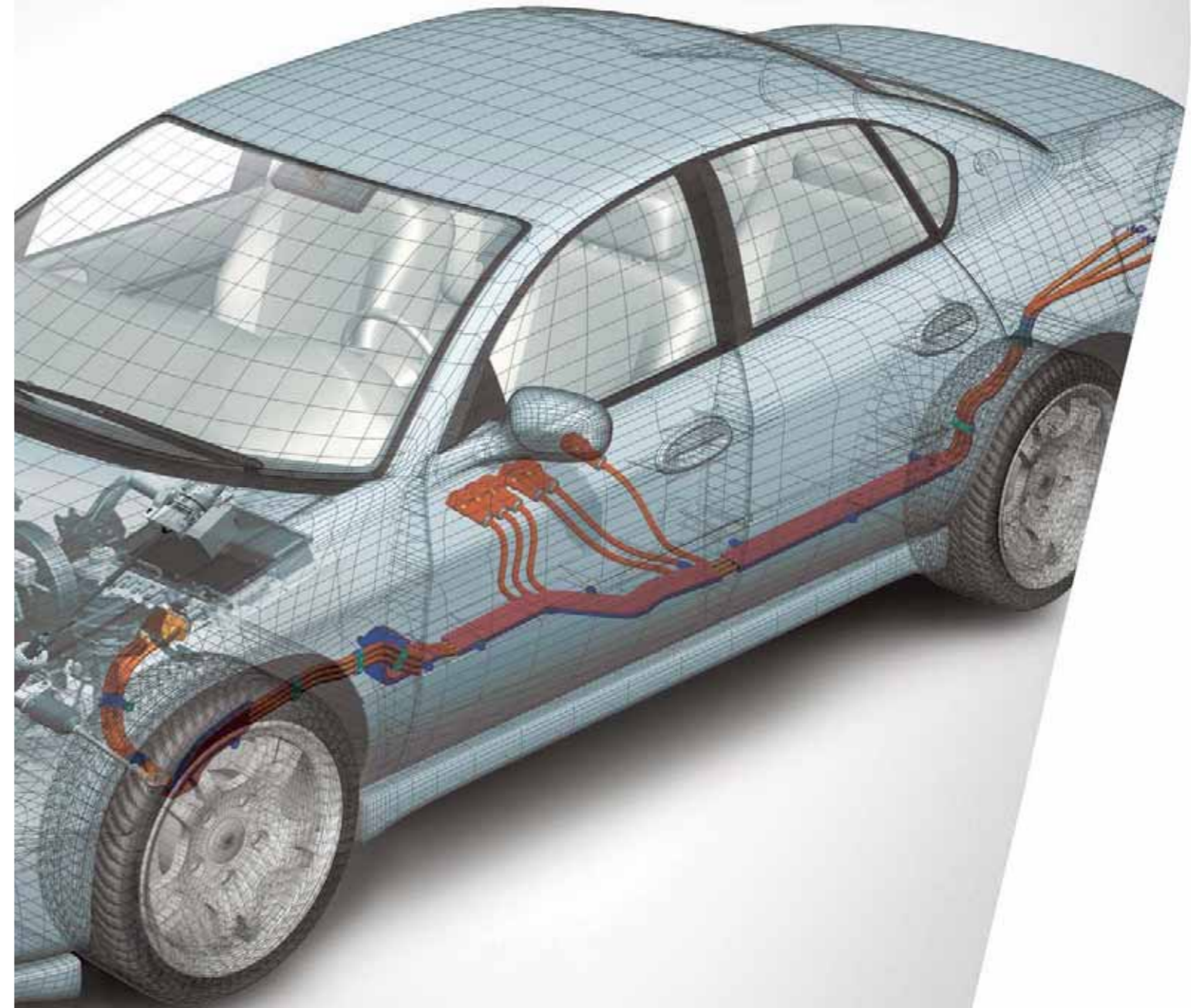


High Voltage Components for Next Generation Vehicle





LS Cable is Everywhere!

From power plants to industrial field, mammoth buildings and factories to Automovtives, ships, railway vehicles and houses, the technology of LS cable is shining brightly in every corner of the world.





High Voltage Components for Next Generation Vehicle

As high voltage components (connector, cable and wiring harness) manufacturer and a division of LS Cable never stop researching, desinging, developing, and manufacturing products with the higher level of quality to address the ever-changing demands in everyday life as well as in the industry.

Our quality control meets the most delicate requirements of international standards and the high level of quality is recognized both by local and international clients.

Our commitment to develop and deliver solutions to address our customers' needs and challenges keep our technology on the cutting edge and our know-how in the field more valuable, which our customers highly appreciate. We are looking forward to working with you.



High Voltage Components for Next Generation Vehicle

Cable	
EEV, EEXV-SB	7
EEHX, EEHX-SB	9
EFX, EFXE-SB	11
Connector	
10A Connector	13
40A Connector	15
65A Connector	17
75A Connector	19
100A Connector	21
300A Connector	23
Global Network	25

EEX, EEXV-SB Cable (125°C Grade)



Description

High voltage, flexible, electromagnetically shielded automotive cable for applications on EV, HEV, FCEV wiring systems

Features

- Reliable to high-voltage & current conditions
- Excellent EMI, EMC noise reduction
- Eco-friendly designed materials (non PBDE, PBBs, Pb, Cr⁺⁶, Cd, Hg)

Benefits

- Maximum using temperature (ISO 6722 Class C : 125°C)
- Flexible and easy to handle for harnessing

