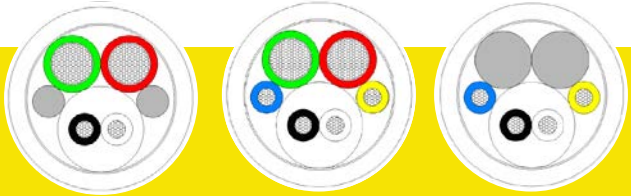
Fields of application

The name multi-function cables says it all. Specifically, it is a matter of combining several automotive cables for different applications in one overall cable. Among other things, this makes sense for the axle wiring in cars. For example, this is where cables for the following applications are fitted:

- wheel speed sensor (WSS) for anti-lock braking
- electronic parking brake (EPB)
- adaptive damper systems (ADS)
- brake wear indicator (BVA)

It allows for a large variety of customised combination options and dimensions within tight tolerances:



WSS + EPB ***WSS + ADS + EPB*** ***WSS + ADS***

The WSS element is applied as a seperate sheathed cable to the sensor and is tightly overmouldable.

Global market coverage

LEONI Adascar multi-function cables are subject to a more complex manufacturing process compared to standard sensor cables. They are globally available and produced at our production facilities in Germany, China and Mexico.

More about global production network:

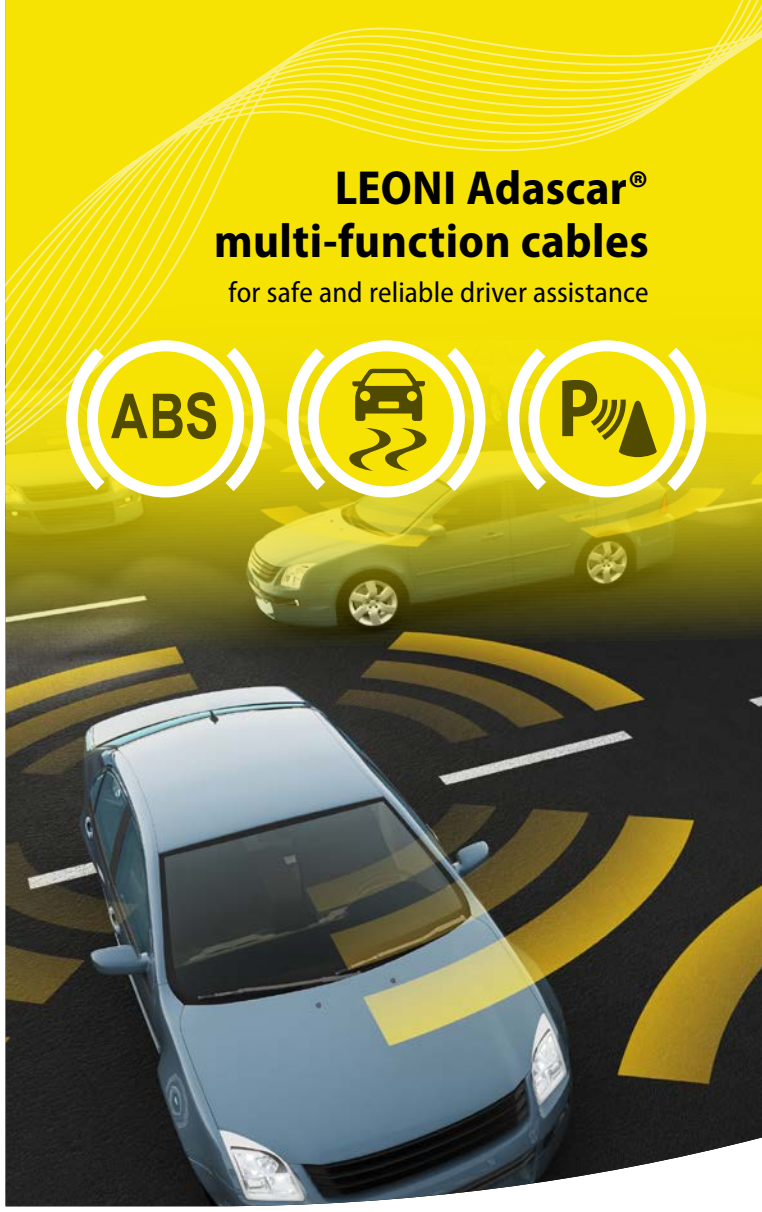
Automotive & Commercial Vehicles
www.leoni-automotive-cables.com
www.leoni-cable.com
cable-info@leoni.com
@leoni_cable

