

STEELE CONNECT

The Ingenious Connection



RCU SERIES

ELECTRICAL CONNECTORS



DESIGN AND MANUFACTURE HIGH POWER INTERCONNECT SYSTEMS **RCU SERIES** FOR SEVERE ENVIRONMENT

RCU SERIES



ROBUST & SAFE



CONFIGURATION
ACCORDING TO YOUR
NEEDS



MODULAR SYSTEM WITH
PHASE CODING



OPERATING TEMPERATURE
-20°C to +90°C

COMPETENCY

Steele Connect can provide **integrated solution according to your applications.** High competences on special processes and Manufacturing with ISO 9001 & EN 9100 standards in respect of environmental requirements Reach/Rohs.

ENGAGEMENTS

Ensure daily contact to **bring all relevant solution to your needs for innovative connectors.**

Compact connector with small footprint offering weight saving for the applications and low insertion & extraction force.

We support product qualification & maintenance during product life cycle.

SERVICES

Customer satisfaction oriented. We propose the study & development of interconnect systems for all sectors.

For a better adaptation, we manufacture according to specifications, from prototyping to small, medium and mass production. STEELE CONNECT can provide a complete pre-wired solution with the test report.



INCREASED PERFORMANCES THROUGH INNOVATION

AN INNOVATIVE SOLUTION



- Compact connector: The electrical values of Ultrawatts© contacts are 20% higher than the other existing contact technologies (De-rating curve on demand)
- Connectors Coding devices avoiding mating errors between phases
- High modularity with small connection footprint
- Fast connection,
- Reduce downtime installations, Easy to use.
- No specific tools to realize the assembly, only crimping tools are necessary for the contacts and lugs with the selected cable

PERFORMANCE AND SAFETY OVERVIEW



- Low insertion and extraction force
- Up to 500 mating / un-mating cycles
- Power range extended from 50 to 400 A
- Reinforced security: 1000V AC / 1500V DC
- IP2X Finger protection / IP67 Waterproofing

IP67 WATERPROOF



Configuration Resistant against welding fumes and sparks



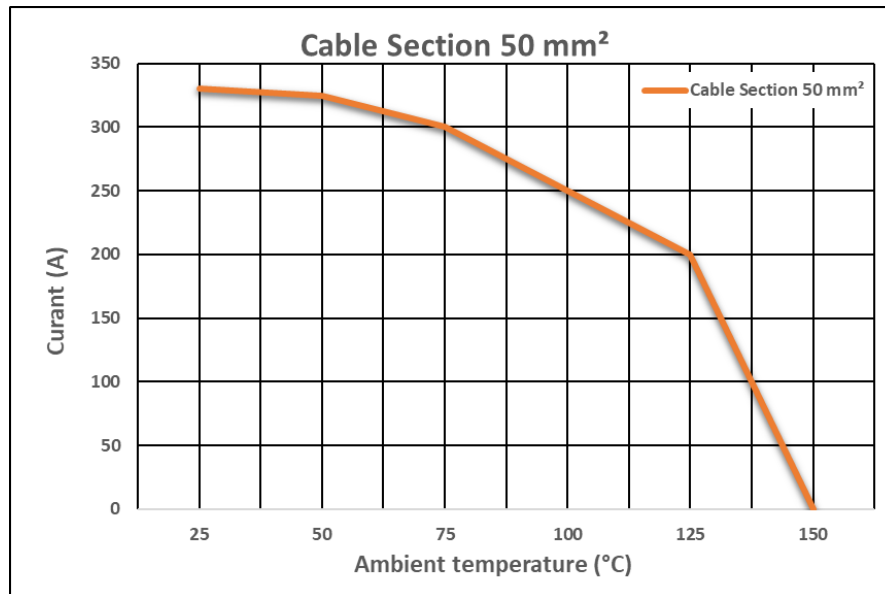
TECHNICAL SPECIFICATIONS

ELECTRICAL, MECHANICAL & ENVIRONMENTAL PERFORMANCES

| Connector Size | Cable cross section (AWG-mm ²) | Max Continuous Current Rating (A) | Max operating Voltage (V) | Contact Resistance (mΩ/m) | Insertion/ Extraction Force per module (N) |
|----------------|--|-----------------------------------|---------------------------|---------------------------|--|
| RCU 300 | AWG 0 (50 mm ²) | 330 | 1000V AC / 1500V DC | 0.4 | 20 |

- Endurance, mating & un-mating cycles according with EIA-364-09
- Sealing (mated / unmated): IP67, 1hr at 2 meters immersion and waterproof against high pressure steam jet Cleaning
- Temperature range -20°C to +90°C (optional 145°C)
- Other specifications: IEC 61984, DIN VDE 0298-4/2003-08

Single Pole: De-rating curve Steele RCU connector (EN 60512-5-2)



De-rating curve is according to EN 60512-5-2 tested with cables 1.5-meter length.