Materials

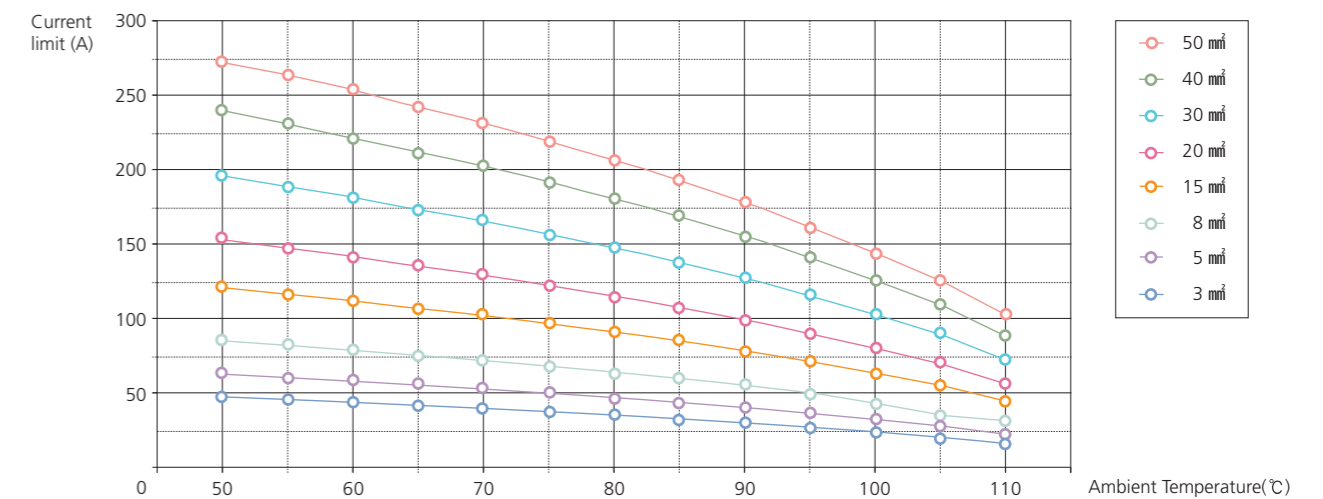
- Conductor : roped-strand tin annealed copper
- Insulation : 125°C halogen-free XLPE
- Shield : braided by tin annealed copper strands
- Sheath : 105°C Pb-free PVC

Structure and cable selection

Nominal size (mm ²)	Conductor			Insulation		Shield braid	Sheath	
	No. of Strand (N/mm)	O.D (mm)	Resistance (Ω/m@20 °C)	Thickness (mm)	O.D (mm)	No. of Strand (N/mm)	Thickness (mm)	O.D (mm)
1.25	37/0.21TA	1.50	0.01550	0.60	2.70 ±0.20	24/4/0.12TA	0.50	4.20 ±0.25
3	65/0.26TA	2.40	0.00565	0.70	3.80 ±0.25	24/6/0.12TA	0.50	5.30 ±0.30
5	65/0.32TA	3.00	0.00372	0.80	4.60 ±0.30	24/7/0.14TA	0.80	6.90 ±0.40
8	7/22/0.26TA	4.00	0.00243	0.80	5.60 ±0.30	24/7/0.14TA	0.80	7.90 ±0.40
15	19/9/0.32TA	5.30	0.00144	1.10	7.50 ±0.30	24/7/0.18TA	1.00	10.30 ±0.45
20	19/13/0.32TA	6.50	0.00010	1.10	8.70 ±0.35	24/8/0.18TA	1.00	11.50 ±0.45
25	19/16/0.32TA	7.30	0.00082	1.10	9.50 ±0.35	24/8/0.18TA	1.00	12.40 ±0.45
40	19/26/0.32TA	9.10	0.00052	1.40	11.90 ±0.40	24/10/0.18TA	1.50	15.70 ±0.55
50	19/32/0.32TA	10.10	0.00042	1.60	13.30 ±0.45	24/10/0.18TA	1.50	17.10 ±0.60

Current limit

• EEXV-SB Cable



EEHX, EEHX-SB Cable (150°C Grade)



Description

High voltage, flexible, electromagnetically shielded automotive cable for applications on EV, HEV, FCEV wiring systems

Features

- Reliable to high-voltage & current conditions
- Excellent EMI, EMC noise reduction
- Eco-friendly designed materials (non PBDE, PBBs, Pb, Cr⁶⁺, Cd, Hg)

Benefits

- Maximum using temperature (ISO 6722 Class D : 150°C)
- Flexible and easy to handle for harnessing

Materials

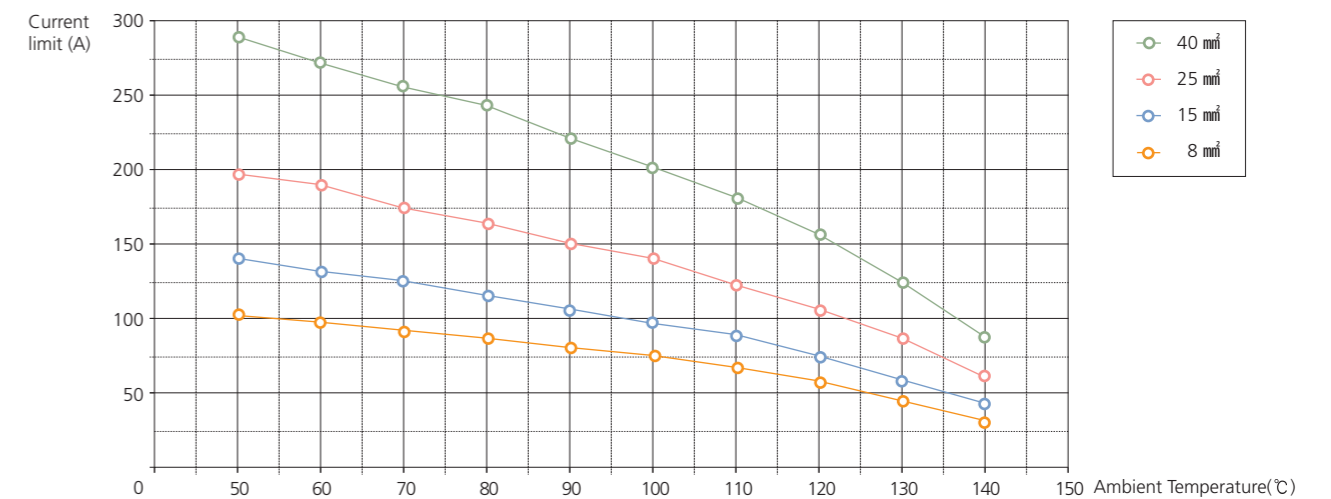
- Conductor : roped-strand tin annealed copper
- Insulation : heat-resistance 150°C halogen-free XLPE
- Shield : braided by tin annealed copper strands
- Sheath : 105°C Pb-free PVC (or HF-XLPO : optional)

