Automotive products

RADOX® cables and system solutions

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specialist electronic materials

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RADOX® battery cables – thin-wall, flexible

Power cables for road vehicles, class D according to ISO 6722, operating temperature –40 to +150 °C

RADOX battery cables are high temperature resistant products with a reduced outer diameter.

The cable is highly resistant to temperature, ozone, weathering, hydrolysis and has excellent resistance to battery acid and cooling agents. It is also resistant against oils, fuels and other fluids used inside and outside of the motor compartment.

Thanks to its electron beam cross-linked RADOX insulation, the cable has, despite the reduced outer diameter, excellent resistance to heat pressure and abrasion. In addition, the RADOX battery cable has outstanding dielectric properties. The flame retardant insulation does not melt or flow at high temperatures and is easy to strip.

General features

- Operating temperature –70 to +150 °C
- Outstanding flexibility
- Reduced outer diameter
- Resistant to motor oils, battery acid and fuels
- High resistance to heat pressure
- Excellent abrasion resistance

RADOX® Elastomer S (REMS) battery cable, flexible (FLR13X)

Number of conductors	1
Cross section	10 to 150 mm²
Voltage rating	600 V AC/900 V DC
Temperature range	–70 to +150 °C (3000 h)
Min. bending radius	3 × cable dia.

Composition of cable

1. Conductor	stranded bare copper
2. Plastic tape	optional
3. Insulation	RADOX Elastomer S (REMS), extruded irradiation cross-linked copolymer, various colours

Characteristics and specialities

- Excellent high and low temperature resistance
- Very flexible
- Ozone and weathering resistance
- Outstanding resistance against battery acids, diesel, various oils, engine coolant and window washer fluids
- Resistance against humidity, petrol and brake fluids
- Flame retardant
- Easy to strip and process

Application

Flexible battery or power cable for use in road vehicle applications.

Standards

Conductor	General
ISO 6722 -1, ISO 19642-5	ISO 6722, ISO 19642-5 class D, thin-wall
DIN EN 13602, Cu-ETP1-A (CW003A)	

For further technical details please refer to our data sheet STD 565167

RADOX® Elastomer S (REMS) battery cable, flexible (FLR13X)

Extract from our delivery programme

Cross section	Conductor				Cable		
Nominal mm²	**Number of individual wires guide value**	**Diameter of individual wires max. mm**	**Diameter max. mm**	**Resistance at 20 °C max. Ω/km**	**Wall thickness min. mm**	**Weight nom. kg/100 m**	**Cable-diameter mm**
10	78	0.41	4.3	1.82	0.50	10.7	5.75 ± 0.15
12	92	0.41	4.65	1.52	0.50	12.1	6.05 ± 0.15
16	126	0.41	5.4	1.16	0.52	16.7	6.90 ± 0.20
20	154	0.41	6.2	0.955	0.52	20.2	7.60 ± 0.20
25	189	0.41	6.7	0.743	0.55	24.5	8.20 ± 0.20
30	224	0.41	7.4	0.647	0.64	29.9	9.10 ± 0.25
35	273	0.41	7.9	0.527	0.65	35.4	9.70 ± 0.25
50	385	0.41	9.4	0.368	0.80	49.8	11.50 ± 0.25
70	360	0.51	11.6	0.259	0.80	70.4	13.70 ± 0.25
95	480	0.51	13.5	0.196	0.90	95.0	16.25 ± 0.30
120	589	0.51	15.1	0.153	0.90	115.9	18.00 ± 0.30

Datasheet STD 565167

RADOX® Elastomer S (REMS) battery cable, high flexible (FLR13X)

Number of conductors	1
Cross section	10 to 150 mm²
Voltage rating	600 V AC/900 V DC
Temperature range	–70 to +150 °C (3000 h)
Min. bending radius	3 × cable dia.

