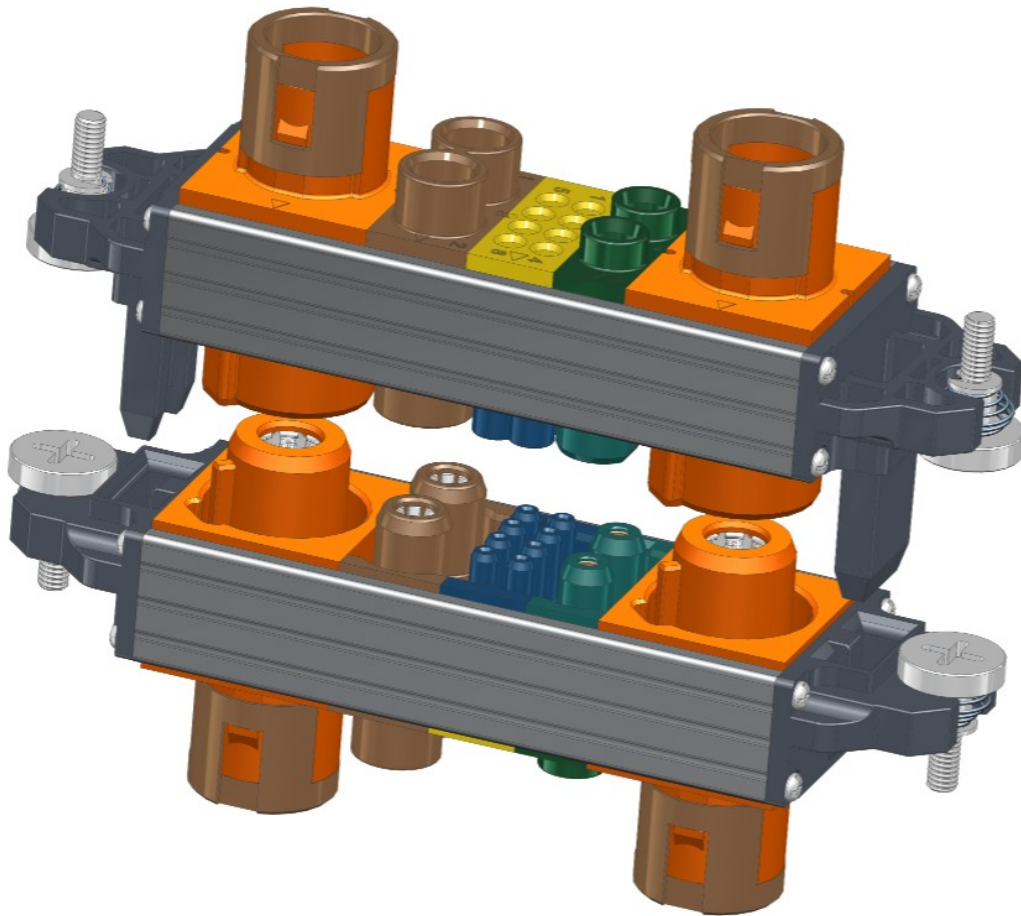


BSC Series | Battery Stack/Swap Connector

Blind Mate Power Connectors Modularization & Adaptive Floating

Integrations for the signal and power interconnect solution, the modular connector combines various connection types in a rugged, variable frame and can be configured according to your exact specifications.



High voltage & Heavy current connector with signal and AC/DC power contacts

Modularized, Combined, Adaptive Floating for Blind Mate

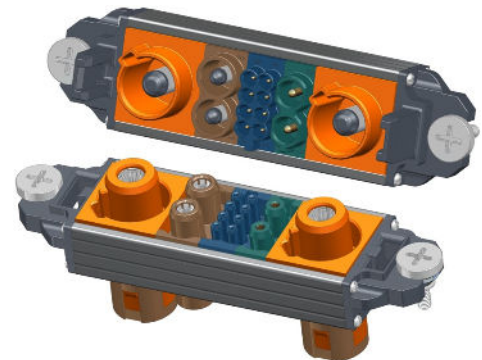
Blind Mate Connector series (Rectangular Battery Swappable Connector-BSC) was designed to meet the application requirements of the new energy vehicles & equipment, energy storage system, AGV, etc., to provide users with highly reliable power supplying and signal transmission solutions.

