

## Medium Voltage Covered Conductors upto 36 KV

Medium Voltage Covered Conductors are developed to improve the reliability of the distribution of electricity. The concept of covered conductor has proven to be extremely functional and reliable. It consists of a conductor surrounded by a covering made of insulating material as protection against accidental contacts with other covered conductors and with grounded parts such as tree branches, etc. Medium voltage covered conductors are produced in voltage rating between 6.6KV to 33KV.



### CCX WK 20 kV

#### Application

Suitable for AC high-voltage overhead power lines. Provide protection against accidental contact with other life covered overhead conductors and with grounded parts. Since these cables are unscreened they are not touch proof and shall be treated as bare conductors in respect to electric shock.

#### Construction

- 1 | Bare alloy aluminium conductor (AlMgSi), round stranded compressed (RM). Longitudinally watertight by dry finishing.
- 2 | Core insulation (XLPE, black, UV resistant)

#### Data

Standard: EN 50397-1

Rated voltage: 20 kV

Test voltage: 20 kV/50 Hz

Temperature range: laying temperature: min. -20 °C

operating temperature: -40 °C to +80 °C

conductor temperature: max. +80 °C

short-circuit temperature: max. +130 °C/5 s

Bending radius (min.): 18 x  $\varnothing$  of cable

New marking	Old marking	Max. conductor resistance	Min. breaking load of conductor strand	Current rating in air <sup>1)</sup>	Outer diameter	Total weight
Number of cores x nominal Cross section (mm <sup>2</sup> )	Number of cores x nominal Cross section (mm <sup>2</sup> )	( $\Omega$ /km)	(kN)	(A)	(mm)ca.	(kg/km)ca.
CCX WK 20 kV						
34-AL3	1x35 RM	1.047	9.64	169	11.9	175

49-AL3	1x50 RM	0.7	13.87	210	13.3	225
66-AL3	1x70 RM	0.528	18.44	255	14.7	280
93-AL3	1x95 RM	0.372	26.14	320	16.7	375
117-AL3	1x120 RM	0.297	32.79	365	18.1	450
147-AL3	1x150 RM	0.237	41.23	425	19.8	560

## CCST W 10-52kV

### Description

CCST is a round stranded, non-compacted covered overhead line . The conductor is longitudinally water blocked with extruded polymer between each layer in the conductor. This increases the reliability and service life of the covered conductor by preventing water from penetrating the conductor and causing corrosion . The longitudinally water blocked conductor and the three extruded layers are made in one and the same process for the best quality and performance .

Standards EN 50397- 1

### Construction

Conductor - ACSR, ACSC, AAAC

\* Extruded longitudinal water blocking

\* Extruded inner semi-conductive layer

\* Insulation of PE

\* Outer layer of UV- and tracking resistant HDPE

\* Colors - Green, Gray or Black

\* Voltage class, U(Um) - 10(12), 20(24), 30(36) and 52kV

Minimum bending radius	15xD (10xD final installation)
Recommended minimum conductor temperature during installation	-20°C
Maximum continuous conductor temperature	+70°C

For special requests, we can also design customized solutions.

Product [-]	Area [mm <sup>2</sup> ]	Construction [-]	Nom. Outer diameter [mm]	Weight [kg/km]
CCST 1x62 ACSR	62	1+6 x 3,37mm	15,4	335
CCST 1x99 ACSR	99	1+6 x 4,25 mm	18,1	495
CCST 1x99 AAAC	99	7 x 4,25 mm	18,1	422
CCST 1x159 AAAC	157	19 x 3,26 mm	21,6	637
CCST 1x241 AAAC	241	19 x 4,02 mm	25,4	922
CCST 1x329 AAAC	329	37 x 3,37 mm	28,8	1244

## CCSX W 10-52kV

### Application

CCSX is a round stranded, non-compacted covered overhead conductor. The conductor is longitudinally water blocked with extruded polymer between each layer in the conductor.

This increases the reliability and lifespan of the covered conductor by preventing water from penetrating the conductor and causing corrosion.

The longitudinally waterproof conductor and the three extruded layers are made in one and the same process for the best quality and function.

The outer sheath is UV protected.

Covered conductor is available as ACSR, ACSC and AAAC.

Covered conductor is manufactured and tested according to standard EN 50397-1 or SS 42 414 64.

### Construction

\* Conductor - ACSR, ACSC, AAAC

- \* Extruded longitudinal water blocking
- \* Extruded inner semi-conductive layer
- \* Insulation of XLPE
- \* Outer layer of UV- and tracking resistant XLPE
- \* Colors - Gray or Black
- \* Voltage class, U(Um) - 10(12), 20(24), 30(36) and 52kV

Minimum bending radius	15xD (10xD final installation)
Recommended minimum conductor temperature during installation	-20°C
Maximum continuous conductor temperature	+80°C

Product [-]	Area [mm <sup>2</sup> ]	Construction [-]	Nom. Outer diameter [mm]	Weight [kg/km]
CCSX 1x62 ACSR	62	1+6x3,37mm	154	335
CCSX 1x99 ACSR	99	1+6x4,25 mm	181	495
CCSX 1x99 AAAC	99	7x4,25 mm	181	422
CCSX 1x159 AAAC	157	19x3,26 mm	216	637
CCSX 1x241 AAAC	241	19x4,02 mm	254	922
CCSX 1x329 AAAC	329	37x3,37 mm	288	1244

## CCSX W 10-52kV Hybrid

### Application

CCSX Hybrid is a round stranded, non-compacted covered overhead conductor. The conductor is longitudinally water blocked with extruded polymer between each layer in the conductor.

This increases the reliability and lifespan of the covered conductor by preventing water from penetrating the conductor and causing corrosion.

The longitudinally waterproof conductor and the three extruded layers are made in one and the same process for the best quality and function.

The outer sheath is UV protected.

### Construction

Covered conductor is available as ACSR, ACSC and AAAC.

Standard color - Gray.

Can also be made into customized solutions.

Covered conductor is manufactured and tested according to standard EN 50397-1 or SS 42 414 64.

- \* Conductor - ACSR, ACSC, AAAC
- \* Extruded longitudinal water blocking
- \* Extruded inner semi-conductive layer
- \* Insulation of XLPE
- \* Outer layer of UV- and tracking resistant HDPE
- \* Color - Gray
- \* Voltage class, U(Um) - 10(12), 20(24), 30(36) and 52kV

Minimum bending radius	15xD (10xD final installation)
Recommended minimum conductor temperature during installation	-20°C
Maximum continuous conductor temperature	+80°C

For special requests, we can also design customized solutions.

Product [-]	Area [mm <sup>2</sup> ]	Construction [-]	Nom. Outer diameter [mm]
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CCSX 1x25 ACSC HYBRID	25	7x2,12mm	130
CCSX 1x62 ACSR HYBRID	62	1+6x3,37mm	160
CCSX 1x99 ACSR HYBRID	99	1+6x4,25 mm	181
CCSX 1x99 AAAC HYBRID	99	7x4,25 mm	181
CCSX 1x159 AAAC HYBRID	157	19x3,26 mm	220
CCSX 1x241 AAAC HYBRID	241	19x4,02 mm	254

Conductor (MVCC) is becoming as one of the best replacement of Over Head Bare Conductor (ACSR) and Aerial Bunched cable in power transmission and distribution system in some part of the world. The uses of Covered Conductor which is similar like SAC (Space Aerial Bunch Cables) are seen in South Korea, Japan, Iran, Myanmar and some parts of Australia. It has a very successful journey so far.