

BosCon connector

Renewable Energy | Solar Photovoltaics

EN



BosCon connector, standard length



Socket connector OPC16-CS...

- PV connector for large size copper conductors (3/0 AWG to 500 MCM).
- cULus certified to UL6703 and CSA22.2 No. 182.5.
- Rated at AC/DC 1500V and up to 620 A.
- Coding ring provides color and mechanical coding in 7 positions (+, -, L1, L2, L3, PE, N).
- Can be crimped in the field or in a factory. See assembly instructions MA709 for necessary crimp tooling.
- Made in USA.



Plug connector OPC16-CP...

Technical data

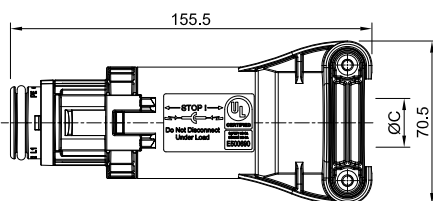
Technical data	
Connector system	Ø 16 mm
Rated voltage:	AC/DC 1500 V ¹⁾
Rated current	310 A (3/0 AWG) ²⁾
	360 A (4/0 AWG) ²⁾
	405 A (250 MCM) ²⁾
	445 A (300 MCM) ²⁾
	505 A (350 MCM) ²⁾
	545 A (400 MCM) ²⁾
	620 A (500 MCM) ²⁾
Rated impulse voltage	16 kV
Transportation/storage temperature range	-30 °C...+60 °C
Transportation/storage relative humidity	< 70 %
Max. operating temperature (MOT)	+90 °C ²⁾
Degree of protection, mated	IP65/IP68 (1 m, 1 h)
Degree of protection, unmated	IP2X
Overvoltage category/Pollution degree	CAT III/3
Contact resistance of plug connectors	< 0.25 mΩ
Polarity of the connectors	Socket = positive Plug = negative
Locking system	Locking type
Contact system	MULTILAM
Type of termination	Crimping
Safety instruction	Do not disconnect under load
Contact material	Copper, silver plated
Insulation material	PA
Flame class	UL94-V0
UL certified according to UL 6703 and CSA C22.2 No. 182.5 (cULus Listed) ³⁾	E500690

¹⁾ For applicable cable diameter please see table 1 in assembly instructions MA709.

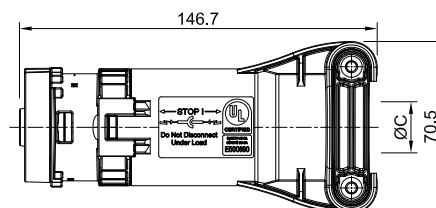
²⁾ Engineering considerations: Application associated current ratings have to be verified in the products end-use and shall not exceed the maximum operating temperature.

³⁾ The connector is considered to be in compliance with UL6703, Edition 1, Revision Date 06/10/2021 only when assembled in the manner specified by assembly instructions MA709.

Dimensional drawings



Socket connector OPC16-CS...

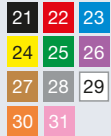


Plug connector OPC16-CP...

BosCon connector, standard length

Ordering information

Order No.	Type	Socket	Plug	Conductor cross-section		Outer diameter of cable	Colors*
				AWG	MCM	mm	
55000654-*	OPC16-CS/HS-3/0AWG/I-*	×		3/0		17.3 – 22.8	21 22 23 24 25 26 27 28 29 30 31
55000655-*	OPC16-CP/HS-3/0AWG/I-*		×				
55000656-*	OPC16-CS/HS-4/0AWG/I-*	×		4/0			
55000657-*	OPC16-CP/HS-4/0AWG/I-*		×				
55000658-*	OPC16-CS/HS-250MCM/I-*	×			250		
55000659-*	OPC16-CP/HS-250MCM/I-*		×				
55000660-*	OPC16-CS/HS-300MCM/I-*	×			300		
55000661-*	OPC16-CP/HS-300MCM/I-*		×				
55000590-*	OPC16-CS/HS-350MCM/I-*	×			350		
55000589-*	OPC16-CP/HS-350MCM/I-*		×				
55000596-*	OPC16-CS/HS-3/0AWG/II-*	×		3/0		22.8 – 24.8	21 22 23 24 25 26 27 28 29 30 31
55000595-*	OPC16-CP/HS-3/0AWG/II-*		×				
55000598-*	OPC16-CS/HS-4/0AWG/II-*	×		4/0			
55000597-*	OPC16-CP/HS-4/0AWG/II-*		×				
55000650-*	OPC16-CS/HS-250MCM/II-*	×			250		
55000651-*	OPC16-CP/HS-250MCM/II-*		×				
55000632-*	OPC16-CS/HS-300MCM/II-*	×			300		
55000633-*	OPC16-CP/HS-300MCM/II-*		×				
55000634-*	OPC16-CS/HS-350MCM/II-*	×			350		
55000635-*	OPC16-CP/HS-350MCM/II-*		×				
55000668-*	OPC16-CS/HS-400MCM/II-*	×			400		
55000669-*	OPC16-CP/HS-400MCM/II-*		×				
55000670-*	OPC16-CS/HS-500MCM/II-*	×			500		
55000671-*	OPC16-CP/HS-500MCM/II-*		×				

