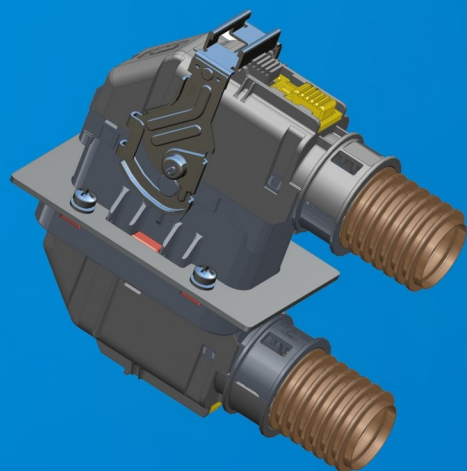
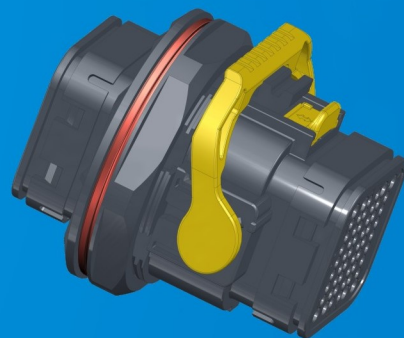
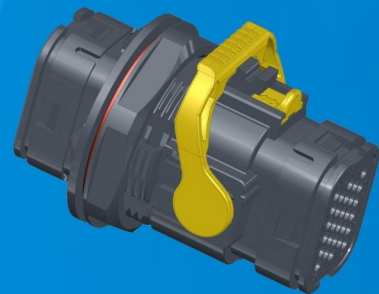
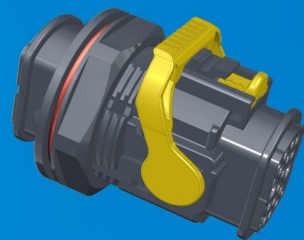


Amphenol

GEC | Amphenol
TFI



USCL SERIES

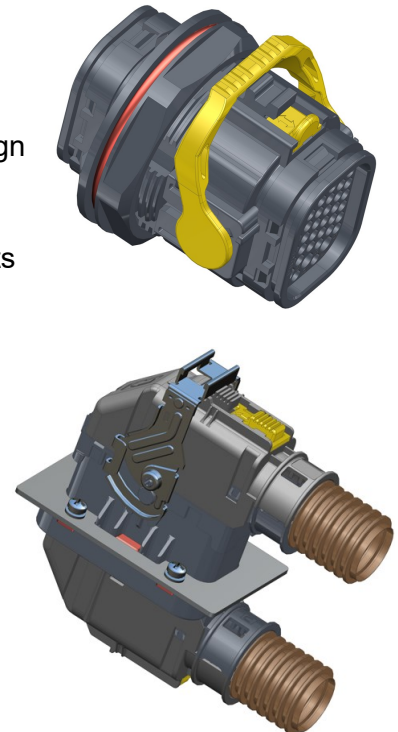
USCL (Ultra Sealed Connector, Lever-driven) is the solution for increasingly complex and highly reliable signal and power connection applications, its rugged design ensuring safe and reliable signal transmission and power supply for vehicle and industrial equipment in harsh environments.

USCL, an environmentally sealed connector series incorporating thermoplastic housings, silicone rubber seals and precision stamping contacts that delivers superior mechanical & electrical performances, the USCL connectors are designed to be high waterproof grade with integral real grommets or individual sealing plugs, up to IP67, IP69K, IP68, and 48Kpa airtight protection. The coupling and locking of the plug and receptacle are designed as levers and secondary locker (CPA) to provide tactile and audible feedbacks to the operator, ensuring the connector can be mated in right position easily and realize fast plugging and locking; precision stamping contact features low conduction resistance and high vibration resistance & mechanical shock resistance;

The USCL series is available in a variety of layouts (from 16 to 87 poles) to meet the needs of multichannel signal and power connections.

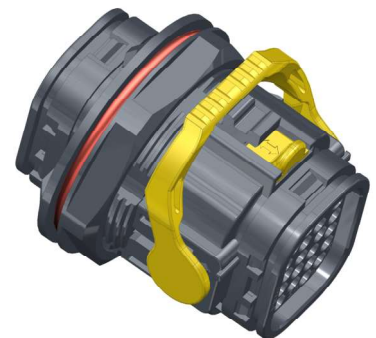
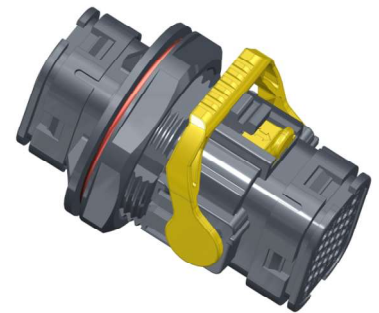
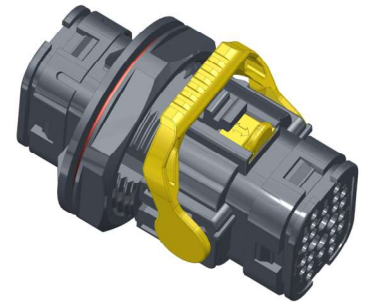
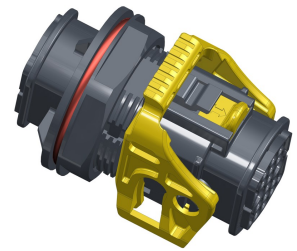
Key Features

- Thermoplastic shells connectors
- Individual sealing plugs or integral real grommet waterproof design
- Wide arrangements ranging from 16 to 87 poles
- Mixed layouts are available, Mixes signal and 30A power contacts in one housing
- Accepts contact size 12#&16# (Max. 30A/13A)
- Minimum 200 mating cycles for stamped contacts
- Cable Range: 24-12 AWG (0.35mm² - 4.0mm²)
- Operating Temp: -55°C to +125 °C
- IP67, IP68, and IP6K9K, 48Kpa Air-tight(when mated)
- Jam-Nut and Cable-to-Cable installation methods
- Locating cover design offers accurate contact positioning



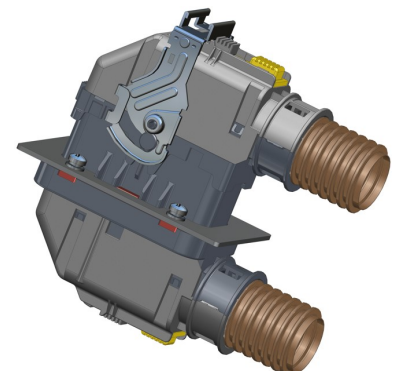
Technical Overview

| | |
|----------------------------|---|
| Current Rating | Up to 10A@20# contacts, 13A@16# contacts, 30A@12# contacts |
| Operation Voltage | 48V AC/DC, up to 250V AC/DC* (HV applications) |
| Cable Range | 24- 12 AWG (0.35mm ² - 4. 0mm ²) |
| | Insulator diameter ranges: 16#: Ø1.2mm to 2. 70mm |
| | 12#: Ø2.2mm to 3. 81mm |
| | 20#: Ø1.3mm to 2. 20mm |
| Operating Temp | -55°C to +125°C |
| Durability | Minimum 200 mating cycles |
| Waterproof | IP67, IP68 (1meter, 24H), IP6K9K |
| Flammability | UL 94 V-0 |
| Dielectric Voltage | 1500V ac for 60 s |
| Thermal Shock | -55°C to +125°C, 20 cycles |
| Physical Shock | 50g's peak, 3axes, 11millisecond duration half-sine pulse, no loss of continuity >1µsec |
| Vibration | Refer. SAE J2030-201506 |
| | No unlocking or un-mating and exhibits no mechanical or physical damage after sinusoidal vibration levels of 20 G's at 10 to 2000 Hz in each of the three mutually perpendicular planes No electrical discontinuities longer than 1µsec |
| Salt Spray | 96 H |
| Air-Tight | Pressure with 48kPa and keep 15s, no leakage |
| Temp. Endurance | 1008H at 125°C, Insulation Resistance >100MΩ |
| Moisture Resistance | Ref. IEC 60068-2-78, RH90-95%, 40°C, 504 H; Insulation Resistance > 100MΩ |
| Humidity Steady | Ref. QC/T-1067.1, 10 Cycles; Insulation Resistance > 100MΩ |



