

EISF, EIFA**INSTRUMENTATION CABLES****APPLICATIONS**

EISF and **EIFA** instrumentation cables are intended for control and instrumentation circuits, for signal, monitoring and data processing systems and for analogue or digital data transmission, all in industrial electronics applications, allowing particularly for conditions met in chemical, petrochemical and paper industries.

The cables are protected by an overall electrostatic shield against external electric interferences.

Shielded pair structure substantially decreases mutual influence between signals transmitted along the cable.

Steel tape armour in **EIFA** cables offers enhanced protection against mechanical damages and rodent attack.

The cables can also be used for power supply to small auxiliary devices on condition that current-carrying capacity limit (see our *Technical Guide*) is not exceeded.

The cables are suitable for fixed indoor and outdoor installations.

Sheathing PVC of high oxygen index is UV radiation and weather resistant, is self-extinguishing and flame retardant. The cables pass combustibility test according to PN-EN 60332-3 standard.

The cables are oil-resistant and offer enhanced resistance to aliphatic hydrocarbons.

CONSTRUCTION

- bare annealed copper wire conductors,
 - 05** – 0.50 mm² (1x0.8 mm),
 - 09** – 0.88 mm² (7x0.4 mm)
 - 15** – 1.50 mm² (7x0.52 mm),
- heat resistant PVC insulation,
- insulated conductors twisted into:
 - pairs **IP** – colour code insulation: white and red,
 - triads **IT** – colour code insulation: white, red and blue,
- pair/triad electrostatic shield incorporating aluminium-polyester tape and stranded annealed tinned copper drain wire, cross-section 0.22 mm² (7x0.2 mm),
- special PVC sheath of shielded pairs/triads, blue (RAL 5012), other colours also available and printed black number of pair or triad,
- shielded and sheathed pairs or triads laid-up in layers,
- cable core wrapped in polyester tape,
- overall electrostatic shield incorporating aluminium-polyester tape and stranded annealed tinned copper drain wire, cross-section 0.22 mm² (7x0.2 mm), number of drain wires from 1 to 3 depending on the cable core diameter,
- special PVC cable sheath, blue (RAL 5012), other colours also available,
- steel tape armour for **EIFA** cable,
- special PVC cable covering, blue (RAL 5012), other colours also available.

EISF, EIFA

CHARACTERISTICS

DC loop resistance at 20°C,
maximum:

0.50 mm ² conductor	75.0 Ω/km
0.88 mm ² conductor	42.8 Ω/km
1.50 mm ² conductor	24.2 Ω/km

Resistance unbalance,
maximum:

0.50 mm ² conductor	1.120 Ω/km
0.88 mm ² conductor	1.070 Ω/km
1.50 mm ² conductor	0.605 Ω/km

Operating voltage U₀/U 300/300 V

Voltage test

conductor/conductor	1500 V rms
conductor/screen	1000 V rms

Insulation resistance, minimum 500 MΩ·km

Mutual capacitance,
maximum:

0.50 mm ² conductor	210 nF/km
0.88 mm ² conductor	230 nF/km
1.50 mm ² conductor	220 nF/km

Operating temperature range

during operation	from - 30 to + 90°C
during installation	from - 5 to + 70°C

Minimum bending radius 15 x cable diameter

Resistance to aliphatic
hydrocarbons

NF M 87-202 Annex A

Oil resistance

PN-EN 60811-404

Cable combustibility

flame retardant

Combustibility tests

PN-EN 60332-1-2, IEC 60332-1-2

Reference standards

NF M 87-202

CE = the cable meets requirements of the low voltage directive 2014/35/EU

Product No.	Cable type	Number of pairs/triads (x 2/3) x conductor cross-section	Cable outer diameter (appr.)	Copper index	Cable weight (appr.)
		mm ²	mm	kg/km	kg/km
1423 005	03 IP 05 EISF	3 x 2 x 0,5	12.2	38.0	126.0
1423 004	07 IP 05 EISF	7 x 2 x 0,5	17.6	87.0	339.0
1423 003	12 IP 05 EISF	12 x 2 x 0,5	23.6	145.0	558.0
1423 007	19 IP 05 EISF	19 x 2 x 0,5	29.4	229.0	867.0
1424 002	07 IT 05 EISF	7 x 3 x 0,5	18.2	120.0	399.0
1424 003	12 IT 05 EISF	12 x 3 x 0,5	24.7	205.0	673.0
1423 008	03 IP 09 EISF	3 x 2 x 0,88	15.5	60.0	223.0
1423 001	07 IP 09 EISF	7 x 2 x 0,88	20.8	138.0	470.0
1423 002	12 IP 09 EISF	12 x 2 x 0,88	28.0	235.0	778.0
1423 006	19 IP 09 EISF	19 x 2 x 0,88	34.8	368.0	1207.0
1282 001	07 IT 09 EISF	7 x 3 x 0,88	21.7	197.0	574.0
1424 001	12 IT 09 EISF	12 x 3 x 0,88	29.4	336.0	970.0

Product No.	Cable type	Number of pairs/triads (x 2/3) x conductor cross-section	Cable outer diameter (appr.)	Copper index	Cable weight (appr.)
		mm ²	mm	kg/km	kg/km
0874 005	03 IP 05 EIFA	3 x 2 x 0,5	16.4	38.0	348.0
0874 006	07 IP 05 EIFA	7 x 2 x 0,5	21.0	87.0	581.0
0874 007	12 IP 05 EIFA	12 x 2 x 0,5	27.2	145.0	891.0
0874 008	19 IP 05 EIFA	19 x 2 x 0,5	33.0	229.0	1277.0
1727 001	07 IT 05 EIFA	7 x 3 x 0,5	21.6	120.0	649.0
1727 002	12 IT 05 EIFA	12 x 3 x 0,5	28.1	205.0	1006.0
0874 003	03 IP 09 EIFA	3 x 2 x 0,88	18.7	60.0	440.0
0874 001	07 IP 09 EIFA	7 x 2 x 0,88	24.2	138.0	754.0
0874 002	12 IP 09 EIFA	12 x 2 x 0,88	31.8	235.0	1184.0
0874 004	19 IP 09 EIFA	19 x 2 x 0,88	38.8	368.0	1727.0
1727 003	07 IT 09 EIFA	7 x 3 x 0,88	25.3	197.0	882.0
1727 004	12 IT 09 EIFA	12 x 3 x 0,88	29.4	336.0	1397.0

Other cross-sections and pair or triad counts available on request.

TECHNOKABEL S.A. reserves the right to change specifications without prior notice.