Order No.	Type	Socket	Plug	Conductor cross-section		Outer diameter of cable	Colors*
				AWG	MCM		
55000874-*	OPC16-CS/HS-250MCM/III-*	x			250	24.8 – 27.5	
55000875-*	OPC16-CP/HS-250MCM/III-*		x				
55000876-*	OPC16-CS/HS-300MCM/III-*	x			300		
55000877-*	OPC16-CP/HS-300MCM/III-*		x				
55000662-*	OPC16-CS/HS-350MCM/III-*	x			350		
55000663-*	OPC16-CP/HS-350MCM/III-*		x				
55000664-*	OPC16-CS/HS-400MCM/III-*	x			400		
55000665-*	OPC16-CP/HS-400MCM/III-*		x				
55000666-*	OPC16-CS/HS-500MCM/III-*	x			500		
55000667-*	OPC16-CP/HS-500MCM/III-*		x				

Note:

* Add the desired color code

For detailed information concerning the suitable cable gland range, please consult MA709.

Further information



Assembly instructions

For assembly instructions for “BosCon connector” please consult:

www.staubli.com/re-downloads.html → English → Assembly info → **MA709**

BosCon cable connector, extended length



Socket connector OPC16-CSXL...

- Extended housing version of standard BosCon connector.
- Made in USA.



Plug connector OPC16-CPXL...

Technical data

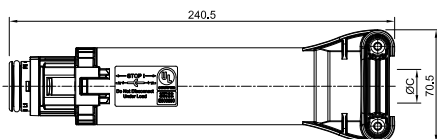
Technical data	
Connector system	Ø 16 mm
Rated voltage:	AC/DC 1500 V ¹⁾
Rated current	310 A (3/0 AWG) ²⁾
	360 A (4/0 AWG) ²⁾
	405 A (250 MCM) ²⁾
	445 A (300 MCM) ²⁾
	505 A (350 MCM) ²⁾
	545 A (400 MCM) ²⁾
	620 A (500 MCM) ²⁾
Rated impulse voltage	16 kV
Transportation/storage temperature range	-30 °C...+60 °C
Transportation/storage relative humidity	< 70 %
Max. operating temperature (MOT)	+90 °C ²⁾
Degree of protection, mated	IP65/IP68 (1 m, 1 h)
Degree of protection, unmated	IP2X
Overvoltage category/Pollution degree	CAT III/3
Contact resistance of plug connectors	<0.25 mΩ
Polarity of the connectors	Socket = positive Plug = negative
Locking system	Locking type
Contact system	MULTILAM
Type of termination	Crimping
Safety instruction	Do not disconnect under load
Contact material	Copper, silver plated
Insulation material	PA
Flame class	UL94-V0
UL certified according to UL 6703 and CSA C22.2 No. 182.5 (cULus Listed) ³⁾	E500690

¹⁾ For applicable cable diameter please see table 1 in assembly instructions MA709.

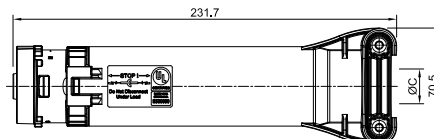
²⁾ Engineering considerations: Application associated current ratings have to be verified in the products end-use and shall not exceed the maximum operating temperature.

³⁾ The connector is considered to be in compliance with UL6703, Edition 1, Revision Date 06/10/2021 only when assembled in the manner specified by assembly instructions MA709.

Dimensional drawings



Socket connector OPC16-CSXL...



Plug connector OPC16-CPXL...

BosCon connector, extended length

Ordering information

Order No.	Type	Socket	Plug	Conductor cross-section		Outer diameter of cable	Colors*
				AWG	MCM	mm	
55000672-*	OPC16-CSXL/HS-3/0AWG/I-*	×		3/0		17.3 – 22.8	212223 242526 272829 3031
55000673-*	OPC16-CPXL/HS-3/0AWG/I-*		×				
55000674-*	OPC16-CSXL/HS-4/0AWG/I-*	×		4/0			
55000675-*	OPC16-CPXL/HS-4/0AWG/I-*		×				
55000676-*	OPC16-CSXL/HS-250MCM/I-*	×			250		
55000677-*	OPC16-CPXL/HS-250MCM/I-*		×				
55000678-*	OPC16-CSXL/HS-300MCM/I-*	×			300		
55000679-*	OPC16-CPXL/HS-300MCM/I-*		×				
55000748-*	OPC16-CSXL/HS-350MCM/I-*	×			350		
55000749-*	OPC16-CPXL/HS-350MCM/I-*		×				
55000614-*	OPC16-CSXL/HS-3/0AWG/II-*	×		3/0		22.8 – 24.8	212223 242526 272829 3031
55000615-*	OPC16-CPXL/HS-3/0AWG/II-*		×				
55000616-*	OPC16-CSXL/HS-4/0AWG/II-*	×		4/0			
55000617-*	OPC16-CPXL/HS-4/0AWG/II-*		×				
55000652-*	OPC16-CSXL/HS-250MCM/II-*	×			250		
55000653-*	OPC16-CPXL/HS-250MCM/II-*		×				
55000693-*	OPC16-CSXL/HS-300MCM/II-*	×			300		
55000694-*	OPC16-CPXL/HS-300MCM/II-*		×				
55000695-*	OPC16-CSXL/HS-350MCM/II-*	×			350		
55000696-*	OPC16-CPXL/HS-350MCM/II-*		×				
55000686-*	OPC16-CSXL/HS-400MCM/II-*	×			400		
55000687-*	OPC16-CPXL/HS-400MCM/II-*		×				
55000688-*	OPC16-CSXL/HS-500MCM/II-*	×			500		
55000689-*	OPC16-CPXL/HS-500MCM/II-*		×				