Structure and cable selection

Nominal size (mm ²)	Conductor			Insulation		Shield braid	Sheath	
	No. of Strand (N/mm)	O.D (mm)	Resistance (Ω/m@20 °C)	Thickness (mm)	O.D (mm)	No. of Strand (N/mm)	Thickness (mm)	O.D (mm)
1.25	37/0.21TA	1.50	0.01550	0.60	2.70 ±0.20	24/4/0.12TA	0.50	4.20 ±0.25
3	65/0.26TA	2.40	0.00565	0.70	3.80 ±0.25	24/6/0.12TA	0.50	5.30 ±0.30
5	65/0.32TA	3.00	0.00372	0.80	4.60 ±0.30	24/7/0.14TA	0.80	6.90 ±0.40
8	7/22/0.26TA	4.00	0.00243	0.80	5.60 ±0.30	24/7/0.14TA	0.80	7.90 ±0.40
15	19/9/0.32TA	5.30	0.00144	1.10	7.50 ±0.30	24/7/0.18TA	1.00	10.30 ±0.45
20	19/13/0.32TA	6.50	0.00010	1.10	8.70 ±0.35	24/8/0.18TA	1.00	11.50 ±0.45
25	19/16/0.32TA	7.30	0.00082	1.10	9.50 ±0.35	24/8/0.18TA	1.00	12.40 ±0.45
40	19/26/0.32TA	9.10	0.00052	1.40	11.90 ±0.40	24/10/0.18TA	1.50	15.70 ±0.55
50	19/32/0.32TA	10.10	0.00042	1.60	13.30 ±0.45	24/10/0.18TA	1.50	17.10 ±0.60

Current limit

- EEHX-SB Cable



EFX, EFXE-SB Cable (200°C Grade)



Description

Extremely high temperature / oil / flame-resistance application, High voltage, flexible, electromagnetically shielded automotive cable for applications on EV, HEV, FCEV wiring systems

Features

- Reliable to high-voltage & current conditions
- Excellent EMI, EMC noise reduction
- Eco-friendly designed materials (non PBDE, PBBs, Pb, Cr⁶⁺, Cd, Hg)

Benefits

- Maximum using temperature (ISO 6722 Class F : 200 °C)
- Flexible and easy to handle for harnessing

Materials

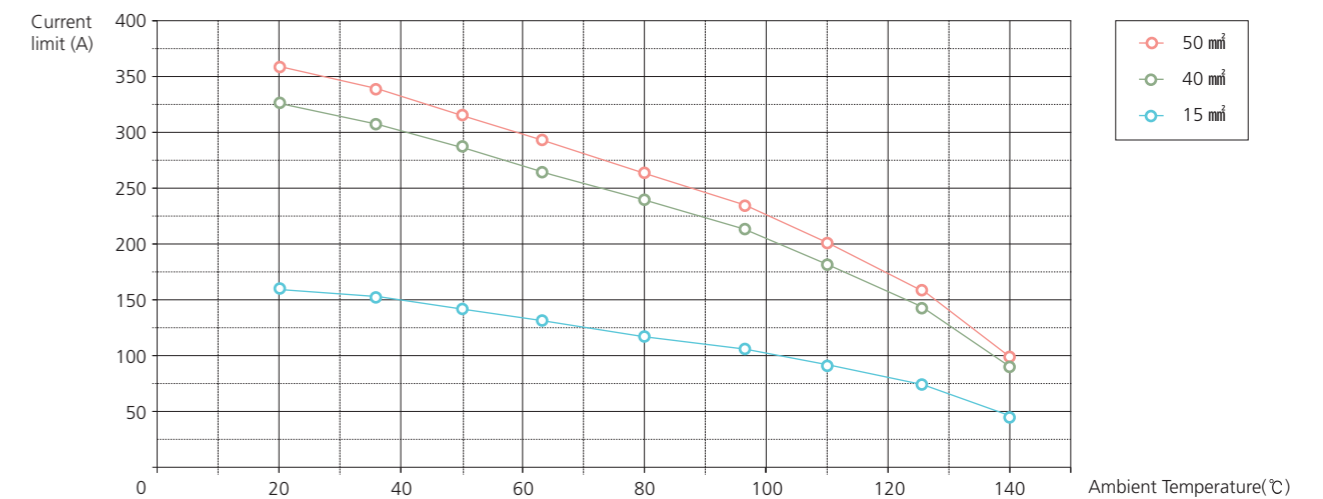
- Conductor : roped-strand tin annealed copper
- Insulation : 200 °C rated fluorine elastomer
- Shield : braided by tin annealed copper strands
- Sheath : heat-resistance HF-XLPO

Structure and cable selection

Nominal size (mm ²)	Conductor			Insulation		Shield braid	Sheath	
	No. of Strand (N/mm)	O.D (mm)	Resistance (Ω/m@20 °C)	Thickness (mm)	O.D (mm)	No. of Strand (N/mm)	Thickness (mm)	O.D (mm)
1.25	37/0.21TA	1.50	0.01550	0.60	2.70 ±0.20	24/4/0.12TA	0.50	4.20 ±0.25
3	65/0.26TA	2.40	0.00565	0.70	3.80 ±0.25	24/6/0.12TA	0.50	5.30 ±0.30
5	65/0.32TA	3.00	0.00372	0.80	4.60 ±0.30	24/7/0.14TA	0.80	6.90 ±0.40
8	7/22/0.26TA	4.00	0.00243	0.80	5.60 ±0.30	24/7/0.14TA	0.80	7.90 ±0.40
12	7/22/0.32TA	5.00	0.00160	1.00	7.00 ±0.30	24/6/0.18TA	1.00	9.80 ±0.40
15	19/9/0.32TA	5.30	0.00144	1.10	7.50 ±0.30	24/7/0.18TA	1.00	10.30 ±0.45
20	19/13/0.32TA	6.50	0.00010	1.10	8.70 ±0.35	24/8/0.18TA	1.00	11.50 ±0.45
25	19/16/0.32TA	7.30	0.00082	1.10	9.50 ±0.35	24/8/0.18TA	1.00	12.40 ±0.45
40	19/26/0.32TA	9.10	0.00052	1.40	11.90 ±0.40	24/10/0.18TA	1.50	15.70 ±0.55
50	19/32/0.32TA	10.10	0.00042	1.60	13.30 ±0.45	24/10/0.18TA	1.50	17.10 ±0.60

Current limit

- EFXE-SB Cable



10A Connector



Description

High voltage, sealed, electromagnetically shielded connector for BOP* components on FCEV systems

Features

- Electromagnetically shielded connector with metal housing
- Sliding mounting construction
- Contact reliability ensured for high vibration and high temperature by using strip-form contact elements
- Easy bolting on unit side connector

