

High-Voltage Cables

HV Robot

highly flexible SABIX®/PUR high-voltage single conductor with overall copper screen and cULus recognition

Nominal voltage up to
U₀/U₁ 1,8/3,0 kV AC
U₀/U₂ 2,7/5,4 kV DC



Style 12150 AWM I/II A/B 150°C 2000V FT1 FT2

marking example:

SAB BRÖCKSKES · D-VIERSEN · HV Robot U₀/U₁ 1,8/3 kV 95,0mm² cULus AWM Style 12150 AWM I/II A/B 80°C 2000V FT1 FT2

Construction:

Conductor:	bare copper strands acc. to IEC 60228, VDE 0295, class 6
Insulation:	SABIX®
Wrapping:	non-woven tape
Screen:	tinned copper braiding
Wrapping:	non-woven tape
Sheath material:	PUR, TMPU acc. to EN 50363-10-2 + VDE 0207-363-10-2
Sheath colour:	orange (RAL 2003)

Outstanding features:

- » extremely flexible
- » cULus recognized
- » good EMC characteristics
- » halogen-free
- » flexible at low temperatures
- » heat resistant
- » flame retardant and self-extinguishing
- » weather resistant
- » high protection against environmental influences
- » extremely high mechanical resistance
- » 100% oil resistance acc. to standard
- » suitable for cable tracks and robots
- » PWIS uncritical
(PWIS = paint-wetting impairment substances)
- » PFAS free

Technical data:

Nominal voltage:	U ₀ /U ₁ 1,8/3,0 kV AC U ₀ /U ₂ 2,7/5,4 kV DC
Voltage cULus:	2000 V
Testing voltage:	6500 V
Current-carrying capacity:	acc. to VDE 0298-4, see chapter N „Technical data“
Min. bending radius	
fixed laying:	3 x d
flexible application:	6 x d
Temperature range	DIN VDE cULus: up to +80 °C
fixed laying:	-50/+90 °C
flexible application:	-40/+90 °C
limited:	+100 °C / 10000 h +125 °C / 2000 h
Halogen-free:	acc. to IEC 60754-1 + VDE 0482-754-1
Fire performance:	flame retardant and self-extinguishing acc. to IEC 60332-1-2 + VDE 0482-332-1-2, cULus FT1, FT2
Oil resistance:	very good - TMPU acc. to EN 50363-10-2 + VDE 0207-363-10-2
Chem. resistance:	good against acids, alkalines, solvents, hydraulic liquids etc.
Hydrolysis and microbial resistance:	very good acc. to EN 50363-10-2 + VDE 0207-363-10-2
Weather resistance:	very good acc. to HD 605
Salt water resistance:	very good acc. to UL 1309
Ozone resistance:	very good acc. to DIN EN 50396
MUD resistance:	very good - acc. to IEC 60092-360, IEC 61892-4, NEK TS 606
Mechanical characteristics:	the main mechanical characteristics accomplished by the PUR outer sheath are: - high tensile strength - high tear strength - high abrasion resistance - high notch resistance - high transverse strength
Absence of harmful substances:	acc. to RoHS directive of the European Union, see chapter N „Technical data“

item no.	nominal cross-section mm ²	largest single wire ø mm	outer-ø max. mm	copper figure kg/km	cable weight ≈ kg/km	ohmic resistance at 20°C acc. to VDE 0812 max. Ω/km
39142507	25,0	0,21	12,8	300,7	346	0,78
39143507	35,0	0,21	14,6	403,4	466	0,554
39145007	50,0	0,31	16,5	580,0	654	0,386
39147007	70,0	0,31	19,0	786,9	876	0,272
39149507	95,0	0,31	22,6	1050,0	1179	0,206
39141207	120,0	0,31	24,2	1309,9	1438	0,161

Other dimensions and colours are possible on request.