A Part 3-22	7 l/m
B Part 3-23	3.5 l/m
C Part 3-24	1.5 l/m
D Part 3-25	0.5 l/m



IEC 60331 / EN 50200

FIRE RESISTANCE TEST

A sample of cable is horizontally applied supported by metal rings, or in U shape fixed on a fireproof wall. Through using a gas burner the cable is maintained in flame contact for a certain time.

The test and the temperature of burner are described in the reference standards. In U shape test, the fireproof wall is hit every five minutes by a mechanical shock, to simulate a potential collapse during the fire.

The time of fire application, and the temperature of flame are described in the reference standards (typically 750 °C or 830 °C). The optical transmission of the fibers is checked and the change in attenuation is recorded during the test. and 15 minutes after flame extinction.

BS 6387 Category CWZ

FIRE RESISTANCE PROTOCOLS

The full test consists of subjecting the cable to 3 different protocols:

C: a flame with a temperature attack of 950 °C is applied to the cable

W: a flame with a temperature attack of 650 °C is applied to the cable together with water simulating a sprinkler system

Z: a flame with a temperature attack of 950 °C is applied to the cable together with mechanical shock.

IEC 61034-1/2 - EN 50268-1/2

MEASUREMENT OF SMOKE DENSITY OF CABLES BURNING UNDER DEFINED CONDITIONS

The amount of smoke of a cable burnt in a cubic (3x3x3 m) chamber using a flammable liquid. The light transmittance of the resulting smoke is measured using an optical light meter. The test duration is 40 minutes. Depending on the quantity and composition of the liquid fuel. During the test the light transmittance of the smoke must be 60% minimum.

BS 8434-2 2003 + A2 2009

FIRE RESISTANCE TEST

Test for unprotected small cables for use in emergency circuits. The fire resistance test is carried out according to BS 6387 and BS 8434-2. The test is based on the requirements of BS EN 50200 and includes mechanical shock and water spray. The cable is mounted on a vertical ladder and exposed to a flame of 830 °C. The test duration is 120 minutes.

The cable must continue to operate normally during the test.

The test is considered successful if the cable can supply power to emergency equipment safely for a 120 min duration.

IEC 60754-2 - EN 50267-2-1

TEST ON GASES EVOLVED DURING COMBUSTION OF MATERIALS FROM CABLES – MEASUREMENT OF AMOUNT OF HALOGEN ACID GAS

The cable is burned in a tube with a constant stream of air. The combustion gases are collected in water. The amount of halogen acid gas is measured. The concentration of halogen acid gas must be less than 5 mg/g.

IEC 60754-2 - EN 50267-2-2

TEST ON GASES EVOLVED DURING COMBUSTION OF MATERIALS FROM CABLES – DETERMINATION OF ACIDITY (BY PH MEASUREMENT) AND CONDUCTIVITY

A small quantity of cable is burned. In a furnace, the pH and conductivity combustion gases dissolved in water are measured.

The minimum pH value of the washing water must 4.3, and the maximum conductivity must be 10 µS/mm.

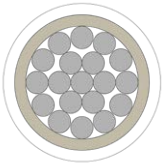
These images are for illustrative purposes.

STD. REF. NAV-80-6145-0003-14-01B000

Technical specification for miniaturized and flexible electrical and electronic interconnection cables that are suitable for naval shipboard applications

TK - TYPE UG-N - SPECIFICATION SHEET N. 01

Miniaturized and flexible single core unshielded electrical cable with low toxicity, for internal wiring of devices. Cable for general use - 300/500 V



characteristics

CONSTRUCTION

Conductor	concentric tinned copper conductor according ASTM B33
Insulation	double layer with special compounds. Coded colours as per color guide tab A

TECHNICAL DATA

Temperature range	-45°C ÷ 105°C
Minimum bending radius	5 x outer diameter (installation)

REFERENCE STANDARDS

High resistance to oils and fuels	CEI EN 50305 § 8.1 CEI EN 60811-404, IRM 902 - IRM 903
Flame retardancy	CEI EN 60332-1-2
Smoke emission	CEI EN 61034-1 – CEI EN 61034-2
Emission of acid and corrosive gases	CEI EN 60754-2
Evolution of HCl	CEI EN 60754-2
Fluorine content	CEI EN 60754-3
Toxicity index	CEI EN 50305 § 9.2

SPECIFICATION SHEET NO. 01

Item n°	Designation	Cross-section mm²	Diameter cable mm	Max cable Weight kg/km
225TK0301*	UG-N-0.35-*	1 x 0.35	1.15 ÷ 1.35	5.5
230TK0301*	UG-N-0.50-*	1 x 0.5	1.25 ÷ 1.45	6.5
240TK0301*	UG-N-1.0-*	1 x 1	1.45 ÷ 1.80	11
245TK0301*	UG-N-1.5-*	1 x 1.5	1.95 ÷ 2.30	19
255TK0301*	UG-N-2.5-*	1 x 2.5	2.50 ÷ 2.85	30

AWG cross section are available on request, in compliance with NAV-80-6145-0003-14-00B000, as following examples:				
Item n°	Designation	Cross-section AWG	Nominal Diameter cable mm	Nominal cable Weight kg/km
212TK0601*	UG-N-26-*	1 x 26 (0.15)	0.80 ÷ 0.95	2.9
218TK0601*	UG-N-24-*	1 x 24 (0.21)	0.90 ÷ 1.05	3.5
224TK0601*	UG-N-22-*	1 x 22 (0.33)	1.05 ÷ 1.20	4.9
231TK0601*	UG-N-20-*	1 x 20 (0.59)	1.30 ÷ 1.50	7.6
238TK0601*	UG-N-18-*	1 x 18 (0.93)	1.55 ÷ 1.75	10.5
243TK0601*	UG-N-16-*	1 x 16 (1.34)	1.80 ÷ 2.00	16.5
250TK0601*	UG-N-14-*	1 x 14 (1.82)	2.15 ÷ 2.35	20.8
263TK0601*	UG-N-12-*	1 x 12 (2.61)	2.50 ÷ 2.70	27.3

Last digit (*) corresponding to tab A.

TAB A: Insert the following number in the last digit of the item number, in place of *, for different vcolours	
0: black	5: green
1: brown	6: blue
2: red	7: violet
3: orange	8: grey
4: yellow	9: white

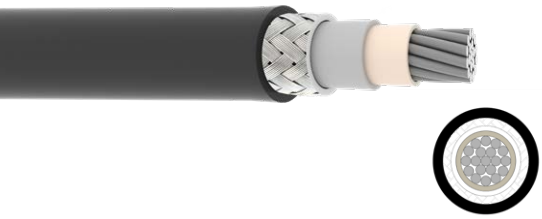
EXAMPLES OF DESIGNATIONS:

The code UG-N-0.35-9 identifies a cable that has these properties:

- Single core cable
- Unshielded
- Cross-section of the conductor 0.35 mm²
- White color (refer to color guide).
- The code UG-N-1.5-45 identifies a cable that has these properties:
- Single core cable
- Unshielded
- Cross-section of the conductor 1.50 mm²
- Yellow color with green stripe/ring

TK - TYPE UG-S - SPECIFICATION SHEET N. 02

Miniaturized and flexible shielded single core electrical cable, shielded with low toxicity, for internal wiring of devices. Cable for general use - 300/500 V



TAB A: Insert the following number in the last digit of the item number, in place of *, for different vcolours	
0: black	5: green
1: brown	6: blue
2: red	7: violet
3: orange	8: grey
4: yellow	9: white

Example of designations: the code UG-S-0.35-9 identifies a single core cable, with section of 0.35 mm², with white primary insulation (refer to color guide).

characteristics

CONSTRUCTION

Conductor	concentric tinned copper conductor according ASTM B33
Insulation	double layer with special compound. Coded colours as per color guide tab A
Shield	tinned copper wire braid
Sheath	crosslinked compound, type S2 according to Standard EN 50306-1. Colour black according to NAV80 std or coloured on request

TECHNICAL DATA

Temperature range	-40°C ÷ 90°C
Minimum bending radius	5 x outer diameter (installation)

REFERENCE STANDARDS

High resistance to oils and fuels	CEI EN 50305 § 8.1 CEI EN 60811-404, IRM 902 - IRM 903
Flame retardancy	CEI EN 60332-1-2
Smoke emission	CEI EN 61034-1 – CEI EN 61034-2
Emission of acid and corrosive gases	CEI EN 60754-2
Evolution of HCl	CEI EN 60754-2
Fluorine content	CEI EN 60754-3
Toxicity index	CEI EN 50305 § 9.2

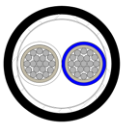
SPECIFICATION SHEET NO. 02				
Item n°	Designation	Cross-section mm²	Diameter cable mm	Max cable Weight kg/km
225TK0302*	UG-S-0.35-*	1 x 0.35	2.10 ÷ 2.40	14
230TK0302*	UG-S-0.50-*	1 x 0.5	2.20 ÷ 2.50	16
240TK0302*	UG-S-1.0-*	1 x 1	2.50 ÷ 2.85	22
245TK0302*	UG-S-1.5-*	1 x 1.5	3.00 ÷ 3.40	33
255TK0302*	UG-S-2.5-*	1 x 2.5	3.45 ÷ 3.90	45

AWG cross section are available on request, in compliance with NAV-80-6145-0003-14-00B000, as following examples:				
Item n°	Designation	Cross-section AWG	Nominal Diameter cable mm	Nominal cable Weight kg/km
212TK0602*	UG-S-26-*	1 x 26 (0.15)	1.60 ÷ 1.80	7.6
218TK0602*	UG-S-24-*	1 x 24 (0.21)	1.70 ÷ 1.95	8.6
224TK0602*	UG-S-22-*	1 x 22 (0.33)	1.85 ÷ 2.10	10.7
231TK0602*	UG-S-20-*	1 x 20 (0.59)	2.10 ÷ 2.35	14.5
238TK0602*	UG-S-18-*	1 x 18 (0.93)	2.35 ÷ 2.65	18.4
243TK0602*	UG-S-16-*	1 x 16 (1.34)	2.60 ÷ 2.90	25.8
250TK0602*	UG-S-14-*	1 x 14 (1.82)	2.95 ÷ 3.25	31.5
263TK0602*	UG-S-12-*	1 x 12 (2.61)	3.30 ÷ 3.65	39.6

Last digit (*) corresponding to tab A.

TK - TYPE CG-S - SPECIFICATION SHEET N. 03

Miniaturized and flexible shielded two-core electrical cable, with low toxicity, for internal wiring of devices. Cable for general use - 300/500 V



TAB A: Insert the following number in the last digit of the item number, in place of *, for different vcolours	
0: black	5: green
1: brown	6: blue
2: red	7: violet
3: orange	8: grey
4: yellow	9: white

Example of designations: the code UG-S-0.35-9 identifies a single core cable, with section of 0.35 mm², with white primary insulation (refer to color guide).

characteristics

CONSTRUCTION

Conductor	concentric tinned copper conductor according ASTM B33
Insulation	double layer with special compound. Coded colours as per color guide tab A
Shield	tinned copper wire braid
Sheath	crosslinked compound type S2 according to Standard EN 50306-1. Colour black according to NAV80 std or coloured on request

TECHNICAL DATA

Temperature range	-40°C ÷ 90°C
Minimum bending radius	5 x outer diameter (installation)

REFERENCE STANDARDS

High resistance to oils and fuels	CEI EN 50305 § 8.1 CEI EN 60811-404, IRM 902 - IRM 903
Flame retardancy	CEI EN 60332-1-2
Fire Propagation	CEI EN 60332-3-22 Cat. A
Emission of acid and corrosive gases	CEI EN 60754-2
Evolution of HCl	CEI EN 60754-2
Fluorine content	CEI EN 60754-3
Toxicity index	CEI EN 50305 § 9.2

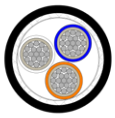
SPECIFICATION SHEET NO. 03				
Item n°	Designation	Cross-section mm²	Diameter cable mm	Max cable Weight kg/km
525TK0303**	CG-S-0.35-Y/Y	2x0.35	3.40 ÷ 4.0	28
530TK0303**	CG-S-0.50-Y/Y	2x0.5	3.50 ÷ 4.15	31
540TK0303**	CG-S-1.0-Y/Y	2x1	4.10 ÷ 4.90	44
545TK0303**	CG-S-1.5-Y/Y	2x1.5	5.10 ÷ 5.90	65
555TK0303**	CG-S-2.5-Y/Y	2x2.5	6.10 ÷ 7.00	95

AWG cross section are available on request, in compliance with NAV-80-6145-0003-14-00B000, as following examples:				
Item n°	Designation	Cross-section AWG	Nominal Diameter cable mm	Nominal cable Weight kg/km
512TK0603**	CG-S-26-Y/Y	2x26 (0.15)	2.65 ÷ 2.95	15.8
518TK0603**	CG-S-24-Y/Y	2x24 (0.21)	2.85 ÷ 3.15	17.9
524TK0603**	CG-S-22-Y/Y	2x22 (0.33)	3.20 ÷ 3.45	21.4
531TK0603**	CG-S-20-Y/Y	2x20 (0.59)	3.75 ÷ 4.05	30.5
538TK0603**	CG-S-18-Y/Y	2x18 (0.93)	4.20 ÷ 4.60	38.9
543TK0603**	CG-S-16-Y/Y	2x16 (1.34)	4.70 ÷ 5.10	54.2
550TK0603**	CG-S-14-Y/Y	2x14 (1.82)	5.40 ÷ 5.85	66.4
563TK0603**	CG-S-12-Y/Y	2x12 (2.61)	6.10 ÷ 6.55	83.3

Last two digits (**) corresponding to tab A.

TK - TYPE TG-S - SPECIFICATION SHEET N. 04

Miniaturized and flexible shielded three-core electrical cable, with low toxicity, for internal wiring of devices. Cable for general use - 300/500 V



TAB A: Insert the following number in the last digit of the item number, in place of *, for different vcolours	
0: black	5: green
1: brown	6: blue
2: red	7: violet
3: orange	8: grey
4: yellow	9: white

Example of designations: the code TG-S-0.50-9/2/0 identifies a three-core cable, with shield, with components of 0.50 mm², white, red and black (refer to color guide).

characteristics

CONSTRUCTION

Conductor	concentric tinned copper conductor according ASTM B33
Insulation	double layer with special compound, white, blue and orange (preferential). Coded colours as per color guide tab A
Shield	tinned copper wire braid
Sheath	crosslinked compound type S2 according to Standard EN 50306-1. Colour black according to NAV80 std or coloured on request

TECHNICAL DATA

Temperature range	-40°C ÷ 90°C
Minimum bending radius	5 x outer diameter (installation)

REFERENCE STANDARDS

High resistance to oils and fuels	CEI EN 50305 § 8.1 CEI EN 60811-404, IRM 902 - IRM 903
Flame retardancy	CEI EN 60332-1-2
Fire Propagation	CEI EN 60332-3-22 Cat. A
Smoke emission	CEI EN 61034-1 – CEI EN 61034-2
Emission of acid and corrosive gases	CEI EN 60754-2
Evolution of HCl	CEI EN 60754-2
Fluorine content	CEI EN 60754-3
Toxicity index	CEI EN 50305 § 9.2

SPECIFICATION SHEET NO. 04				
Item n°	Designation	Cross-section mm²	Nominal Diameter cable mm	Nominal cable Weight kg/km
525TK0304***	TG-S-0.35-Y/Y/Y	3x0.35	3.50 ÷ 4.10	34
530TK0304***	TG-S-0.50-Y/Y/Y	3x0.5	3.70 ÷ 4.25	35
540TK0304***	TG-S-1.0-Y/Y/Y	3x1	4.30 ÷ 5.00	50
545TK0304***	TG-S-1.5-Y/Y/Y	3x1.5	5.20 ÷ 5.90	80
555TK0304***	TG-S-2.5-Y/Y/Y	3x2.5	6.50 ÷ 7.30	120

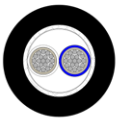
AWG cross section are available on request, in compliance with NAV-80-6145-0003-14-00B000, as following examples:

Item n°	Designation	Cross-section AWG	Nominal Diameter cable mm	Nominal cable Weight kg/km
512TK0604***	TG-S-26-Y/Y/Y	3x26 (0.15)	2.80 ÷ 3.10	18.7
518TK0604***	TG-S-24-Y/Y/Y	3x24 (0.21)	3.00 ÷ 3.30	21.3
524TK0604***	TG-S-22-Y/Y/Y	3x22 (0.33)	3.35 ÷ 3.65	27.1
531TK0604***	TG-S-20-Y/Y/Y	3x20 (0.59)	3.90 ÷ 4.30	37.8
538TK0604***	TG-S-18-Y/Y/Y	3x18 (0.93)	4.40 ÷ 4.85	48.9
543TK0604***	TG-S-16-Y/Y/Y	3x16 (1.34)	5.00 ÷ 5.40	70.0
550TK0604***	TG-S-14-Y/Y/Y	3x14 (1.82)	5.70 ÷ 6.20	86.1
563TK0604***	TG-S-12-Y/Y/Y	3x12 (2.61)	6.40 ÷ 7.00	105.1

Last three digits (***) corresponding to tab A.

TK - TYPE FN 02 - SPECIFICATION SHEET N. 05

Miniaturized and flexible two-core power supply electrical cable, with low toxicity. Cable for general use - 300/500 V



characteristics

CONSTRUCTION

Conductor	cconcentric tinned copper conductor according ASTM B33
Insulation	double layer with special compound, white and blue
Inner sheath	halogen free compound (for type FN 02-A)
Shield	tinned copper wire braid (for type FN 02-O)
Armour	aluminium wire braid (for type FN 02-A)
Sheath	crosslinked compound, type EM104 according to Standard EN 50306-1. Colour black according to NAV80 std or coloured on request

TECHNICAL DATA

Temperature range	-40°C ÷ 90°C
Minimum bending radius	5 x outer diameter (installation)

REFERENCE STANDARDS

High resistance to oils and fuels	CEI EN 50305 § 8.1 CEI EN 60811-404, IRM 902 - IRM 903
Flame retardancy	CEI EN 60332-1-2
Fire Propagation	CEI EN 60332-3-22 Cat. A
Smoke emission	CEI EN 61034-1 – CEI EN 61034-2
Emission of acid and corrosive gases	CEI EN 60754-2
Evolution of HCl	CEI EN 60754-2
Fluorine content	CEI EN 60754-3
Toxicity index	CEI EN 50305 § 9.2

TYPE FN 02-N				
Item n°	Designation	Cross-section mm²	Nominal Diameter cable mm	Nominal cable Weight kg/km
340TK030502	FN 02-N-1.0	2x1.0	5.1 ÷ 5.7	50
345TK030502	FN 02-N-1.5	2x1.5	6.1 ÷ 6.7	75
355TK030502	FN 02-N-2.5	2x2.5	7.2 ÷ 8.0	105
TYPE FN 02-O				
Item n°	Designation	Cross-section mm²	Nominal Diameter cable mm	Nominal cable Weight kg/km
540TK030502	FN 02-O-1.0	2x1.0	5.7 ÷ 6.3	70
545TK030502	FN 02-O-1.5	2x1.5	6.7 ÷ 7.4	100
555TK030502	FN 02-O-2.5	2x2.5	7.8 ÷ 8.6	135
TYPE FN 02-A				
Item n°	Designation	Cross-section mm²	Nominal Diameter cable mm	Nominal cable Weight kg/km
840TK030502	FN 02-A-1.0	2x1.0	7.8 ÷ 8.7	115
845TK030502	FN 02-A-1.5	2x1.5	8.8 ÷ 9.8	150
855TK030502	FN 02-A-2.5	2x2.5	10.0 ÷ 11.0	185

Add letter S to the item number for “enhanced shielding effectiveness” (EMC requirements).