Benefits

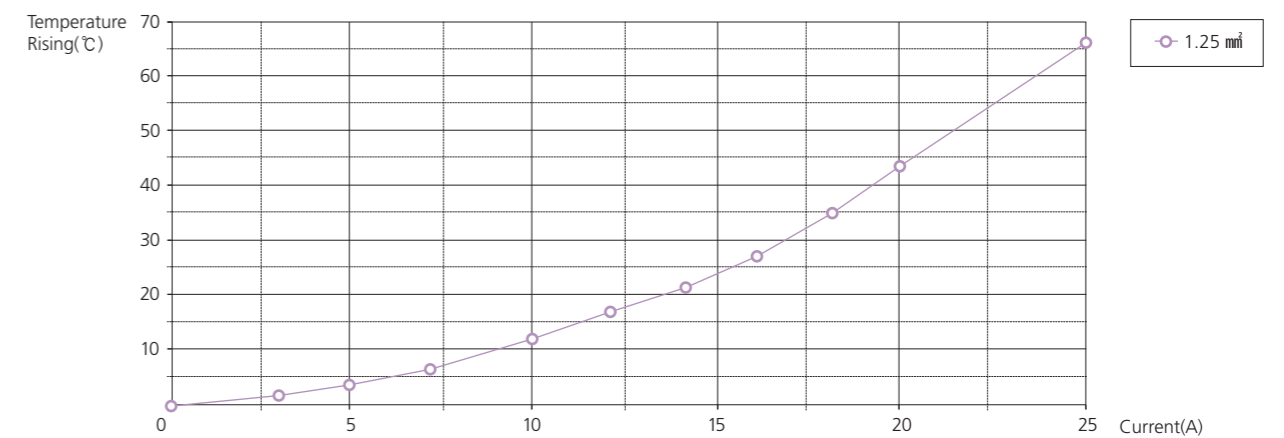
- EMI shielding with bundle shield part
- Unit side connector easily integrates into BOP components
- Low contact resistance and voltage drop
- Compact size with bundle shielding type

Specification

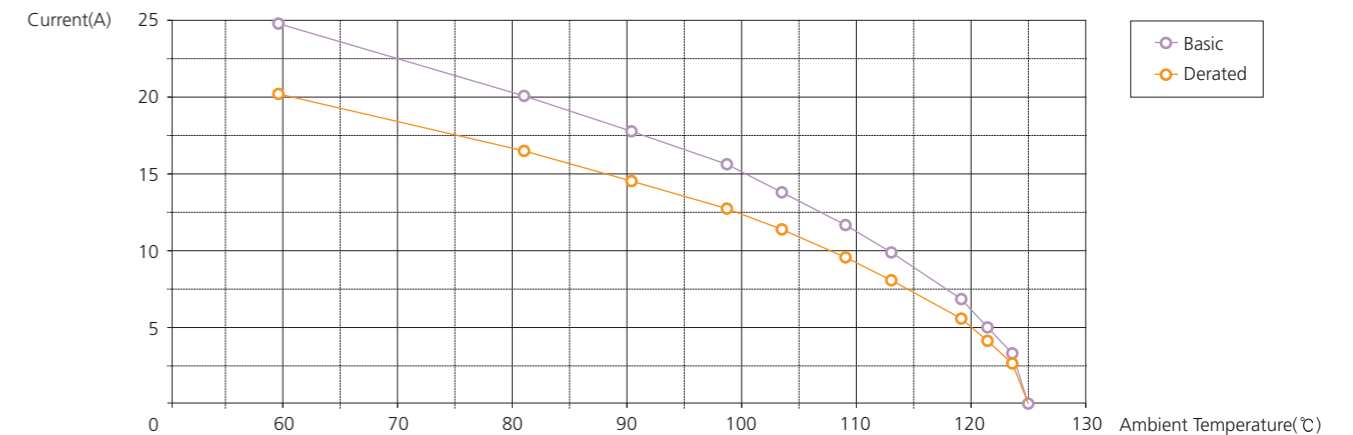
Type	Unit Side	Wire Side
	Male	Female
Poles	2P, 3P	2P, 3P
Voltage rating	~ 600 V	~ 600 V
Current rating	10 A	10 A
Applicable wire size	1.25 mm ²	1.25 mm ²
Shielding effectiveness	40 dB	40 dB

Characteristics

• Temperature Rising (SAE J 1742)



• De-rating Curve (IEC 60512-5-2)



* The test data are based on single circuits in free space. This result does not account for all of the variables that would be present in an actual application.

BOP* Balance of plant for fuel cell

40A Connector



Description

High voltage, sealed, electromagnetically shielded connector for inverter / converter and other applications on HEV and FCEV systems

Features

- Electromagnetically shielded connector
- Tamper-resistant CPA
- Contact reliability ensured for high vibration and high temperature by using multiple contact terminal

Benefits

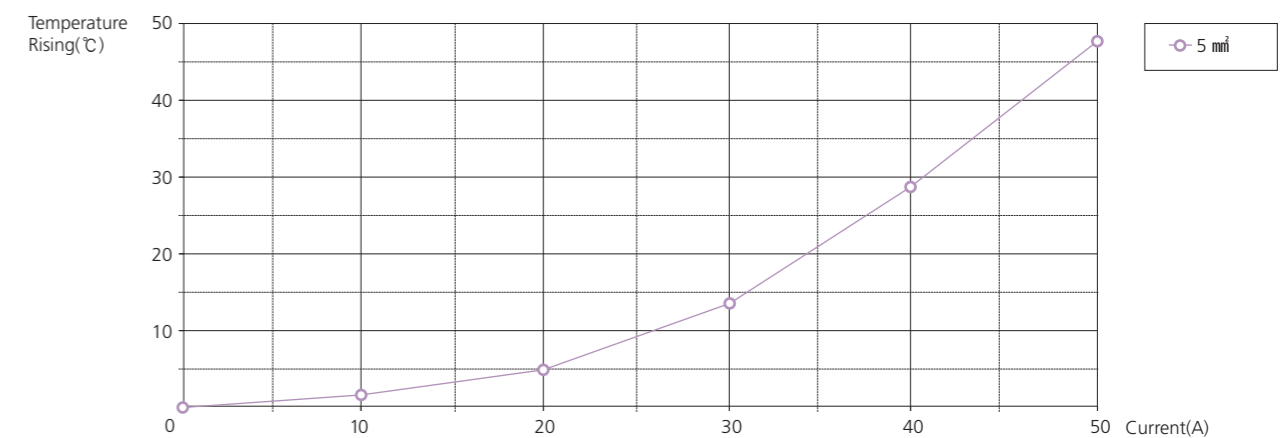
- EMI shielding with independent or bundle shield part
- Tamper-resistant CPA prevents removal by customer
- Unit side connector easily integrates into battery or inverter
- Low contact resistance and voltage drop

