



RS 485 Industrial BUS ARM SHF1

1-, 2-, 4-, 6- or 12-pair, +quad (4 core)

AWG 22/7, Flexible

Armoured

SHF1, UV

120 Ω

DNV

Application

120 Ω Armoured BUS cable for industrial- and offshore environments. Tape and braided copper screens.
Data transmission in industrial environments.



Construction

Conductor	0.35 [mm ²] stranded tinned Cu AWG 22/7 (7 x 0.254 mm)
Insulation	Foam PE 1 pair: $\varnothing = 2.03 \pm 0.10$ [mm] 4 core: $\varnothing = 1.75 \pm 0.10$ [mm] 2 pair: $\varnothing = 1.65 \pm 0.10$ [mm] 4 pair: $\varnothing = 1.5 \pm 0.05$ [mm] 6 pair: $\varnothing = 1.45 \pm 0.05$ [mm] 12 pair: $\varnothing = 1.45 \pm 0.05$ [mm]
Colour code	See table
Filler	1 pair, 2 pair, 6 pairs, 12 pairs yes: PP 4 core, 2pairs, 4 pair, none
Tape	1 pair, 4 core, 6 pairs, 12 pairs, none 2 pairs, 4 pairs, yes: Mylar tape
Screen	Al/Mylar
Screen 2	Tinned Cu braid ≥ 85 [% optical coverage]
Inner jacket	1P&4C: SHF1 $\varnothing = 6.60 \pm 0.3$ [mm] 2P: SHF1 $\varnothing = 8.30 \pm 0.4$ [mm] 4P: SHF1 $\varnothing = 9.30 \pm 0.5$ [mm] 6P: SHF1 $\varnothing = 10.4 \pm 0.6$ [mm] 12P: SHF1 $\varnothing = 13.2 \pm 0.7$ [mm]
Armour alt.1	Galvanised steel wire braid 0.3 [mm] ≥ 60 % optical cover
Armour alt.2	Tinned Cu-braid 0.3 [mm] ≥ 60 % optical cover
Outer Jacket	Black or green SHF1 thicknes app. 1.00 [mm]
O.D.	1P&4C: $\varnothing = 9.8 \pm 0.50$ [mm] 2P: $\varnothing = 11.60 \pm 0.60$ [mm] 4P: $\varnothing = 12.50 \pm 0.60$ [mm] 6P: $\varnothing = 14.60 \pm 0.70$ [mm] 12P: $\varnothing = 17.50 \pm 0.80$ [mm]
Jacket marking	4 cores: NEK Kabel – RS485 Industrial BUS – 4xAWG22/7 – GSWB – SHF1 – DNV – IEC 60332-3-22 – batch.no – dd/mm/yy – ****m 1 - 12 pairs: NEK Kabel – RS485 Industrial BUS – "n"x2xAWG22/7 – GSWB – SHF1 – DNV – IEC 60332-3-22 – batch.no – dd/mm/yy – ****m



Specifications

Operating temperature normal	-40 – +80 [°C]
Temperature @ installation	-20 – +60 [°C]
Dielectric strength	DC 2kV for 1 min.
Characteristic impedance	120 ± 15 [Ω @ 1MHz]
Conductor resistance	≤ 55 [Ω/km]
Resistance unbalance	≤ 5 [%]
Insulation resistance	≥ 1 [GΩ x km]
Attenuation	≤ 20.0 [dB/km @ 1MHz]
Min. bending radius installed	8 [x outer diam]
Min. bending radius @ installation	15 [x outer diam]

Norms

Halogenfree, max content corrosive and toxic gases	IEC 60754-1 & IEC 60754-2
Material properties, insulation and sheath	IEC 60092-360 (359)
Design and testing standards	IEC 61158-2
Flame resistance	IEC 60332-3-22 Cat.A
Flame retardant	IEC 60332-1-2
Smoke emission	IEC 61034-2
Oil and fuel resistant	IEC 60811-2-1 IIR 902 23°C / 7 days, 70°C / 4h
UV-resistant	UL 1581 (300H)
Certification	DNV

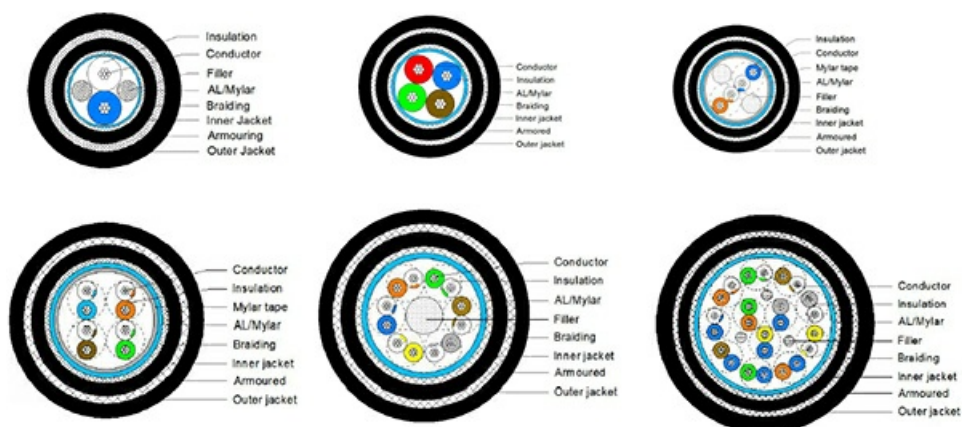


Pairs	Outer diam. [mm]	Weight [kg/km]	Art. no.
1 x 2 x AWG22/7 GSWB Black	9.8 ± 0.5	143	2040006
2 x 2 x AWG22/7 GSWB Black	9.8 ± 0.5	196	2040005
4 x AWG22/7 GSWB Black	11.6 ± 0.6	150	2040010
4 x 2 x AWG22/7 GSWB Black	10.3 ± 0.5	211	2040003
6 x 2 x AWG22/7 GSWB Black	14.6 ± 0.7	309	2040011
12 x 2 x AWG22/7 GSWB Black	17.5 ± 0.8	430	2040012
1 x 2 x AWG22/7 GSWB Green	9.8 ± 0.5	143	2040013
4 x AWG22/7 GSWB Green	9.8 ± 0.5	150	2040014
4 x 2 x AWG22/7 GSWB Green	12.5 ± 0.5	211	2040015



Colour code

No. of cores	Colour code
1 - pair	White, blue
2 - pairs	White/blue, blue; White/orange, orange
4 - cores	Red, blue, brown, green
4 - pairs	White/blue, blue, White/orange, orange, White/green, green, White/brown, brown
6 - pairs	White/blue, blue; White/orange, orange White/green, green; White/brown, brown White/grey, grey; White/yellow, yellow
12 - pairs	White/blue, blue; White/orange, orange White/green, green; White/brown, brown White/grey, grey; White/yellow, yellow Blue, orange; Blue, green Blue, brown; Blue,grey Blue, yellow; Orange, green



Updated

Date	Rev.	Description
08.02.2022	0	Created
29.04.2025	1	Adding 12 pairs