TK - TYPE FN 02 - SPECIFICATION SHEET N. 05

Miniaturized and flexible two-core power supply electrical cable, with low toxicity. Cable for general use - 300/500 V

AWG cross section are available on request, in compliance with NAV-80-6145-0003-14-00B000, as following examples:

TYPE FN 02-N				
Item n°	Designation	Cross-section AWG	Nominal Diameter cable mm	Nominal cable Weight kg/km
343TK060502	FN 02-N-16	2x16 (1.34)	5.2 ÷ 6.1	71
350TK060502	FN 02-N-14	2x14 (1.82)	6.0 ÷ 6.9	88
363TK060502	FN 02-N-12	2x12 (2.61)	6.7 ÷ 7.6	111

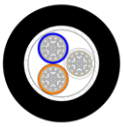
TYPE FN 02-O				
Item n°	Designation	Cross-section AWG	Nominal Diameter cable mm	Nominal cable Weight kg/km
543TK060502	FN 02-O-16	2x16 (1.34)	5.9 ÷ 6.7	94
550TK060502	FN 02-O-14	2x14 (1.82)	6.5 ÷ 7.5	114
563TK060502	FN 02-O-12	2x12 (2.61)	7.4 ÷ 8.3	139

TYPE FN 02-A				
Item n°	Designation	Cross-section AWG	Nominal Diameter cable mm	Nominal cable Weight kg/km
843TK060502	FN 02-A-16	2x16 (1.34)	7.8 ÷ 8.9	128
850TK060502	FN 02-A-14	2x14 (1.82)	8.4 ÷ 9.6	151
863TK060502	FN 02-A-12	2x12 (2.61)	9.3 ÷ 10.4	180

Add letter S to the item number for “enhanced shielding effectiveness” (EMC requirements).

TK - TYPE FN 03 - SPECIFICATION SHEET N. 06

Miniaturized and flexible three-core power supply electrical cable, with low toxicity. Cable for general use - 300/500 V



characteristics

CONSTRUCTION

Conductor	concentric tinned copper conductor according ASTM B33
Insulation	double layer with special compound, white, blue and orange
Inner sheath	halogen free compound (for type FN 03-A)
Shield	tinned copper wire braid (for type FN 03-O)
Armour	aluminium wire braid (for type FN 03-A)
Sheath	crosslinked compound, type EM104 according to Standard EN 50306-1. Colour black according to NAV80 std or coloured on request

TECHNICAL DATA

Temperature range	-40°C ÷ 90°C
Minimum bending radius	5 x outer diameter (installation)

REFERENCE STANDARDS

High resistance to oils and fuels	CEI EN 50305 § 8.1 CEI EN 60811-404, IRM 902 - IRM 903
Flame retardancy	CEI EN 60332-1-2
Fire Propagation	CEI EN 60332-3-22 Cat. A
Smoke emission	CEI EN 61034-1 – CEI EN 61034-2
Emission of acid and corrosive gases	CEI EN 60754-2
Evolution of HCl	CEI EN 60754-2
Fluorine content	CEI EN 60754-3
Toxicity index	CEI EN 50305 § 9.2

TYPE FN 03-N				
Item n°	Designation	Cross-section mm²	Nominal Diameter cable mm	Nominal cable Weight kg/km
340TK030603	FN 03-N-1.0	3x1.0	5.4 ÷ 6.0	65
345TK030603	FN 03-N-1.5	3x1.5	6.4 ÷ 7.1	95
355TK030603	FN 03-N-2.5	3x2.5	7.6 ÷ 8.5	135

TYPE FN 03-O				
Item n°	Designation	Cross-section mm²	Nominal Diameter cable mm	Nominal cable Weight kg/km
540TK030603	FN 03-O-1.0	3x1.0	5.9 ÷ 6.6	80
545TK030603	FN 03-O-1.5	3x1.5	7.0 ÷ 7.8	115
555TK030603	FN 03-O-2.5	3x2.5	8.2 ÷ 9.0	165

TYPE FN 03-A				
Item n°	Designation	Cross-section mm²	Nominal Diameter cable mm	Nominal cable Weight kg/km
840TK030603	FN 03-A-1.0	3x1.0	8.0 ÷ 8.9	130
845TK030603	FN 03-A-1.5	3x1.5	9.2 ÷ 10.2	175
855TK030603	FN 03-A-2.5	3x2.5	10.4 ÷ 11.5	225

AWG cross section are available on request, in compliance with NAV-80-6145-0003-14-00B000, as following examples:

TYPE FN 03-N				
Item n°	Designation	Cross-section AWG	Nominal Diameter cable mm	Nominal cable Weight kg/km
343TK060603	FN 03-N-16	3x16 (1.34)	5.5 ÷ 6.4	86
350TK060603	FN 03-N-14	3x14 (1.82)	6.3 ÷ 7.2	106
363TK060603	FN 03-N-12	3x12 (2.61)	7.1 ÷ 8.0	134

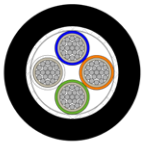
TYPE FN 03-O				
Item n°	Designation	Cross-section AWG	Nominal Diameter cable mm	Nominal cable Weight kg/km
543TK060603	FN 03-O-16	3x16 (1.34)	6.1 ÷ 7.0	110
550TK060603	FN 03-O-14	3x14 (1.82)	7.0 ÷ 7.9	133
563TK060603	FN 03-O-12	3x12 (2.61)	7.8 ÷ 8.7	164

TYPE FN 03-A				
Item n°	Designation	Cross-section AWG	Nominal Diameter cable mm	Nominal cable Weight kg/km
843TK060603	FN 03-A-16	3x16 (1.34)	8.1 ÷ 9.2	145
850TK060603	FN 03-A-14	3x14 (1.82)	8.9 ÷ 10.1	172
863TK060603	FN 03-A-12	3x12 (2.61)	9.6 ÷ 11.0	207

Add letter S to the item number for “enhanced shielding effectiveness” (EMC requirements).

TK - TYPE FN 04 - SPECIFICATION SHEET N. 07

Miniaturized and flexible four-core power supply electrical cable, with low toxicity. Cable for general use - 300/500 V



characteristics

CONSTRUCTION

Conductor	Concentric tinned copper conductor according ASTM B33
Insulation	Double layer with special compound, white, blue, orange and green
Inner sheath	Halogen free compound (for type FN 04-A)
Shield	Tinned copper wire braid (for type FN 04-O)
Armour	Aluminium wire braid (for type FN 04-A)
Sheath	Crosslinked compound, type EM104 according to Standard EN 50306-1. Colour black according to NAV80 std or coloured on request

TECHNICAL DATA

Temperature range	-40°C ÷ 90°C
Minimum bending radius	5 x outer diameter (installation)

REFERENCE STANDARDS

High resistance to oils and fuels	CEI EN 50305 § 8.1 CEI EN 60811-404, IRM 902 - IRM 903
Flame retardancy	CEI EN 60332-1-2
Fire Propagation	CEI EN 60332-3-22 Cat. A
Smoke emission	CEI EN 61034-1 – CEI EN 61034-2
Emission of acid and corrosive gases	CEI EN 60754-2
Evolution of HCl	CEI EN 60754-2
Fluorine content	CEI EN 60754-3
Toxicity index	CEI EN 50305 § 9.2

TYPE FN 04-N				
Item n°	Designation	Cross-section mm²	Nominal Diameter cable mm	Nominal cable Weight kg/km
340TK030704	FN 04-N-1.0	4x1.0	5.8 ÷ 6.4	75
345TK030704	FN 04-N-1.5	4x1.5	7.0 ÷ 7.7	120
355TK030704	FN 04-N-2.5	4x2.5	8.3 ÷ 9.3	175

TYPE FN 04-O				
Item n°	Designation	Cross-section mm²	Nominal Diameter cable mm	Nominal cable Weight kg/km
540TK030704	FN 04-O-1.0	4x1.0	6.3 ÷ 7.0	100
545TK030704	FN 04-O-1.5	4x1.5	7.5 ÷ 8.3	140
555TK030704	FN 04-O-2.5	4x2.5	8.9 ÷ 9.8	205

TYPE FN 04-A				
Item n°	Designation	Cross-section mm²	Nominal Diameter cable mm	Nominal cable Weight kg/km
840TK030704	FN 04-A-1.0	4x1.0	8.5 ÷ 9.4	150
845TK030704	FN 04-A-1.5	4x1.5	9.8 ÷ 10.8	205
855TK030704	FN 04-A-2.5	4x2.5	11.2 ÷ 12.4	270

AWG cross section are available on request, in compliance with NAV-80-6145-0003-14-00B000, as following examples:

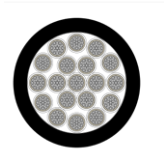
TYPE FN 04-N				
Item n°	Designation	Cross-section AWG	Nominal Diameter cable mm	Nominal cable Weight kg/km
343TK060704	FN 04-N-16	4x16 (1.34)	6.0 ÷ 7.0	103
350TK060704	FN 04-N-14	4x14 (1.82)	6.9 ÷ 7.9	128
363TK060704	FN 04-N-12	4x12 (2.61)	7.8 ÷ 8.8	166

TYPE FN 04-O				
Item n°	Designation	Cross-section AWG	Nominal Diameter cable mm	Nominal cable Weight kg/km
543TK060704	FN 04-O-16	4x16 (1.34)	6.6 ÷ 7.6	132
550TK060704	FN 04-O-14	4x14 (1.82)	7.5 ÷ 8.6	161
563TK060704	FN 04-O-12	4x12 (2.61)	8.5 ÷ 9.5	200

TYPE FN 04-A				
Item n°	Designation	Cross-section AWG	Nominal Diameter cable mm	Nominal cable Weight kg/km
843TK060704	FN 04-A-16	4x16 (1.34)	8.8 ÷ 10.0	170
850TK060704	FN 04-A-14	4x14 (1.82)	9.5 ÷ 10.9	203
863TK060704	FN 04-A-12	4x12 (2.61)	10.2 ÷ 11.8	246

TK - TYPE UN-N - SPECIFICATION SHEET N. 08

Miniaturized and flexible multi-core power supply electrical cable, with low toxicity. Cable for general use - 300/500 V



characteristics

CONSTRUCTION

Conductor	concentric tinned copper conductor according ASTM B33
Insulation	double layer with special compound, white with black numbers
Sheath	Crosslinked compound, type EM104 according to Standard EN 50306-1. Colour black according to NAV80 std or coloured on request

TECHNICAL DATA

Temperature range	-40°C ÷ 90°C
Minimum bending radius	5 x outer diameter (installation)

REFERENCE STANDARDS

High resistance to oils and fuels	CEI EN 50305 § 8.1 CEI EN 60811-404, IRM 902 - IRM 903
Flame retardancy	CEI EN 60332-1-2
Fire Propagation	CEI EN 60332-3-22 Cat. A
Smoke emission	CEI EN 61034-1 – CEI EN 61034-2
Emission of acid and corrosive gases	CEI EN 60754-2
Evolution of HCl	CEI EN 60754-2
Fluorine content	CEI EN 60754-3
Toxicity index	CEI EN 50305 § 9.2

TYPE UN 0.35-N				
Item n°	Designation	Cross-section mm²	Nominal Diameter cable mm	Nominal cable Weight kg/km
325TK030807	UN 0.35-N-7	7 x 0.35	5.6 ÷ 6.2	70
325TK030812	UN 0.35-N-12	12 x 0.35	7.1 ÷ 7.9	105
325TK030819	UN 0.35-N-19	19 x 0.35	8.2 ÷ 9.1	150
325TK030837	UN 0.35-N-37	37 x 0.50	10.7 ÷ 11.8	275

TYPE UN 0.50-N				
Item n°	Designation	Cross-section mm²	Nominal Diameter cable mm	Nominal cable Weight kg/km
330TK030807	UN 0.50-N-7	7x 0.50	6.0 ÷ 6.6	0
330TK030810	UN 0.50-N-10	10 x 0.50	7.3 ÷ 8.1	110
330TK030814	UN 0.50-N-14	14 x 0.50	7.9 ÷ 8.7	140
330TK030819	UN 0.50-N-19	19 x 0.50	8.7 ÷ 9.6	180
330TK030824	UN 0.50-N-24	24 x 0.50	10.0 ÷ 11.0	220
330TK030837	UN 0.50-N-37	37 x 0.50	11.4 ÷ 12.6	320
330TK030844	UN 0.50-N-44	44 x 0.50	12.7 ÷ 14.0	380
330TK030861	UN 0.50-N-61	61 x 0.50	14.1 ÷ 15.6	500

TYPE UN 1.0-N				
Item n°	Designation	Cross-section mm²	Nominal Diameter cable mm	Nominal cable Weight kg/km
340TK030807	UN 1.0-N-7	7 x 1	6.8 ÷ 7.5	120
340TK030812	UN 1.0-N-12	12 x 1	8.7 ÷ 9.6	195
340TK030819	UN 1.0-N-19	19 x 1	10.1 ÷ 11.2	285
340TK030837	UN 1.0-N-37	37 x 1	13.3 ÷ 14.7	525

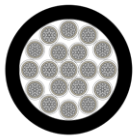
AWG cross section are available on request, in compliance with NAV-80-6145-0003-14-00B000, as following examples:

TYPE UN 20-N				
Item n°	Designation	Cross-section AWG	Nominal Diameter cable mm	Nominal cable Weight kg/km
331TK060807	UN 20-N-7	7x20 (0,59)	5.7 ÷ 6.6	84
331TK060810	UN 20-N-10	10x20 (0,59)	7.2 ÷ 8.1	117
331TK060814	UN 20-N-14	14x20 (0,59)	7.9 ÷ 8.9	152
331TK060819	UN 20-N-19	19x20 (0,59)	8.8 ÷ 9.8	197
331TK060824	UN 20-N-24	24x20 (0,59)	10.4 ÷ 11.4	247
331TK060830	UN 20-N-30	30x20 (0,59)	10.8 ÷ 12.0	298

Example of designations:
the code UN 0.35-N-19 identifies a cable, with 19 isolated core (UG-N), with components of 0.35 mm², without overall shield (N).

TK - TYPE UN-O - SPECIFICATION SHEET N. 09

Miniaturized and flexible shielded multi-core electrical cable, with low toxicity. Cable for general use - 300/500 V



characteristics

CONSTRUCTION

Conductor	concentric tinned copper conductor according ASTM B33
Insulation	double layer with special compound, white with black numbers
Shield	tinned copper wire braid
Sheath	crosslinked compound, type EM104 according to Standard EN 50306-1. Colour black according to NAV80 std or coloured on request

TECHNICAL DATA

Temperature range	-40°C ÷ 90°C
Minimum bending radius	5 x outer diameter (installation)

REFERENCE STANDARDS

High resistance to oils and fuels	CEI EN 50305 § 8.1 CEI EN 60811-404, IRM 902 - IRM 903
Flame retardancy	CEI EN 60332-1-2
Fire Propagation	CEI EN 60332-3-22 Cat. A
Smoke emission	CEI EN 61034-1 – CEI EN 61034-2
Emission of acid and corrosive gases	CEI EN 60754-2
Evolution of HCl	CEI EN 60754-2
Fluorine content	CEI EN 60754-3
Toxicity index	CEI EN 50305 § 9.2

Example of designations:
the code UN 0.35-N-19 identifies a cable, with 19 isolated core (UG-N), with components of 0.35 mm², without overall shield (N).

TYPE UN 0.35-N				
Item n°	Designation	Cross-section mm²	Nominal Diameter cable mm	Nominal cable Weight kg/km
525TK030907	UN 0.35-O-7	7 x 0.35	6.2 ÷ 6.9	90
525TK030912	UN 0.35-O-12	12 x 0.35	7.6 ÷ 8.4	135
525TK030919	UN 0.35-O-19	19 x 0.35	8.7 ÷ 9.6	185
525TK030937	UN 0.35-O-37	37 x 0.35	11.4 ÷ 12.6	335

TYPE UN 0.50-N				
Item n°	Designation	Cross-section mm²	Nominal Diameter cable mm	Nominal cable Weight kg/km
530TK030907	UN 0.50-O-7	7 x 0.50	6.5 ÷ 7.2	100
530TK030910	UN 0.50-O-10	10 x 0.50	7.8 ÷ 8.6	135
530TK030914	UN 0.50-O-14	14 x 0.50	8.4 ÷ 9.3	170
530TK030919	UN 0.50-O-19	19 x 0.50	9.2 ÷ 10.2	210
530TK030924	UN 0.50-O-24	24 x 0.50	10.8 ÷ 11.9	280
530TK030937	UN 0.50-O-37	37 x 0.50	12.1 ÷ 13.4	390
530TK030944	UN 0.50-O-44	44 x 0.50	13.5 ÷ 14.9	450
530TK030961	UN 0.50-O-61	61 x 0.50	15.1 ÷ 16.7	610

TYPE UN 1.0-O				
Item n°	Designation	Cross-section mm²	Nominal Diameter cable mm	Nominal cable Weight kg/km
540TK030907	UN 1.0-O-7	7 x 1	7.3 ÷ 8.1	145
540TK030910	UN 1.0-O-10	10 x 1	8.9 ÷ 9.8	190
540TK030914	UN 1.0-O-14	14 x 1	9.8 ÷ 10.8	250
540TK030916	UN 1.0-O-16	16 x 1	10.3 ÷ 11.4	305
540TK030920	UN 1.0-O-20	20 x 1	11.3 ÷ 12.5	365
540TK030924	UN 1.0-O-24	24 x 1	12.4 ÷ 13.7	430
540TK030937	UN 1.0-O-37	37 x 1	14.2 ÷ 15.7	630

TYPE UN 1.5-O				
Item n°	Designation	Cross-section mm²	Nominal Diameter cable mm	Nominal cable Weight kg/km
545TK030907	UN 1.5-O-7	7 x 1.5	8.9 ÷ 9.8	215
545TK030912	UN 1.5-O-12	12 x 1.5	11.5 ÷ 12.7	360
545TK030916	UN 1.5-O-16	16 x 1.5	12.7 ÷ 14.0	470
545TK030919	UN 1.5-O-19	19 x 1.5	13.3 ÷ 14.7	540
545TK030924	UN 1.5-O-24	24 x 1.5	15.6 ÷ 17.2	700
545TK030937	UN 1.5-O-37	37 x 1.5	17.8 ÷ 19.7	980

TYPE UN 2.5-O				
Item n°	Designation	Cross-section mm²	Nominal Diameter cable mm	Nominal cable Weight kg/km
555TK030907	UN 2.5-O-7	7 x 2.5	10.7 ÷ 11.8	310
555TK030912	UN 2.5-O-12	12 x 2.5	13.8 ÷ 15.3	520
555TK030916	UN 2.5-O-16	16 x 2.5	15.3 ÷ 16.9	670
555TK030919	UN 2.5-O-19	19 x 2.5	16.2 ÷ 17.9	790
555TK030924	UN 2.5-O-24	24 x 2.5	19.0 ÷ 21.0	990
555TK030937	UN 2.5-O-37	37 x 2.5	21.9 ÷ 24.2	147

Add letter S to the item number for “enhanced shielding effectiveness” (EMC requirements).