Specification

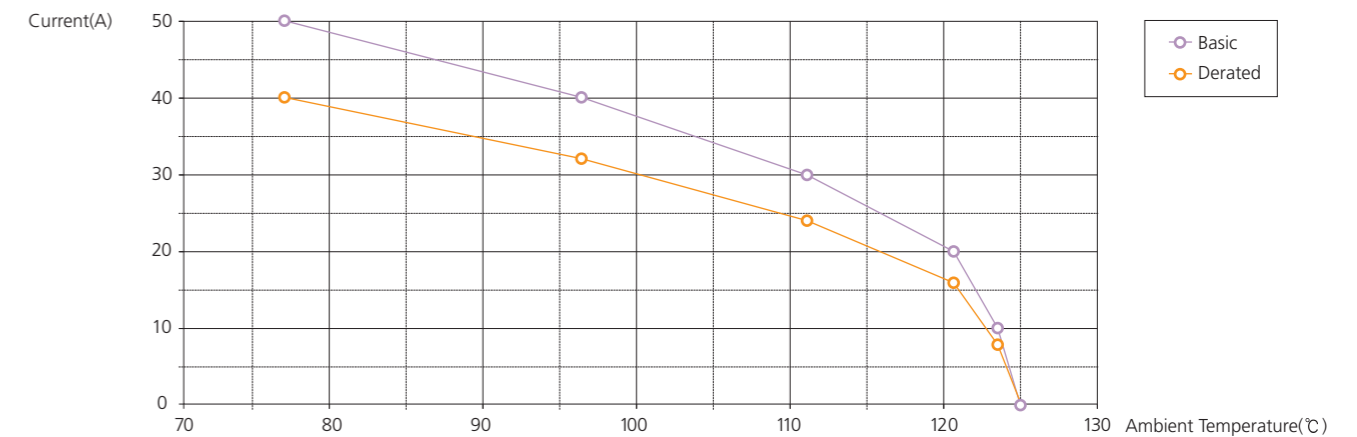
Type	Unit Side	Wire Side
	Male	Female
Poles	2P, 3P, 4P	2P, 3P, 4P
Voltage rating	~ 600 V	~ 600 V
Current rating	35 ~ 40 A	35 ~ 40 A
Applicable wire size	3 ~ 8 mm ²	3 ~ 8 mm ²
Shielding effectiveness	40 dB	40 dB

Characteristics

• Temperature Rising (SAE J 1742)



• De-rating Curve (IEC 60512-5-2)



※ The test data are based on single circuits in free space. This result does not account for all of the variables that would be present in an actual application.

65A Connector



Description

High voltage, sealed, electromagnetically shielded connector for Battery and Inverter applications on HEV systems

Features

- Electromagnetically shielded connector with metal housing
- Tamper-resistant CPA
- Contact reliability ensured for high vibration and high temperature by using strip-form contact elements
- Easy bolting on unit side connector

Benefits

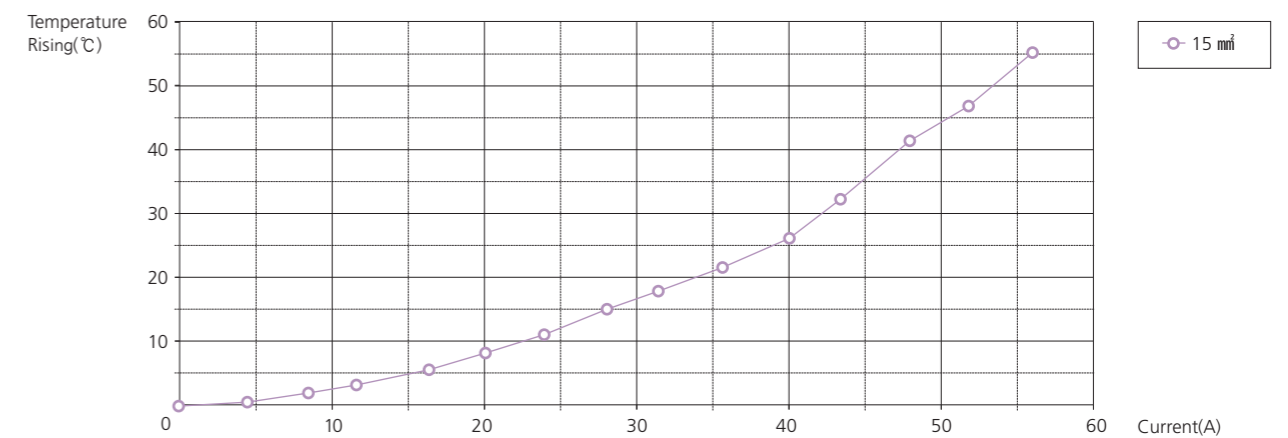
- EMI shielding with Independent shield part
- Tamper-resistant CPA prevents removal by customer
- Unit side connector easily integrates into battery or inverter
- Low contact resistance and voltage drop
- Compact size with high performance contact of high conductivity

Specification

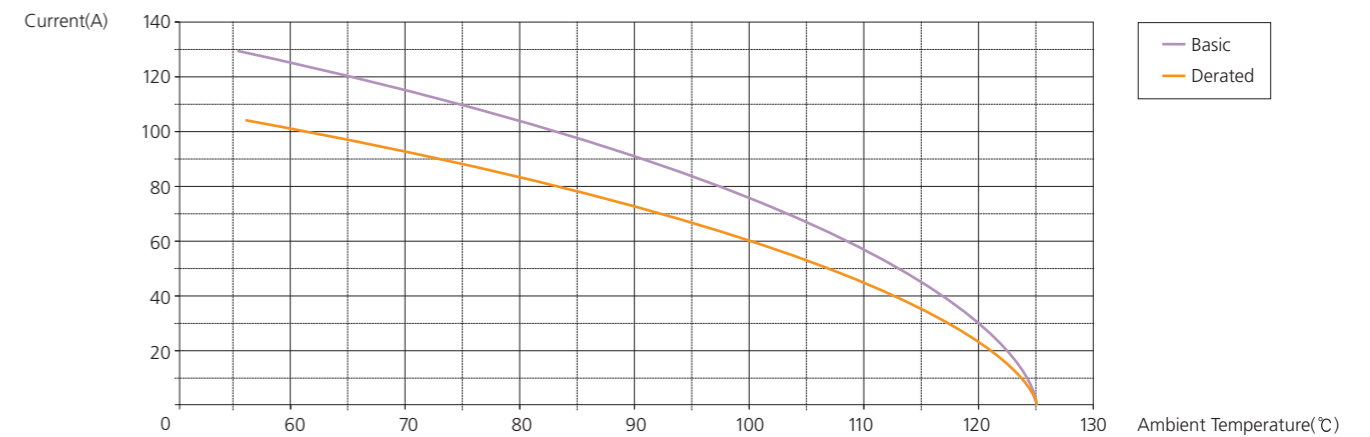
Type	Unit Side	Wire Side
	Male	Female
Poles	2P	2P
Voltage rating	~ 600 V	~ 600 V
Current rating	60 A	60 A
Applicable wire size	15 mm ²	15 mm ²
Shielding effectiveness	40 dB	40 dB

Characteristics

• Temperature Rising (SAE J 1742)



• De-rating Curve (IEC 60512-5-2)



※ The test data are based on single circuits in free space. This result does not account for all of the variables that would be present in an actual application.

