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CAN Bus Hybrid Cable including Power Supply for Rail Vehicles

Thanks to the new High-Endurance Hybrid Cable by HRADIL Spezialkabel it is now possible to transmit both, high-speed data as well as electric power in a single cable along the interior and exterior of trains. The rugged cable complies with the Hazard Levels HL1 through to 3 in accordance with the fire protection standards EN 45545 as well as EN 50264-3-2. It can be shipped within a minimum of time following order approval.

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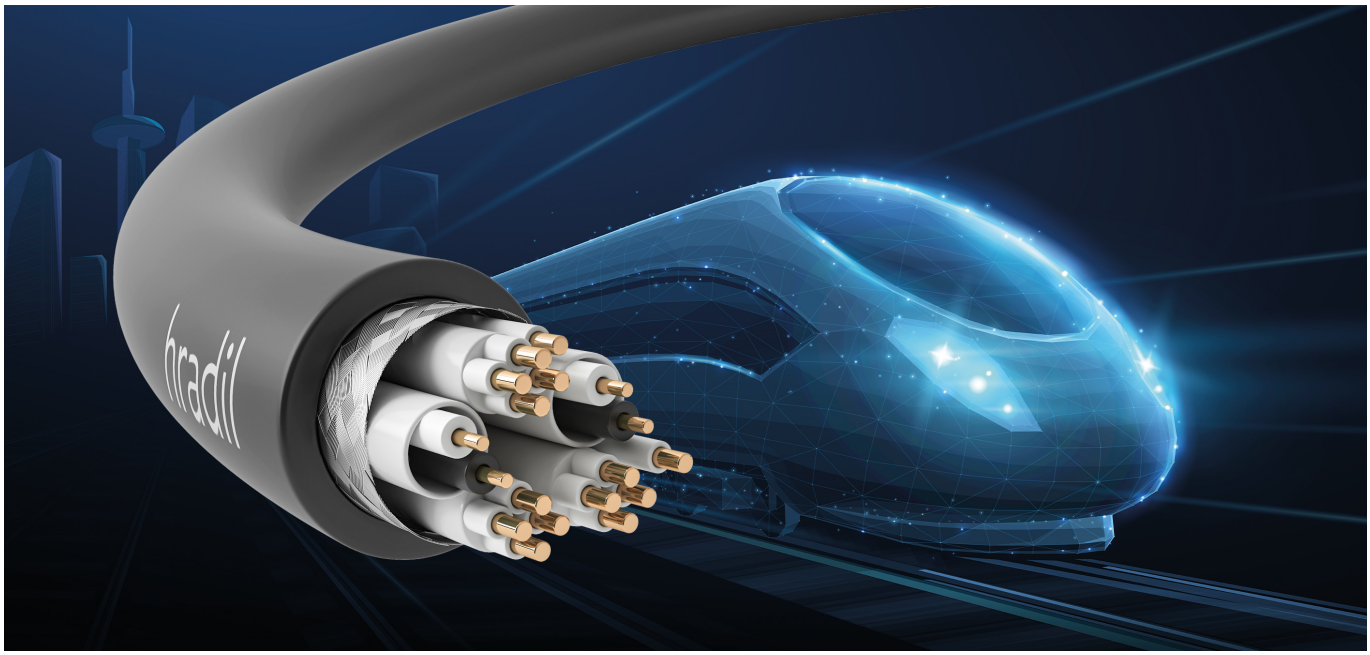

Fig. 1: HRADIL High-Endurance CAN-Bus Hybrid Cable for Rail Vehicles
(For larger view, please click on image | Image montage: Shutterstock.com and Hradil)

The High-Endurance Hybrid Cable presented by HRADIL Spezialkabel is robust, suitable for trains and has been designed for indoor and outdoor applications on rail-bound vehicles. Thanks to the Hradil hybrid cable it is no longer necessary to have separate cables for power and signal transmission as it combines both capabilities in a single cable. Furthermore, the cable has been designed for indoor as well as for demanding outdoor tasks. One single cable is sufficient to provide the cabling for an entire train, even across couplings. HRADIL offers a range of versions of this new cable.

Fig. 2: Hybrid Cable for Rail Vehicles by HRADIL
(For larger view, please click on image)

HRADIL’s CAN bus hybrid cables have been designed for rugged outdoor use, withstand long-term temperature exposure in the range from -50 to +90 degrees C and are resistant against oil and fuels in accordance with the EN 60811-504 and EN 60811-404 standards. Ozone resistance in accordance with EN 50306-4 is guaranteed. In the case of fixed cabling it permits a bending radius of six times the external diameter. Special compounds are used to produce the high-endurance cable. Aramide fibre braiding provides for tensile strength of the jacket and the inside of the cable.

Fig. 3: HRADIL High-Endurance CAN Bus Hybrid Cable for rail vehicles
(For larger view, please click on image | Image montage: Shutterstock.com and Hradil)

Maximum Fire-Protection for Rail Vehicle

The High-Endurance Hybrid Cable by HRADIL meets all fire protection requirements for interior as well as exterior applications on trains in accordance with Hazard Levels HL1 through to 3 of DIN EN 45545-2 and EN 50264-3-2. Among others the cables have been tested for vertical flame spread of vertically-mounted bunched wires or cables (EN 60332-1-2 and EN 60332-3-24), smoke density (EN 61034-2), toxicity of combustion gases (EN 50305), absence of halogen (EN 50267-2-1; EN 60684-2) as well as combustion gas corrosivity (EN 50267-2-2). Thanks to the low fire load of the cable in accordance with DIN 51900 and low oxygen index (LOI) in accordance with ISO 4589-2 as well as ASTM D 2863, the fire risk is reduced to a minimum.

Fig. 4: Hybrid Cable for Rail Vehicles by HRADIL
(For larger view, please click on image)

Fig. 5: HRADIL High-Endurance CAN Bus Hybrid Cable for Rail Vehicles
(For larger view, please click on image | Image montage: Shutterstock.com and Hradil)

Useful to know: CAN Bus (Controller Area Network)

The CAN bus (Controller Area network) is a real-time capable field bus standard that has been designed for the serial transmission of data. Originally developed by Bosch in the year 1983 for automotive engineering applications its purpose was to minimize the need for wiring harnesses aboard motor vehicles. Over the last years the CAN bus has become the field bus of choice for automation and manufacturing equipment. In keeping with the International Standardisation Organisation (ISO 11898-2 High-Speed Medium Access Unit from 2003) twisted-pair cables with a wave impedance of 95 to 140 ? are recommended as a bus medium.

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