Product Material

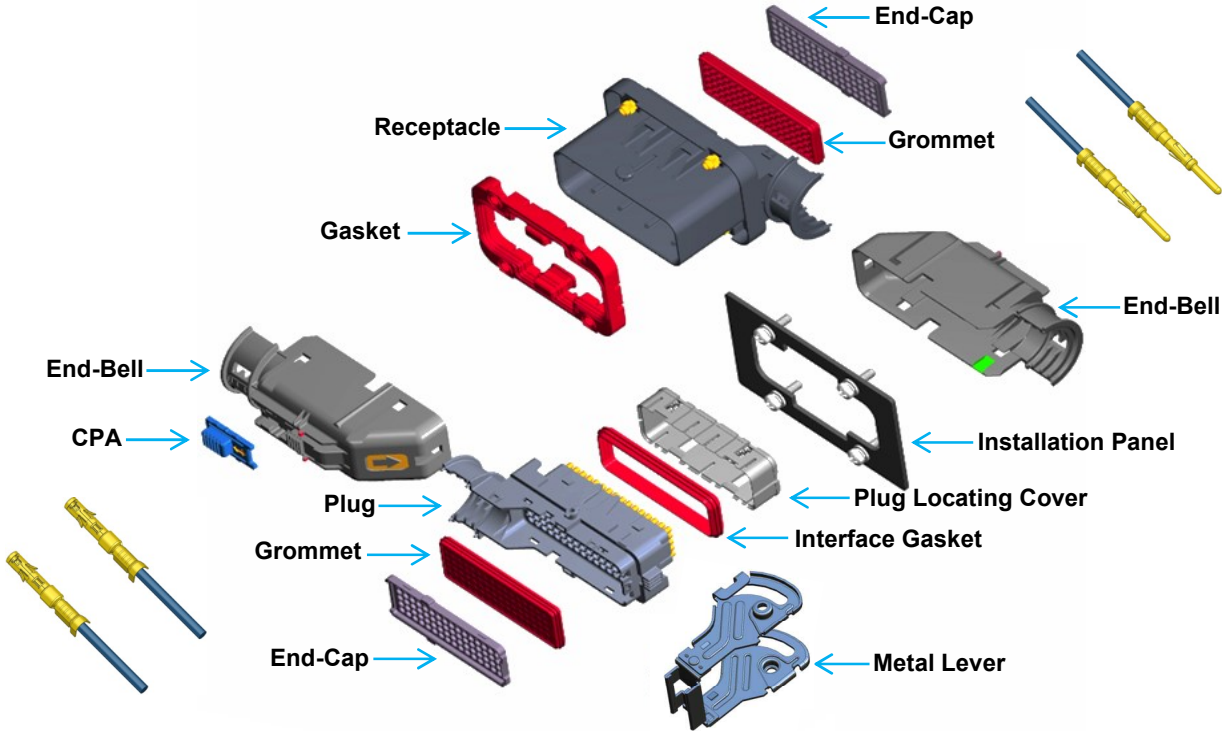
| | |
|-----------------------|--------------------------------|
| Housing | Thermoplastic, Glass filled PA |
| Seals | Silicone Rubber |
| Locating Cover | PBT+GF |
| Secondary Lock | Thermoplastic, Glass filled PA |
| Contact | Copper alloy & stainless steel |
| | Nickel, or gold flash plating |



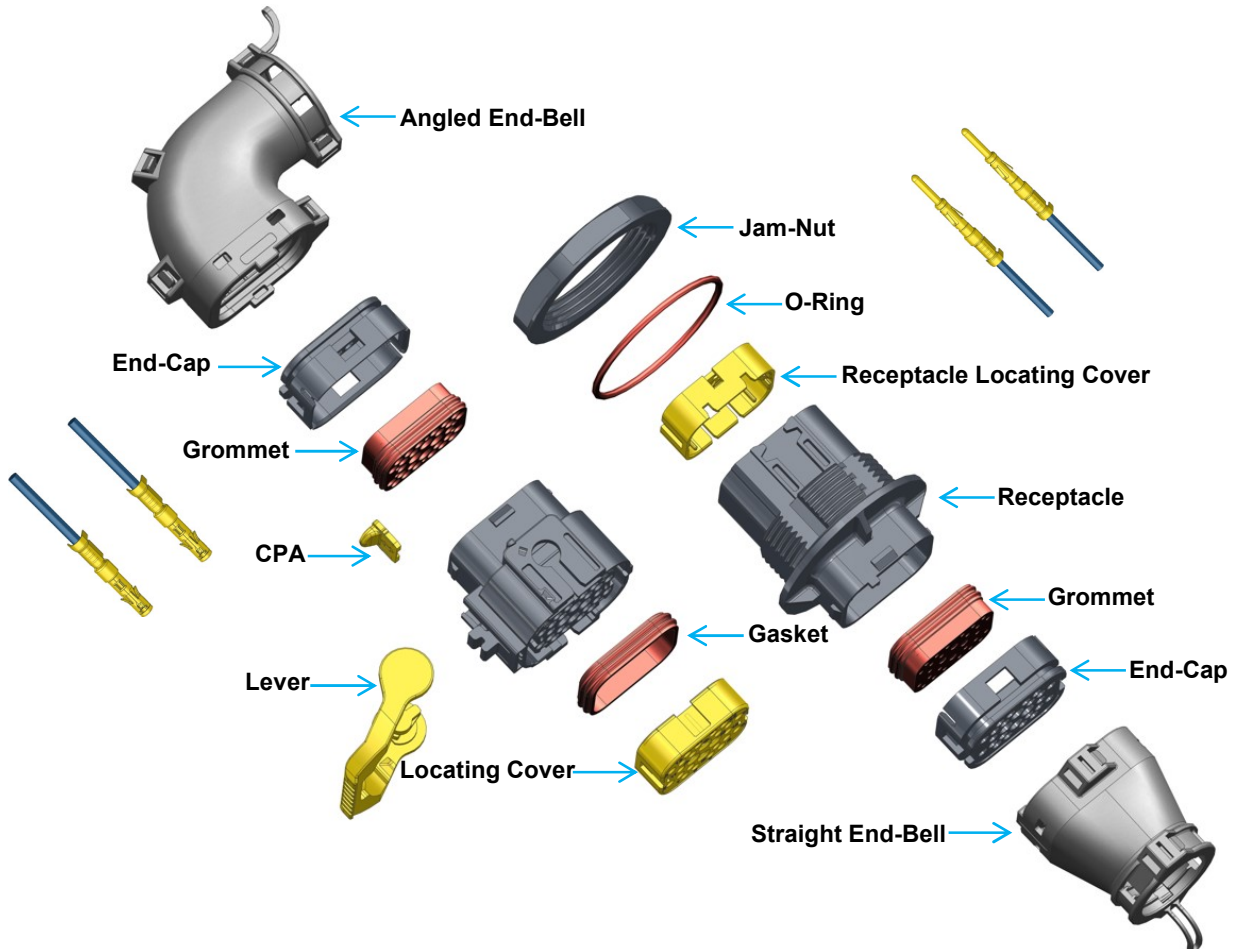
* High-Voltage applications, further information available upon request

Product Exploded View

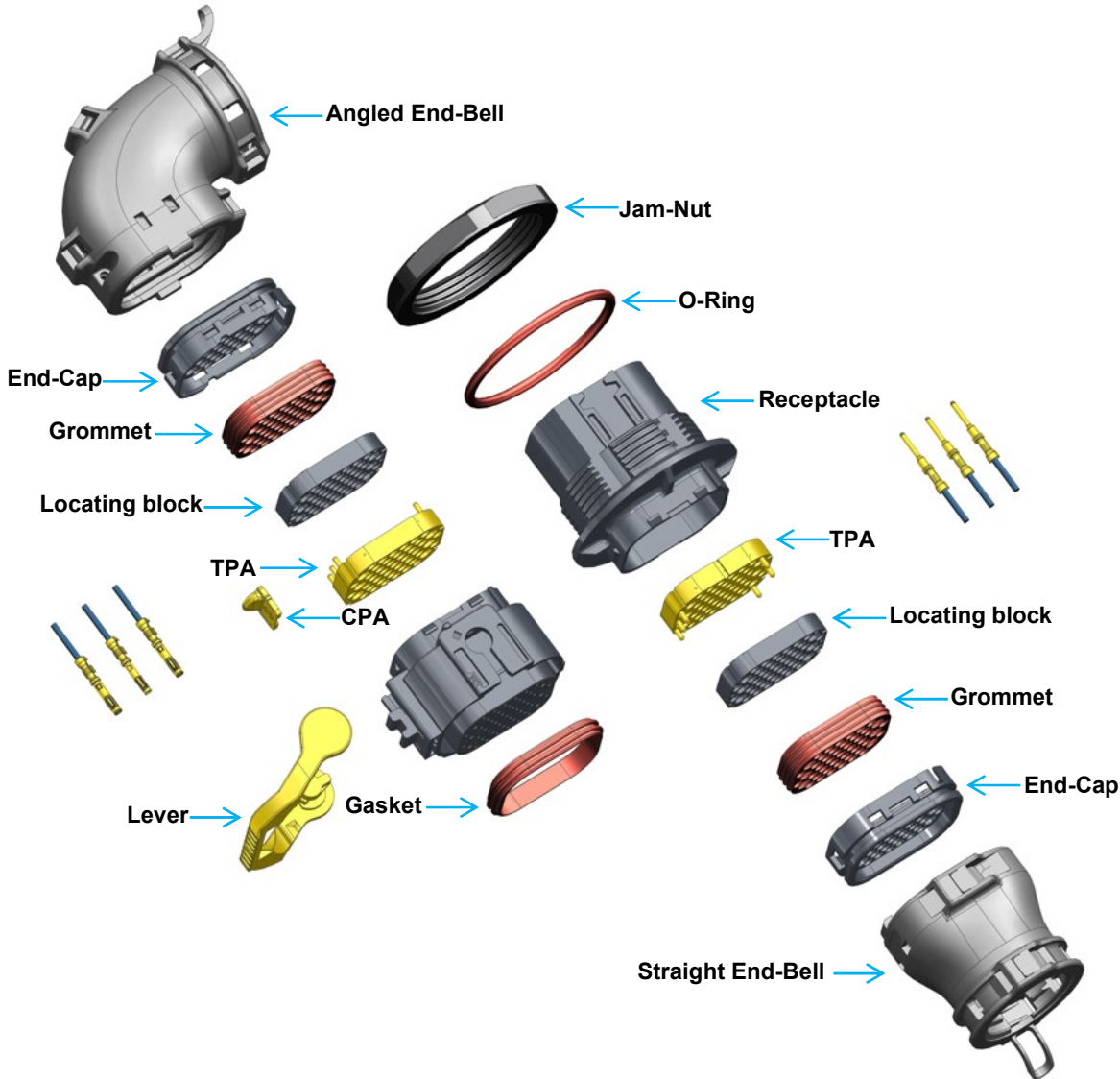
(一) Flange + Integral Grommet + Stamped Contacts