AWG cross section are available on request, in compliance with NAV-80-6145-0003-14-00B000, as following examples:

TYPE UN 20-O				
Item n°	Designation	Cross-section AWG	Nominal Diameter cable mm	Nominal cable Weight kg/km
531TK060907	UN 20-O-7	7x20 (0,59)	6.4 ÷ 7.3	109
531TK060910	UN 20-O-10	10x20 (0,59)	7.9 ÷ 8.8	149
531TK060914	UN 20-O-14	14x20 (0,59)	8.5 ÷ 9.5	186
531TK060919	UN 20-O-19	19x20 (0,59)	9.4 ÷ 10.4	236
531TK060924	UN 20-O-24	24x20 (0,59)	10.9 ÷ 12.0	304
531TK060930	UN 20-O-30	30x20 (0,59)	11.4 ÷ 12.6	359
531TK060937	UN 20-O-37	37x20 (0,59)	12.6 ÷ 13.8	425

TK - TYPE UN-A - SPECIFICATION SHEET N. 10

Miniaturized and flexible multi-core armored electrical cable, with low toxicity. Cable for general use - 300/500 V

characteristics

CONSTRUCTION

Conductor	concentric tinned copper conductor according ASTM B33
Insulation	double layer with special compound, white with black numbers
Inner Sheath	halogen free compound
Armour	aluminium wire braid
Sheath	crosslinked compound, type EM104 according to Standard EN 50306-1. Colour black according to NAV80 std or coloured on request

TECHNICAL DATA

Temperature range	-40°C ÷ 90°C
Minimum bending radius	5 x outer diameter (installation)

REFERENCE STANDARDS

High resistance to oils and fuels	CEI EN 50305 § 8.1 CEI EN 60811-404, IRM 902 - IRM 903
Flame retardancy	CEI EN 60332-1-2
Fire Propagation	CEI EN 60332-3-22 Cat. A
Smoke emission	CEI EN 61034-1 – CEI EN 61034-2
Emission of acid and corrosive gases	CEI EN 60754-2
Evolution of HCl	CEI EN 60754-2
Fluorine content	CEI EN 60754-3
Toxicity index	CEI EN 50305 § 9.2

TYPE UN 0.50-A				
Item n°	Designation	Cross-section · mm²	Nominal Diameter cable · mm	Nominal cable Weight · kg/km
825TK031007	UN 0.50-A-7	7 x 0.50	8.7 ÷ 9.6	150
825TK031010	UN 0.50-A-10	10 x 0.50	10.1 ÷ 11.2	195
825TK031014	UN 0.50-A-14	14 x 0.50	10.7 ÷ 11.9	235
825TK031019	UN 0.50-A-19	19 x 0.50	11.5 ÷ 12.8	280
825TK031024	UN 0.50-A-24	24 x 0.50	12.9 ÷ 14.3	340
825TK031037	UN 0.50-A-37	37 x 0.50	14.4 ÷ 16.0	460
825TK031044	UN 0.50-A-44	44 x 0.50	15.8 ÷ 17.5	530
825TK031061	UN 0.50-A-61	61 x 0.50	17.2 ÷ 19.0	675

TYPE UN 1.0-A				
Item n°	Designation	Cross-section · mm²	Nominal Diameter cable · mm	Nominal cable Weight· kg/km
840TK031007	UN 1.0-A-7	7 x 1	9.5 ÷ 10.5	200
840TK031010	UN 1.0-A-10	10 x 1	11.3 ÷ 12.5	270
840TK031014	UN 1.0-A-14	14 x 1	11.9 ÷ 13.2	305
840TK031016	UN 1.0-A-16	16 x 1	12.5 ÷ 13.9	325
840TK031020	UN 1.0-A-20	20 x 1	13.5 ÷ 14.9	430
840TK031024	UN 1.0-A-24	24 x 1	14.7 ÷ 16.3	500
840TK031037	UN 1.0-A-37	37 x 1	16.4 ÷ 18.2	690

Example of designations:
the code UN 0.50-A-19 identifies a cable, with 19 isolated core (UG-N), with components of 0.50 mm², with armor (A).

TK - TYPE UN-A - SPECIFICATION SHEET N. 11

Miniaturized and flexible multi-core shielded electrical cable, with individually shielded wires and low toxicity. Cable for general use - 300/500 V

characteristics

CONSTRUCTION

Conductor	concentric tinned copper conductor according ASTM B33
Insulation	double layer with special compound, white
Core shield	tinned copper wire braid
Core sheath	halogen free compound, type S2 according to Standard EN 50306-1, black with white numbers
Overall shield	tinned copper wire braid
Sheath	Crosslinked compound, type EM104 according to Standard EN 50306-1. Colour black according to NAV80 std or coloured on request

TECHNICAL DATA

Temperature range	-40°C ÷ 90°C
Minimum bending radius	5 x outer diameter (installation)

REFERENCE STANDARDS

High resistance to oils and fuels	CEI EN 50305 § 8.1 CEI EN 60811-404, IRM 902 - IRM 903
Flame retardancy	CEI EN 60332-1-2
Fire Propagation	CEI EN 60332-3-22 Cat. A
Smoke emission	CEI EN 61034-1 – CEI EN 61034-2
Emission of acid and corrosive gases	CEI EN 60754-2
Evolution of HCl	CEI EN 60754-2
Fluorine content	CEI EN 60754-3
Toxicity index	CEI EN 50305 § 9.2

TYPE US 0.35-O				
Item n°	Designation	Cross-section · mm²	Nominal Diameter cable · mm	Nominal cable Weight · kg/km
525TK031103	US 0.35-O-3	3 x 0.35	7.3 ÷ 8.0	100
525TK031107	US 0.35-O-7	7 x 0.35	9.2 ÷ 10.2	170
525TK031114	US 0.35-O-14	14 x 0.35	12.6 ÷ 13.9	330
525TK031120	US 0.35-O-20	20 x 0.35	14.6 ÷ 16.2	450
525TK031130	US 0.35-O-30	30 x 0.35	17.3 ÷ 19.0	650
525TK031140	US 0.35-O-40	40 x 0.35	19.4 ÷ 21.5	880

TYPE US 0.50-O				
Item n°	Designation	Cross-section · mm²	Nominal Diameter cable · mm	Nominal cable Weight · kg/km
530TK031103	US 0.50-O-3	3 x 0.50	7.5 ÷ 8.3	110
530TK031107	US 0.50-O-7	7 x 0.50	9.7 ÷ 10.7	200
530TK031112	US 0.50-O-12	12 x 0.50	12.4 ÷ 13.7	330
530TK031119	US 0.50-O-19	19 x 0.50	14.6 ÷ 16.2	500
530TK031137	US 0.50-O-37	37 x 0.50	19.3 ÷ 21.3	850

TYPE US 1.0-O				
Item n°	Designation	Cross-section mm²	Nominal Diameter cable mm	Nominal cable Weight kg/km
540TK031103	US 1.0-O-3	3 x 1	8.5 ÷ 9.3	155
540TK031107	US 1.0-O-7	7 x 1	10.7 ÷ 11.9	275
540TK031112	US 1.0-O-12	12 x 1	13.8 ÷ 15.3	435
540TK031119	US 1.0-O-19	19 x 1	16.4 ÷ 17.9	650
540TK031137	US 1.0-O-37	37 x 1	22.0 ÷ 24.0	1150

TYPE US 1.5-O				
Item n°	Designation	Cross-section mm²	Nominal Diameter cable mm	Nominal cable Weight kg/km
545TK031103	US 1.5-O-3	3 x 1.5	9.6 ÷ 10.6	200
545TK031107	US 1.5-O-7	7 x 1.5	12.3 ÷ 13.5	375
545TK031110	US 1.5-O-10	10 x 1.5	15.7 ÷ 17.3	550
545TK031119	US 1.5-O-19	19 x 1.5	19.0 ÷ 20.9	900
545TK031137	US 1.5-O-37	37 x 1.5	25.7 ÷ 28.2	1650

Add letter S to the item number for “enhanced shielding effectiveness” (EMC requirements).

AWG cross section are available on request, in compliance with NAV-80-6145-0003-14-00B000, as following examples:

TYPE US 20-O				
Item n°	Designation	Cross-section AWG	Nominal Diameter cable mm	Nominal cable Weight kg/km
531TK061107	US 20-O-7	7x20 (0,59)	9.2 ÷ 10.1	187
531TK061112	US 20-O-12	12x20 (0,59)	12.1 ÷ 13	354
531TK061119	US 20-O-19	19x20 (0,59)	11.3 ÷ 15.3	455

Add letter S to the item number for “enhanced shielding effectiveness” (EMC requirements).

Example of designations:
the code US 0.50-O-19 identifies a cable, with 19 isolated core (UG-S), with components of 0.50 mm², with overall shield (O).

TK - TYPE US-A - SPECIFICATION SHEET N. 12

Miniaturized and flexible multi-core armored electrical cable, with individually shielded wires and low toxicity. Cable for general use - 300/500 V

characteristics

CONSTRUCTION

Conductor	concentric tinned copper conductor according ASTM B33
Insulation	double layer with special compound, white
Core shield	tinned copper wire braid
Core sheath	halogen free compound, type S2 according to Standard EN 50306-1, black with white numbers
Inner sheath	halogen free compound
Armour	aluminium wire braid
Sheath	crosslinked compound, type EM104 according to Standard EN 50306-1. Colour black according to NAV80 std or coloured on request

TECHNICAL DATA

Temperature range	-40°C ÷ 90°C
Minimum bending radius	5 x outer diameter (installation)

REFERENCE STANDARDS

High resistance to oils and fuels	CEI EN 50305 § 8.1 CEI EN 60811-404, IRM 902 - IRM 903
Flame retardancy	CEI EN 60332-1-2
Fire Propagation	CEI EN 60332-3-22 Cat. A
Smoke emission	CEI EN 61034-1 – CEI EN 61034-2
Emission of acid and corrosive gases	CEI EN 60754-2
Evolution of HCl	CEI EN 60754-2
Fluorine content	CEI EN 60754-3
Toxicity index	CEI EN 50305 § 9.2

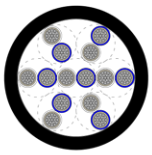
TYPE US 0.50-A				
Item n°	Designation	Cross-section mm²	Nominal Diameter cable mm	Nominal cable Weight kg/km
825TK031203	US 0.50-A-3	3 x 0.50	9.7 ÷ 10.8	170
825TK031207	US 0.50-A-7	7 x 0.50	11.8 ÷ 13.1	270
825TK031212	US 0.50-A-12	12 x 0.50	14.7 ÷ 16.3	410
825TK031219	US 0.50-A-19	19 x 0.50	16.8 ÷ 18.6	570
825TK031237	US 0.50-A-37	37 x 0.50	21.8 ÷ 24.1	980

TYPE US 1.0-A				
Item n°	Designation	Cross-section mm²	Nominal Diameter cable mm	Nominal cable Weight kg/km
840TK031203	US 1.0-A-3	3 x 1	10.5 ÷ 11.6	205
840TK031207	US 1.0-A-7	7 x 1	12.8 ÷ 14.2	340
840TK031212	US 1.0-A-12	12 x 1	16.1 ÷ 17.8	520
840TK031219	US 1.0-A-19	19 x 1	18.5 ÷ 20.5	730
840TK031237	US 1.0-A-37	37 x 1	24.2 ÷ 26.8	1270

Example of designations:
the code US 0.50-A-19 identifies a cable, with 19 isolated core (UG-S), with components of 0.50 mm², with armor (A).

TK - TYPE CN-N - SPECIFICATION SHEET N. 13

Miniaturized and flexible multi-pair electrical cable, with low toxicity. Cable for general use - 300/500 V



CONSTRUCTION

Conductor	concentric tinned copper conductor according ASTM B33
Insulation	double layer with special compound, white and blue with black numbers
Pairs	single cores are twisted into pairs
Sheath	crosslinked compound, type EM104 according to Standard EN 50306-1. Colour black according to NAV80 std or coloured on request

TECHNICAL DATA

Temperature range	-40°C ÷ 90°C
Minimum bending radius	5 x outer diameter (installation)

REFERENCE STANDARDS

High resistance to oils and fuels	CEI EN 50305 § 8.1 CEI EN 60811-404, IRM 902 - IRM 903
Flame retardancy	CEI EN 60332-1-2
Fire Propagation	CEI EN 60332-3-22 Cat. A
Smoke emission	CEI EN 61034-1 – CEI EN 61034-2
Emission of acid and corrosive gases	CEI EN 60754-2
Evolution of HCl	CEI EN 60754-2
Fluorine content	CEI EN 60754-3
Toxicity index	CEI EN 50305 § 9.2

TYPE CN 0.35-N				
Item n°	Designation	Cross-section mm²	Nominal Diameter cable mm	Nominal cable Weight kg/km
325TK031303	CN 0.35-N-3	3 x 2 x 0.35	5.9 ÷ 6.6	70
325TK031307	CN 0.35-N-7	7 x 2 x 0.35	7.9 ÷ 8.8	130
325TK031310	CN 0.35-N-10	10 x 2 x 0.35	9.9 ÷ 11.0	180
325TK031316	CN 0.35-N-16	16 x 2 x 0.35	11.3 ÷ 12.5	260
325TK031320	CN 0.35-N-20	20 x 2 x 0.35	12.6 ÷ 14.0	315
325TK031330	CN 0.35-N-30	30 x 2 x 0.35	14.8 ÷ 16.4	445
325TK031340	CN 0.35-N-40	40 x 2 x 0.35	16.6 ÷ 18.4	575
325TK031350	CN 0.35-N-50	50 x 2 x 0.35	18.8 ÷ 20.8	715

TYPE CN 0.50-N				
Item n°	Designation	Cross-section mm²	Nominal Diameter cable mm	Nominal cable Weight kg/km
330TK031303	CN 0.50-N-3	3 x 2 x 0.50	6.3 ÷ 7.0	80
330TK031307	CN 0.50-N-7	7 x 2 x 0.50	8.4 ÷ 9.3	150
330TK031310	CN 0.50-N-10	10 x 2 x 0.50	10.6 ÷ 11.7	210
330TK031316	CN 0.50-N-16	16 x 2 x 0.50	12.1 ÷ 13.4	300
330TK031320	CN 0.50-N-20	20 x 2 x 0.50	13.4 ÷ 14.9	370
330TK031330	CN 0.50-N-30	30 x 2 x 0.50	15.8 ÷ 17.5	525
330TK031340	CN 0.50-N-40	40 x 2 x 0.50	17.8 ÷ 19.7	680
330TK031350	CN 0.50-N-50	50 x 2 x 0.50	20.2 ÷ 22.4	845

AWG cross section are available on request, in compliance with NAV-80-6145-0003-14-00B000, as following examples:

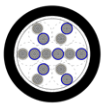
TYPE CN 0.22-N				
Item n°	Designation	Cross-section AWG	Nominal Diameter cable mm	Nominal cable Weight kg/km
324TK061303	CN 22-N-3	3 x 2 x 22 (0,33)	6.1 ÷ 7.0	64
324TK061305	CN 22-N-5	5 x 2 x 22 (0,33)	7.1 ÷ 8.4	93
324TK061310	CN 22-N-10	10 x 2 x 22 (0,33)	10.2 ÷ 11.5	166
324TK061316	CN 22-N-16	16 x 2 x 22 (0,33)	12.0 ÷ 13.1	242
324TK061320	CN 22-N-20	20 x 2 x 22 (0,33)	13.1 ÷ 14.6	295
324TK061330	CN 22-N-30	30 x 2 x 22 (0,33)	15.7 ÷ 17.2	422
324TK061340	CN 22-N-40	40 x 2 x 22 (0,33)	17.4 ÷ 19.4	547

TYPE CN 20-N				
Item n°	Designation	Cross-section AWG	Nominal Diameter cable mm	Nominal cable Weight kg/km
331TK061303	CN 20-N-3	3 x 2 x 20 (0,59)	7.3 ÷ 8.3	95
331TK061316	CN 20-N-16	16 x 2 x 20 (0,59)	14.0 ÷ 15.9	354

Example of designations:
the code CN 0.35-N-7 identifies a cable, with 7 isolated two-core (UG-N), with components of 0.35 mm².