The BSC series connectors provide a more flexible and cost-effective solution for increasingly complex and highly reliable signal and power connection applications. The all-in-one design of the signal and power hybrid modules enables a modular combination connector to achieve safe and reliable signal communication and power supply. This series of products combines high-strength thermoplastic shell, aluminum alloy frame, precision stamping terminals, and high-conductivity machining power contacts, so that it has strong and durable characteristics and superior electrical and mechanical properties;

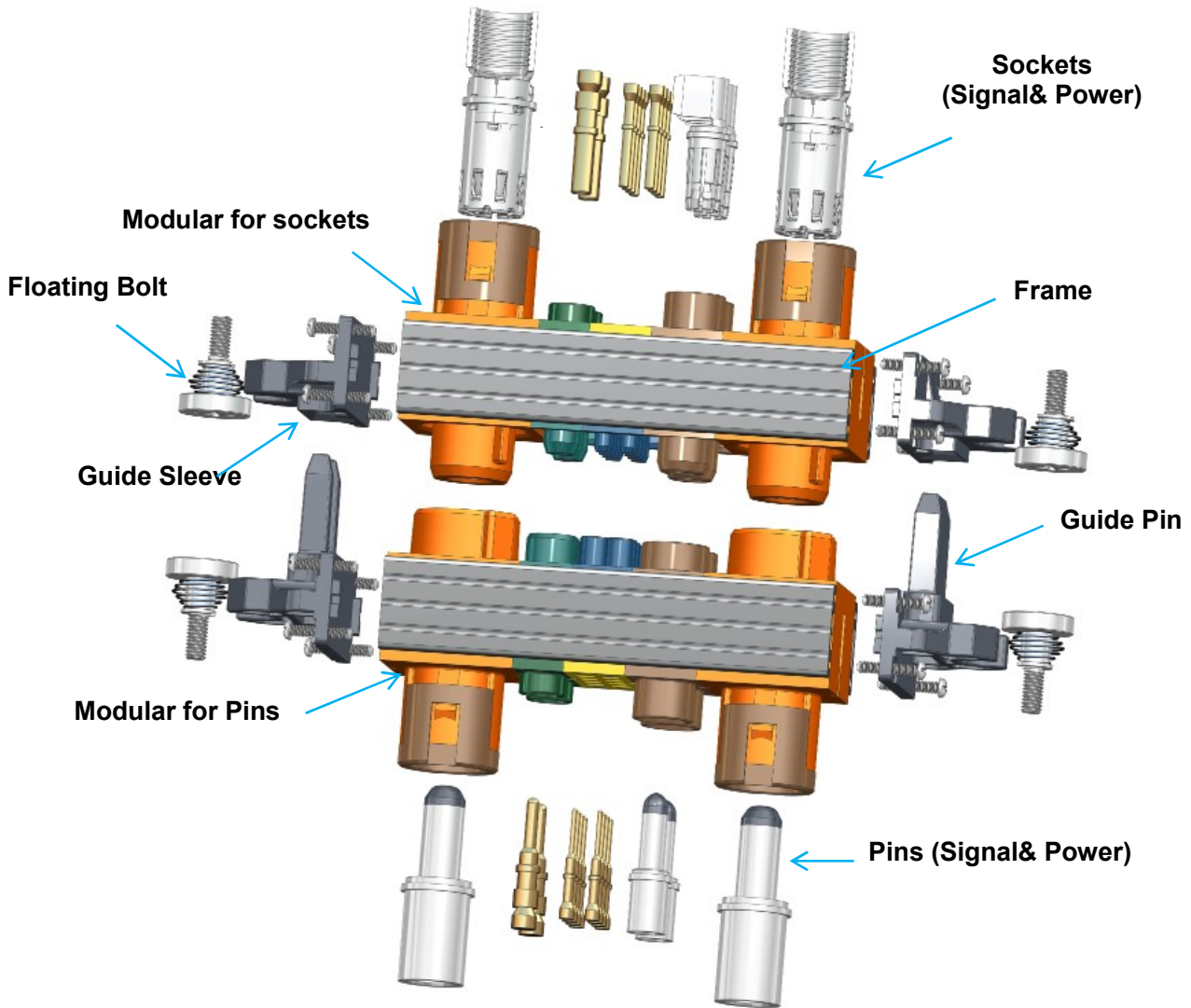
The BSC series is a constantly growing family by a variety of combinations for power and signal modulars, the connectors designed for an unlimited array of applications that uses modularization, standardized and ruggedized mating guides for improved gather ability and mating polarization. Key features include high performance power contacts, sequenced mating for power and signal (HVIL), probe-proof contacts (IP2XB), and support for various power contact systems to meet a wide variety of mating cycles and electrical performance requirements;