Order No.	Type	Socket	Plug	Conductor cross-section		Outer diameter of cable	Colors*
				AWG	MCM		
55000882-*	OPC16-CSXL/HS-250MCM/III-*	x			250	24.8 – 27.5	21 22 23 24 25 26 27 28 29 30 31
55000883-*	OPC16-CPXL/HS-250MCM/III-*		x				
55000884-*	OPC16-CSXL/HS-300MCM/III-*	x			300		
55000885-*	OPC16-CPXL/HS-300MCM/III-*		x				
55000680-*	OPC16-CSXL/HS-350MCM/III-*	x			350		
55000681-*	OPC16-CPXL/HS-350MCM/III-*		x				
55000682-*	OPC16-CSXL/HS-400MCM/III-*	x			400		
55000683-*	OPC16-CPXL/HS-400MCM/III-*		x				
55000684-*	OPC16-CSXL/HS-500MCM/III-*	x			500		
55000685-*	OPC16-CPXL/HS-500MCM/III-*		x				

Note:

* Add the desired color code

For more detailed information concerning the suitable cable gland range, please consult MA709.

Further information



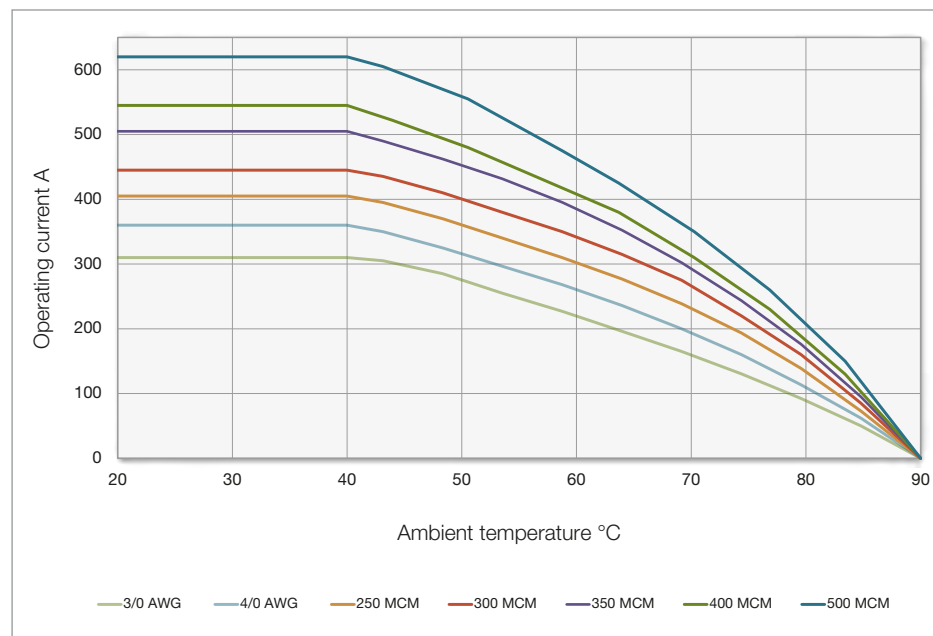
Assembly instructions

For assembly instructions for “BosCon connector” please consult:

www.staubli.com/re-downloads.html → English → Assembly info → **MA709**

Derating diagramms

Current-carrying capacity BosCon connector



Test performed to standard IEC60512-5-2.
Reduction factor 0.9. Test values have not been confirmed by UL.

Disconnect tool



Disconnect tool (OPC16-DT)

- To disconnect plug and socket connectors when mated.

Ordering information

Order No.	Type	Designation
55000788	OPC16-DT	Disconnect tool

Further information



Assembly instructions

For assembly instructions for "Disconnect tool" please consult:

www.staubli.com/re-downloads.html → English → Assembly info → **MA709**

Dust caps



Dust cap for plug and socket connectors.

- Dust caps for temporary protection of unplugged connectors.
- Provides IP54 ingress protection.

Ordering information

Order No.	Type	Suitable for socket side	Suitable for plug side	Material
55000769	I-OPC16-DC	x	x	Si



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