(二) Jam-Nut + Integral Grommet + Stamped Contacts



(E) Jam-Nut + Integral Grommet + Stamped Contacts (Clean Body)



Target Market

- **Heavy Vehicle**
 - Heavy Truck
 - Bus
- **Off-Road Vehicle& Equipment**
 - Construction
 - Mining
 - Agriculture
- **Industrial**
 - Factory equipment& Robotics
 - Outdoor Electronics

Applications

- Engine & Transmission Harnessing
- Lighting
- Control Units
- Signal Interfaces
- Cabin Harness& Accessories
- Vehicle Seat& Brand Logo
- Wipers/under hood electronics
- LCD displays & accessories
- Sensors (Electrical, Pressure, Temperature)



Heavy Truck



Bus



Tractor



Agriculture



Construction



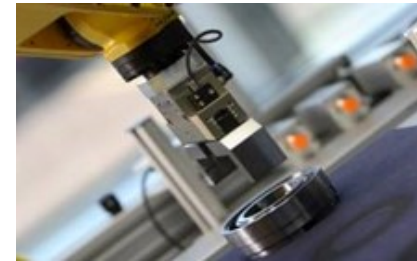
Off-Road



Outdoor Electronics

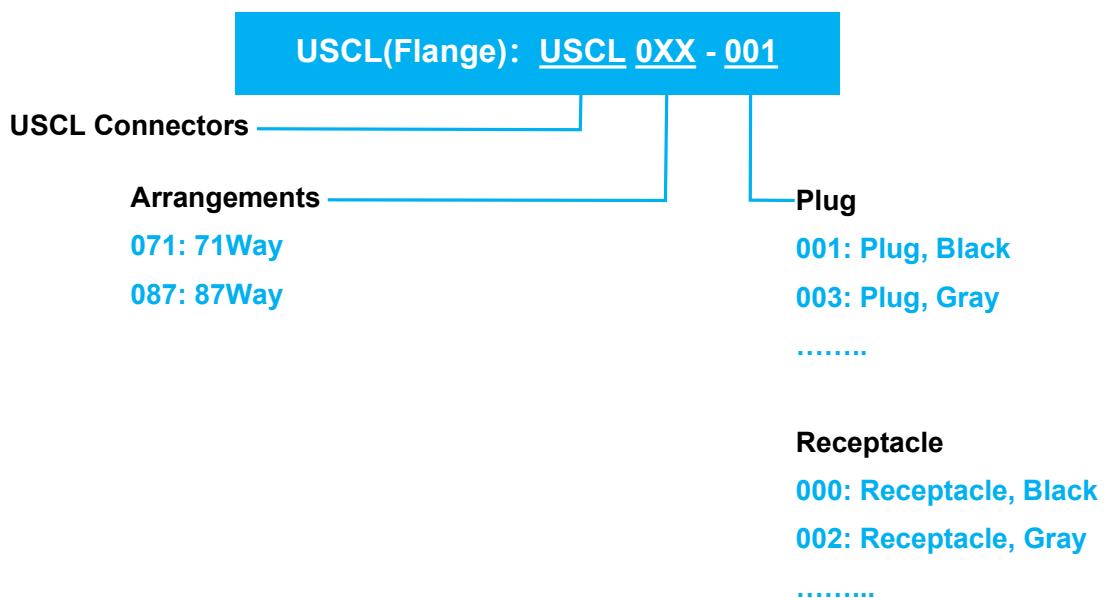
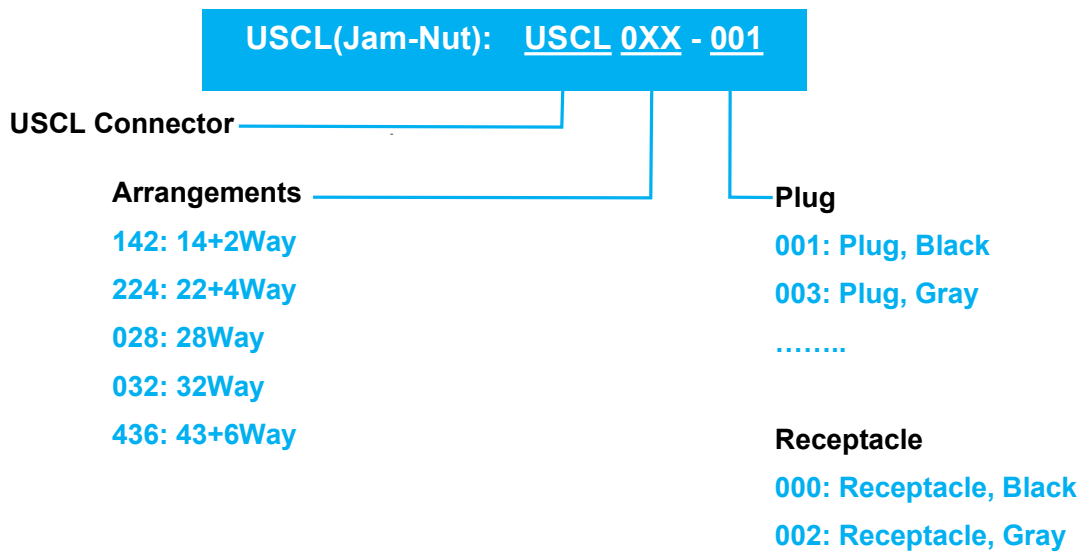


Robotics

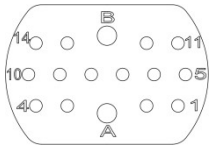


Factory Equipment

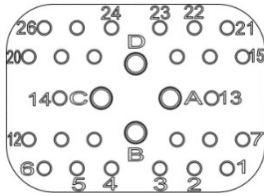
How To Order



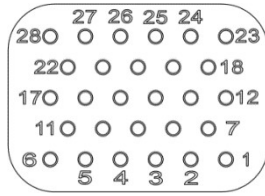
USCL Series Layouts



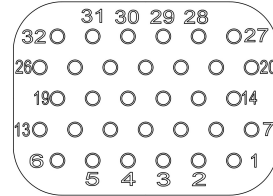
16芯=14*16#+2*12#



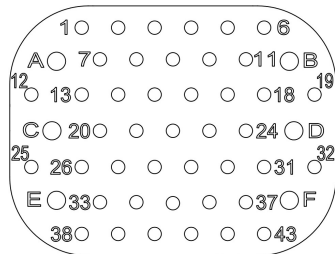
26芯=22*16#+4*12#



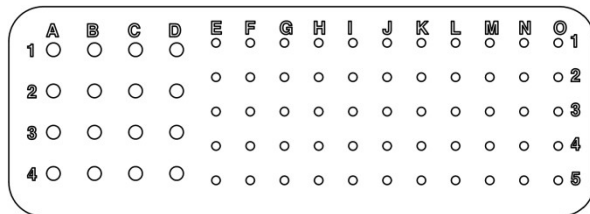
28芯=28*16#



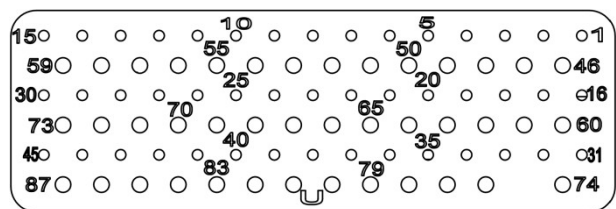
32芯=32*16#



49芯=43*20#+6*16#



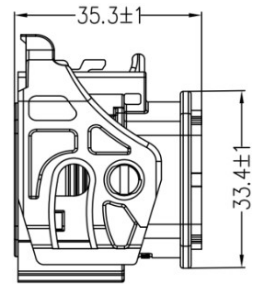
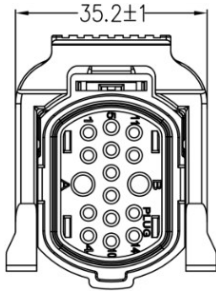
71芯=55*20#+16*16#



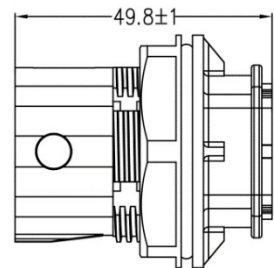
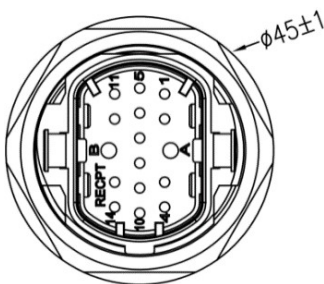
87芯=45*20#+42*16#

USCL, Jam-Nut Installation (1)

14+2 Way – Individual Cable Seals + Stamped Contacts



| Connector | Color | P/N | Description |
|-----------|-------|-------------|-------------------|
| Plug | Black | USCL142-001 | 14+2Way, Plug, BK |
| | Gray | USCL142-003 | 14+2Way, Plug, GY |