Key Features

- Thermoplastic housing + aluminum alloy frame combined connector;
- Probe-proof power contacts -IP2XB;
- Rich configurations, Power& Signal can be flexibly customized
- Operation Voltage: 250V (Signal)-1000V(Power);
- Mating Cycles: >200times
- Cable Ranges:
 - Signal contacts: 0.35mm² - 1.5mm² (24-16 AWG)
 - Auxiliary power contacts: 2.0mm² - 4.0mm²
 - High Current Power Contacts: 6.0mm² - 150mm²
- Operating temp: -40°C to +125 °C
- Free configuration and extension by modulars;
- Adaptive floating bolt mounting, floating: X&Y axis +/-2mm;
- Temp sensors are optionally installed, real-time monitor equipment temp.



Overview of BSC Connector



How to order

BSC Series: BSC XA XB XC XD XE XF - 001 -XXX

BSC Connector

Modular type& quantities

- A: Modular A – 8 way signal
- B: Modular B – 2 way power (Max. 25A)
- C: Modular C – 2 way power (Max. 100A)
- D: Modular D – 1 way power (Max. 200A)
- E: Modular E – 1 way power (Max. 300A)
- F: Modular F – 1 way power (Max. 400A)

X: Quantities of modules configured

Customized coding

003: with temp sensor
***please consult with factory

Combinations (Plug & Recept.)

- 000: Receptacle with Pins
- 001: Plug with Sockets

Applications

- Energy Storage System
- AGV logistics robot
- New energy vehicles and electric motorcycles
- Automated production equipment and test equipment



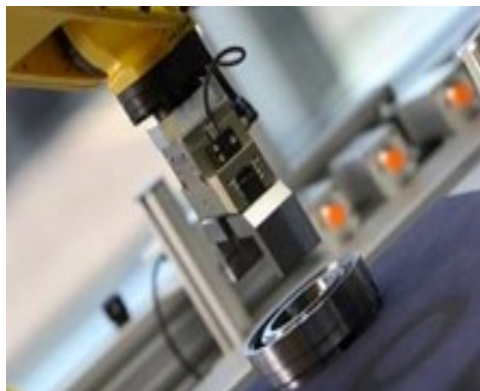
Battery module stack for ESS

- Battery stack with in-built BSC connectors
- Stable and reliable signal and power connection
- Adaptive floating for blind mating
- Signal & power integration, simplifies wiring harnesses, saves space & cost
- Total solution including cable assembly



AGV logistics robot charging

- Signal & power integration, simplifies wiring harnesses, saves space & cost
- Signal and power connections are stable, reliable and easy to maintain
- Adaptive floating for blind mating
- The ideal solution for higher mating cycles

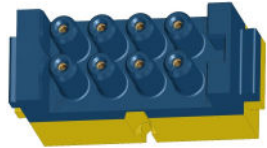


Manufacturing equipment drivers & Controls

- Meet the functional and modular requirements of large machinery and equipment
- Stable and reliable signal and power connection
- Adaptive floating for blind mating
- Modular design, to meet the equipment quick switching, improve efficiency