75A Connector



Description

High voltage, sealed, electromagnetically shielded connector for Motor / Inverter applications on HEV systems

Features

- Electromagnetically shielded connector with metal housing
- Tamper-resistant CPA
- Contact reliability ensured for high vibration and high temperature environments by using contact member
- Lever to reduce connector mating force
- Bolt on equipment side connector

Benefits

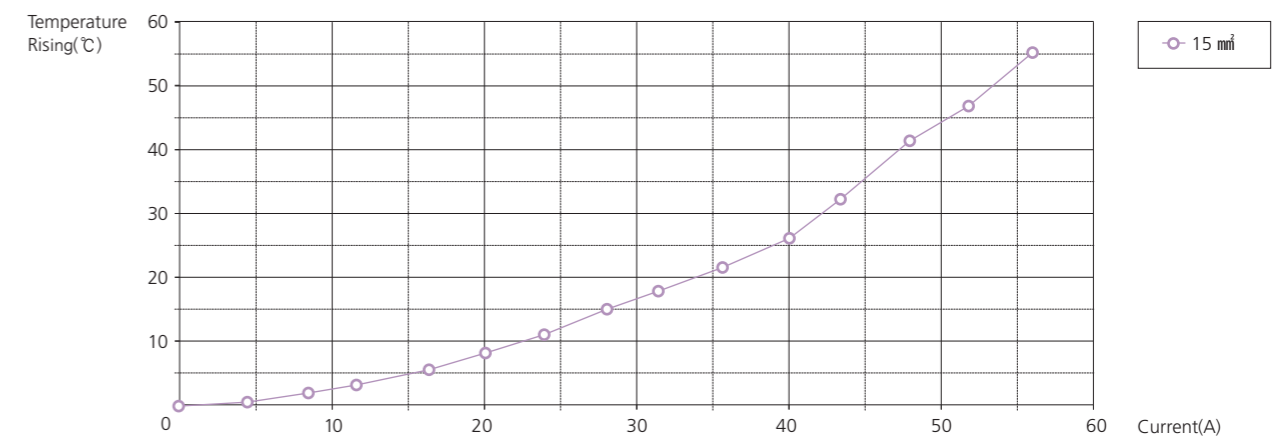
- Complete EMI shielding with easy connecting to shielded cable
- Tamper-resistant CPA prevents removal by customer
- Unit side connector easily integrates into motor or inverter
- Low contact resistance and voltage drop

Specification

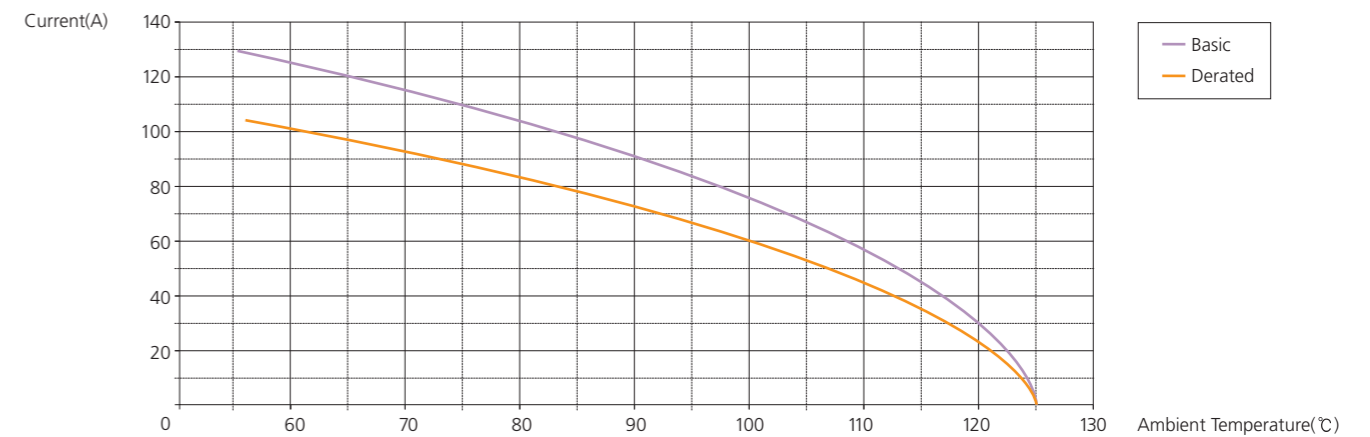
Type	Unit Side	Wire Side
	Male	Female
Poles	3P	3P
Voltage rating	~ 600 V	~ 600 V
Current rating	75 A	75 A
Applicable wire size	15 mm ²	15 mm ²
Shielding effectiveness	40 dB	40 dB

Characteristics

• Temperature Rising (SAE J 1742)



• De-rating Curve (IEC 60512-5-2)



※ The test data are based on single circuits in free space. This result does not account for all of the variables that would be present in an actual application.