TK - TYPE CN-O - SPECIFICATION SHEET N. 14

Miniaturized and flexible multi-pair shielded electrical cable, with low toxicity. Cable for general use - 300/500 V



characteristics

CONSTRUCTION

Conductor	concentric tinned copper conductor according ASTM B33
Insulation	double layer with special compound, white and blue with blanck numbers
Pairs	single cores are twisted into pairs
Shield	tinned copper wire braid
Sheath	crosslinked compound, type EM104 according to Standard EN 50306-1. Colour black according to NAV80 std or coloured on request

TECHNICAL DATA

Temperature range	-40°C ÷ 90°C
Minimum bending radius	5 x outer diameter (installation)

REFERENCE STANDARDS

High resistance to oils and fuels	CEI EN 50305 § 8.1 CEI EN 60811-404, IRM 902 - IRM 903
Flame retardancy	CEI EN 60332-1-2
Fire Propagation	CEI EN 60332-3-22 Cat. A
Smoke emission	CEI EN 61034-1 – CEI EN 61034-2
Emission of acid and corrosive gases	CEI EN 60754-2
Evolution of HCl	CEI EN 60754-2
Fluorine content	CEI EN 60754-3
Toxicity index	CEI EN 50305 § 9.2

TYPE CN 0.35-O				
Item n°	Designation	Cross-section · mm²	Nominal Diameter cable · mm	Nominal cable Weight kg/km
525TK031403	CN 0.35-O-3	3 x 2 x 0.35	6.3 ÷ 7.0	85
525TK031407	CN 0.35-O-7	7 x 2 x 0.35	8.3 ÷ 9.2	145
525TK031410	CN 0.35-O-10	10 x 2 x 0.35	10.4 ÷ 11.4	210
525TK031416	CN 0.35-O-16	16 x 2 x 0.35	11.7 ÷ 13.0	305
525TK031420	CN 0.35-O-20	20 x 2 x 0.35	12.9 ÷ 14.2	365
525TK031430	CN 0.35-O-30	30 x 2 x 0.35	15.2 ÷ 16.8	530
525TK031440	CN 0.35-O-40	40 x 2 x 0.35	16.9 ÷ 18.7	670
525TK031450	CN 0.35-O-50	50 x 2 x 0.35	19.0 ÷ 21.0	875

TYPE CN 0.50-O				
Item n°	Designation	Cross-section · mm²	Nominal Diameter cable · mm	Nominal cable Weight · kg/km
530TK031403	CN 0.50-O-3	3 x 2 x 0.50	6.8 ÷ 7.5	95
530TK031407	CN 0.50-O-7	7 x 2 x 0.50	8.7 ÷ 9.7	175
530TK031410	CN 0.50-O-10	10 x 2 x 0.50	11.0 ÷ 12.1	250
530TK031416	CN 0.50-O-16	16 x 2 x 0.50	12.5 ÷ 13.9	350
530TK031420	CN 0.50-O-20	20 x 2 x 0.50	13.8 ÷ 15.2	445
530TK031430	CN 0.50-O-30	30 x 2 x 0.50	16.2 ÷ 17.9	620
530TK031440	CN 0.50-O-40	40 x 2 x 0.50	18.1 ÷ 20.0	845
530TK031450	CN 0.50-O-50	50 x 2 x 0.50	20.5 ÷ 22.6	1025

TYPE CN 1.0-O				
Item n°	Designation	Cross-section mm²	Nominal Diameter cable mm	Nominal cable Weight kg/km
540TK031403	CN 1.0-O-3	3 x 2 x 1	8.1 ÷ 9.0	145
540TK031407	CN 1.0-O-7	7 x 2 x 1	10.4 ÷ 11.5	265
540TK031410	CN 1.0-O-10	10 x 2 x 1	13.2 ÷ 14.6	380
540TK031416	CN 1.0-O-16	16 x 2 x 1	15.2 ÷ 16.8	565
540TK031420	CN 1.0-O-20	20 x 2 x 1	16.9 ÷ 18.7	690
540TK031430	CN 1.0-O-30	30 x 2 x 1	19.9 ÷ 22.0	1015
540TK031440	CN 1.0-O-40	40 x 2 x 1	22.5 ÷ 24.8	1320
540TK031450	CN 1.0-O-50	50 x 2 x 1	25.4 ÷ 28.1	1645

TYPE CN 1.50-O				
Item n°	Designation	Cross-section mm²	Nominal Diameter cable mm	Nominal cable Weight kg/km
545TK031403	CN 1.5-O-3	3 x 2 x 1.5	9.5 ÷ 10.5	215
545TK031407	CN 1.5-O-7	7 x 2 x 1.5	12.2 ÷ 13.8	425
545TK031410	CN 1.5-O-10	10 x 2 x 1.5	15.9 ÷ 17.6	620
545TK031416	CN 1.5-O-16	16 x 2 x 1.5	18.1 ÷ 20.0	905
545TK031420	CN 1.5-O-20	20 x 2 x 1.5	20.1 ÷ 22.2	1170
545TK031430	CN 1.5-O-30	30 x 2 x 1.5	24.2 ÷ 26.7	1690
545TK031440	CN 1.5-O-40	40 x 2 x 1.5	27.2 ÷ 30.1	2185
545TK031450	CN 1.5-O-50	50 x 2 x 1.5	30.5 ÷ 33.5	2735

Add letter S to the item number for “enhanced shielding effectiveness” (EMC requirements).

AWG cross section are available on request, in compliance with NAV-80-6145-0003-14-00B000, as following examples:

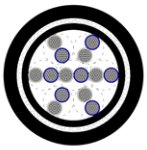
TYPE CN 22-O				
Item n°	Designation	Cross-section AWG	Nominal Diameter cable mm	Nominal cable Weight kg/km
524TK061403	CN 22-O-3	3 x 2 x 22 (0,33)	6.7 ÷ 7.6	90
524TK061405	CN 22-O-5	5 x 2 x 22 (0,33)	8.1 ÷ 9.0	125
524TK061410	CN 22-O-10	10 x 2 x 22 (0,33)	11.1 ÷ 12.1	224
524TK061416	CN 22-O-16	16 x 2 x 22 (0,33)	12.8 ÷ 13.9	309
524TK061420	CN 22-O-20	20 x 2 x 22 (0,33)	14.2 ÷ 15.6	388
524TK061430	CN 22-O-30	30 x 2 x 22 (0,33)	16.4 ÷ 18.3	534
524TK061440	CN 22-O-40	40 x 2 x 22 (0,33)	18.5 ÷ 20.5	674

Add letter S to the item number for “enhanced shielding effectiveness” (EMC requirements).

Example of designations:
the code CN 0.35-O-7 identifies a cable, with 7 isolated two-core (UG-N), with components of 0.35 mm², with overall shield (O).

TK - TYPE US-A - SPECIFICATION SHEET N. 15

Miniaturized and flexible multi-pair armored electrical cable, with low toxicity. Cable for general use - 300/500 V



characteristics

CONSTRUCTION

Conductor	concentric tinned copper conductor according ASTM B33
Insulation	double layer with special compound, white and blue with black numbers
Pairs	single cores are twisted into pairs
Inner sheath	halogen free compound
Armour	aluminium wire braid
Sheath	crosslinked compound, type EM104 according to Standard EN 50306-1. Colour black according to NAV80 std or coloured on request

TECHNICAL DATA

Temperature range	-40°C ÷ 90°C
Minimum bending radius	5 x outer diameter (installation)

REFERENCE STANDARDS

High resistance to oils and fuels	CEI EN 50305 § 8.1 CEI EN 60811-404, IRM 902 - IRM 903
Flame retardancy	CEI EN 60332-1-2
Fire Propagation	CEI EN 60332-3-22 Cat. A
Smoke emission	CEI EN 61034-1 – CEI EN 61034-2
Emission of acid and corrosive gases	CEI EN 60754-2
Evolution of HCl	CEI EN 60754-2
Fluorine content	CEI EN 60754-3
Toxicity index	CEI EN 50305 § 9.2

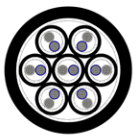
TYPE CN 0.50-A				
Item n°	Designation	Cross-section · mm²	Nominal Diameter cable · mm	Nominal cable Weight · kg/km
830TK031503	CN 0.50-A-3	3 x 2 x 0.50	9.0 ÷ 10.0	150
830TK031507	CN 0.50-A-7	7 x 2 x 0.50	11.2 ÷ 12.4	245
830TK031510	CN 0.50-A-10	10 x 2 x 0.50	13.5 ÷ 14.9	330
830TK031516	CN 0.50-A-16	16 x 2 x 0.50	15.1 ÷ 16.7	445
830TK031520	CN 0.50-A-20	20 x 2 x 0.50	16.5 ÷ 18.3	530
830TK031530	CN 0.50-A-30	30 x 2 x 0.50	19.0 ÷ 21.0	720
830TK031540	CN 0.50-A-40	40 x 2 x 0.50	21.1 ÷ 23.4	900
830TK031550	CN 0.50-A-50	50 x 2 x 0.50	23.6 ÷ 26.1	1100

TYPE CN 1.0-A				
Item n°	Designation	Cross-section · mm²	Nominal Diameter cable · mm	Nominal cable Weight · kg/km
840TK031503	CN 1.0-A-3	3 x 2 x 1	10.3 ÷ 11.4	205
840TK031507	CN 1.0-A-7	7 x 2 x 1	12.6 ÷ 14.0	345
840TK031510	CN 1.0-A-10	10 x 2 x 1	15.4 ÷ 17.1	480
840TK031516	CN 1.0-A-16	16 x 2 x 1	17.3 ÷ 19.2	660
840TK031520	CN 1.0-A-20	20 x 2 x 1	19.0 ÷ 21.0	795
840TK031530	CN 1.0-A-30	30 x 2 x 1	22.0 ÷ 24.4	1110
840TK031540	CN 1.0-A-40	40 x 2 x 1	25.7 ÷ 28.4	1450
840TK031550	CN 1.0-A-50	50 x 2 x 1	27.5 ÷ 30.4	1730

Example of designations:
the code CN 0.50-A-7 identifies a cable, with 7 isolated two-core (UG-N), with components of 0.50 mm², with armor (A).

TK - TYPE CS-O - SPECIFICATION SHEET N. 16

Miniaturized and flexible multi-pair shielded electrical cable, with individually shielded pairs and low toxicity. Cable for general use - 300/500 V



characteristics

CONSTRUCTION

Conductor	concentric tinned copper conductor according ASTM B33
Insulation	double layer with special compound, white and blue
Pairs	single cores are twisted into pairs
Individual shield	tinned copper wire braid on each pair
Pair sheath	halogen free compound, black with white numbers
Overall shield	tinned copper wire braid
Sheath	crosslinked compound, type EM104 according to Standard EN 50306-1. Colour black according to NAV80 std or coloured on request

TECHNICAL DATA

Temperature range	-40°C ÷ 90°C
Minimum bending radius	5 x outer diameter (installation)

REFERENCE STANDARDS

High resistance to oils and fuels	CEI EN 50305 § 8.1 CEI EN 60811-404, IRM 902 - IRM 903
Flame retardancy	CEI EN 60332-1-2
Fire Propagation	CEI EN 60332-3-22 Cat. A
Smoke emission	CEI EN 61034-1 – CEI EN 61034-2
Emission of acid and corrosive gases	CEI EN 60754-2
Evolution of HCl	CEI EN 60754-2
Fluorine content	CEI EN 60754-3
Toxicity index	CEI EN 50305 § 9.2

TYPE CS 0.35-O				
Item n°	Designation	Cross-section · mm²	Nominal Diameter cable · mm	Nominal cable Weight · kg/km
525TK031603	CS 0.35-O-3	3 x 2 x 0.35	9.8 ÷ 10.8	185
525TK031607	CS 0.35-O-7	7 x 2 x 0.35	12.9 ÷ 14.3	350
525TK031612	CS 0.35-O-12	12 x 2 x 0.35	16.9 ÷ 18.7	585
525TK031614	CS 0.35-O-14	14 x 2 x 0.35	17.8 ÷ 19.7	685
525TK031619	CS 0.35-O-19	19 x 2 x 0.35	19.9 ÷ 22.0	870
525TK031630	CS 0.35-O-30	30 x 2 x 0.35	25.0 ÷ 27.6	1300
525TK031640	CS 0.35-O-40	40 x 2 x 0.35	28.5 ÷ 31.5	1710

TYPE CS 0.50-O				
Item n°	Designation	Cross-section · mm²	Nominal Diameter cable · mm	Nominal cable Weight · kg/km
530TK031603	CS 0.50-O-3	3 x 2 x 0.50	10.1 ÷ 11.1	205
530TK031607	CS 0.50-O-7	7 x 2 x 0.50	13.2 ÷ 14.6	385
530TK031612	CS 0.50-O-12	12 x 2 x 0.50	17.5 ÷ 19.3	640
530TK031616	CS 0.50-O-16	14 x 2 x 0.50	18.5 ÷ 20.4	720
530TK031620	CS 0.50-O-20	19 x 2 x 0.50	20.8 ÷ 23.0	955
530TK031630	CS 0.50-O-30	30 x 2 x 0.50	29.5 ÷ 28.6	1430
530TK031640	CS 0.50-O-40	40 x 2 x 0.50	29.3 ÷ 32.4	1880

TYPE CS 1.0-O				
Item n°	Designation	Cross-section · mm²	Nominal Diameter cable · mm	Nominal cable Weight · kg/km
540TK031603	CS 1.0-O-3	3 x 2 x 1	11.4 ÷ 12.6	260
540TK031607	CS 1.0-O-7	7 x 2 x 1	15.0 ÷ 16.6	510
540TK031612	CS 1.0-O-12	12 x 2 x 1	19.9 ÷ 22.0	830
540TK031614	CS 1.0-O-14	14 x 2 x 1	21.1 ÷ 23.4	970
540TK031619	CS 1.0-O-19	19 x 2 x 1	23.8 ÷ 26.3	1290
540TK031630	CS 1.0-O-30	30 x 2 x 1	29.9 ÷ 33.0	2035
540TK031640	CS 1.0-O-40	40 x 2 x 1	34.3 ÷ 38.0	2670

TYPE CS 1.50-O				
Item n°	Designation	Cross-section · mm²	Nominal Diameter cable · mm	Nominal cable Weight · kg/km
545TK031603	CS 1.5-O-3	3 x 2 x 1.5	13.6 ÷ 15.0	365
545TK031607	CS 1.5-O-7	7 x 2 x 1.5	18.0 ÷ 19.9	740
545TK031612	CS 1.5-O-12	12 x 2 x 1.5	24.4 ÷ 27.0	1240
545TK031614	CS 1.5-O-14	14 x 2 x 1.5	25.8 ÷ 28.5	1410
545TK031619	CS 1.5-O-19	19 x 2 x 1.5	29.3 ÷ 32.4	1870
545TK031630	CS 1.5-O-30	30 x 2 x 1.5	36.7 ÷ 40.5	2890
545TK031640	CS 1.5-O-40	40 x 2 x 1.5	42.1 ÷ 46.5	3795

Add letter S to the item number for "enhanced shielding effectiveness" (EMC requirements).

AWG cross section are available on request, in compliance with NAV-80-6145-0003-14-00B000, as following examples:

TYPE CS 22-O				
Item n°	Designation	Cross-section AWG	Nominal Diameter cable · mm	Nominal cable Weight · kg/km
524TK061602	CS 22-O-2	2 x 2 x 22 (0.33)	8.3 ÷ 9.1	119
524TK061603	CS 22-O-3	3 x 2 x 22 (0.33)	9.1 ÷ 10.0	155
524TK061607	CS 22-O-7	7 x 2 x 22 (0.33)	12.4 ÷ 13.3	290
524TK061610	CS 22-O-10	10 x 2 x 22 (0.33)	15.7 ÷ 16.7	403
524TK061614	CS 22-O-14	14 x 2 x 22 (0.33)	17.0 ÷ 18.2	509
524TK061619	CS 22-O-19	19 x 2 x 22 (0.33)	19.2 ÷ 20.4	675
524TK061624	CS 22-O-24	24 x 2 x 22 (0.33)	22.1 ÷ 23.5	842
524TK061630	CS 22-O-30	30 x 2 x 22 (0.33)	24.5 ÷ 26.1	957
524TK061640	CS 22-O-40	40 x 2 x 22 (0.33)	27.0 ÷ 29.0	1323

TYPE CS 20-O				
Item n°	Designation	Cross-section AWG	Nominal Diameter cable · mm	Nominal cable Weight · kg/km
531TK061603	CS 20-O-3	3 x 2 x 20 (0.59)	10.0 ÷ 11.3	216
531TK061607	CS 20-O-7	7 x 2 x 20 (0.59)	13.3 ÷ 15.1	389
531TK061612	CS 20-O-12	12 x 2 x 20 (0.59)	17.8 ÷ 19.6	618
531TK061619	CS 20-O-19	19 x 2 x 20 (0.59)	21.2 ÷ 23.4	928

TYPE CS 18-O				
Item n°	Designation	Cross-section AWG	Nominal Diameter cable · mm	Nominal cable Weight · kg/km
538TK061603	CS 18-O-3	3 x 2 x 18 (0.93)	11.6 ÷ 12.7	259
538TK061607	CS 18-O-7	7 x 2 x 18 (0.93)	15.5 ÷ 17.0	478
538TK061612	CS 18-O-12	12 x 2 x 18 (0.93)	20.6 ÷ 22.5	797
538TK061619	CS 18-O-19	19 x 2 x 18 (0.93)	24.8 ÷ 26.9	1207
538TK061630	CS 18-O-30	30 x 2 x 18 (0.93)	31.0 ÷ 33.4	1796

Add letter S to the item number for "enhanced shielding effectiveness" (EMC requirements).

Example of designations:
the code CS 0.35-O-12 identifies a cable, with 12 shielded two-core (CG-S), with components of 0.35 mm², with overall shield (O).

TK - TYPE CS-A - SPECIFICATION SHEET N. 17

Miniaturized and flexible multi-pair armored electrical cable, with individually shielded pairs and low toxicity. Cable for general use - 300/500 V

characteristics

CONSTRUCTION

Conductor	concentric tinned copper conductor according ASTM B33
Insulation	double layer with special compound, white and blue
Pairs	single cores are twisted into pairs
Individual shield	tinned copper wire braid on each pair
Pair sheath	halogen free compound, black with white numbers
Armour	aluminium braid
Overall inner sheath	halogen free compound
Sheath	crosslinked compound, type EM104 according to Standard EN 50306-1. Colour black according to NAV80 std or coloured on request

TECHNICAL DATA

Temperature range	-40°C ÷ 90°C
Minimum bending radius	5 x outer diameter (installation)

REFERENCE STANDARDS

High resistance to oils and fuels	CEI EN 50305 § 8.1 CEI EN 60811-404, IRM 902 - IRM 903
Flame retardancy	CEI EN 60332-1-2
Fire propagation	CEI EN 60332-3-22 Cat. A
Smoke emission	CEI EN 61034-1 – CEI EN 61034-2
Emission of acid and corrosive gases	CEI EN 60754-2
Evolution of HCl	CEI EN 60754-2
Fluorine content	CEI EN 60754-3
Toxicity index	CEI EN 50305 § 9.2

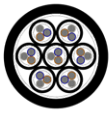
TYPE CS 0.50-A				
Item n°	Designation	Cross-section · mm²	Nominal Diameter cable · mm	Nominal cable Weight · kg/km
830TK031703	CS 0.50-A-3	3 x 2 x 0.50	12.6 ÷ 14.0	275
830TK031707	CS 0.50-A-7	7 x 2 x 0.50	15.9 ÷ 17.6	470
830TK031712	CS 0.50-A-12	12 x 2 x 0.50	20.3 ÷ 22.5	735
830TK031719	CS 0.50-A-19	19 x 2 x 0.50	23.6 ÷ 26.1	1040
830TK031730	CS 0.50-A-30	30 x 2 x 0.50	29.0 ÷ 32.1	1550
830TK031740	CS 0.50-A-40	40 x 2 x 0.50	32.5 ÷ 36.0	1975

TYPE CS 1.0-A				
Item n°	Designation	Cross-section · mm²	Nominal Diameter cable · mm	Nominal cable Weight · kg/km
840TK031703	CS 1.0-A-3	3 x 2 x 1	14.1 ÷ 15.6	340
840TK031707	CS 1.0-A-7	7 x 2 x 1	17.9 ÷ 19.8	610
840TK031712	CS 1.0-A-12	12 x 2 x 1	23.1 ÷ 25.6	970
840TK031719	CS 1.0-A-19	19 x 2 x 1	27.0 ÷ 29.8	1400
840TK031730	CS 1.0-A-30	30 x 2 x 1	33.4 ÷ 37.0	2050

Example of designations: the code CS 0.50-A-7 identifies a cable, with 7 shielded two-core (CG-S), with components of 0.50 mm², with armor (A).