BSC Modulares – A/B/C/D/E/F

Modular - A



8 way - Fit Sockets
Size 20#



8 way - Fit Pins
Φ1.0mm

Modular - B



2 way - Fit Sockets
Size 12#



2 way - Fit Pins
Φ2.5mm

Modular - C

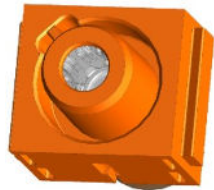


2 way - Fit Sockets
Size 4#



2 way - Fit Pins
Φ5.0mm

Modular - D

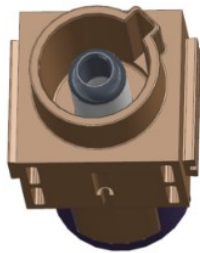


1 way - Fit Socket
Size 0#

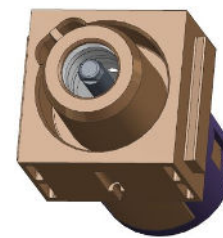


1 way - Fit Pin
Φ8.0mm

Modular - E

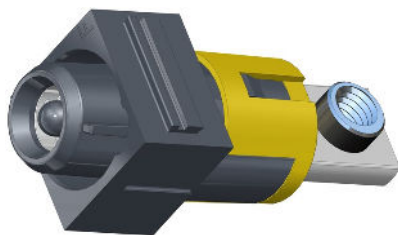


1 way - Fit Socket
Size 4/0#



1 way - Fit Pin
Φ10.0mm

Modular - F



1 way - Fit Socket (BusBar Type)
Size 4/0#



1 way - Fit Pin (BusBar Type)
Φ12.0mm

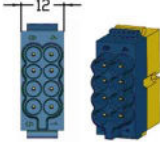
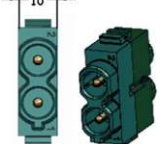

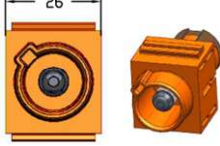
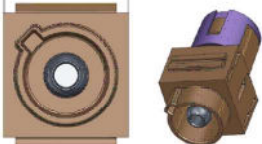


BSC Modular Parameters (Plug with Sockets)

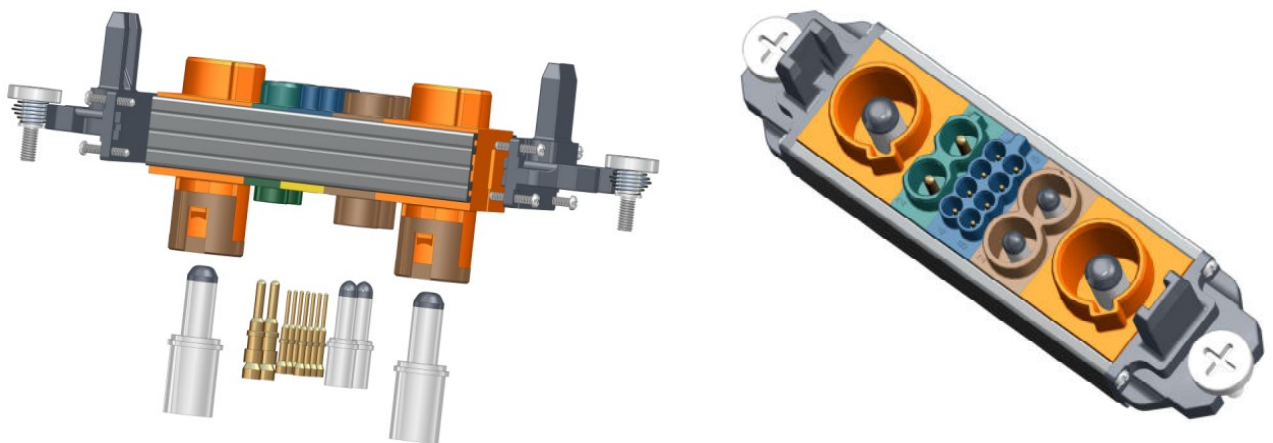
Model Type	Contact Number	Socket Contact		Rated Voltage	Contact Rated Current	Layout
		Contact Size	Cable Range			
A	8	Size 20#	0.35~1.5mm ²	250V	Max.7.5A	
B	2	Size 12#	1.50~4.0mm ²	250V	Max.25A	
C	2	Size 4#	6.0~16.0mm ²	1000V	Max.100A	
D	1	Size 0#	25~50mm ²	1000V	Max.200A	
E	1	Size 4/0#	50~70mm ²	1000V	Max.300A	
F	1	Size 4/0# (Busbar Type)	95~150mm ²	1000V	Max.400A	
Temperature Sensor		Platinum Thermistor	PT1000 (IEC60751)	-50°C~+200°C	<0.3mA	