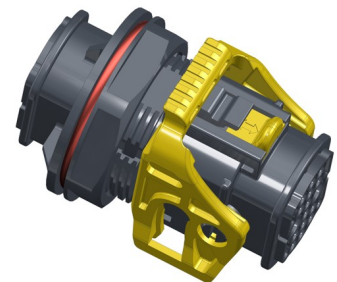
| Connector | Color | P/N | Description |
|------------|-------|-------------|-------------------------|
| Receptacle | Black | USCL142-000 | 14+2Way, Receptacle, BK |
| | Gray | USCL142-002 | 14+2Way, Receptacle, GY |

| End-Bell | Color | P/N | Description |
|-------------------|-------|-------------|-----------------------|
| Straight End-Bell | Black | USCL142-111 | Straight End-Bell, BK |
| | Gray | USCL142-113 | Straight End-Bell, GY |
| Angled End-Bell | Black | USCL142-112 | Angled End-Bell, BK |
| | Gray | USCL142-114 | Angled End-Bell, GY |



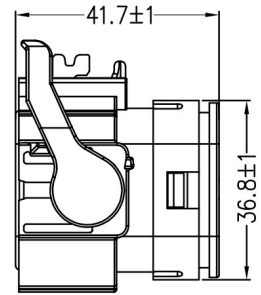
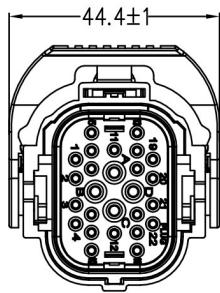
Key Feature

- ◆ 14+2 Way, Mixed Layout: signaling + power connectors
Current rating: Max. 13A&30A
- ◆ 2 color options: black or gray
- ◆ Individual cable plug sealing design, refer to page 20 for compatible sealing plugs
- ◆ Lever-Driven + CPA, Jam-Nut installation
- ◆ Accepts contact size 16#&size 12#, refer to page 16
- ◆ IP67, IP68, and IP6K9K, 48Kpa Air-tight (when mated)
- ◆ Flammability: UL94 V-0

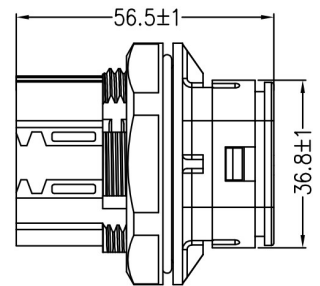
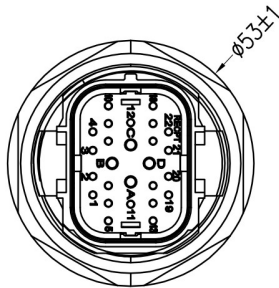


USCL, Jam-Nut Installation (2)

22+4 Way – Integral Grommet + Stamped Contacts

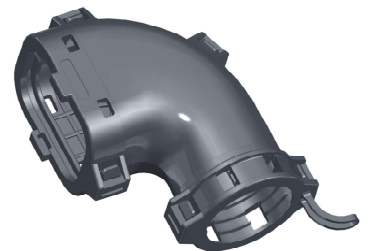


| Connector | Color | P/N | Description |
|-----------|-------|-------------|--------------------|
| Plug | Black | USCL224-001 | 22+4 Way, Plug, BK |
| | Gray | USCL224-003 | 22+4 Way, Plug, GY |



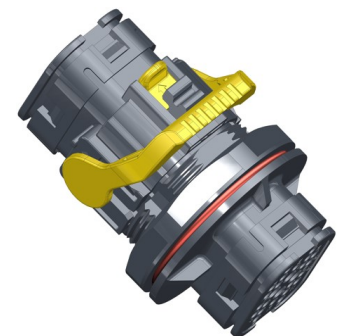
| Connector | Color | P/N | Description |
|------------|-------|-------------|------------------------|
| Receptacle | Black | USCL224-000 | 22+4way Receptacle, BK |
| | Gray | USCL224-002 | 22+4way Receptacle, GY |

| End-Bell | Color | P/N | Description |
|-------------------|-------|-------------|-----------------------|
| Straight End-Bell | Black | USCL028-111 | Straight End-Bell, BK |
| | Gray | USCL028-113 | Straight End-Bell, GY |
| Angled End-Bell | Black | USCL028-112 | Angled End-Bell, BK |
| | Gray | USCL028-114 | Angled End-Bell, GY |



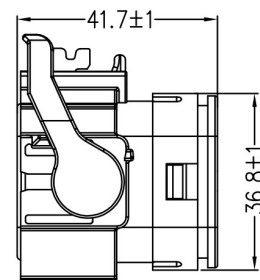
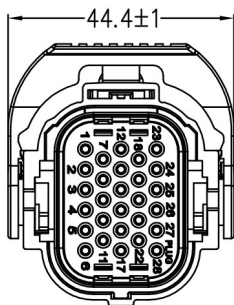
Key Feature

- ◆ 22+4 Way, Mixed Layout: signaling + power connectors, Current rating: Max.13A&30A
- ◆ 2 color options: black or gray
- ◆ Integral grommet sealing design
- ◆ Lever-Driven + CPA, Jam-Nut installation
- ◆ Accepts contact size 16#&size 12#, refer to page 17
- ◆ IP67, IP68, and IP6K9K, 48Kpa Air-tight (when mated)
- ◆ Flammability: UL94 V-0

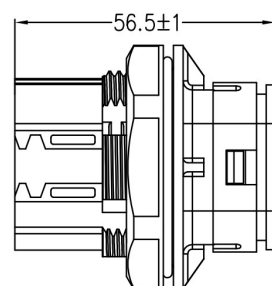
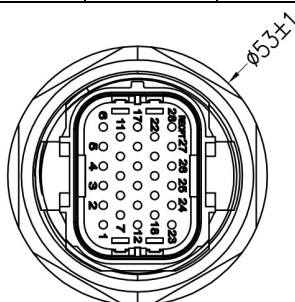


USCL, Jam-Nut Installation (3)

28 Way – Integral Grommet + Stamped Contacts

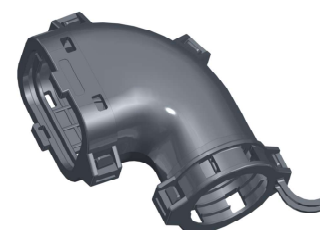


| Connector | Color | P/N | Description |
|-----------|-------|-------------|------------------|
| Plug | Black | USCL028-001 | 28 Way, Plug, BK |
| | Gray | USCL028-003 | 28 Way, Plug, GY |



| Connector | Color | P/N | Description |
|------------|-------|-------------|-----------------------|
| Receptacle | Black | USCL028-000 | 28 Way Receptacle, BK |
| | Gray | USCL028-002 | 28 Way Receptacle, GY |

| End-Bell | Color | P/N | Description |
|-------------------|-------|-------------|-----------------------|
| Straight End-Bell | Black | USCL028-111 | Straight End-Bell, BK |
| | Gray | USCL028-113 | Straight End-Bell, GY |
| Angled End-Bell | Black | USCL028-112 | Angled End-Bell, BK |
| | Gray | USCL028-114 | Angled End-Bell, GY |



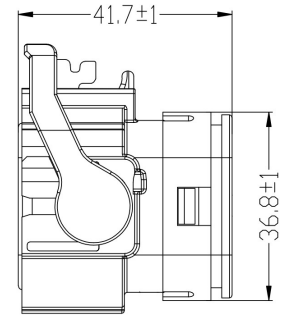
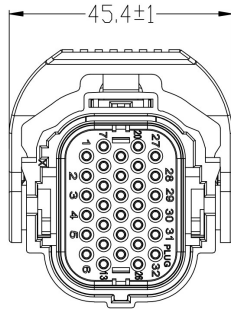
Key Feature

- ◆ 28 Way signaling connectors, Current rating: Max.13A
- ◆ 2 color options: black or gray
- ◆ Integral grommet sealing design
- ◆ Lever-Driven + CPA, Jam-Nut installation
- ◆ Accepts contact size 16#, refer to page 17
- ◆ IP67, IP68, and IP6K9K, 48Kpa Air-tight (when mated)
- ◆ Flammability: UL94 V-0

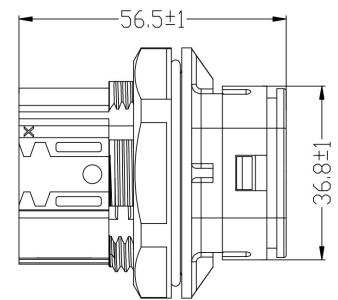
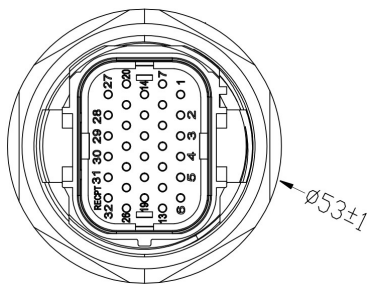


USCL, Jam-Nut Installation (4)