TK - TYPE TS-O - SPECIFICATION SHEET N. 18

Miniaturized and flexible multi-triad shielded electrical cable, with individually shielded triads and low toxicity. Cable for general use - 300/500 V



characteristics

CONSTRUCTION	**Conductor**	concentric tinned copper conductor according ASTM B33
	Insulation	double layer with special compound, white, blue and orange
	Triads	single cores are twisted into triads
	Individual shield	tinned copper wire braid on each pair
	Triad sheath	halogen free compound black with white numbers
	Overall shield	tinned copper wire braid
	Sheath	crosslinked compound, type EM104 according to Standard EN 50306-1. Colour black according to NAV80 std or coloured on request
TECHNICAL DATA	**Temperature range**	-40°C ÷ 90°C
	Minimum bending radius	5 x outer diameter (installation)
REFERENCE STANDARDS	**High resistance to oils and fuels**	CEI EN 50305 § 8.1 CEI EN 60811-404, IRM 902 - IRM 903
	Flame retardancy	CEI EN 60332-1-2
	Fire Propagation	CEI EN 60332-3-22 Cat. A
	Smoke emission	CEI EN 61034-1 – CEI EN 61034-2
	Emission of acid and corrosive gases	CEI EN 60754-2
	Evolution of HCl	CEI EN 60754-2
	Fluorine content	CEI EN 60754-3
	Toxicity index	CEI EN 50305 § 9.2

TYPE TS 0.35-O				
Item n°	Designation	Cross-section AWG	Nominal Diameter cable · mm	Nominal cable Weight · kg/km
525TK031803	TS 0.35-O-3	3 x 3 x 0.35	10.2 ÷ 11.2	210
525TK031807	TS 0.35-O-7	7 x 3 x 0.35	13.2 ÷ 14.6	395
525TK031810	TS 0.35-O-10	10 x 3 x 0.35	16.8 ÷ 18.5	570
525TK031814	TS 0.35-O-14	14 x 3 x 0.35	18.5 ÷ 20.4	765
525TK031819	TS 0.35-O-19	19 x 3 x 0.35	20.8 ÷ 23.0	1015
525TK031830	TS 0.35-O-30	30 x 3 x 0.35	27.7 ÷ 30.6	1535
TYPE TS 0.50-O				
Item n°	Designation	Cross-section · mm²	Nominal Diameter cable · mm	Nominal cable Weight · kg/km
530TK031803	TS 0.50-O-3	3 x 3 x 0.50	10.6 ÷ 11.7	215
530TK031807	TS 0.50-O-7	7 x 3 x 0.50	14.0 ÷ 15.5	415
530TK031810	TS 0.50-O-10	10 x 3 x 0.50	17.9 ÷ 19.8	590
530TK031814	TS 0.50-O-14	14 x 3 x 0.50	19.5 ÷ 21.5	790
530TK031819	TS 0.50-O-19	19 x 3 x 0.50	21.7 ÷ 24.0	1055
530TK031830	TS 0.50-O-30	30 x 3 x 0.50	28.8 ÷ 31.8	1690
TYPE TS 1.0-O				
Item n°	Designation	Cross-section · mm²	Nominal Diameter cable · mm	Nominal cable Weight · kg/km
540TK031803	TS 1.0-O-3	3 x 3 x 1	12.2 ÷ 13.5	300
540TK031807	TS 1.0-O-7	7 x 3 x 1	16.3 ÷ 18.0	590
540TK031810	TS 1.0-O-10	10 x 3 x 1	21.7 ÷ 24.0	870
540TK031814	TS 1.0-O-14	14 x 3 x 1	23.1 ÷ 25.5	1175
540TK031819	TS 1.0-O-19	19 x 3 x 1	25.3 ÷ 27.9	1590

Add letter S to the item number for "enhanced shielding effectiveness" (EMC requirements).

Example of designations:
the code TS 0.35-O-7 identifies a cable, with 7 shielded three-core (TG-S), with components of 0.35 mm², with overall shield (O).

TK - TYPE CS-A - SPECIFICATION SHEET N. 19

Miniaturized and flexible multi-triad armored electrical cable, with individually shielded triads and low toxicity. Cable for general use - 300/500 V

characteristics

CONSTRUCTION

Conductor	concentric tinned copper conductor according ASTM B33
Insulation	double layer with special compound, white, blue and orange
Triads	single cores are twisted into triads
Individual shield	tinned copper wire braid on each pair
Triad sheath	halogen free compound black with white numbers
Overall inner sheath	halogen free compound
Armour	aluminium wire braid
Sheath	crosslinked compound, type EM104 according to Standard EN 50306-1. Colour black according to NAV80 std or coloured on request

TECHNICAL DATA

Temperature range	-40°C ÷ 90°C
Minimum bending radius	5 x outer diameter (installation)

REFERENCE STANDARDS

High resistance to oils and fuels	CEI EN 50305 § 8.1 CEI EN 60811-404, IRM 902 - IRM 903
Flame retardancy	CEI EN 60332-1-2
Fire Propagation	CEI EN 60332-3-22 Cat. A
Smoke emission	CEI EN 61034-1 – CEI EN 61034-2
Emission of acid and corrosive gases	CEI EN 60754-2
Evolution of HCl	CEI EN 60754-2
Fluorine content	CEI EN 60754-3
Toxicity index	CEI EN 50305 § 9.2

TYPE TS 0.50-O				
Item n°	Designation	Cross-section · mm²	Nominal Diameter cable · mm	Nominal cable Weight · kg/km
830TK031903	TS 0.50-A-3	3 x 3 x 0.50	13.2 ÷ 14.6	300
830TK031907	TS 0.50-A-7	7 x 3 x 0.50	16.7 ÷ 18.5	520
830TK031910	TS 0.50-A-10	10 x 3 x 0.50	20.8 ÷ 23.0	735
830TK031914	TS 0.50-A-14	14 x 3 x 0.50	22.4 ÷ 24.8	920
830TK031919	TS 0.50-A-19	19 x 3 x 0.50	24.8 ÷ 27.4	1170
830TK031930	TS 0.50-A-30	30 x 3 x 0.50	31.3 ÷ 34.6	1765
TYPE TS 1.0-O				
Item n°	Designation	Cross-section · mm²	Nominal Diameter cable · mm	Nominal cable Weight · kg/km
840TK031903	TS 1.0-A-3	3 x 3 x 1	14.7 ÷ 16.3	375
840TK031907	TS 1.0-A-7	7 x 3 x 1	19.1 ÷ 21.1	715
840TK031910	TS 1.0-A-10	10 x 3 x 1	24.0 ÷ 26.6	1000
840TK031914	TS 1.0-A-14	14 x 3 x 1	25.5 ÷ 28.2	1275
840TK031919	TS 1.0-A-19	19 x 3 x 1	28.3 ÷ 31.3	1635

Add letter S to the item number for “enhanced shielding effectiveness” (EMC requirements).

Example of designations:
the code TS 0.50-A-19 identifies a cable, with 19 shielded three-core (TG-S), with components of 0.50 mm², with armor (A).

ANNEX A - DESIGNATION OF CABLES

Tables of correspondence with cancelled NAV-80-6145-0002-40-00B000 Specification

SINGLE CORE TYPE UG-N: CORRESPONDENT DESIGNATIONS					
DESIGNATION – P/N CURRENT STANDARD			DESIGNATION – P/N NAV-80-6145-0002-40-00B000		
Designation	section mm² nom.	formation n° x diam. wire mm	Designation	section mm² nom.	formation n° x diam. wire mm
			UG-N-26-Y	0.15	19x0.10
			UG-N-24-Y	0.21	19x0.12
UG-N-0.35-Y	0.35	19x0.16	UG-N-22-Y	0.33	19x0.15
UG-N-0.50-Y	0.50	19x0.18	UG-N-20-Y	0.59	19x0.20
UG-N-1.0-Y	1.00	19x0.25	UG-N-18-Y	0.93	19x0.25
			UG-N-16-Y	1.34	19x0.30
UG-N-1.5-Y	1.50	37x0.23			
			UG-N-14-Y	1.82	37x0.25
UG-N-2.5-Y	2.50	37x0.30	UG-N-12-Y	2.61	37x0.30

COLOR Guidance LETTER "y"	
0: black	5: green
1: brown	6: blue
2: red	7: violet
3: orange	8: grey
4: yellow	9: white

SINGLE CORE TYPE UG-N: EQUIVALENCE NATO CODE			
NUC / NSN	Previous P/N	New P/N	Note
6145-15-121-8383	UG-N-12-0	UG-N-2.5-0	black
6145-15-144-9694	UG-N-12-9	UG-N-2.5-9	white
6145-15-121-8372	UG-N-14-0	=	black - Out of standard for section= 1.82 mm²
6145-15-121-8373	UG-N-14-2	=	red - Out of standard for section= 1.82 mm²
6145-15-144-9692	UG-N-14-9	=	white - Out of standard for section= 1.82 mm²
6145-15-121-8377	UG-N-16-0	UG-N-1.5-0	black
6145-15-121-8379	UG-N-16-5	UG-N-1.5-5	green
6145-15-121-8378	UG-N-16-6	UG-N-1.5-6	blue
6145-15-144-9690	UG-N-16-9	UG-N-1.5-9	white
6145-15-144-9688	UG-N-18-9	UG-N-1.0-9	white
6145-15-121-8406	UG-N-20-0	UG-N-0.50-0	black
6145-15-121-8408	UG-N-20-5	UG-N-0.50-5	green
6145-15-121-8409	UG-N-20-6	UG-N-0.50-6	blue
6145-15-150-9482	UG-N-20-9	UG-N-0.50-9	white
6145-15-121-8402	UG-N-22-6	UG-N-0.35-6	blue
6145-15-150-9483	UG-N-22-9	UG-N-0.35-9	white
6145-15-121-8388	UG-N-26-5	=	green - Out of standard for section= 0.15 mm²

SINGLE CORE SHIELDED TYPE UG-S: CORRESPONDENT DESIGNATIONS					
DESIGNATION – P/N CURRENT STANDARD			DESIGNATION – P/N NAV-80-6145-0002-40-00B000		
Designation	section mm² nom.	formation n° x diam. wire mm	Designation	section mm² nom.	formation n° x diam. wire mm
			UG-S-26-Y	0.15	19x0.10
			UG-S-24-Y	0.21	19x0.12
UG-S-0.35-Y	0.35	19x0.16	UG-S-22-Y	0.33	19x0.15
UG-S-0.50-Y	0.50	19x0.18	UG-S-20-Y	0.59	19x0.20
UG-S-1.0-Y	1.00	19x0.25	UG-S-18-Y	0.93	19x0.25
UG-S-1.5-Y	1.50	37x0.23	UG-S-16-Y	1.34	19x0.30
			UG-S-14-Y	1.82	37x0.25
UG-S-2.5-Y	2.50	37x0.30	UG-S-12-Y	2.61	37x0.30

COLOR Guidance LETTER "y"	
0: black	5: green
1: brown	6: blue
2: red	7: violet
3: orange	8: grey
4: yellow	9: white

PAIR SHIELDED TYPE CG-S: CORRESPONDENT DESIGNATIONS					
DESIGNATION – P/N CURRENT STANDARD			DESIGNATION – P/N NAV-80-6145-0002-40-00B000		
Designation	section mm² nom.	formation n° x diam. wire mm	Designation	section mm² nom.	formation n° x diam. wire mm
			CG-S-26-Y/Y	0.15	19x0.10
			CG-S-24-Y/Y	0.21	19x0.12
CG-S-0.35-Y/Y	0.35	19x0.16	CG-S-22-Y/Y	0.33	19x0.15
CG-S-0.50-Y/Y	0.50	19x0.18	CG-S-20-Y/Y	0.59	19x0.20
CG-S-1.0-Y/Y	1.00	19x0.25	CG-S-18-Y/Y	0.93	19x0.25
CG-S-1.5-Y/Y	1.50	37x0.23	CG-S-16-Y/Y	1.34	19x0.30
			CG-S-14-Y/Y	1.82	37x0.25
CG-S-2.5-Y/Y	2.50	37x0.30	CG-S-12-Y/Y	2.61	37x0.30

COLOR Guidance LETTER "y"	
0: black	5: green
1: brown	6: blue
2: red	7: violet
3: orange	8: grey
4: yellow	9: white

TRIADS SHIELDED TYPE TG-S: CORRESPONDENT DESIGNATIONS					
DESIGNATION – P/N CURRENT STANDARD			DESIGNATION – P/N NAV-80-6145-0002-40-00B000		
Designation	section mm² nom.	formation n° x diam. wire mm	Designation	section mm² nom.	formation n° x diam. wire mm
			TG-S-26-Y/Y/Y	0.15	19x0.10
			TG-S-24-Y/Y/Y	0.21	19x0.12
TG-S-0.35-Y/Y/Y	0.35	19x0.16	TG-S-22-Y/Y/Y	0.33	19x0.15
TG-S-0.50-Y/Y/Y	0.50	19x0.18	TG-S-20-Y/Y/Y	0.59	19x0.20
TG-S-1.0-Y/Y/Y	1.00	19x0.25	TG-S-18-Y/Y/Y	0.93	19x0.25
TG-S-1.5-Y/Y/Y	1.50	37x0.23	TG-S-16-Y/Y/Y	1.34	19x0.30
			TG-S-14-Y/Y/Y	1.82	37x0.25
TG-S-2.5-Y/Y/Y	2.50	37x0.30	TG-S-12-Y/Y/Y	2.61	37x0.30

COLOR Guidance LETTER "y"	
0: black	5: green
1: brown	6: blue
2: red	7: violet
3: orange	8: grey
4: yellow	9: white

ANNEX A - DESIGNATION OF CABLES

TRIADS SHIELDED TYPE TG-S: EQUIVALENCE NATO CODE			
NUC / NSN	Previous P/N	New P/N	Note
6145-15-150-9481	TG-S-20-9/6/3	TG-S-0.50-9/6/3	white – blue - orange
6145-15-150-9480	TG-S-18-9/6/3	TG-S-1.00-9/6/3	white – blue - orange

MULTI-CORE CABLE OF POWER TYPE FN-nn: NATO CODE AND CORRESONDENT DESIGNATIONS			
NUC / NSN	Previous P/N	New P/N	Note
6145-15-142-4073	FN 02-A-12	FN 02-A-2.5	
6145-15-142-6114	FN 02-A-14	=	Out of standard for section= 1.82 mm²
6145-15-142-6113	FN 02-A-16	FN 02-A-1.5	
=	=	FN 02-A-1.0	
6145-15-153-4624	FN 02-N-12	FN 02-N-2.5	
6145-15-150-9474	FN 02-N-14		Out of standard for section= 1.82 mm²
6145-15-153-4625	FN 02-N-16	FN 02-N-1.5	
=	=	FN 02-N-1.0	
6145-15-153-4626	FN 02-O-12	FN 02-O-2.5	
6145-15-150-9473	FN 02-O-14	=	Out of standard for section= 1.82 mm²
6145-15-143-0053	FN 02-O-16	FN 02-O-1.5	
=	=	FN 02-O-1.0	
6145-15-142-4074	FN 03-A12	FN 03-A-2.5	
6145-15-142-6116	FN 03-A-14	=	Out of standard for section= 1.82 mm²
6145-15-142-6115	FN 03-A-16	FN 03-A-1.5	
=	=	FN 03-A-1.0	
6145-15-154-7305	FN 03-N-12	FN 03-N-2.5	
6145-15-153-1367	FN 03-N-14	=	Out of standard for section= 1.82 mm²
6145-15-154-7306	FN 03-N-16	FN 03-N-1.5	
=	=	FN 03-N-1.0	
6145-15-150-9475	FN 03-O-12	FN 03-O-2.5	
6145-15-150-9476	FN 03-O-14	=	Out of standard for section= 1.82 mm²
6145-15-150-9477	FN 03-O-16	FN 03-O-1.5	
=	=	FN 03-O-1.0	
6145-15-142-4075	FN 04-A-12	FN 04-A-2.5	
6145-15-142-6118	FN 04-A-14	=	Out of standard for section= 1.82 mm²
6145-15-142-6117	FN 04-A-16	FN 04-A-1.5	
=	=	FN 04-A-1.0	
6145-15-154-7307	FN 04-N-12	FN 04-N-2.5	
6145-15-150-9479	FN 04-N-14	=	Out of standard for section= 1.82 mm²
6145-15-154-7308	FN 04-N-16	FN 04-N-1.5	
=	=	FN 04-N-1.0	
6145-15-150-9478	FN 04-O-12	FN 04-O-2.5	
6145-15-153-4627	FN 04-O-14	=	Out of standard for section= 1.82 mm²
6145-15-153-4628	FN 04-O-16	FN 04-O-1.5	
=	=	FN 04-O-1.0	

CABLE OF COMUNICATION AND SIGNALING CORRESONDENT DESIGNATIONS

For all the multi-core cables for signaling and communication, the correspondence of the designations is obtained in an immediate way replacing the values present in the field relative to the size of the conductors (paragraph 3.1.2) with the new values normalized in mm² as indicated in the following table:

Designation of previous size	Actual size in mm²
22	0.35
20	0.50
18	1.0
16	1.5

BUILDING VARIATIONS

For building variations related only to the global shield, to obtain higher shielding efficiencies, the symbols to be used in the field of the cladding sheath (paragraph 3.1.2) will be the following:

- **OO** to indicate the optimized double shield (example: CS 0.35-OO-7)
- **K** to indicate superschermat with double braid and interposed "mumetal" tape (example: CS 0.35-K-7)

For the building variations of cables with a global shield to with added armor (paragraph 3.3.6), the symbol to be used in the field of sheathing cladding (paragraph 3.1.2) will be "OA" (example: the TS 1.0-OA-10 designation refers to a multi-core cable consisting of 10 individually-shielded cross- sections of 1,00 mm², with an optimized, reinforced global shield. Construction according to specification sheet no. 18).