100A Connector



100A(3P) Male



100A(3P) Female

Description

High voltage, sealed, electromagnetically shielded connector for motor and inverter applications on HEV systems

Features

- Electromagnetically shielded connector with metal housing
- Tamper-resistant CPA
- Contact reliability ensured for high vibration and high temperature by using strip-form contact elements
- Lever to reduce connector mating force
- Easy bolting on unit side connector

Benefits

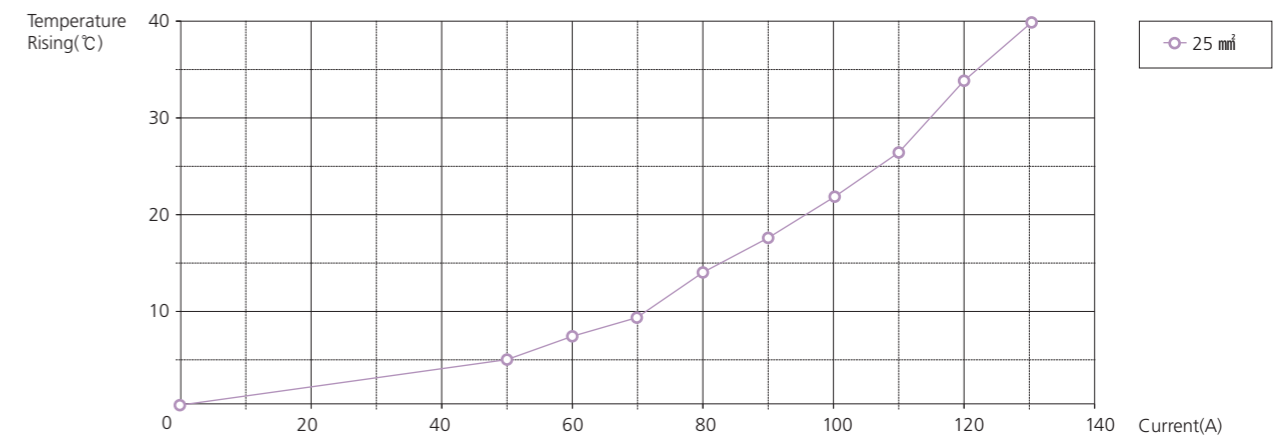
- EMI shielding with Bundle shield part
- Tamper-resistant CPA prevents removal by customer
- Unit side connector easily integrates into motor or inverter
- Low contact resistance and voltage drop

Specification

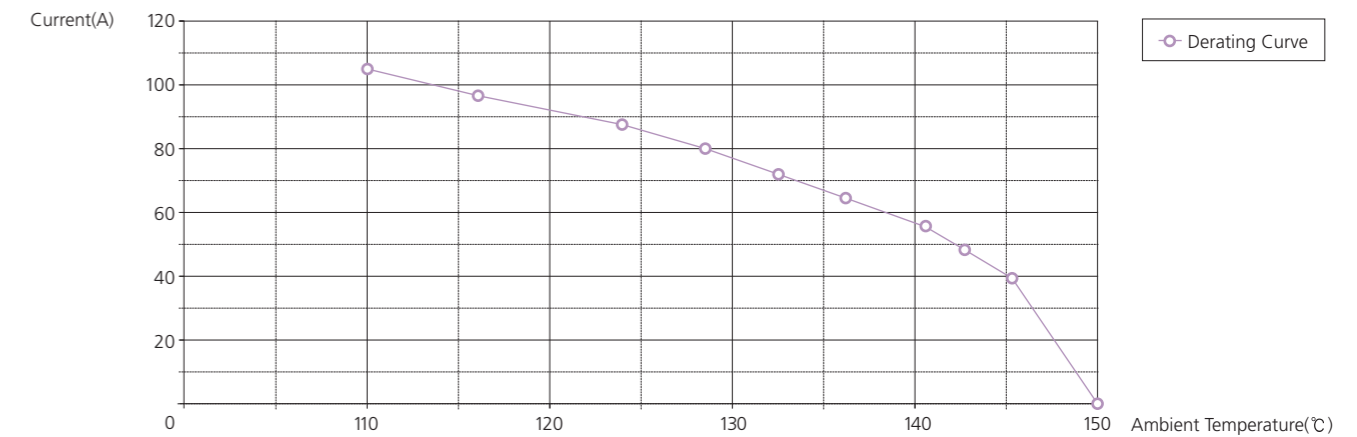
Type	Unit Side	Wire Side
	Male	Female
Poles	3P	3P
Voltage rating	~ 600 V	~ 600 V
Current rating	100 A	100 A
Applicable wire size	20~25 mm ²	20~25 mm ²
Shielding effectiveness	40 dB	40 dB

Characteristics

• Temperature Rising (SAE J 1742)



• De-rating Curve (IEC 60512-5-2)



※ The test data are based on single circuits in free space. This result does not account for all of the variables that would be present in an actual application.

300A Connector



300A(2P) Male

300A(2P) Female

Description

High voltage, very high current, sealed, electromagnetically shielded connector for motor and MCU applications on FCEV systems

Features

- Electromagnetically shielded connector by using simplified shield structure
- High current carrying capacity
- Contact reliability ensured for high vibration and high temperature by using strip-form contact elements
- Easy bolting on unit side connector

Benefits

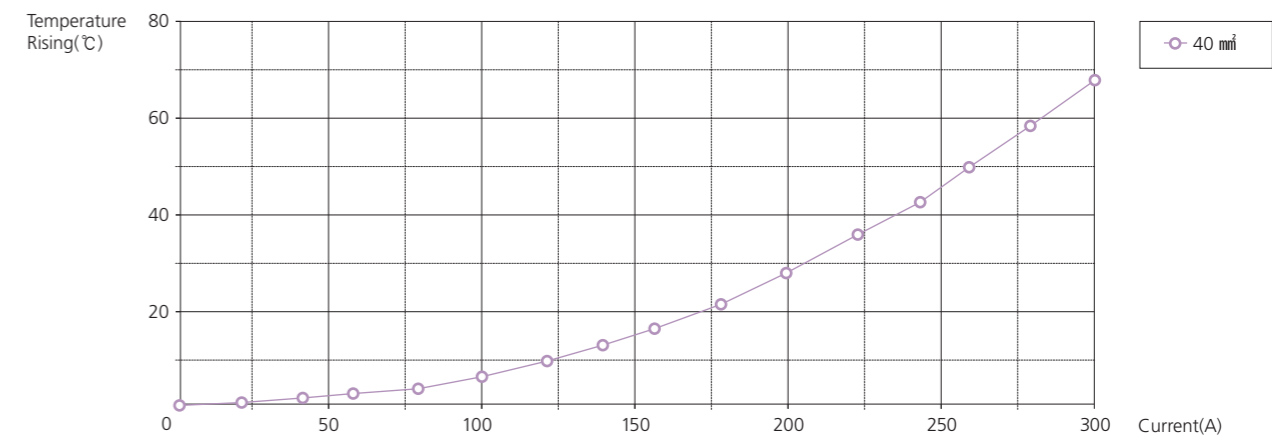
- EMI shielding with independent shield part
- Tamper-resistant CPA prevents removal by customer
- Connectors available 5 keyways