32 Way – Integral Grommet + Stamped Contacts

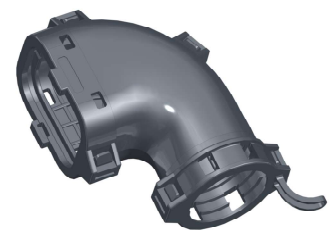


| Connector | Color | P/N | Description |
|-----------|-------|-------------|------------------|
| Plug | Black | USCL032-001 | 32 Way, Plug, BK |
| | Gray | USCL032-003 | 32 Way, Plug, GY |



| Connector | Color | P/N | Description |
|------------|-------|-------------|-----------------------|
| Receptacle | Black | USCL032-000 | 32 Way Receptacle, BK |
| | Gray | USCL032-002 | 32 Way Receptacle, GY |

| End-Bell | Color | P/N | Description |
|-------------------|-------|-------------|-----------------------|
| Straight End-Bell | Black | USCL028-111 | Straight End-Bell, BK |
| | Gray | USCL028-113 | Straight End-Bell, GY |
| Angled End-Bell | Black | USCL028-112 | Angled End-Bell, BK |
| | Gray | USCL028-114 | Angled End-Bell, GY |



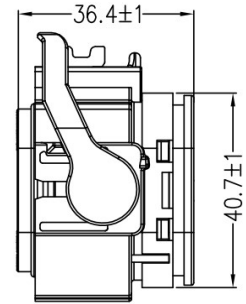
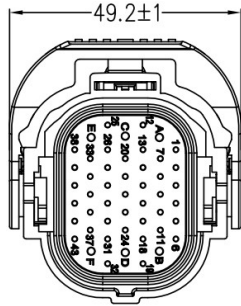
Key Feature

- ◆ 32 Way signaling connectors, Current rating: Max.13A
- ◆ 2 color options: black or gray
- ◆ Integral grommet sealing design
- ◆ Lever-Driven + CPA, Jam-Nut installation
- ◆ Accepts contact size 16#, refer to page 17
- ◆ IP67, IP68, and IP6K9K, 48Kpa Air-tight (when mated)
- ◆ Flammability: UL94 V-0

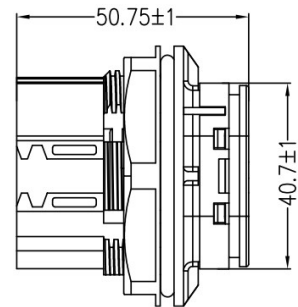
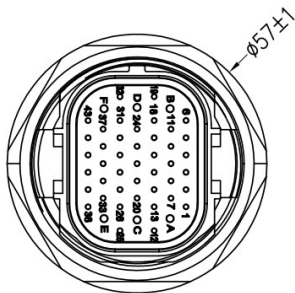
Specifications and dimensions subject to change

USCL, Jam-Nut Installation (5)

49 Way – Integral Grommet + Stamped Contacts (clean body)



| Connector | Color | P/N | Description |
|-----------|-------|-------------|--------------------|
| Plug | Black | USCL436-001 | 43+6 Way, Plug, BK |
| | Gray | USCL436-003 | 43+6 Way, Plug, GY |



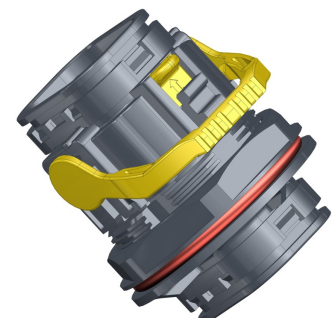
| Connector | Color | P/N | Description |
|------------|-------|-------------|-------------------------|
| Receptacle | Black | USCL436-000 | 43+6 Way Receptacle, BK |
| | Gray | USCL436-002 | 43+6 Way Receptacle, GY |

| End-Bell | Color | P/N | Description |
|-------------------|-------|-------------|-----------------------|
| Straight End-Bell | Black | USCL436-111 | Straight End-Bell, BK |
| | Gray | USCL436-113 | Straight End-Bell, GY |
| Angled End-Bell | Black | USCL436-112 | Angled End-Bell, BK |
| | Gray | USCL436-114 | Angled End-Bell, GY |



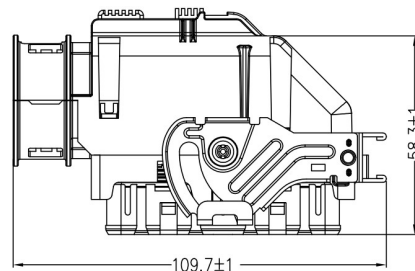
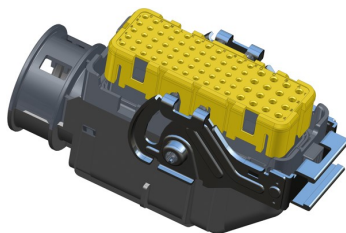
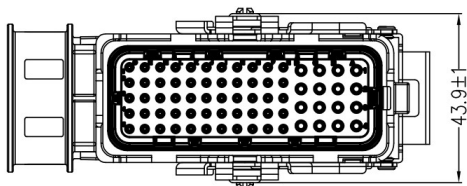
Key Feature

- ◆ 43+6 Way, Mixed Layout: signaling + power connectors, Current rating: Max.10A&13A
- ◆ 2 color options: black or gray
- ◆ Integral grommet sealing design
- ◆ Lever-Driven + CPA, Jam-Nut installation
- ◆ Accepts contact size20#&size16# (Clean body), refer to page 18
- ◆ IP67, IP68, and IP6K9K, 48Kpa Air-tight (when mated)
- ◆ Flammability: UL94 V-0

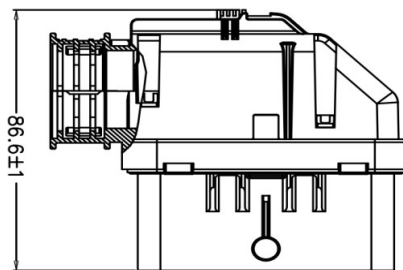
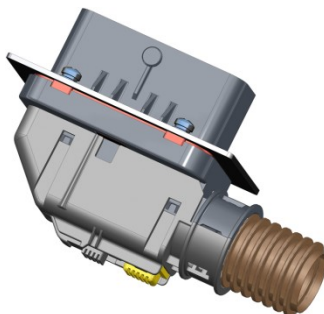
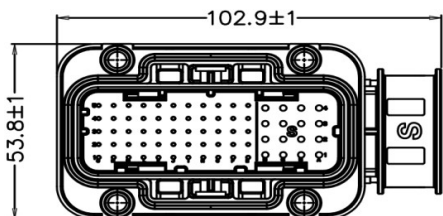


USCL, Flange Installation (1)

71 Way – Integral Grommet + Stamped Contacts



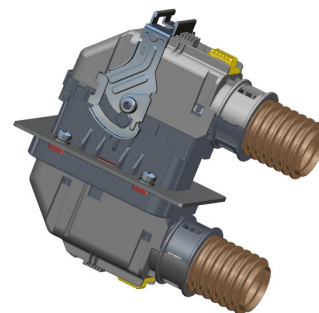
| Connector | Color | P/N | Description |
|-----------|-------|-------------|---------------------|
| Plug | Black | USCL071-001 | 55+16 Way, Plug, BK |
| | Gray | USCL071-013 | 55+16 Way, Plug, GY |



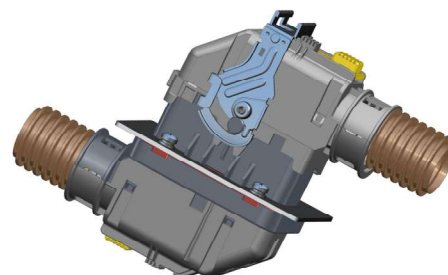
| Connector | Color | P/N | Style | Description |
|------------|-------|-------------|---------|--------------------------|
| Receptacle | Black | USCL071-002 | S Style | 55+16 Way Receptacle, BK |
| | Gray | USCL071-014 | S Style | 55+16 Way Receptacle, GY |
| | Black | USCL071-004 | U Style | 55+16 Way Receptacle, BK |
| | Gray | USCL071-016 | U Style | 55+16 Way Receptacle, GY |

Key Feature

- ◆ 71 Way, Mixed Layout: signaling + power connectors, Current rating: Max. 10A&13A
- ◆ 2 color options: black or gray
- ◆ Integral grommet sealing design
- ◆ Lever-Driven + CPA, flange installation
- ◆ Accepts contact size 20#&size 16#, refer to page 17
- ◆ IP67, IP68, and IP6K9K, 48Kpa Air-tight (when mated)
- ◆ Flammability: UL94 V-0