NATO CODE AND CORRESONDENT DESIGNATIONS			
NUC / NSN	Previous P/N	New P/N	Note
6145-15-150-9485	US 20-O-19	US 0.50-O-19	
6145-15-154-7328	UN 20-A-7	UN 0.50-A-7	
6145-15-154-7321	UN 20-A-10	UN 0.50-A-10	
6145-15-154-7322	UN 20-A-14	UN 0.50-A-14	
6145-15-154-7323	UN 20-A-19	UN 0.50-A-19	
6145-15-154-7324	UN 20-A-24	UN 0.50-A-24	
6145-15-154-7325	UN 20-A-30	UN 0.50-A-30	Out of standard= 30 core
6145-15-154-7326	UN 20-A-37	UN 0.50-A-37	
6145-15-154-7327	UN 20-A-44	UN 0.50-A-44	
6145-15-150-9484	UN 20-N-19	UN 0.50-N-19	
6145-15-154-7329	UN 20-N-24	UN 0.50-N-24	
6145-15-154-7330	UN 20-O-7	UN 0.50-O-7	
6145-15-154-7317	UN 20-O-10	UN 0.50-O-10	
6145-15-154-7318	UN 20-O-14	UN 0.50-O-14	
6145-15-154-7319	UN 20-O-19	UN 0.50-O-19	
6145-15-154-7320	UN 20-O-24	UN 0.50-O-24	
6145-15-121-8413	UN 18-O-10	UN 1.0-O-10	
6145-15-154-7316	UN 18-O-14	UN 1.0-O-14	
6145-15-121-8412	UN 18-O-24	UN 1.0-O-24	
6145-15-121-8411	UN 18-O-37	UN 1.0-O-37	

These images are for illustrative purposes.

STD. REF. NAV-80-6145-0006-13-01B000

Technical specification of suitability for use of zero-halogen electric interconnection cables for replacements of MIL-DTL-24640 cables, without jelly filler, suitable for naval shipboard applications

The cables that comply with NAV-80-6145-0006-13-01B000, are made with shielding materials and techniques that comply with the national reference standards. The conductors of these cables have cross-sections in AWG instead of in square millimetres. The cables are defined as “halogen-free equivalent” and they are physically and electrically interchangeable with MIL-DTL-24640 cables (“low-halogen” cables). They refer to MIL-DTL-24640 cables for configuration, field of use and dimensions. The cables also comply with the general requirements for on-board electrical systems (NAV-80-6160-0024-14-00B000) and with the RINAMIL regulations.

TYPES OF CABLES THAT ARE APPLICABLE

This Specification gives the construction features and the test methods for the applicable cable types. The table below gives the cable types. The table also gives the functional equivalence with the corresponding MIL cables that contain halogens. The field of application for all cable types is as follows:

- Operating temperature: single conductors -45 °C + 105 °C multi-core cables -40 °C + 90 °C
- Working voltage: 300/500 Vac
- Light-weight construction - Double layered insulations

The table that follows gives the correspondance between the specification sheets of MIL-DTL-24640 and the families of cables of NAV-80-6145-0003-14-00B000

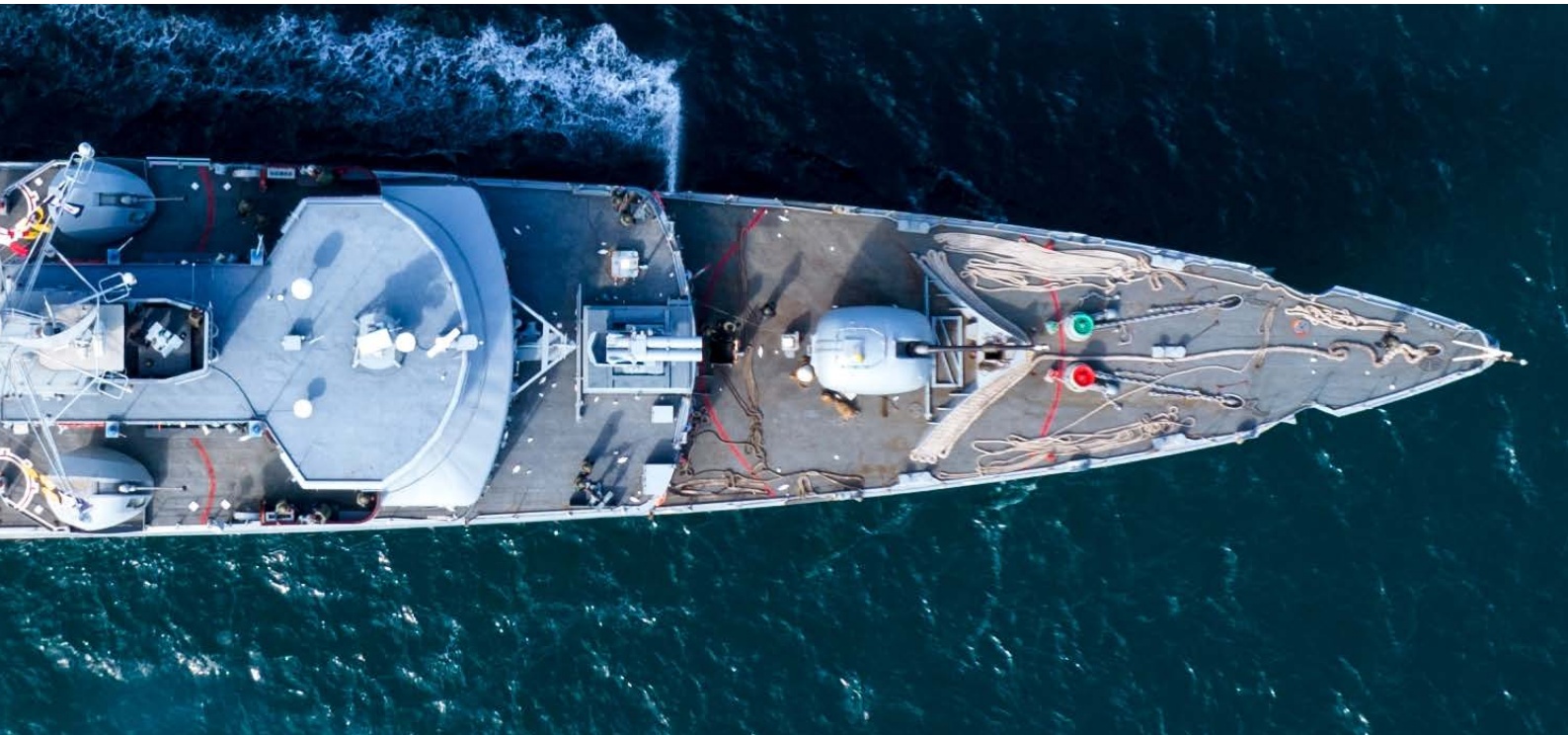


Table 1: correspondance between the types of cables and the related specification sheets of MIL-DTL-24640 and the families of cables of NAV-80-6145-0003-14-00B000		
Type MIL-DTL.24640	Specification for inspection tests	Families of cables of NAV-80-6145-0003-14-00B000
DX DXO DXA	M24640/1	FN02-N FN02-O FN02-A
TX TXO TXA	M24640/2	FN03-N FN03-O FN03-A
FX FXO FXA	M24640/3	FN04-N FN04-O FN04-A
5XO	M24640/26	FN05-O
TTX TTXA	M24640/4	CN20-N CN20-A
TTXS TTXSO TTXSA	M24640/5	CS20-N CS20-O CS20-A
2XAO	M24640/6	CN22-O
1XMSO	M24640/7	US22-O
MXO	M24640/8	UN20-O
2XS 2XSO 2XSA	M24640/9	CS22-N CS22-O CS22-A
MXSO	M24640/10	UN16-O
3XS 3XSA	M24640/11	TS18-N TS-18-A
2XO	M24640/12	CN26-O
2XSXO	M24640/13	CS26-O

Note: For multiple formations, there can be designations that are not in these tables (only if they comply with all the other constructive parameters in the Specification Sheet and in the general introduction of the Specification). The tables are therefore only examples of the most frequent configurations. They do not show all the possible compliant configurations.
For multiple formations with conductors that have cross-sections that are not in the Specification Sheets, designations that are not in these tables are possible. This is possible only if they comply with all the other constructive parameters for the type in the relevant Specification.
These cables will be compliant with the relevant Specification.

These images are for illustrative purposes.

STD. REF. NAV-80-6145-0005-13-01B000

Non-toxic electric cables suitable for naval shipboard applications

TK - TYPE NBT AND NG - SPECIFICATION SHEET N. 01

Halogen-free unarmored electrical cables, flame retardant for general use at low voltage 600/1000 V, for energy, power and control.

characteristics

CONSTRUCTION

Conductor	bare copper conductor according ASTM B33, class 5 according to IEC 60228	
Insulation	HEPR according to IEC 60092-360	
Core identification	single core two-core three-core NBT three-core NG four-core NBT four-core NG	black brown-blue brown–black–grey brown–blue–yellow/green brown–black–grey–blue brown–black–grey– yellow/green
Bedding	textile or extruded fillers.	
Sheath	crosslinked compound, type SHF2 according to IEC 60092-360. Colour black according to NAV80 std or coloured on request.	

TECHNICAL DATA

Temperature range	-40°C ÷ 90°C
Minimum bending radius	6 x outer diameter (installation)

REFERENCE STANDARDS

High resistance to oils and fuels	CEI EN 50305 § 8.1 CEI EN 60811-404, IRM 902 - IRM 903
Flame retardancy	CEI EN 60332-1-2
Fire Propagation	CEI EN 60332-3-22 Cat. A
Smoke emission	CEI EN 61034-1 – CEI EN 61034-2
Emission of acid and corrosive gases	CEI EN 60754-2
Evolution of HCl	CEI EN 60754-2
Fluorine content	CEI EN 60754-3
Toxicity index	CEI EN 50305 § 9.2

SINGLE CORE				
Item n°	Designation	Cross-section · mm²	Nominal Diameter cable · mm	Nominal cable Weight · kg/km
245TK050101	NBT 1.5	1 x 1.5	5.2	40
255TK050101	NBT 2.5	1 x 2.5	5.6	50
265TK050101	NBT 4	1 x 4	6.2	70
270TK050101	NBT 6	1 x 6	6.7	90
280TK050101	NBT 10	1 x 10	7.6	140
285TK050101	NBT 16	1 x 16	8.8	200
290TK050101	NBT 25	1 x 25	10.4	300
293TK050101	NBT 35	1 x 35	11.8	400
295TK050101	NBT 50	1 x 50	13	530
297TK050101	NBT 70	1 x 70	15.3	740
298TK050101	NBT 95	1 x 95	17.4	1010
299TK050101	NBT 120	1 x 120	19	1260
29DTK050101	NBT 150	1 x 150	21.2	1540
29FTK050101	NBT 185	1 x 185	23.6	1940
29ITK050101	NBT 240	1 x 240	26.6	2490
29LTK050101	NBT 300	1 x 300	29.5	3130

TWO CORE				
Item n°	Designation	Cross-section · mm²	Nominal Diameter cable · mm	Nominal cable Weight · kg/km
345TK050102	NBT 2X1.5	2x1.5	8.2	90
355TK050102	NBT 2x2.5	2x2.5	9.2	120
365TK050102	NBT 2x4	2x4	10.3	150
370TK050102	NBT 2x6	2x6	11.6	200
380TK050102	NBT 2x10	2x10	13.5	300
385TK050102	NBT 2x16	2x16	15.7	440
390TK050102	NBT 2x25	2x25	19.2	670
393TK050102	NBT 2x35	2x35	23.4	1200
395TK050102	NBT 2x50	2x50	26.3	1500

THREE CORE				
Item n°	Designation	Cross-section · mm²	Nominal Diameter cable · mm	Nominal cable Weight · kg/km
345TK050103	NBT 3x1.5	3x1.5	8.6	100
355TK050103	NBT 3x2.5	3x2.5	9.7	140
365TK050103	NBT 3x4	3x4	10.9	190
370TK050103	NBT 3x6	3x6	12.3	260
380TK050103	NBT 3x10	3x10	14.5	410
385TK050103	NBT 3x16	3x16	16.9	610
390TK050103	NBT 3x25	3x25	20.6	930
393TK050103	NBT 3x35	3x35	24.7	1500
395TK050103	NBT 3x50	3x50	28	2000
397TK050103	NBT 3x70	3x70	33.3	2830
398TK050103	NBT 3x95	3x95	37.3	3780
399TK050103	NBT 3x120	3x120	41.4	4700
39DTK050103	NBT 3x150	3x150	46	5200
39DTK050103	NBT 3x185	3x185	51.5	7200

FOUR CORE				
Item n°	Designation	Cross-section · mm²	Nominal Diameter cable · mm	Nominal cable Weight · kg/km
345TK050104	NBT 4x1.5	4x1.5	9.6	130
355TK050104	NBT 4x2.5	4x2.5	10.6	180
365TK050104	NBT 4x4	4x4	12.1	240
370TK050104	NBT 4x6	4x6	13.5	340
380TK050104	NBT 4x10	4x10	15.9	510
385TK050104	NBT 4x16	4x16	18.6	770
390TK050104	NBT 4x25	4x25	22.9	1180
393TK050104	NBT 4x35	4x35	27.2	1850
395TK050104	NBT 4x50	4x50	31.2	2500
397TK050104	NBT 4x70	4x70	36.7	3550
398TK050104	NBT 4x95	4x95	41.3	4780
399TK050104	NBT 4x120	4x120	46	6000
39DTK050104	NBT 4x150	4x150	51	7350
39DTK050104	NBT 4x185	4x185	57.6	9300

TK - TYPE NBTA AND NGA - SPECIFICATION SHEET NO. 02

Halogen-free armored electrical cables, flame retardant for general use at low voltage 600/1000 V, for energy, power and control.

characteristics

CONSTRUCTION

Conductor	bare copper conductor according ASTM B33, class 5 according to IEC 60228	
Insulation	HEPR according to IEC 60092-360	
Core identification	single core two-core three-core NBTA three-core NGA four-core NBTA four-core NGA	black brown-blue brown–black–grey brown–blue–yellow/green brown–black–grey–blue brown–black–grey– yellow/green
Bedding	textile or extruded fillers.	
Armour	bare copper wire braid having coverage › 90%, if not otherwise stated	
Sheath	crosslinked compound, type SHF2 according to IEC 60092-360. Colour black according to NAV80 std or coloured on request	

TECHNICAL DATA

Temperature range	-40°C ÷ 90°C
Minimum bending radius	6 x outer diameter (installation)

REFERENCE STANDARDS

High resistance to oils and fuels	CEI EN 50305 § 8.1 CEI EN 60811-404, IRM 902 - IRM 903
Flame retardancy	CEI EN 60332-1-2
Fire Propagation	CEI EN 60332-3-22 Cat. A
Smoke emission	CEI EN 61034-1 – CEI EN 61034-2
Emission of acid and corrosive gases	CEI EN 60754-2
Evolution of HCl	CEI EN 60754-2
Fluorine content	CEI EN 60754-3
Toxicity index	CEI EN 50305 § 9.2

SINGLE CORE				
Item n°	Designation	Cross-section · mm²	Nominal Diameter cable · mm	Nominal cable Weight · kg/km
545TK050201	NBTA 1.5	1.5	6.2	65
555TK050201	NBTA 2.5	2.5	6.6	80
565TK050201	NBTA 4	4	7.1	100
570TK050201	NBTA 6	6	7.8	125
580TK050201	NBTA 10	10	8.8	180
585TK050201	NBTA 16	16	9.8	240
590TK050201	NBTA 25	25	11.6	350
593TK050201	NBTA 35	35	12.9	470
595TK050201	NBTA 50	50	15	650
597TK050201	NBTA 70	70	17	890
598TK050201	NBTA 95	95	18.8	1150
599TK050201	NBTA 120	120	20.7	1420
59DTK050201	NBTA 150	150	22.8	1720
59FTK050201	NBTA 185	185	25.3	2120
59ITK050201	NBTA 240	240	28.2	2700
59LTK050201	NBTA 300	300	31.1	3400

TWO CORES				
Item n°	Designation	Cross-section · mm²	Nominal Diameter cable · mm	Nominal cable Weight · kg/km
545TK050202	NBTA 2x1.5	2x1.5	9.4	130
555TK050202	NBTA 2x2.5	2x2.5	10.2	160
565TK050202	NBTA 2x4	2x4	11.6	210
570TK050202	NBTA 2x6	2x6	12.8	280
580TK050202	NBTA 2x10	2x10	15	430
585TK050202	NBTA 2x16	2x16	17.3	600
590TK050202	NBTA 2x25	2x25	20.7	820
593TK050202	NBTA 2x35	2x35	24.6	1370
595TK050202	NBTA 2x50	2x50	27.6	1740

THREE CORES				
Item n°	Designation	Cross-section · mm²	Nominal Diameter cable · mm	Nominal cable Weight · kg/km
545TK050203	NBTA 3x1.5	3x1.5	9.8	150
555TK050203	NBTA 3x2.5	3x2.5	10.7	190
565TK050203	NBTA 3x4	3x4	12.1	250
570TK050203	NBTA 3x6	3x6	13.3	320
580TK050203	NBTA 3x10	3x10	15.8	530
585TK050203	NBTA 3x16	3x16	18.3	750
590TK050203	NBTA 3x25	3x25	21.9	1100
593TK050203	NBTA 3x35	3x35	26.2	1700
595TK050203	NBTA 3x50	3x50	29.4	2260
597TK050203	NBTA 3x70	3x70	34.5	3050
598TK050203	NBTA 3x95	3x95	39.1	4100
599TK050203	NBTA 3x120	3x120	43.2	5100
59DTK050203	NBTA 3x150	3x150	48	6200
59DTK050203	NBTA 3x185	3x185	53.5	7800

FOUR CORES				
Item n°	Designation	Cross-section · mm²	Nominal Diameter cable · mm	Nominal cable Weight · kg/km
545TK050204	NBTA 4x1.5	4x1.5	10.6	180
555TK050204	NBTA 4x2.5	4x2.5	11.7	230
565TK050204	NBTA 4x4	4x4	13.1	300
570TK050204	NBTA 4x6	4x6	15	450
580TK050204	NBTA 4x10	4x10	17.5	640
585TK050204	NBTA 4x16	4x16	20.1	960
590TK050204	NBTA 4x25	4x25	24.2	1380
593TK050204	NBTA 4x35	4x35	28.7	2100
595TK050204	NBTA 4x50	4x50	32.7	2780
597TK050204	NBTA 4x70	4x70	38.5	3970
598TK050204	NBTA 4x95	4x95	43.3	5200
599TK050204	NBTA 4x120	4x120	48.2	6500
59DTK050204	NBTA 4x150	4x150	53.2	7900
59DTK050204	NBTA 4x185	4x185	59.6	9900

AWG cross section are available on request.