Composition of cable

1. Conductor	stranded bare copper
2. Plastic tape	optional
3. Insulation	RADOX Elastomer S (REMS), extruded irradiation cross-linked copolymer, various colours

Characteristics and specialities

- Excellent high and low temperature resistance
- Very flexible
- Ozone and weathering resistance
- Outstanding resistance against battery acids, diesel, various oils, engine coolant and window washer fluids
- Resistance against humidity, petrol and brake fluids
- Flame retardant
- Easy to strip and process

Application

High flexible battery or power cable for use in road vehicle applications.

Standards

Conductor	General
ISO 6722 -1, ISO 19142-5	ISO 6722, ISO 19642-5 class D, thin-wall
DIN EN 13602, Cu-ETP1-A (CW003A)	

For further technical details please refer to our data sheet STD 451483.

RADOX® Elastomer S (REMS) battery cable, high flexible (FLR13X)

Extract from our delivery programme

Cross section	Conductor				Cable		
Nominal mm²	Number of individual wires guide value	Diameter of individual wires max. mm	Diameter max. mm	Resistance at 20 °C max. Ω/km	Wall thickness min. mm	Weight nom. kg/100 m	Cable-diameter mm
16	490	0.21	5.4	1.16	0.52	16.7	6.80 ± 0.20
25	760	0.21	7.0	0.743	0.52	25.0	8.45 ± 0.25
35	1'064	0.21	8.3	0.527	0.64	35.5	10.15 ± 0.25
50	1'520	0.21	9.9	0.368	0.71	50.3	11.95 ± 0.25
70	2'146	0.21	11.8	0.259	0.80	69.6	14.10 ± 0.30
95	2'849	0.21	13.3	0.196	0.90	93.5	16.40 ± 0.30
120	3'538	0.21	15.3	0.153	1.28	120.1	19.40 ± 0.30

Datasheet STD 451483

RADOX® Elastomer S (REMS) battery cable, flexible, thick-wall (FL13X)

Number of conductors	1
Cross section	10 to 150 mm²
Voltage rating	600 V AC/900 V DC
Temperature range	–70 to +150 °C (3000 h)
Min. bending radius	3 × cable dia.

Composition of cable

1. Conductor	stranded bare copper
2. Plastic tape	optional
3. Insulation	RADOX Elastomer S (REMS), extruded radiation cross-linked copolymer, various colours

Characteristics and specialities

- Excellent high and low temperature resistance
- Very flexible
- Ozone and weathering resistance
- Outstanding resistance against battery acids, diesel, various oils, engine coolant and window washer fluids
- Resistance against humidity, petrol and brake fluids
- Flame retardant
- Easy to strip and process

Application

ADR approved, thick-wall battery or power cable for use in road vehicle applications.

Standards

Conductor	General
ISO 6722 -1, ISO 19642-5	ISO 6722, ISO 19642-5 class D, thick-wall
DIN EN 13602, Cu-ETP1-A (CW003A)	ADR approved

For further technical details please refer to our data sheets STD 711923 and STD 412055.

RADOX® Elastomer S (REMS) battery cable, flexible, thick-wall (FL13X)

Extract from our delivery programme

Cross section	Conductor				Cable		
Nominal mm²	Number of individual wires guide value	Diameter of individual wires max. mm	Diameter max. mm	Resistance at 20 °C max. Ω/km	Wall thickness min. mm	Weight nom. kg/100 m	Cable-diameter mm
10	78	0.41	4.3	1.82	0.80	11.4	6.30 ± 0.20
16	126	0.41	5.4	1.16	1.10	18.6	8.10 ± 0.20
25	189	0.41	6.7	0.743	1.40	28.3	10.15 ± 0.25
35	273	0.41	7.9	0.527	1.40	39.1	11.35 ± 0.25
50	385	0.41	9.4	0.368	1.60	54.4	13.25 ± 0.25
70	360	0.51	11.6	0.259	1.45	75.0	15.20 ± 0.30
95	480	0.51	13.5	0.196	1.70	100.2	17.70 ± 0.30
120	589	0.51	15.1	0.153	1.35	117.8	18.50 ± 0.30

Datasheet TD 711923