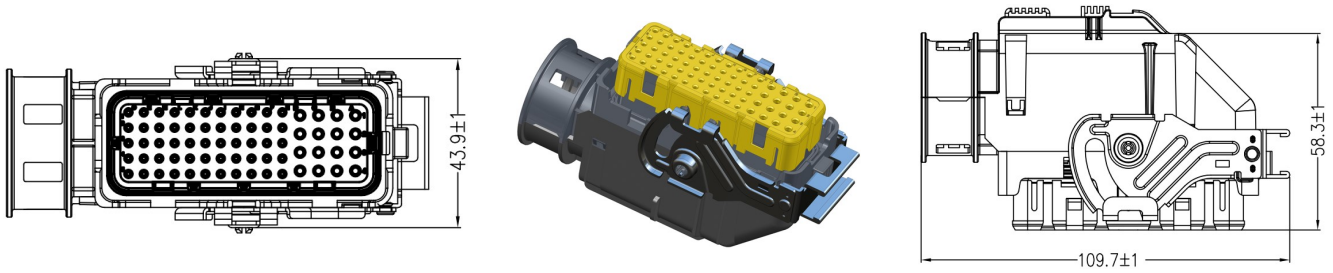


U Style

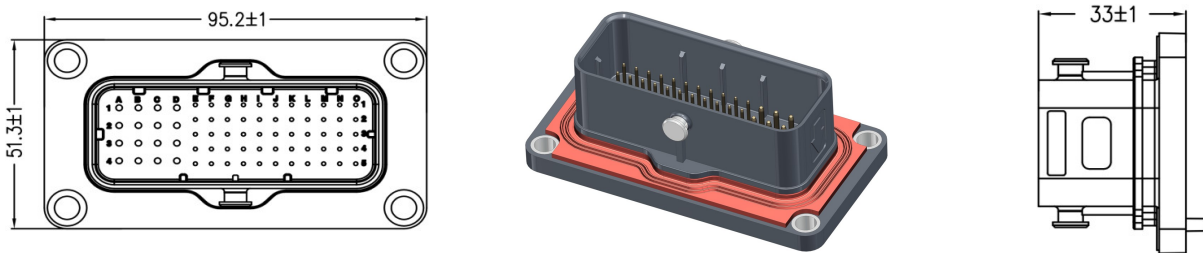


S Style

USCL, Flange Installation (2) 71 Way (Soldering) – Integral Grommet + Stamped Contacts



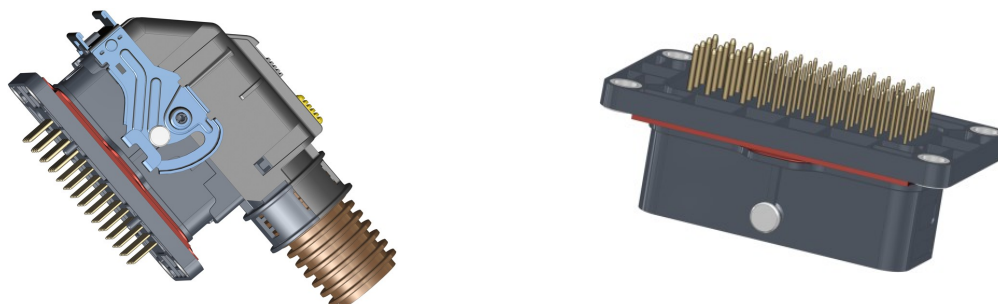
| Connector | Color | P/N | Description |
|-----------|-------|-------------|---------------------|
| Plug | Black | USCL071-001 | 55+16 Way, Plug, BK |
| | Gray | USCL071-013 | 55+16 Way, Plug, GY |



| Connector | Color | P/N | Description |
|------------|-------|-------------|--------------------------|
| Receptacle | Black | USCL071-000 | 55+16 Way Receptacle, BK |
| | Gray | USCL071-018 | 55+16 Way Receptacle, GY |

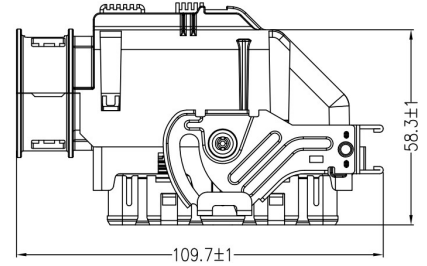
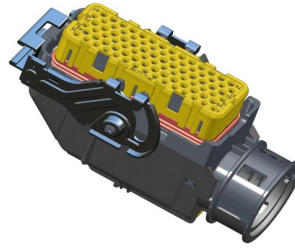
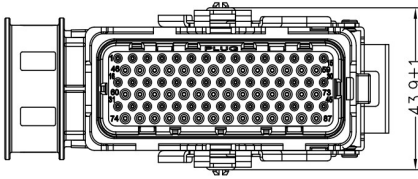
Key Feature

- ◆ 71 Way, soldering receptacles, Mixed Layout: signaling + power connectors, Current rating: Max.10A&13A
- ◆ 2 color options: black or gray
- ◆ Integral grommet sealing design
- ◆ Lever-Driven + CPA, flange installation
- ◆ Accepts contact size20#&size16#, refer to page 17
- ◆ IP67, IP68, and IP6K9K, 48Kpa Air-tight (when mated)
- ◆ Flammability: UL94 V-0

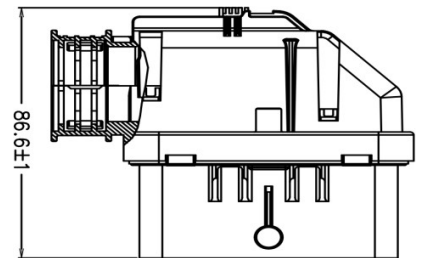
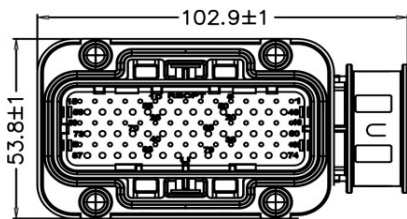


USCL, Flange Installation (3)

87 Way – Integral Grommet + Stamped Contacts

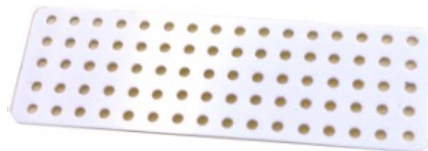


| Connector | Color | P/N | Description |
|-----------|-------|-------------|------------------|
| Plug | Black | USCL087-001 | 87 Way, Plug, BK |
| | Gray | USCL087-003 | 87 Way, Plug, GY |



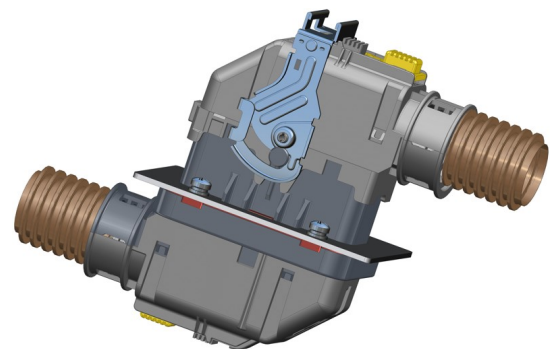
| Connector | Color | P/N | Style | Description |
|------------|-------|-------------|---------|---|
| Receptacle | Black | USCL087-000 | U Style | 87 Way Receptacles Flange bolts unsealed |
| | Gray | USCL087-006 | U Style | |
| | Black | USCL087-002 | S Style | |
| | Gray | USCL087-008 | S Style | |
| | Black | USCL087-004 | U Style | 87 Way Receptacles Flange bolts sealed |
| | Gray | USCL087-012 | U Style | |
| | Black | USCL087-010 | S Style | |
| | Gray | USCL087-014 | S Style | |

| Guide Disc | Color | P/N | Description |
|-----------------|-------|-------------|-------------------|
| Receptacle Disc | White | USCL087-200 | 87 Way Guide Disc |



Key Feature

- ◆ 87 Way, Mixed Layout: signaling + power connectors
Current rating: Max. 10A&13A
- ◆ 2 color options: black or gray
- ◆ Integral grommet sealing design
- ◆ Lever-Driven + CPA, flange installation
- ◆ Accepts contact size 20#&size 16#, refer to page 17
- ◆ IP67, IP68, and IP6K9K, 48Kpa Air-tight (when mated)
- ◆ Flammability: UL94 V-0



Specifications and dimensions subject to change

Stamped Contact System (1)

Contact Resistances

| Cable Range AWG (mm ²) | Current(A) | Voltage Drop (mV Max.) |
|---------------------------------------|------------|---------------------------|
| 12 (4.0) | 30 | 100 |
| 14 (2.5) | 25 | 100 |
| 16 (1.5) | 13 | 100 |
| 18 (1.0) | 10 | 100 |
| 20 (0.5) | 7.5 | 100 |

Contact Features

- Size 16# signal contacts, current rate: Max 13A
 - Size 12# power contacts, current rate: Max 30A
 - Contact clip with 3prongs, used with individual seals
 - Nickel and gold flash plating options
 - Contact durability \geq 200 times
 - Cable ranges:
- Signal contacts: 22AWG (0.35mm²) to 14AWG(2.5mm²)
 Power contacts: 16AWG (1.5mm²) to 12AWG(4.0mm²)

Stamped & Plated Contacts (crimp with cable seals)

| Size 16#, Cable-Range | | Type | Nickel Plated (2000/reel) | Gold Plated (2000/reel) | Cable Φ OD |
|-----------------------|-------------|--------|------------------------------|----------------------------|---|
| mm ² | AWG | | | | |
| 0.35 - 0.50 | 22 - 20 AWG | Pin | USCT000-055 | USCT000-255 | Φ 1.20-1.60mm |
| 0.35 - 0.50 | 22 - 20 AWG | Socket | USCT000-054 | USCT000-254 | Φ 1.20-1.60mm |
| 0.75 - 1.50 | 18 - 16 AWG | Pin | USCT000-051 | USCT000-251 | Φ 1.40-2.40mm |
| 0.75 - 1.50 | 18 - 16 AWG | Socket | USCT000-050 | USCT000-250 | Φ 1.40-2.40mm |
| 1.50 - 2.50 | 16 - 14 AWG | Pin | USCT000-053 | USCT000-253 | < Φ 2.40mm (ultrathin cable) or customized connectors |
| 1.50 - 2.50 | 16 - 14 AWG | Socket | USCT000-052 | USCT000-252 | |
| Size 12#, Cable-Range | | Type | Tin Plated (3000/reel) | Gold Plated (3000/reel) | Cable Φ OD |
| mm ² | AWG | | | | |
| 1.5 - 2.50 | 16 - 14 AWG | Pin | USCT000-087 | USCT000-287 | Φ 2.20-3.00mm |
| 1.5 - 2.50 | 16 - 14 AWG | Socket | USCT000-088 | USCT000-288 | Φ 2.20-3.00mm |
| 4.00 | 12 AWG | Pin | USCT000-095 | USCT000-295 | Φ 3.40-3.70mm |
| 4.00 | 12 AWG | Socket | USCT000-096 | USCT000-296 | Φ 3.40-3.70mm |



