

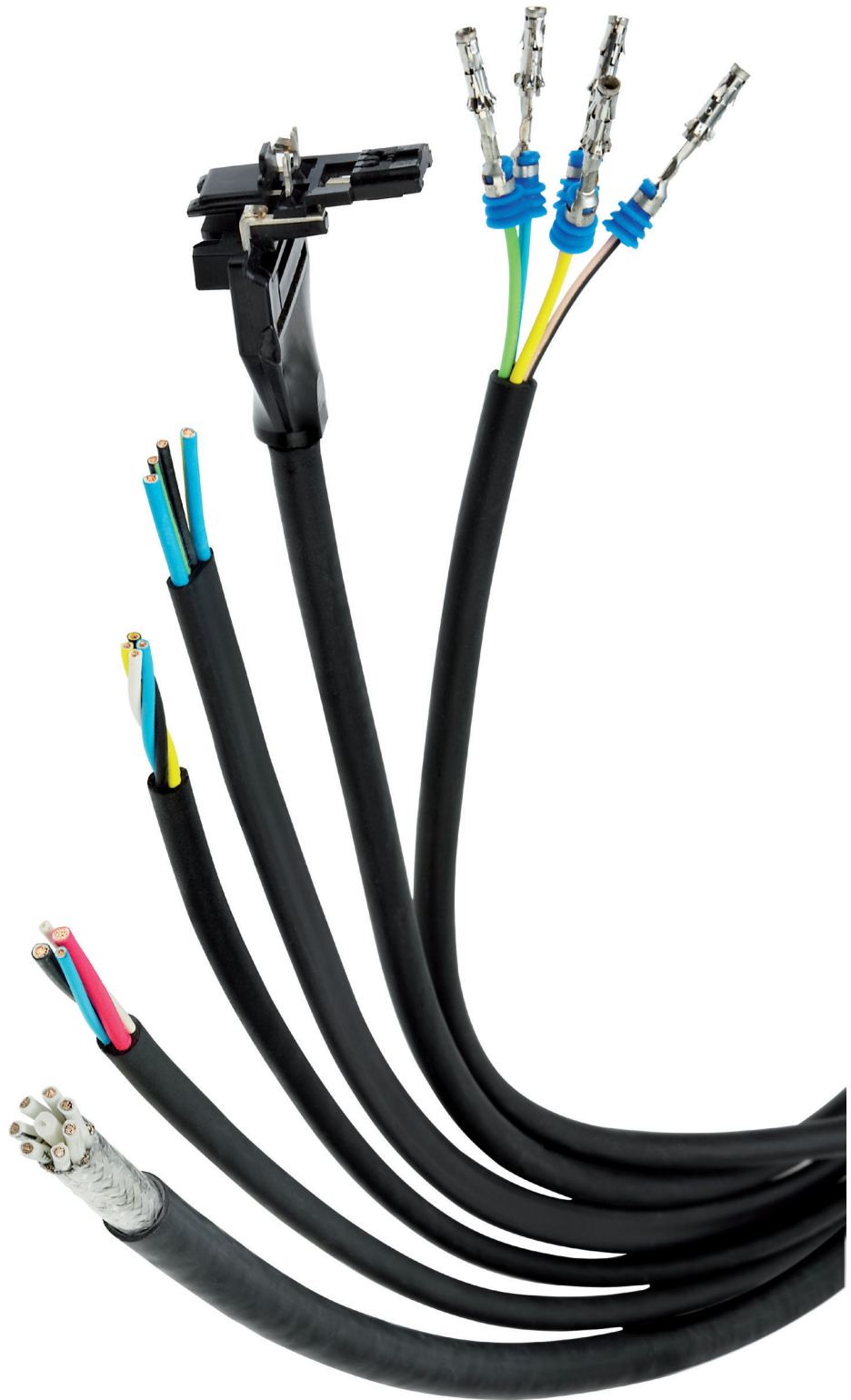
Automotive products

RADOX® cables and system solutions

Edition 2020/09



RADOX[®] sensor cables



Sensor cables for road vehicles: Resistant to low and high temperatures, flame retardant, flexible and media resistant, customer specific designs.