Specification

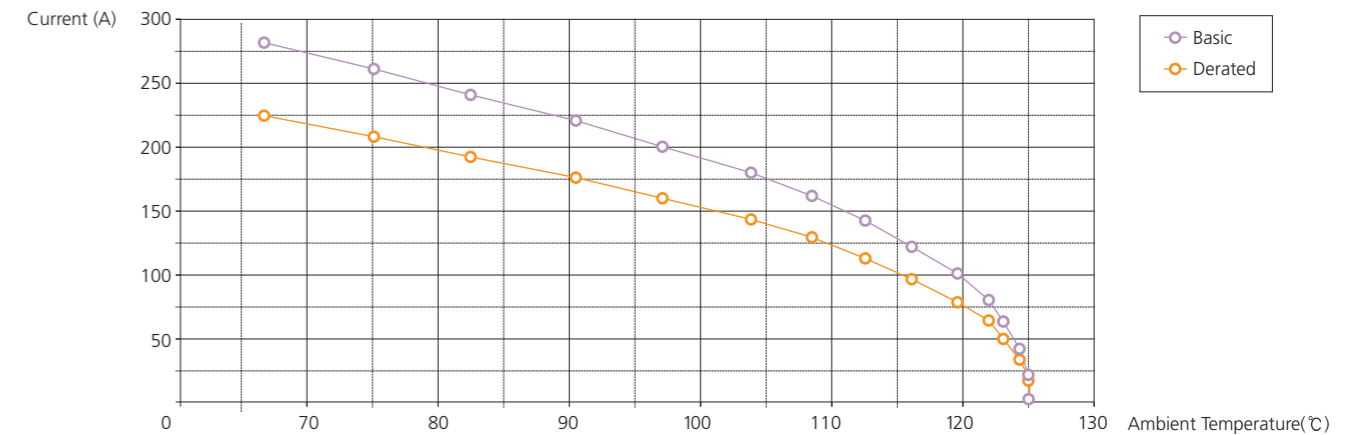
Type	Unit Side	Wire Side
	Male	Female
Poles	1P, 2P, 3P	1P, 2P, 3P
Voltage rating	~ 900 V	~ 900 V
Current rating	220 A (@40mm ²)	220 A (@40mm ²)
Applicable wire size	25~50 mm ²	25~50 mm ²
Shielding effectiveness	40 dB	40 dB

Characteristics:

• Temperature Rising (SAE J 1742)

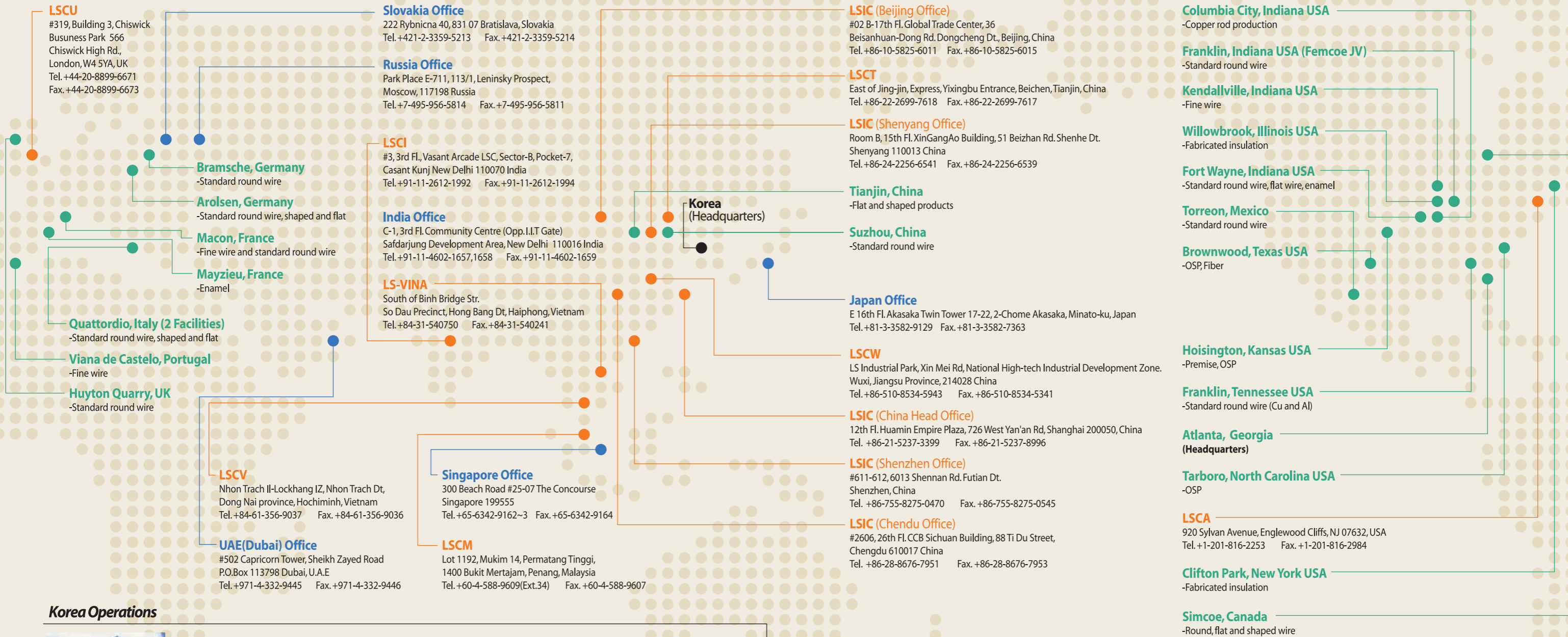


• De-rating Curve (IEC 60512-5-2)



※ The test data are based on single circuits in free space. This result does not account for all of the variables that would be present in an actual application.

Global Network



Korea Operations



Headquarters
 LS Tower 1026-6 Hogye-dong
 Dongan-gu, Anyang, Gyeonggi-do
 431-830 Korea
 Tel. +82-2-2189-9114



Anyang Plant
 555 Hogye-dong, Dongan-gu
 Anyang, Gyeonggi-do
 431-830 Korea
 Tel. +82-31-428-4114



Gumi Plant
 190 Gongdan-dong, Gumi
 Gyeongsangbuk-do
 730-708 Korea
 Tel. +82-54-469-7114



Indong Plant
 643 Jinpyeong-dong, Gumi
 Gyeongsangbuk-do
 730-735 Korea
 Tel. +82-54-469-7050



R&D Center
 555 Hogye-dong, Dongan-gu
 Anyang, Gyeonggi-do
 431-830 Korea
 Tel. +82-31-450-8114

● Subsidiaries ● Branches ● Superior Essex