Size 12#



Size 16#

Stamped Contact System (2)

Contact Resistances

| Cable Range AWG (mm ²) | Current(A) | Voltage Drop (mV Max.) |
|---------------------------------------|------------|---------------------------|
| 12 (4.00) | 30 | 100 |
| 14 (2.50) | 25 | 100 |
| 16 (1.50) | 13 | 100 |
| 18 (1.00) | 10 | 100 |
| 20 (0.50) | 7.5 | 100 |
| 22 (0.35) | 5.0 | 100 |

Contact Features

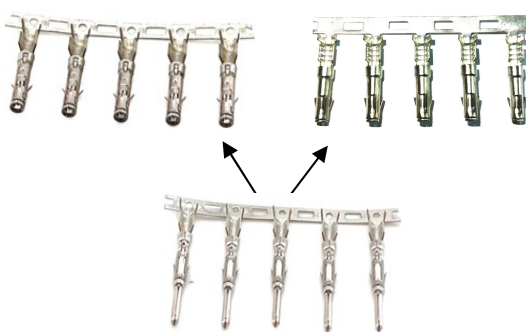
- Size20# signal contacts, current rate: Max 10A
- Size16# signal contacts, current rate: Max 13A
- Size12# power contacts, current rate: Max 30A
- Contact clip with 3prongs, used with integral grommet
- Nickel and gold flash plating options
- Contact durability \geq 200 times
- Cable ranges:
Signal contacts: 22AWG (0.35mm²) to 14AWG(2.5mm²)
Power contacts: 14AWG (2.5mm²) to 12AWG(4.0mm²)

Stamped & Plated Contacts (Compatible with integral grommets)

| Size 20#, Cable-Range | | Type | Nickel Plated (3000/reel) | Gold Plated (3000/reel) | Cable Φ OD |
|-----------------------|-------------|--------|------------------------------|----------------------------|---------------------|
| mm ² | AWG | | | | |
| 0.35 - 0.75 | 22 - 18 AWG | Pin | USCT000-030 | USCT000-930 | Φ 1.30-2.20mm |
| 0.35 - 0.75 | 22 - 18 AWG | Socket | USCT000-020 | USCT000-920 | Φ 1.30-2.20mm |
| 0.75 - 1.00 | 18 - 17 AWG | Pin | USCT000-042 | USCT000-942 | Φ 1.30-2.20mm |
| 0.75 - 1.00 | 18 - 17 AWG | Socket | USCT000-043 | USCT000-943 | Φ 1.30-2.20mm |
| Size 16#, Cable-Range | | Type | Nickel Plated (3000/reel) | Gold Plated (3000/reel) | Cable Φ OD |
| mm ² | AWG | | | | |
| 0.35 - 0.50 | 22 - 20 AWG | Pin | USCT000-016 | USCT000-216 | Φ 1.50-2.70mm |
| 0.35 - 0.50 | 22 - 20 AWG | Socket | USCT000-015 | USCT000-913 | Φ 1.50-2.70mm |
| 0.35 - 0.50 | 22 - 20 AWG | Socket | USCT000-502 | USCT000-902 | Φ 1.50-2.70mm* |
| 0.75 - 1.50 | 18 - 16 AWG | Pin | USCT000-013 | USCT000-213 | Φ 1.50-2.70mm |
| 0.75 - 1.50 | 18 - 16 AWG | Socket | USCT000-012 | USCT000-932 | Φ 1.50-2.70mm |
| 0.75 - 1.50 | 18 - 16 AWG | Socket | USCT000-504 | USCT000-904 | Φ 1.50-2.70mm* |
| 1.50 - 2.50 | 16 - 14 AWG | Pin | USCT000-011 | USCT000-211 | Φ 1.50-2.70mm |
| 1.50 - 2.50 | 16 - 14 AWG | Socket | USCT000-010 | USCT000-934 | Φ 1.50-2.70mm |
| 1.50 - 2.50 | 16 - 14 AWG | Socket | USCT000-506 | USCT000-906 | Φ 1.50-2.70mm* |
| Size 12#, Cable-Range | | Type | Tin Plated (3000/reel) | Gold Plated (3000/reel) | Cable Φ OD |
| mm ² | AWG | | | | |
| 1.5 - 2.50 | 14 AWG | Pin | USCT000-089 | USCT000-289 | Φ 2.41-3.81mm |
| 1.5 - 2.50 | 14 AWG | Socket | USCT000-090 | USCT000-290 | Φ 2.41-3.81mm |
| 2.5 - 4.00 | 12 AWG | Pin | USCT000-093 | USCT000-293 | Φ 2.41-3.81mm |
| 2.5 - 4.00 | 12 AWG | Socket | USCT000-094 | USCT000-294 | Φ 2.41-3.81mm |



Size 12#



Size 16#



Size 20#

*Specified socket contacts for 71&87 Way Plug connectors;

Specifications and dimensions subject to change

Stamped Contact System (2)

contact Resistances

| Cable Range AWG (mm ²) | Current(A) | Voltage Drop (mV Max.) |
|---------------------------------------|------------|---------------------------|
| 14 (2.50) | 25 | 100 |
| 16 (1.50) | 13 | 100 |
| 18 (1.00) | 10 | 100 |
| 20 (0.50) | 7.5 | 100 |
| 22 (0.35) | 5.0 | 100 |

Contact Features

- Size20# signal contacts, current rate: Max 10A
- Size16# signal contacts, current rate: Max 13A
- Contact clip with 3prongs, used with integral grommet
- Nickel and gold flash plating options
- Contact durability \geq 200 times
- Cable ranges:
Signal contacts: 22AWG (0.35mm²) to 14AWG(2.5mm²)

Stamped & Plated Contacts (Clean Body, used with integral grommet)

| Size 20#, Cable-Range | | Type | Nickel Plated (3000/reel) | Gold Plated (3000/reel) | Cable Φ OD |
|-----------------------|------------|--------|------------------------------|----------------------------|--------------------|
| mm ² | AWG | | | | |
| 0.35 - 0.75 | 22- 18 AWG | Pin | USCT000-071 | USCT000-271 | Φ 1.30-2.20mm |
| 0.35 - 0.75 | 22- 18 AWG | Socket | USCT000-072 | USCT000-272 | Φ 1.30-2.20mm |
| 0.75 - 1.50 | 18- 16 AWG | Pin | USCT000-073 | USCT000-273 | Φ 1.30-2.20mm |
| 0.75 - 1.50 | 18- 16 AWG | Socket | USCT000-074 | USCT000-274 | Φ 1.30-2.20mm |
| Size 16#, Cable-Range | | Type | Nickel Plated (3000/reel) | Gold Plated (3000/reel) | Cable Φ OD |
| mm ² | AWG | | | | |
| 0.35 - 0.50 | 22- 20 AWG | Pin | USCT000-085 | USCT000-285 | Φ 1.50-2.70mm |
| 0.35 - 0.50 | 22- 20 AWG | Socket | USCT000-084 | USCT000-284 | Φ 1.50-2.70mm |
| 0.75 - 1.50 | 18- 16 AWG | Pin | USCT000-077 | USCT000-277 | Φ 1.50-2.70mm |
| 0.75 - 1.50 | 18- 16 AWG | Socket | USCT000-076 | USCT000-276 | Φ 1.50-2.70mm |
| 1.50 - 2.50 | 16- 14 AWG | Pin | USCT000-079 | USCT000-279 | Φ 1.50-2.70mm |
| 1.50 - 2.50 | 16- 14 AWG | Socket | USCT000-078 | USCT000-278 | Φ 1.50-2.70mm |



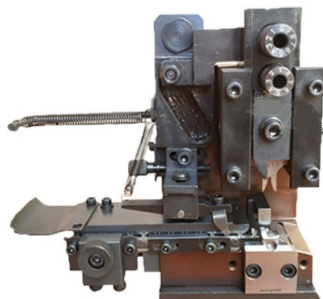
Size 16#



Size 20#



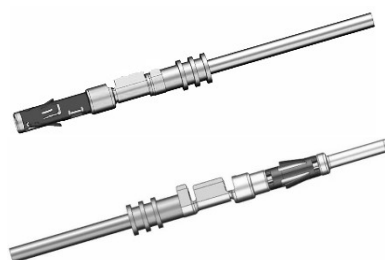
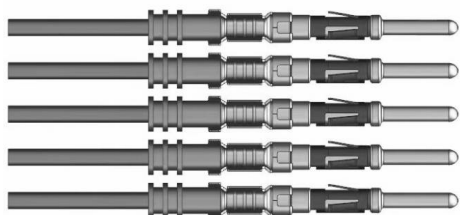
Contacts Crimp Tool



| Cable Size/AWG (mm ²) | Tool No. | Description |
|-----------------------------------|----------|----------------------|
| 12# (4.0) | T-0307 | Automatic crimp tool |
| 14# (2.5) | T-0306 | Automatic crimp tool |
| 16# (1.5) | T-0305 | Automatic crimp tool |
| 18#(1.0) | T-0304 | Automatic crimp tool |
| 20# (0.5) | T-0303 | Automatic crimp tool |



| Cable Size/AWG (mm ²) | Tool No. | Description |
|-----------------------------------|----------|-----------------|
| 12# (4.0) | T-1307 | Hand crimp tool |
| 14# (2.5) | T-1306 | Hand crimp tool |
| 16# (1.5) | T-1305 | Hand crimp tool |
| 18#(1.0) | T-1304 | Hand crimp tool |
| 20# (0.5) | T-1303 | Hand crimp tool |