TK - TYPE NVD AND NVD-S - SPECIFICATION SHEET N. 03

Halogen-free armored electrical cables, flame retardant and fire resistant for general use at low voltage 600/1000V, for energy, power “Vessel in Distress”, (Version -S for submerged service)

characteristics

CONSTRUCTION

Conductor	Bare copper conductor according to ASTM B33, class 5 according to IEC 60228	
Insulation	Fire Barrier Tape + XLPE according to IEC 60092-360	
Core identification	single core two-core three-core four-core	black brown-blue brown–black–grey brown-black-grey-blue
Bedding	Tapes and/or extruded filler	
EMC Shield (if any)	metallic/plastic tape + tinned copper wire braid having coverage ≥ 90%	
Inner Covering	halogen free compound or tapes	
Armour	bare copper wire braid having coverage > 90%, if not otherwise stated	
Sheath	crosslinked compound, type SHF2 according to IEC 60092-360. Colour orange according to NAV80 std or coloured on request	

TECHNICAL DATA

Temperature range	-40°C ÷ + 90°C
Minimum bending radius	6 x outer diameter (installation)

REFERENCE STANDARDS

High resistance to oils and fuels	CEI EN 50305 par.8.1 CEI EN 60811-404 – IRM 902 – IRM903
Flame retardancy	CEI EN 60332-1-2
Fire propagation	CEI EN 60332-3-22 Cat. A
Fire Resistance	CEI EN 50200 (180 min) CEI EN 50200 Annex E (90 min)
Emission of acid and corrosive gases	CEI EN 60754-2
Evolution of HCl	CEI EN 60754-1
Fluorine content	CEI EN 60754-3
Toxicity index	CEI EN 50305 par.9.2

SINGLE CORE				
Item n°	Designation	Cross-section · mm²	Nominal Diameter cable · mm	Nominal cable Weight · kg/km
845TK050301	NVD 1x1.5	1x1.5	6.8	80
855TK050301	NVD 1x2.5	1x2.5	7.2	100
865TK050301	NVD 1x4	1x4	7.7	110
870TK050301	NVD 1x6	1x6	8.3	140
880TK050301	NVD 1x10	1x10	9.4	200
885TK050301	NVD 1x16	1x16	10.4	270
890TK050301	NVD 1x25	1x25	12.2	380
893TK050301	NVD 1x35	1x35	13.3	470
895TK050301	NVD 1x50	1x50	15.3	660
897TK050301	NVD 1x70	1x70	17.6	900
898TK050301	NVD 1x95	1x95	19.6	1150
899TK050301	NVD 1x120	1x120	21.3	1450
89DTK050301	NVD 1x150	1x150	23.4	1700
89FTK050301	NVD 1x185	1x185	25.9	2100
89ITK050301	NVD 1x240	1x240	28.8	2750
89LTK050301	NVD 1x300	1x300	31.7	3400

TWO CORES				
Item n°	Designation	Cross-section · mm²	Nominal Diameter cable · mm	Nominal cable Weight · kg/km
845TK050302	NVD 2x1.5	2x1.5	11.8	220
855TK050302	NVD 2x2.5	2x2.5	12.5	260
865TK050302	NVD 2x4	2x4	13.5	310
870TK050302	NVD 2x6	2x6	15.3	430
880TK050302	NVD 2x10	2x10	17.4	590
885TK050302	NVD 2x16	2x16	19.6	780
890TK050302	NVD 2x25	2x25	23.4	1100
893TK050302	NVD 2x35	2x35	25.8	1450
895TK050302	NVD 2x50	2x50	28.8	1850

THREE CORES				
Item n°	Designation	Cross-section · mm²	Nominal Diameter cable · mm	Nominal cable Weight · kg/km
845TK050303	NVD 3x1.5	3x1.5	12.2	240
855TK050303	NVD 3x2.5	3x2.5	13.1	290
865TK050303	NVD 3x4	3x4	14.7	400
870TK050303	NVD 3x6	3x6	16	500
880TK050303	NVD 3x10	3x10	18,.3	690
885TK050303	NVD 3x16	3x16	20.6	940
890TK050303	NVD 3x25	3x25	24.7	1300
893TK050303	NVD 3x35	3x35	27.2	1780
895TK050303	NVD 3x50	3x50	30.4	2270
897TK050303	NVD 3x70	3x70	35.6	3200
898TK050303	NVD 3x95	3x95	40.4	4310
899TK050303	NVD 3x120	3x120	44.4	4450
89DTK050303	NVD 3x150	3x150	52	6440
89FTK050303	NVD 3x185	3x185	54,1	8000

FOUR CORES				
Item n°	Designation	Cross-section · mm²	Nominal Diameter cable · mm	Nominal cable Weight · kg/km
845TK050304	NVD 4x1.5	4x1.5	13.1	270
855TK050304	NVD 4x2.5	4x2.5	14.4	370
865TK050304	NVD 4x4	4x4	15.8	470
870TK050304	NVD 4x6	4x6	17.3	600
880TK050304	NVD 4x10	4x10	19.7	840
885TK050304	NVD 4x16	4x16	22.7	1160
890TK050304	NVD 4x25	4x25	27	1710
893TK050304	NVD 4x35	4x35	29.8	2200
895TK050304	NVD 4x50	4x50	33.8	2900
897TK050304	NVD 4x70	4x70	39.6	4100
898TK050304	NVD 4x95	4x95	44.3	5400
899TK050304	NVD 4x120	4x120	49.2	6700
89DTK050304	NVD 4x150	4x150	54.3	8100
89FTK050304	NVD 4x185	4x185	60.6	10200

Add letter S to the item number for “enhanced shielding effectiveness” (EMC requirements).
NVD-S family Add letter U to the intem number for “submerged service”.

TTK - TYPE NVD/C - SPECIFICATION SHEET N. 3.1

Halogen-free armored electrical cables, flame retardant and fire resistant for general use at low voltage 150/250V, for control and monitoring, power “Vessel in Distress”, (Version -S for submerged service)

characteristics

CONSTRUCTION

Conductor	Bare copper conductor according to ASTM B33, class 5 according to IEC 60228	
Insulation	Fire Barrier Tape + XLPE according to IEC 60092-360	
Core identification	single core multi-pairs single-triad multi-traids multi-cores	white-black white-black with numbers 1-1, 2-2,... white-black-red white-black-red with numbers 1-1-1, 2-2-2, 3-3-3,... black numberes
Bedding (if any)	Tapes and/or extruded filler	
EMC Shield (if any)	metallic/plastic tape + tinned copper wire braid having coverage ≥ 90%	
Inner Covering	halogen free compound or tapes	
Armour	bare copper wire braid having coverage ≥ 90%	
Sheath	crosslinked compound, type SHF2 according to IEC 60092-360. Colour orange according to NAV80 std or coloured on request	

TECHNICAL DATA

Temperature range	-40°C ÷ + 90°C
Minimum bending radius	6 x outer diameter (installation)

REFERENCE STANDARDS

High resistance to oils and fuels	CEI EN 50305 par.8.1 CEI EN 60811-404 – IRM 902 – IRM903
Flame retardancy	CEI EN 60332-1-2
Fire propagation	CEI EN 60332-3-22 Cat. A
Fire Resistance	CEI EN 50200 (180 min) CEI EN 50200 Annex E (90 min)
Emission of acid and corrosive gases	CEI EN 60754-2
Evolution of HCl	CEI EN 60754-1
Fluorine content	CEI EN 60754-3
Toxicity index	CEI EN 50305 par.9.2

DESIGNATION STRUCTURE LL (BASE ELEMENTS)

UN	single cores
US	pairs
CS	pairs individually shielded
TN	triads
TS	triads individually shielded
YY	conductor cross section [mm²]
X	overall screening type
O	overall shield, armoured
A	armouring
N	no shield or armour
nn	number of base elements

examples:
NVD/C 150/250 V – UN – 1,5-OA-07 cable with 7 single cores 1,5 mm²,
overall shielded NVD/C 150/250 V – CS – 0,75-A-12 cable with 12 pairs 0,75 mm²,
individually shielded, armoured

DESIGNATION STRUCTURE				
Item nº	Designation	Cross-section · mm²	Nominal Diameter cable · mm	Nominal cable Weight · kg/km
835TK0531MUA02	NVD/C 2x0.75	2x0.75	10.8	170
840TK0531MUA07	NVD/C 7x1	7x1	13.7	325
840TK0531MUA10	NVD/C 10x1	10x1	16.8	470
840TK0531MUA14	NVD/C 14x1	14x1	17.8	565
840TK0531MUA19	NVD/C 19x1	19x1	19.5	705
840TK0531MUA24	NVD/C 24x1	24x1	22.9	815
840TK0531MUA30	NVD/C 30x1	30x1	23.8	985
845TK0531MUA02	NVD/C 2x1.5	2x1.5	12.2	220
845TK0531MUA03	NVD/C 3x1.5	3x1.5	12.7	240
845TK0531MUA04	NVD/C 4x1.5	4x1.5	13.7	280
845TK0531MUA05	NVD/C 5x1.5	5x1.5	14.4	330
845TK0531MUA07	NVD/C 7x1.5	7x1.5	15.8	460
845TK0531MUA10	NVD/C 10x1.5	10x1.5	19	605
845TK0531MUA14	NVD/C 14x1.5	14x1.5	20.4	685
845TK0531MUA19	NVD/C 19x1.5	19x1.5	23	880
845TK0531MUA20	NVD/C 20x1.5	20x1.5	24.1	945
845TK0531MUA24	NVD/C 24x1.5	24x1.5	25.1	1100
845TK0531MUA30	NVD/C 30x1.5	30x1.5	27.5	1290
855TK0531MUA03	NVD/C 3x2.5	3x2.5	9.15	110
855TK0531MUA04	NVD/C 4x2.5	4x2.5	15	435

Add letter S to the item number for “enhanced shielding effectiveness” (EMC requirements).
NVD-S family Add letter U to the intem number for “submerged service”.

The NVD/C type, in special execution, also at nominal voltage 0.6/1 kV.

TWO CORES				
Item n°	Designation	Cross-section · mm²	Nominal Diameter cable · mm	Nominal cable Weight · kg/km
845TK050302	NVD 2x1.5	2x1.5	11.8	220
855TK050302	NVD 2x2.5	2x2.5	12.5	260
865TK050302	NVD 2x4	2x4	13.5	310
870TK050302	NVD 2x6	2x6	15.3	430
880TK050302	NVD 2x10	2x10	17.4	590
885TK050302	NVD 2x16	2x16	19.6	780
890TK050302	NVD 2x25	2x25	23.4	1100
893TK050302	NVD 2x35	2x35	25.8	1450
895TK050302	NVD 2x50	2x50	28.8	1850

NVD/C UN-yy-OA-nn (multicores, overall shielded, armoured)

THREE CORES				
Item n°	Designation	Cross-section · mm²	Nominal Diameter cable · mm	Nominal cable Weight · kg/km
835TK0531POA02	NVD/C 1x2x0.75	1x2x0.75	11	190
835TK0531POA28	NVD/C 14x2x0.75	14x2x0.75	24	940
835TK0531POA04	NVD/C 2x2x0.75	2x2x0.75	13.7	285
835TK0531POA08	NVD/C 4x2x0.75	4x2x0.75	16,6	440
835TK0531POA14	NVD/C 7x2x0.75	7x2x0.75	19,1	590
835TK0531POA20	NVD/C 10x2x0.75	10x2x0.75	23,7	775
835TK0531POA48	NVD/C 24x2x0.75	24x2x0.75	27,9	1325
840TK0531POA60	NVD/C 30x2x1	30x2x1	29,5	1920
845TK0531POA02	NVD/C 1x2x1.5	1x2x1.5	12,3	250
845TK0531POA04	NVD/C 2x2x1.5	2x2x1.5	15,9	389
845TK0531POA08	NVD/C 4x2x1.5	4x2x1.5	19,3	600
845TK0531POA20	NVD/C 10x2x1.5	10x2x1.5	27.2	1040
845TK0531POA38	NVD/C 19x2x1.5	19x2x1.5	34.7	1860
845TK0531POA60	NVD/C 30x2x1.5	30x2x1.5	31.5	2350

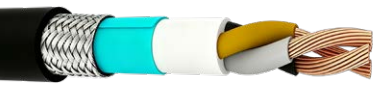
NVD/C UN-yy-OA-nn (multicores, overall shielded, armoured)

FOUR CORES				
Item n°	Designation	Cross-section · mm²	Nominal Diameter cable · mm	Nominal cable Weight · kg/km
830TK0531PIOA62	NVD/C 31x2x0.5	31x2x0.5	29.6	1470
835TK0531PIOA04	NVD/C 2x2x0.75	2x2x0.75	16	415
835TK0531PIOA08	NVD/C 4x2x0.75	4x2x0.75	17.8	1485
835TK0531PIOA14	NVD/C 7x2x0.75	7x2x0.75	20,7	625
835TK0531PIOA20	NVD/C 10x2x0.75	10x2x0.75	26.6	931
835TK0531PIOA38	NVD/C 19x2x0.75	19x2x0.75	29.8	1450
835TK0531PIOA48	NVD/C 24x2x0.75	24x2x0.75	36	1750
845TK0531PIOA04	NVD/C 2x2x1.5	2x2x1.5	17.6	550
845TK0531PIOA08	NVD/C 4x2x1.5	4x2x1.5	21.1	637
845TK0531PIOA24	NVD/C 12x2x1.5	12x2x1.5	25.7	1090
845TK0531PIOA28	NVD/C 14x2x1.5	14x2x1.5	32.6	1700

NVD/C UN-yy-OA-nn (multicores, overall shielded, armoured)

TK - TYPE NVFD - SPECIFICATION SHEET N. 04

Halogen-free electrical cables, with EMC shielding, flame retardant, low voltage 600/1000 V for variable frequency power supply.



characteristics

CONSTRUCTION

Conductor	bare copper conductor according ASTM B33, class 5 according to IEC 60228
Insulation	HEPR or XLPE according to IEC 60092-360
Core identification	three-core brown-black-grey four-core brown-black-grey-blue
Bedding	textile or extruded fillers (LSZH)
EMC Shield	metallic/plastic tape + tinned copper wire braid having coverage >90%
Sheath	crosslinked compound, type SHF2 according to IEC 60092-360. Colour black according to NAV80 std or coloured on request

TECHNICAL DATA

Temperature range	-40°C ÷ 90°C
Minimum bending radius	10 x outer diameter (installation)

REFERENCE STANDARDS

High resistance to oils and fuels	CEI EN 50305 § 8.1 CEI EN 60811-404, IRM 902 - IRM 903
Flame retardancy	CEI EN 60332-1-2
Fire Propagation	CEI EN 60332-3-22 Cat. A
Smoke emission	CEI EN 61034-1 – CEI EN 61034-2
Smoke emission	CEI EN 61034-1 – CEI EN 61034-2
Emission of acid and corrosive gases	CEI EN 60754-2
Evolution of HCl	CEI EN 60754-2
Fluorine content	CEI EN 60754-3
Toxicity index	CEI EN 50305 § 9.2

SINGLE CORE				
Item n°	Designation	Cross-section · mm²	Nominal Diameter cable · mm	Nominal cable Weight · kg/km
565TK050401	NVFD 2x4	1x4	7,2	95
570TK050401	NVFD 2x6	1x6	7,8	120
580TK050401	NVFD 2x10	1x10	8,9	170
585TK050401	NVFD 2x16	1x16	10,1	240
590TK050401	NVFD 2x25	1x25	12,1	355
593TK050401	NVFD 2x35	1x35	13,7	465
595TK050401	NVFD 2x50	1x50	15,3	635
597TK050401	NVFD 2x70	1x70	17,7	855
598TK050401	NVFD 2x95	1x95	19,7	1115
599TK050401	NVFD 2x120	1x120	22	1415
59DTK050401	NVFD 2x150	1x150	23,9	1725
59FTK050401	NVFD 2x185	1x185	26,7	2110
59ITK050401	NVFD 2x240	1x240	29,8	2725

TWO CORES				
Item n°	Designation	Cross-section · mm²	Nominal Diameter cable · mm	Nominal cable Weight · kg/km
565TK050402	NVFD 2x4	2x4	11,6	235
570TK050402	NVFD 2x6	2x6	12,8	300
580TK050402	NVFD 2x10	2x10	15	430
585TK050402	NVFD 2x16	2x16	17,2	605
590TK050402	NVFD 2x25	2x25	21,1	925
593TK050402	NVFD 2x35	2x35	24,5	1240
595TK050402	NVFD 2x50	2x50	27,9	1700
597TK050402	NVFD 2x70	2x70	32,5	2300
598TK050402	NVFD 2x95	2x95	36,3	2965
599TK050402	NVFD 2x120	2x120	40,3	3680
59DTK050402	NVFD 2x150	2x150	44,8	4625
59FTK050402	NVFD 2x185	2x185	50,2	5695
59ITK050402	NVFD 2x240	2x240	55,6	7150
59FTK050403	NVFD 3x185	3x185	54	7805

THREE CORES				
Item n°	Designation	Cross-section · mm²	Nominal Diameter cable · mm	Nominal cable Weight · kg/km
545TK050403	NVFD 3x1.5	3x1.5	10	155
555TK050403	NVFD 3x2.5	3x2.5	11	195
565TK050403	NVFD 3x4	3x4	12.5	255
570TK050403	NVFD 3x6	3x6	13.5	325
580TK050403	NVFD 3x10	3x10	16	535
585TK050403	NVFD 3x16	3x16	18.5	755
590TK050403	NVFD 3x25	3x25	22.2	1105
593TK050403	NVFD 3x35	3x35	26.5	1705
595TK050403	NVFD 3x50	3x50	29.7	2265
597TK050403	NVFD 3x70	3x70	35	3055
598TK050403	NVFD 3x95	3x95	39.5	4105
599TK050403	NVFD 3x120	3x120	43.5	5105
59DTK050403	NVFD 3x150	3x150	48.5	6205
59FTK050403	NVFD 3x185	3x185	54	7805

FOUR CORES				
Item n°	Designation	Cross-section · mm²	Nominal Diameter cable · mm	Nominal cable Weight · kg/km
545TK050404	NVFD 4x1.5	4x1.5	11	185
555TK050404	NVFD 4x2.5	4x2.5	12	235
565TK050404	NVFD 4x4	4x4	13.5	305
570TK050404	NVFD 4x6	4x6	15.3	455
580TK050404	NVFD 4x10	4x10	17.8	645
585TK050404	NVFD 4x16	4x16	20.5	965
590TK050404	NVFD 4x25	4x25	24.5	1385
593TK050404	NVFD 4x35	4x35	29	2105
595TK050404	NVFD 4x50	4x50	33	2785
597TK050404	NVFD 4x70	4x70	38.8	3975
598TK050404	NVFD 4x95	4x95	43.5	5205
599TK050404	NVFD 4x120	4x120	48.5	6505
59DTK050404	NVFD 4x150	4x150	53.5	7905
59FTK050404	NVFD 4x185	4x185	60	9905