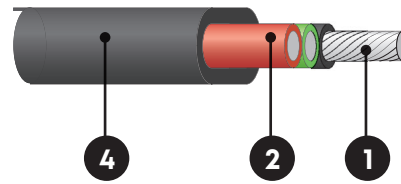
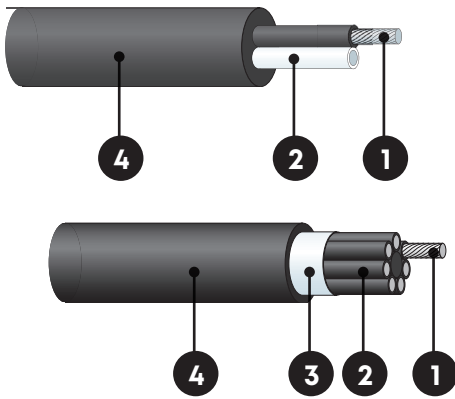
Pressure, knock and temperature sensors are standard today, and sensors for seatbelt tighteners, automatic transmissions, diesel pumps, ABS/EPS systems, speed monitoring plus other applications are an increasing demand. It must be ensured that critical electrical circuits will perform faultlessly under the most adverse conditions.

Electrical systems for fan motors, water pumps, power steering, brakes and accelerators are increasingly replacing V-belts, various hydraulic motors and mechanical actuators. Sensor cables serve for controlling the electronics and supplying power to the electric motors.

General features

- Temperature range –55 to +150 °C
- Resistant to motor oils, fuels, hydrolysis
- Electron beam cross-linked RADOX insulation does not melt or flow at high temperatures
- Usable in automated processing
- Resistant to potting or overmoulding
- Compact and flexible

RADOX[®] sensor cables



Number of conductors	1 to 50
Cross section	0.14 to 6 mm ²
Voltage rating	60 to 600 V DC
Temperature range	(-55) -40 to +150 °C (3000 h)

Composition of cable

- | | |
|---------------|--------------------------------------|
| 1. Conductor | stranded tinned or bare copper |
| 2. Insulation | various RADOX, fluoropolymers |
| 3. EMC screen | copper braiding or aluminium tape |
| 4. Jacket | various RADOX, TPU or fluoropolymers |

Characteristics and specialities

- High and low temperature resistance
- Ozone and weathering resistance
- Resistant to pressure at high temperature
- Resistant to motor oils, fuels and hydrolysis
- Flame retardant
- High abrasion resistance
- Easy to strip and process

Application

Sensor cables for use in road vehicle applications.

Standards

Conductor	General
ISO 6722	ISO 19642
DIN EN 13602, Cu-ETPI-A (CW003A)	ADR approved

For further technical details please refer to our data sheet.

RADOX[®] sensor cables

Customised cables to your requirements

- Round or flat cable?
- EMC shielding necessary?
- What degree of flexibility is required?
- Special temperature requirements?
- Special requirements for voltage rating, impedance, attenuation?
- Special chemical or environmental concerns?
- Potting or overmoulding?
- Special requirements on processing (crimping, welding, ultrasonic welding, etc.)?
- Approvals?

Our leads

single-coloured or two-coloured



Lead type	Temperature range	Cross section	Designation
	3000 h	mm ²	
RADOX 155S RW	-55 to +150 °C	0.14 to 1	Following „ultra thin-wall“ according to ISO 6722, excellent media resistance, for applications where a small diameter is required
RADOX 155S FLR	-55 to +150 °C	0.35 to 6	„Thin-wall“ according to ISO 6722, excellent media resistance, for standard applications
PE-X	-40 to +125 °C	0.35 to 1	Databus cable with 110/120 Ω impedance
ETFE FLR	-55 to +200 °C	0.35 to 6	„Thin-wall“ according to ISO 6722, excellent media resistance, such as hot oil

Our jacket materials

Jacket material	Temperature range	Electron beam cross-linked	Mechanical resistance	Flexibility	Media resistance
	3000 h				
RADOX Elastomer S	-70 to +150 °C	yes	very good	excellent	excellent
RADOX 155	-55 to +150 °C	yes	good	good	good
TPU	-40 to +125 °C	no	very good	excellent	good