Contact Extrusion Tool



| Contact Type | Tool No. | Description |
|---------------------|----------|-------------------------|
| Signal Pin(Φ1.0mm) | T-00207 | Tool for Mini contacts |
| Signal Pin (Φ1.6mm) | T-00301 | Tool for STD contacts |
| Power Pin(Φ2.5mm) | T-00206 | Tool for Power contacts |

Cable Seal & Blind Plugs

USCL connector adopts individual sealing plugs to realize excellent waterproof function, Wire Seals are required for connectors without an integrated rear seal to maintain an environmental seal.

Size 16# contacts accept below cable seals:

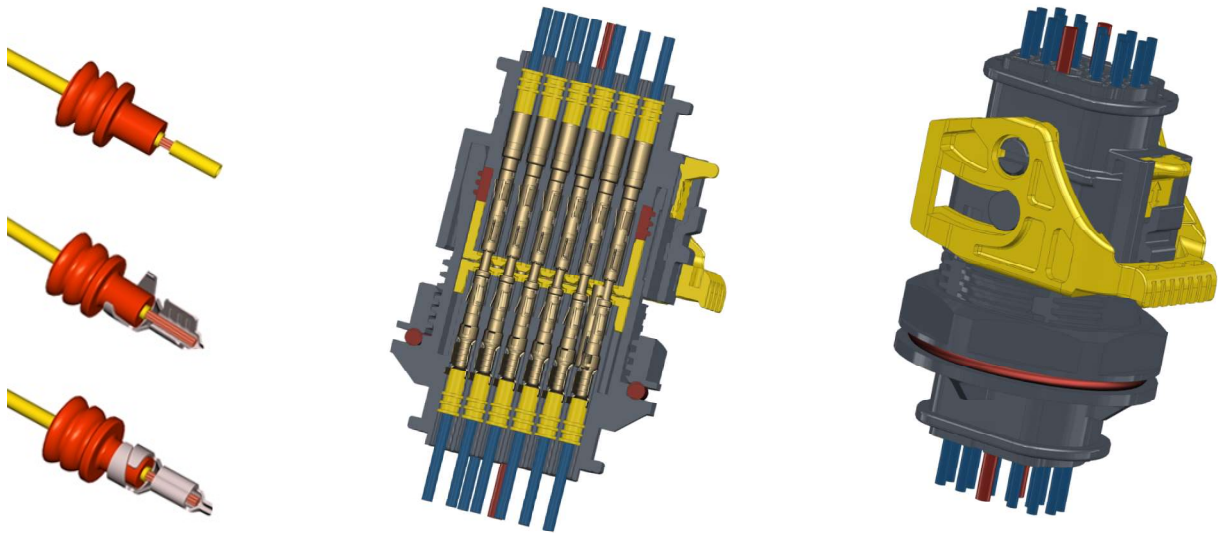


| Acceptable cables (OD) | P/Ns | Color | Type |
|------------------------|-----------|--------|------------|
| Φ1.2mm-Φ1.6mm | USCM49711 | Red | Cable Seal |
| Φ1.4mm-Φ1.9mm | USCM35301 | Gray | Cable Seal |
| Φ1.9mm-Φ2.4mm | USCM49721 | Yellow | Cable Seal |
| N/A | USCM35311 | White | Blind plug |



Size 12# contacts accept below cable seals:

| Acceptable cables (OD) | P/Ns | Color | Type |
|------------------------|-----------|------------|------------|
| Φ1.2mm-Φ2.1mm | USCM89041 | Light-Blue | Cable Seal |
| Φ2.2mm-Φ3.0mm | USCM89051 | White | Cable Seal |
| Φ3.1mm-Φ3.7mm | USCM89061 | Blue | Cable Seal |
| N/A | USCM89221 | White | Blind plug |



Dust-Cap

USCM dust-cap provide an environmental sealing and are used to protect the connector interface when the plug and receptacle are not mated.

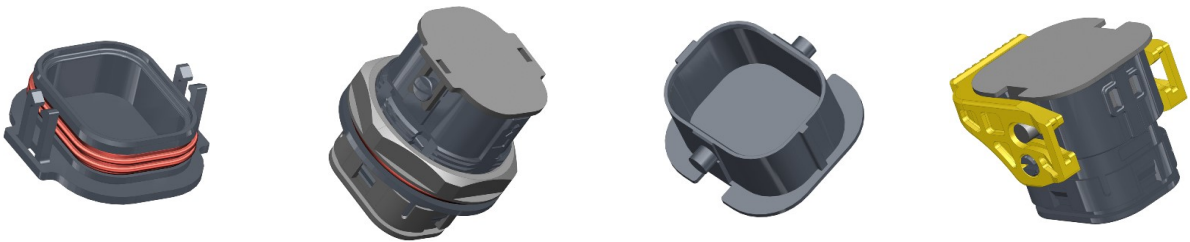


Dust-Cap for the receptacles (dustproof+waterproof,IPX5)

| Compatible Connectors | P/N | Color | Type |
|-------------------------|---------|-------|--------------------|
| 14+2 Way Receptacles | DC-142 | Black | Rubber Cover |
| 22+4/28 Way Receptacles | DC-028 | Black | Rubber Cover |
| 32/43+6 Way Receptacles | DC-032 | Black | Rubber Cover |
| 71/87 Way Receptacles | DC-071 | Black | Rubber Cover |
| 14+2 Way Receptacles | DC-142L | Black | Rubber Cover + Tie |
| 22+4/28 Way Receptacles | DC-028L | Black | Rubber Cover + Tie |
| 32/43+6 Way Receptacles | DC-032L | Black | Rubber Cover + Tie |
| 71/87 Way Receptacles | DC-071L | Black | Rubber Cover + Tie |

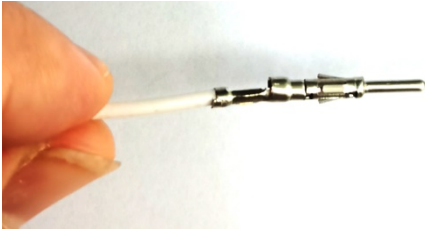
Dust-Cap for the receptacles (dustproof + waterproof, IPX67)

| Compatible Connectors | P/N | Color | Type |
|-------------------------|---------|-------|---------------|
| 14+2 Way Receptacles | DC-142R | Pure | Plastic Cover |
| 22+4/28 Way Receptacles | DC-028R | Pure | Plastic Cover |
| 32/43+6 Way Receptacles | DC-052R | Pure | Plastic Cover |
| 71/87 Way Receptacles | DC-071R | Pure | Plastic Cover |
| 14+2 Way Receptacles | DC-142P | Pure | Plastic Cover |
| 22+4/28 Way Receptacles | DC-028P | Pure | Plastic Cover |
| 32/43+6 Way Receptacles | DC-052P | Pure | Plastic Cover |
| 71/87 Way Receptacles | DC-071P | Pure | Plastic Cover |



Operating Instructions

Contact insertion and extrusion



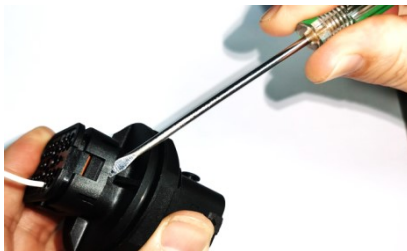
Insertion: Step-1#:

Grasp crimped contact approximately 1.5~2.0cm behind the contact



Insertion: Step-3#:

Push contact straight into connector until a click is felt. A slight tug will confirm that it is properly locked in place



Extrusion: Step-2#

Remove the End-Cap firstly with a tool. Pry off the End-Cap from the housing hooks one by one, do not destroy the components



Extrusion: Step-4#

Insert the tool into the contact cavity from the mating direction, push the tube fully into the cavity



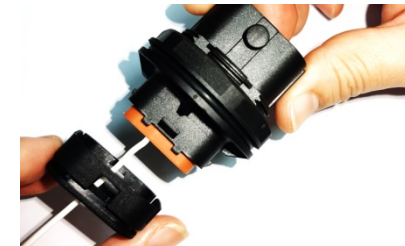
Insertion: Step-2#:

Make sure the contact is in the correct orientation. Insert the contacts vertically into the connector holes



Extrusion: Step-1#

Using a specialized tool (Tweezers or pliers with barbs) remove out the locating cover



Extrusion: Step-3#

After the End-Cap removed, draw it back to the appropriate position, convenient for contact extrusion



Extrusion: Step-5#

Depress the plunger to eject the contact, the contact can be removed from the back of the connector

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.

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