Specifications and dimensions subject to change

BSC Modular Parameters (Recept. with Pins)

Model Type	Contact Number	Socket Contact		Rated Voltage	Contact Rated Current	Layout
		Contact Size	Cable Range			
A	8	Φ1.0mm	0.35~1.5mm ²	250V	Max.7.5A	
B	2	Φ2.5mm	1.50~4.0mm ²	250V	Max.25A	
C	2	Φ5.0mm	6.0~16.0mm ²	1000V	Max.100A	
D	1	Φ8.0mm	25~50mm ²	1000V	Max.200A	
E	1	Φ10.0mm	50~70mm ²	1000V	Max.300A	
F	1	Φ12.0mm (Busbar Type)	95~150mm ²	1000V	Max.400A	
Temperature Sensor		Platinum Thermistor	PT1000 (IEC60751)	-50°C~+200°C	<0.3mA	



Specifications and dimensions subject to change

Stamping Contacts

Signal & Auxiliary power contacts

Features

- **20# contacts**: stamping type, Max. **7.5A**; Machining type, Max. **10A**
- **12# contacts**: stamping type, Max. **25A**; Machining type, Max. **30A**
- Mating Cycles: >200 times
- Cable ranges:

20# signal contacts: 22AWG (0.35mm²) to 16AWG(1.50mm²)

12# power contacts: 14AWG (2.0mm²) to 12AWG(4.00mm²)

20# Contact, Cable spec.		Type	P/N (Ni Plating) (2000/reel)	P/N (Gold Plating) (2000/reel)	Cable OD	Contact Style	
mm ²	AWG						
0.35 - 0.50	22-18 AWG	Pin	USCT000-071	USCT000-271	Φ1.20-1.90mm	Stamping	
			USCT000-801	USCT000-871		Machining	
0.35 - 0.50	22-18 AWG	Socket	USCT000-072	USCT000-272		Stamping	
			USCT000-802	USCT000-872		Machining	
0.50 - 1.30	20-16 AWG	Pin	USCT000-073	USCT000-273		Φ1.30-2.20mm	Stamping
			USCT000-803	USCT000-873			Machining
0.50 - 1.30	20-16 AWG	Socket	USCT000-074	USCT000-274	Stamping		
			USCT000-804	USCT000-874	Machining		
12# Contact, Cable spec.		Type	P/N (Ni Plating) (1500/reel)	P/N (Gold Plating) (1500/reel)	Cable OD		Contact Style
mm ²	AWG						
2.00 - 4.00	12-14 AWG	Pin	USCT000-081	USCT000-281	Φ2.87-4.47mm	Stamping	
			USCT000-805	USCT000-875		Machining	
		Socket	USCT000-080	USCT000-280		Stamping	
			USCT000-806	USCT000-876		Machining	



20# Contacts



12# Contacts

High Current Power Contacts

Features

- Machining Pin contacts, and two options for Sockets: Stamping & Machining
- Mating Cycles: Stamping type >200 times; Machining type >2000times
- **4# contacts:** stamping type, Max. **100A**; Machining type, Max. **120A**
- **0# contacts:** stamping type, Max. **200A**; Machining type, Max. **230A**
- **4/0# contacts:** Machining type, **Modular E-Max. 300A, Modular F-Max. 400A**
- Cable Ranges:
 - 4# contacts:** 6mm², 8mm², 10mm², 16 mm²
 - 0# contacts:** 25 mm², 35 mm², 50 mm²
 - 4/0# contacts:** **Modular E:** 50 mm², 70 mm²; **Modular F:** 95 mm² ~ 150 mm²