TK - TYPE NFO AND NFO-S - SPECIFICATION SHEET N. 05

Halogen-free unarmored electrical cables, flame retardant, low voltage 600/1000V for general use and flexing service (oil resistant if required) (Version -S for submerged service)

characteristics

CONSTRUCTION

Conductor	tinned copper conductor according ASTM B33, class 6 according to IEC 60228
Insulation	EPR or HEPR according to IEC 60092-360
Core identification	according to HD 308 S2
Bedding	textile or extruded fillers (LSZH)
Sheath	crosslinked compound, type SHF2 according to IEC 60092-360. Colour black according to NAV80 std or coloured on request

TECHNICAL DATA

Temperature range	-40°C ÷ 90°C
Minimum bending radius	4 x outer diameter (installation)

REFERENCE STANDARDS

High resistance to oils and fuels	CEI EN 50305 § 8.1 CEI EN 60811-404, IRM 902 - IRM 903
Flame retardancy	CEI EN 60332-1-2
Fire Propagation	CEI EN 60332-3-22 Cat. A
Smoke emission	CEI EN 61034-1 – CEI EN 61034-2
Smoke emission	CEI EN 61034-1 – CEI EN 61034-2
Emission of acid and corrosive gases	CEI EN 60754-2
Evolution of HCl	CEI EN 60754-2
Fluorine content	CEI EN 60754-3
Toxicity index	CEI EN 50305 § 9.2

SINGLE CORE				
Item n°	Designation	Cross-section · mm²	Nominal Diameter cable · mm	Nominal cable Weight · kg/km
245TK050501	NFO 1x1.5	1x1.5	5.2	40
255TK050501	NFO 1x2.5	1x2.5	5.6	50
265TK050501	NFO 1x4	1x4	6.2	70
270TK050501	NFO 1x6	1x6	6.7	90
280TK050501	NFO 1x10	1x10	7.6	140
285TK050501	NFO 1x16	1x16	8.8	200
290TK050501	NFO 1x25	1x25	10.4	300
293TK050501	NFO 1x35	1x35	11.8	400
295TK050501	NFO 1x50	1x50	13	530
297TK050501	NFO 1x70	1x70	15.3	740
298TK050501	NFO 1x95	1x95	17.4	1010
299TK050501	NFO 1x120	1x120	19	1260
29DTK050501	NFO 1x150	1x150	21.2	1540
29FTK050501	NFO 1x185	1x185	23.6	1940
29ITK050501	NFO 1x240	1x240	26.6	2490
29LTK050501	NFO 1x300	1x300	29.5	3130

TWO CORES				
Item n°	Designation	Cross-section · mm²	Nominal Diameter cable · mm	Nominal cable Weight · kg/km
345TK050502	NFO 2x1.5	2x1.5	8.2	90
355TK050502	NFO 2x2.5	2x2.5	9.2	120
365TK050502	NFO 2x4	2x4	10.3	150
370TK050502	NFO 2x6	2x6	11.6	200
380TK050502	NFO 2x10	2x10	13.5	300
385TK050502	NFO 2x16	2x16	15.7	440
390TK050502	NFO 2x25	2x25	19.2	670
393TK050502	NFO 2x35	2x35	23.4	1200
395TK050502	NFO 2x50	2x50	26.3	1500

Add letter S to the item number for “enhanced shielding effectiveness” (EMC requirements).

THREE CORES				
Item n°	Designation	Cross-section · mm²	Nominal Diameter cable · mm	Nominal cable Weight · kg/km
345TK050503	NFO 3x1.5	3x1.5	8.6	100
355TK050503	NFO 3x2.5	3x2.5	9.7	140
365TK050503	NFO 3x4	3x4	10.9	190
370TK050503	NFO 3x6	3x6	12.3	260
380TK050503	NFO 3x10	3x10	14.5	410
385TK050503	NFO 3x16	3x16	16.9	610
390TK050503	NFO 3x25	3x25	20.6	930
393TK050503	NFO 3x35	3x35	24.7	1500
395TK050503	NFO 3x50	3x50	28	2000
397TK050503	NFO 3x70	3x70	33.3	2830
398TK050503	NFO 3x95	3x95	37.3	3780
399TK050503	NFO 3x120	3x120	41.4	4700
39DTK050503	NFO 3x150	3x150	46	5200
39FTK050503	NFO 3x185	3x185	51.5	7200

FOUR CORES				
Item n°	Designation	Cross-section · mm²	Nominal Diameter cable · mm	Nominal cable Weight · kg/km
345TK050504	NFO 4x1.5	4x1.5	9.6	130
355TK050504	NFO 4x2.5	4x2.5	10.6	180
365TK050504	NFO 4x4	4x4	12.1	240
370TK050504	NFO 4x6	4x6	13.5	340
380TK050504	NFO 4x10	4x10	15.9	510
385TK050504	NFO 4x16	4x16	18.6	770
390TK050504	NFO 4x25	4x25	22.9	1180
393TK050504	NFO 4x35	4x35	27.2	1850
395TK050504	NFO 4x50	4x50	31.2	2500
397TK050504	NFO 4x70	4x70	36.7	3550
398TK050504	NFO 4x95	4x95	41.3	4780
399TK050504	NFO 4x120	4x120	46	6000
39DTK050504	NFO 4x150	4x150	51	7350
39FTK050504	NFO 4x185	4x185	57.6	9300

AWG cross section are available on request.
NFO-S family Add letter U to the intem number for “submerged service”

TK - TYPE NSC - SPECIFICATION SHEET N. 06

Halogen-free unarmored electrical cables, flame retardant, low voltage 600/1000 V for shore connection.

AWG cross section are available on request.

characteristics

CONSTRUCTION

Conductor	tinned copper conductor according ASTM B33, class 6 according to IEC 60228
Separator	polyester tape
Insulation	EPR or HEPR according to IEC 60092-360
Core identification	according to HD 308 S2
Inner sheath (for three cores)	Halogen free compound
Reinforcement	antitorsional textile braid, coverage >20%
Sheath	crosslinked compound, type SHF2 according to IEC 60092-360. Colour black according to NAV80 std or coloured on request

TECHNICAL DATA

Temperature range	-40°C ÷ 90°C
Minimum bending radius	4 x outer diameter (static) 6 x outer diameter (dynamic) (installation)

REFERENCE STANDARDS

High resistance to oils and fuels	CEI EN 50305 § 8.1 CEI EN 60811-404, IRM 902 - IRM 903
Flame retardancy	CEI EN 60332-1-2
Fire Propagation	CEI EN 60332-3-22 Cat. A
Smoke emission	CEI EN 61034-1 – CEI EN 61034-2
Smoke emission	CEI EN 61034-1 – CEI EN 61034-2
Emission of acid and corrosive gases	CEI EN 60754-2
Evolution of HCl	CEI EN 60754-2
Fluorine content	CEI EN 60754-3
Toxicity index	CEI EN 50305 § 9.2

SINGLE CORE				
Item n°	Designation	Cross-section · mm²	Nominal Diameter cable · mm	Nominal cable Weight · kg/km
895TK050601	NSC 1x50	1x50	18.5	710
897TK050601	NSC 1x70	1x70	24	1150
898TK050601	NSC 1x95	1x95	25	1350
899TK050601	NSC 1x120	1x120	27	1600
89DTK050601	NSC 1x150	1x150	30	2000
89FTK050601	NSC 1x185	1x185	33.5	2500
89ITK050601	NSC 1x240	1x240	35	3000
89LTK050601	NSC 1x300	1x300	39	3700
89MTK050601	NSC 1x400	1x400	42	4600

THREE CORES				
Item n°	Designation	Cross-section · mm²	Nominal Diameter cable · mm	Nominal cable Weight · kg/km
890TK050603	NSC 3x25	3x25	28	1500
893TK050603	NSC 3x35	3x35	30	1900
895TK050603	NSC 3x50	3x50	38.5	2750
897TK050603	NSC 3x70	3x70	47	4100
898TK050603	NSC 3x95	3x95	50	4900
899TK050603	NSC 3x120	3x120	58	6250
89DTK050603	NSC 3x150	3x150	64	7700
89FTK050603	NSC 3x185	3x185	68.5	9300

TK - TYPE NCM - SPECIFICATION SHEET N. 07

Halogen-free unarmored electrical cables, flame retardant, low voltage 600/1000 V for magnetic compensation.

characteristics

CONSTRUCTION

Conductor	bare copper conductor according ASTM B33, class 5 according to IEC 60228
Insulation	HEPR according to IEC 60092-360
Core identification	according to HD 308 S2 and EN50334
Inner sheath	Halogen free compound
EMC Shield	metallic/plastic tape + tinned copper wire braid having coverage >90%
Sheath	crosslinked compound, type SHF2 according to IEC 60092-360. Colour black according to NAV80 std or coloured on request

TECHNICAL DATA

Temperature range	-40°C ÷ 90°C
Minimum bending radius	6 x outer diameter (installation)

REFERENCE STANDARDS

High resistance to oils and fuels	CEI EN 50305 § 8.1 CEI EN 60811-404, IRM 902 - IRM 903
Flame retardancy	CEI EN 60332-1-2
Fire Propagation	CEI EN 60332-3-22 Cat. A
Smoke emission	CEI EN 61034-1 – CEI EN 61034-2
Smoke emission	CEI EN 61034-1 – CEI EN 61034-2
Emission of acid and corrosive gases	CEI EN 60754-2
Evolution of HCl	CEI EN 60754-2
Fluorine content	CEI EN 60754-3
Toxicity index	CEI EN 50305 § 9.2

SINGLE CORE				
Item n°	Designation	Cross-section · mm²	Nominal Diameter cable · mm	Nominal cable Weight · kg/km
545TK050702	NCM 2x1.5	2x1.5	9.6	130
555TK050702	NCM 2x2.5	2x2.5	10.4	160
565TK050702	NCM 2x4	2x4	11.8	210
570TK050702	NCM 2x6	2x6	13	280
580TK050702	NCM 2x10	2x10	15.2	430
585TK050702	NCM 2x16	2x16	17.5	600
590TK050702	NCM 2x25	2x25	21	820

THREE CORES				
Item n°	Designation	Cross-section · mm²	Nominal Diameter cable · mm	Nominal cable Weight · kg/km
545TK050704	NCM 4x1.5	4x1.5	11	180
555TK050704	NCM 4x2.5	4x2.5	12	230
565TK050704	NCM 4x4	4x4	13.5	400
570TK050704	NCM 4x6	4x6	15.3	450
580TK050704	NCM 4x10	4x10	17.8	640
585TK050704	NCM 4x16	4x16	20.5	960
590TK050704	NCM 4x25	4x25	24.5	1380
593TK050704	NCM 4x35	4x35	29	2100
595TK050704	NCM 4x50	4x50	33	2780
597TK050704	NCM 4x70	4x70	38.8	3970

MULTI CORES				
Item n°	Designation	Cross-section · mm²	Nominal Diameter cable · mm	Nominal cable Weight · kg/km
545TK050712	NCM 12x1.5	12x1.5	17	465
545TK050719	NCM 19x1.5	19x1.5	20	675
545TK050724	NCM 24x1.5	24x1.5	23	855
555TK050712	NCM 12x2.5	12x2.5	19	620
555TK050719	NCM 19x2.5	19x2.5	22.5	910
555TK050724	NCM 24x2.5	24x2.5	26	1145

AWG cross section are available on request.

TK - TYPE NST - SPECIFICATION SHEET N. 08

Halogen-free electrical cables, flame retardant for instrumentation with terminal board connection - nominal voltage 150/250 V

characteristics

CONSTRUCTION

Conductor	bare copper conductor according ASTM B33, class 5 according to IEC 60228
Insulation	HEPR according to IEC 60092-360
Core identification	Pairs: white, black with numbers 1-1, 2-2,... Triads: white, black, red with numbers 1-1-1, 2-2-2,...
Multicores	black with numbers
Individual shield (if any)	0,50 mm² drain wire, polyester and metallic tape
Inner covering	Halogen free compound or tapes
Armour (if any)	bare copper wire braid having coverage >90%
Sheath	crosslinked compound, type SHF2 according to IEC 60092-360. Colour black according to NAV80 std or coloured on request

TECHNICAL DATA

Temperature range	-40°C ÷ 90°C
Minimum bending radius	6 x outer diameter (installation)

REFERENCE STANDARDS

High resistance to oils and fuels	CEI EN 50305 § 8.1 CEI EN 60811-404, IRM 902 - IRM 903
Flame retardancy	CEI EN 60332-1-2
Fire Propagation	CEI EN 60332-3-22 Cat. A
Smoke emission	CEI EN 61034-1 – CEI EN 61034-2
Emission of acid and corrosive gases	CEI EN 60754-2
Evolution of HCl	CEI EN 60754-2
Fluorine content	CEI EN 60754-3
Toxicity index	CEI EN 50305 § 9.2

DESIGNATION STRUCTURE

LL (base elements)	UN: single cores US: single cores, individually shielded CN: pairs CS:. pairs individually shielded TN: triads TS: triads individually shielded
yy	conductor cross section [mm²]
X: overall shielding type	O: overall shield A: armouring N: no shield or armour
nn	number of base elements
examples	NST 150/250 V – UN-1,5-O-07 cable with 7 single cores 1,5 mm², overall shielded NST 150/250 V – CS-0,75-A-12 cable with 12 pairs 0,75 mm², individually shielded, armoured

NST UN-yy-N-nn (multi cores, unshielded, unarmoured)				
Item n°	Designation	Cross-section · mm²	Nominal Diameter cable · mm	Nominal cable Weight · kg/km
330TK0502MUU07	NST 7x0.50	7x0.50	7.6	80
330TK0502MUU10	NST 10x0.50	10x0.50	9.3	115
330TK0502MUU09	NST 19x0.50	19x0.50	11.3	185
330TK0502MUU30	NST 30x0.50	30x0.50	13.9	230

NST UN-yy-A-nn (multi cores, unshielded, armoured)				
Item n°	Designation	Cross-section · mm²	Nominal Diameter cable · mm	Nominal cable Weight · kg/km
530TK0508MUA07	NST 7x0.50	7x0.50	8.4	130
530TK0508MUA10	NST 10x0.50	10x0.50	10.1	170
530TK0508MUA19	NST 19x0.50	19x0.50	12.1	255
530TK0508MUA30	NST 30x0.50	30x0.50	15.1	350

NST UN-yy-OA-nn (multi cores, overall shielded, armoured)				
Item n°	Designation	Cross-section · mm²	Nominal Diameter cable · mm	Nominal cable Weight · kg/km
530TK0508MOA07	NST 7x0.50	7x0.50	8.4	130
530TK0508MOA10	NST 10x0.50	10x0.50	10.1	175
530TK0508MOA19	NST 19x0.50	19x0.50	12.1	210
530TK0508MOA30	NST 30x0.50	30x0.50	15.1	320

Add letter G at the end of the item number if green/yellow core is present

NST UN-yy-O-nn (multi cores, overall shielded, unarmoured)				
Item n°	Designation	Cross-section · mm²	Nominal Diameter cable · mm	Nominal cable Weight · kg/km
430TK0508MOU07	NST 7x0.50	7x0.50	7.6	85
430TK0508MOU10	NST 10x0.50	10x0.50	9.3	120
430TK0508MOU19	NST 19x0.50	19x0.50	11.3	185
430TK0508MOU30	NST 30x0.50	30x0.50	13.9	287

Add letter G at the end of the item number if green/yellow core is present. Add letter E at the end of the item number for enhanced EMC performance

TK - TYPE NMV E NMV-VFD - SPECIFICATION SHEET N. 09

Halogen-free unarmored and armored electrical cables, flame retardant for general distribution medium voltage 1800/3000V

characteristics

CONSTRUCTION

Conductor	Tinned copper conductor according to ASTM B33, class 5 according to IEC 60228
Insulation	HEPR or XLPE according to IEC 60092-360
Core identification	single-core black three-cores brown-black-grey
Bedding (if any)	Tapes and/or extruded filler
EMC Shield (for NMV-VFD)	metallic/plastic tape + tinned copper wire braid having coverage ≥ 90%
Inner covering	Halogen free compound or tapes
Armour (if any)	bare copper wire braid having coverage ≥ 90%
Sheath	crosslinked compound, type SHF2 according to IEC 60092-360. Colour red according to NAV80 std or coloured on request

TECHNICAL DATA

Temperature range	-40°C ÷ 90°C
Minimum bending radius	4 x outer diameter (single core installation) 12 x outer diameter (three-cores installation)

REFERENCE STANDARDS

High resistance to oils and fuels	CEI EN 50305 par. 8.1 CEI EN 60811-404, IRM 902 - IRM 903
Flame retardancy	CEI EN 60332-1-2
Fire Propagation	CEI EN 60332-3-22 Cat. A
Emission of acid and corrosive gases	CEI EN 60754-2
Evolution of HCl	CEI EN 60754-1
Fluorine content	CEI EN 60754-3
Toxicity index	CEI EN 50305 par.9.2

SINGLE CORE ARMOURED				
Item n°	Designation	Cross-section · mm²	Nominal Diameter cable · mm	Nominal cable Weight · kg/km
885TK050901	NMV 1x16	1x16	15.1	400
890TK050901	NMV 1x25	1x25	16.7	520
893TK050901	NMV 1x35	1x35	17.6	630
895TK050901	NMV 1x50	1x50	19.1	780
897TK050901	NMV 1x70	1x70	20.9	1010
898TK050901	NMV 1x95	1x95	23.2	1310
899TK050901	NMV 1x120	1x120	24.9	1560
89DTK050901	NMV 1x150	1x150	26.4	1850
89FTK050901	NMV 1x185	1x185	29.1	2260
89ITK050901	NMV 1x240	1x240	31.6	2840
89LTK050901	NMV 1x300	1x300	33.9	3400

THREE CORES ARMOURED				
Item n°	Designation	Cross-section · mm²	Nominal Diameter cable · mm	Nominal cable Weight · kg/km
885TK050903	NMV-VFD 3x16	3x16	28.4	1330
890TK050903	NMV-VFD 3x25	3x25	31.6	1760
893TK050903	NMV-VFD 3x35	3x35	33.7	2150
895TK050903	NMV-VFD 3x50	3x50	37.1	2700
897TK050903	NMV-VFD 3x70	3x70	41.2	3520
898TK050903	NMV-VFD 3x95	3x95	46.5	4690
899TK050903	NMV-VFD 3x120	3x120	50.8	5720
89DTK050903	NMV-VFD 3x150	3x150	53.8	6710
89FTK050903	NMV-VFD 3x185	3x185	59.8	8270

AWG cross section are available on request.

Tecnikabel

Passion flows through our cables

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