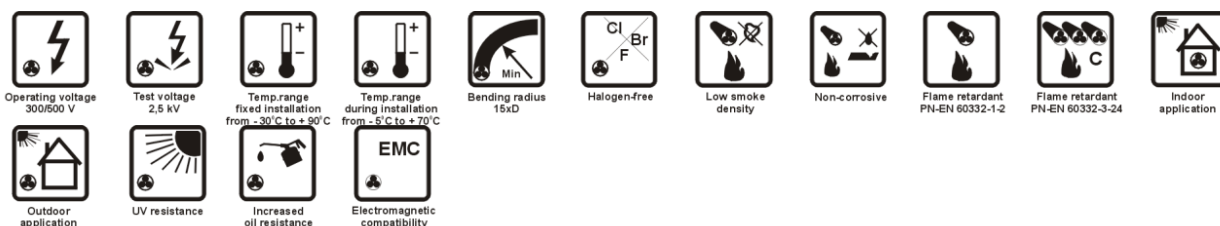


EGSF SHX, EGFA SHX**INSTRUMENTATION CABLES****APPLICATIONS**

EGSF SHX and **EGFA SHX** 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.

Steel tape armour in **EGFA SHX** 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.

The cables are flame retardant and their smoke emission is low, emitted fumes are non toxic and non corrosive.

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),
- insulation made of cross-linked halogen free compound,
- insulated conductors twisted into:
 - pairs **IP** – colour code: white and red insulation and pair number printed on it,
 - triads **IT** – colour code: white, red and blue insulation and triad number printed on it,
 - quads **IQ** – colour code: white, red, blue and yellow insulation for identification,
- pairs, triads or quads 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),
- cable sheath made of cross-linked halogen free compound, blue (RAL 5012), other colours also available,
- steel tape armour for **EGFA SHX** cable,
- cable covering made of cross-linked halogen free compound, blue (RAL 5012), other colours also available.

EGSF SHX, EGFA SHX

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 U_o/U

300/500 V

Voltage test

conductor/conductor	2500 V rms
conductor/screen	2000 V rms

Insulation resistance, minimum

500 MΩ·km

Mutual capacitance, max (this value may be 30%
higher for one pair or triad):

0.50 mm ² conductor	145 nF/km
0.88 mm ² conductor	160 nF/km
1.50 mm ² conductor	150 nF/km

Operating temperature range
during operation
during installation

from - 30 to + 90°C
from - 5 to + 70°C

Minimum bending radius

15 x cable diameter

Corrosivity of emitted gases
per

very low, halogen free
PN-EN 60754-1, PN-EN 60754-2,
IEC 60754-2

pH appr.
conductivity appr.

6.8
0.4 μS/mm

Smoke density

low smoke density
PN-EN 61034-2, IEC 61034-2

light transmittance,
minimum

70 %

Resistance to aliphatic
hydrocarbons

NF M 87-202 Annex A

Oil resistance

PN-EN 60811-404

Cable combustibility

flame retardant

Combustibility tests

PN-EN 50265-2-1, IEC 60332-1-2
PN-EN 60332-3-24, IEC 60332-3-24

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/quads (x 2/3/4) x conductor cross-section	Cable outer diameter (appr.)	Copper index	Cable weight (appr.)
		mm ²	mm	kg/km	kg/km
1713 001	03 IP 05 EGSF SHX	3 x 2 x 0,5	8.4	31.0	84.0
1713 002	07 IP 05 EGSF SHX	7 x 2 x 0,5	10.9	70.0	157.0
1713 003	12 IP 05 EGSF SHX	12 x 2 x 0,5	13.9	118.0	255.0
1713 004	19 IP 05 EGSF SHX	19 x 2 x 0,5	17.1	185.0	388.0
1713 005	27 IP 05 EGSF SHX	27 x 2 x 0,5	19.0	262.0	510.0
1713 006	07 IT 05 EGSF SHX	7 x 3 x 0,5	12.4	103.0	219.0
1713 007	12 IT 05 EGSF SHX	12 x 3 x 0,5	15.9	175.0	366.0
1713 008	01 IP 09 EGSF SHX	1 x 2 x 0,88	6.6	20.0	60.0
1713 009	03 IP 09 EGSF SHX	3 x 2 x 0,88	10.3	53.0	126.0
1713 010	07 IP 09 EGSF SHX	7 x 2 x 0,88	13.7	121.0	252.0
1713 011	12 IP 09 EGSF SHX	12 x 2 x 0,88	17.5	205.0	412.0
1713 012	19 IP 09 EGSF SHX	19 x 2 x 0,88	21.3	324.0	621.0
1713 013	27 IP 09 EGSF SHX	27 x 2 x 0,88	25.1	459.0	864.0
1713 014	01 IT 09 EGSF SHX	1 x 3 x 0,88	7.0	28.0	70.0
1713 015	07 IT 09 EGSF SHX	7 x 3 x 0,88	15.8	180.0	363.0
1713 016	12 IT 09 EGSF SHX	12 x 3 x 0,88	20.0	307.0	595.0
1713 017	01 IQ 09 EGSF SHX	1 x 4 x 0,88	7.5	36.0	85.0
1714 001	03 IP 05 EGFA SHX	3 x 2 x 0,5	11.2	31.0	191.0
1714 002	07 IP 05 EGFA SHX	7 x 2 x 0,5	13.9	70.0	300.0
1714 003	12 IP 05 EGFA SHX	12 x 2 x 0,5	17.1	118.0	441.0

Product No.	Cable type	Number of pairs/triads/quads (x 2/3/4) x conductor cross-section	Cable outer diameter (appr.)	Copper index	Cable weight (appr.)
		mm ²	mm	kg/km	kg/km
1714 004	19 IP 05 EGFA SHX	19 x 2 x 0,5	20.5	185.0	624.0
1714 005	27 IP 05 EGFA SHX	27 x 2 x 0,5	24.0	262.0	810.0
1714 006	07 IT 05 EGFA SHX	7 x 3 x 0,5	15.6	103.0	387.0
1714 007	12 IT 05 EGFA SHX	12 x 3 x 0,5	19.3	175.0	586.0
1714 008	01 IP 09 EGFA SHX	1 x 2 x 0,88	9.4	20.0	167.0
1714 009	03 IP 09 EGFA SHX	3 x 2 x 0,88	13.3	53.0	261.0
1714 010	07 IP 09 EGFA SHX	7 x 2 x 0,88	16.9	121.0	436.0
1714 011	12 IP 09 EGFA SHX	12 x 2 x 0,88	20.9	205.0	653.0
1714 012	19 IP 09 EGFA SHX	19 x 2 x 0,88	25.1	324.0	936.0
1714 013	27 IP 09 EGFA SHX	27 x 2 x 0,88	29.1	459.0	1245.0
1714 014	01 IT 09 EGFA SHX	1 x 3 x 0,88	9.8	28.0	161.0
1714 015	07 IT 09 EGFA SHX	7 x 3 x 0,88	19.0	180.0	573.0
1714 016	12 IT 09 EGFA SHX	12 x 3 x 0,88	23.4	307.0	869.0
1714 017	01 IQ 09 EGFA SHX	1 x 4 x 0,88	10.3	36.0	182.0
1714 018	01 IP 15 EGFA SHX	1 x 2 x 1,5	10.7	28.0	161.0
1714 019	07 IP 15 EGFA SHX	7 x 2 x 1,5	20.6	180.0	573.0
1714 020	12 IP 15 EGFA SHX	12 x 2 x 1,5	25.7	307.0	869.0

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

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