4# Contact, Cable Spec.		Type	P/N (Sliver Plating)	Cable OD	Contact Style
mm ²	AWG				
6.0-10.0	10 - 7AWG	Socket	USCP000-202	Φ4.60-6.40mm	Stamping
			USCP000-206		Machining
		Pin	USCP000-203		Machining
16.0	5AWG	Socket	USCP000-200	Φ7.10-7.70mm	Stamping
			USCP000-204		Machining
		Pin	USCP000-201		Machining
0# Contact, Cable Spec.		Type	P/N (Sliver Plating)	Cable OD	Contact Style
mm ²					
25.0-35.0	3 - 2 AWG	Socket	USCP000-302	Φ7.90-10.4mm	Stamping
			USCP000-310		Machining
		Pin	USCP000-303		Machining
50.0	1/0AWG	Socket	USCP000-300	Φ11.0-12.2mm	Stamping
			USCP000-306		Machining
		Pin	USCP000-301		Machining
4/0# Contact, Cable Spec.		Type	P/N (Sliver Plating)	Cable OD	Contact Style
mm ²					
50.0-70.0	1/0 – 2/0AWG	Socket	USCP000-304	Φ11.0-14.4mm	Machining
		Pin	USCP000-305		Machining
95.0-150.0	4/0AWG	Socket	USCP000-308	Φ18.0-23.0mm	Machining
		Pin	USCP000-309		Machining



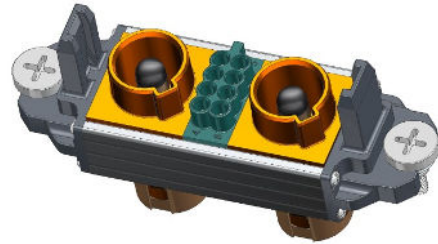
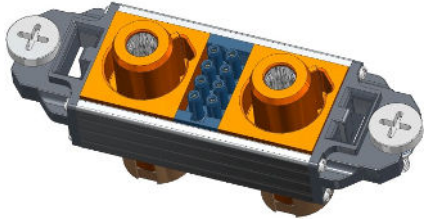
Specifications and dimensions subject to change

Combination examples

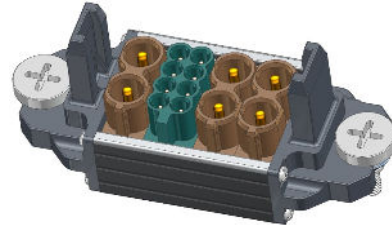
BSC1A1B1C2D-000/001 (8+2+2+2 Way)



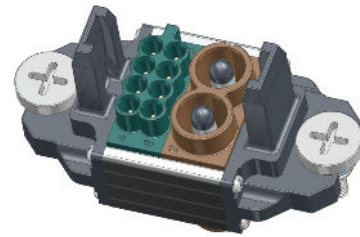
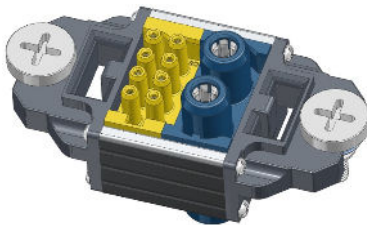
BSC1A2D-000/001 (8+2 Way)



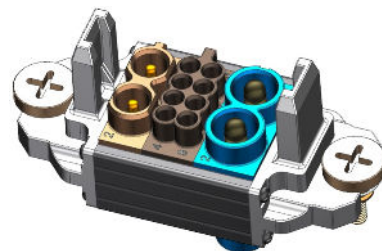
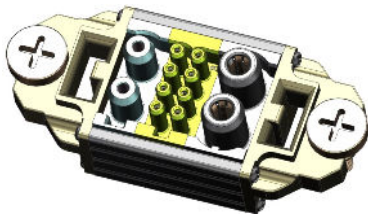
BSC1A3B-000/001 (8+6 Way)



BSC1A1C-000/001 (8+2 Way)



BSC1A1B1C-000/001 (8+2+2 Way)



Floating Bolts

Material: Copper/Stainless steel



Temp Sensor (PT1000)

-50°C-200°C



Specifications and dimensions subject to change

Amphenol

Amphenol is one of the world's largest designers, manufacturers and marketers of connectors and interconnect systems, antennas solutions, sensors and high-speed cable. Our connector and connector system solutions include fiber optic interconnect, harsh environment interconnect, high-speed interconnect, power interconnect, power distribution and busbars and radio frequency (RF) interconnect products. Our sensors and sensor-based product solutions include gas and moisture sensors, level sensors, position sensor, pressure sensors, temperature sensors and vibration sensors. Our value-added cable assemblies include cable assemblies and harnesses, cable management products and backplane interconnect systems. Our cable solutions include coaxial cable, power cable and specialty cable. We also provide combiner/splitter products, flexible and rigid printed circuit boards, hinges and molded parts.

Contact us

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