Business Group
Automotive Cable Solutions

LEONI Kabel GmbH
An der Lände 3
91154 Roth, Germany
+49 9171 804-2378

LEONI Adascar® multi-function cables

for safe and reliable driver assistance



The Quality Connection

LEONI

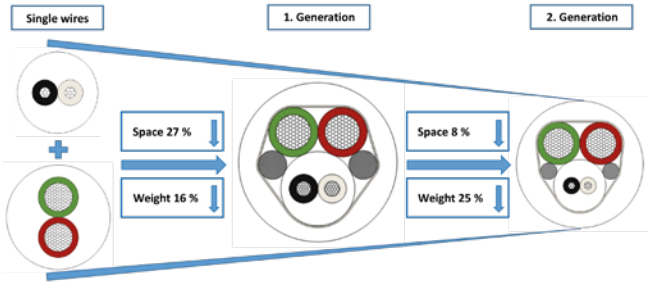
LEONI Adascar multi-function cables

As the number of driver assist systems grows, so does the number of cables. Be it parking and camera systems or lane departure warning and stability control: Much installation space would be requited if a dedicated cable were to be fitted for each function. That is why LEONI combines various signal wires into multi-function cables.

Technical advantages:

- fitting a cable system is usually less complicated than laying several, individual cables
- the reduction in installation space required is approx. 27 percent and in weight it is about 16 percent compared with seperate cables (1. generation)
- as-needed division of the cable system regardless of customer requirements is possible; different sheath stripping lengths specific to the application are feasible
- potential for significant savings on material

Schematic overview of the savings potential provided by multi-function cables versus conventional cables



Excellent mechanical properties in terms of flex, torsion and abrasion go without saying for these types of cable because they are usually fitted along the axle. The cables must furthermore also withstand the effects of ambient conditions. As is usual with axle wiring, thermoplastic polyurethane (TPE-U) is used as the jacket material. This highly effective material is very well suited for this application, it can be overmoulded extremely well. It is like-wise essential that the jacket insulation can be stripped very well even across long lengths and that fully-automated processing does not present any problems.

Possible cable / application combinations

	Code	Application	Jacket material	Outer-Ø [nom. mm]	Temperature range [3,000h]
1. Generation	LEONI Adascar® Sensor 1931 2 x 2.5sn + (2 x 0.5)	WSS + EPB	TPE-U	9.2	–40 °C / +125 °C
	LEONI Adascar® Sensor 1934 2 x 0.5sn + (2 x 0.5)	WSS + ADS	TPE-U	9.2	–40 °C / +125 °C
	LEONI Adascar® Sensor 1940 2 x 2.5 + 2 x 0.5 + (2 x 0.5)	WSS + ADS + EPB	TPE-U	9.2	–40 °C / +125 °C
2. Generation	LEONI Adascar® Sensor 1941 2 x 2.5 + (2 x 0.13)	WSS + EPB	TPE-U	8.5	–40 °C / +125 °C
	LEONI Adascar® Sensor 1943 2 x 0.13 + (2 x 0.13)	WSS + ADS	TPE-U	6.3	–40 °C / +125 °C
	LEONI Adascar® Sensor 1942 2 x 2.5 + 2 x 0.13 + (2 x 0.13)	WSS + ADS + EPB	TPE-U	8.5	–40 °C / +125 °C