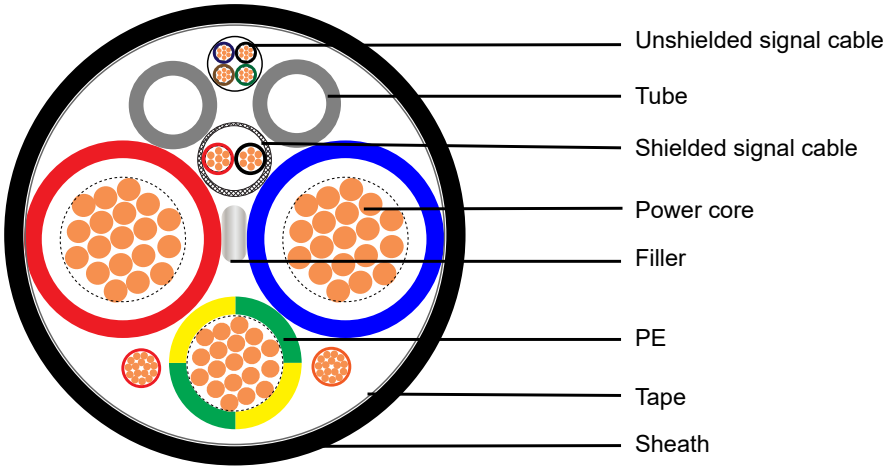
Oil-cooled Cables

APPLICATION

The application mode of the cables is mainly used to connect electric vehicle charging devices to the charging infrastructure, thus providing fast power transmission to electric vehicles, and equipped with a certain number of signal and control lines to ensure accurate control and safe and error-free operation of the entire charging process.
The cable structure is mainly composed of the main core of power supply, ground wire, signal wire or shield wire set, return pipe, filler and reinforcing rope combination. DC+ and DC- conductors are immersed in the cooling medium to take away heat through the medium and form a cooling circuit through the circulation of the return pipe, which eventually carries a larger current with a smaller conductor cross-section to achieve the effect of high-power fast charging. The cable use scenario is generally used in centralized charging stations, large parking lots, hotels, garages and other areas.

STANDARDS

Basic design to IEC62893-4-2



CABLE CONSTRUCTION

Conductor: Bare copper or tinned copper, class 5 to IEC60228.

Power cores	16mm^2 to 150mm^2
Control or pilot cores	min. 0.5mm^2
Optional PE conductor	min. 25mm^2
Optional auxiliary power cores	2.5mm^2 to 6mm^2

Insulation: Irradiation cross-linked polyolefin.
Screen(optional): Braided copper wire.
Tube: Irradiation cross-linked polyolefin.
Filler: PP hemp or cotton yarn.
Tape: Non-woven fabric.
Sheath: TPU, Black,other colours can be offered upon request.

TECHNICAL CHARACTERISTICS

Temperature range: - 40º C to + 90º C
Rated voltage: AC 600V/1000V ; DC 1500V
Flame resistant: According to EN 60332-1-2
Minimum bending radius: 6×OD
Dielectric voltage: 3.5kVac/15min.No Breakdown
Oil resistant: IRM902,100°C/168h Tensile and Elongation≥60%
Cold bending: -40°C/4h No cracks
Hot shock: 150°C/1h No cracks
Crush resistant: ＞ 11KN
Weather resistant: 720min a xenon arc weatherometer, No cracks

CONSTRUCTION PARAMETERS

No.of Cores×Cross section	Nominal Thickness of Insulation	Nominal Thickness of Sheath	Maximum Overall Diameter	Minimum Insulation Resistance at 90 °C [e]
mm²	mm	mm	mm	MΩ · km
2×16	0.8	2.4	Design structures according to standards or customer requirements	0.0044
2×25	1.0	2.8		0.0043
2×35	1.0	3.2		0.0037
2×50	1.1	3.6		0.0034
2×70	1.2	4.0		0.0031
2×95	1.2	4.4		0.0028
2×120	1.3	4.8		0.0027
2×150	1.5	5.3		0.0028

Note: 1. Signal line range n = 0-10
2. The number of reflux tubes according to customer requirements.
3. Cooling medium is defined by the client.