Please contact us, should you require a derating curve for an alternate cable length

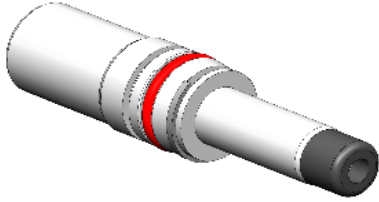
ELECTRICAL PERFORMANCES: Single & Multiple Pole Configuration

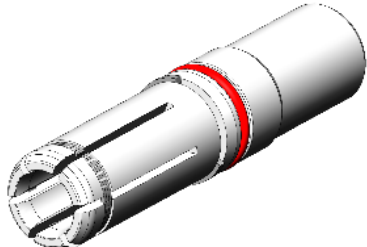
| Cable (conductor cross section) | Intensity Max (Permanent) | | |
|---------------------------------|---|--|---|
| | Single Pole | Two Poles | Three Poles |
| |  |  |  |
| 50 mm² | | | |
| By pole | 330 A | 300A/ pole | 300A/pole |
| By connector | 330 A | 600A | 900A |

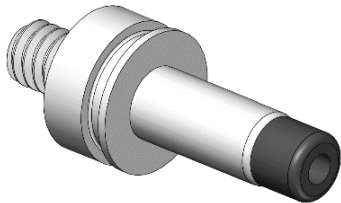
TYPE of CABLE

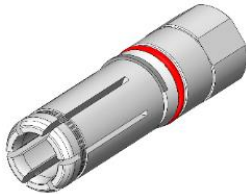
| Cable | | | Connector Size (Single pole Module configuration) |
|--|-------------------------------|-------|--|
| | | | RCU 300 |
| 10 mm² (Cross section) AWG 7 | Conductor Ø (mm) | 4,59 | X |
| | Maximum Current (A) @ 30°C | 120A | |
| 16 mm² (Cross section) AWG 5 | Conductor Ø (mm) | 6,15 | X |
| | Maximum Current (A) @ 30°C | 160 A | |
| 25 mm² (Cross section) AWG 4 | Conductor Ø (mm) | 7,25 | X |
| | Maximum Current (A) @ 30°C | 210 A | |
| 35 mm² (Cross section) AWG 2 | Conductor Ø (mm) | 8,68 | X |
| | Maximum Current (A) @ 30°C | 265A | |
| 50 mm² (Cross section) AWG 0 | Conductor Ø (mm) | 10,15 | X |
| | Maximum Current (A) @ 30°C | 330A | |
| 70 mm² (Cross section) AWG 00 | Conductor Ø (mm) | 12,32 | X |
| | Maximum Current (A) @ 30°C | 400A | |

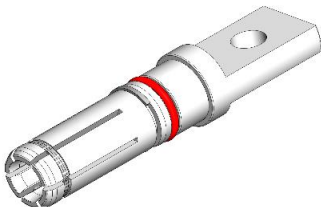
CONTACTS

| Pin Contact with Crimp termination | Cable cross section | Part Number |
|---|-----------------------------|--------------------------|
|  | AWG 7 / 10 mm ² | RCU-XXX-0PXXX-010-0AXX-X |
| | AWG 5/ 16 mm ² | RCU-XXX-0PXXX-016-0AXX-X |
| | AWG 4 / 25 mm ² | RCU-XXX-0PXXX-025-0AXX-X |
| | AWG 2 / 35 mm ² | RCU-XXX-0PXXX-035-0AXX-X |
| | AWG 0 / 50 mm ² | RCU-XXX-0PXXX-050-0AXX-X |
| | AWG 00 / 70 mm ² | RCU-XXX-0PXXX-070-0AXX-X |

| Socket Contact with Crimp termination | Cable cross section | Part Number |
|---|-----------------------------|--------------------------|
|  | AWG 7 / 10 mm ² | RCU-XXX-0SXXX-010-0AXX-X |
| | AWG 5/ 16 mm ² | RCU-XXX-0SXXX-016-0AXX-X |
| | AWG 4 / 25 mm ² | RCU-XXX-0SXXX-025-0AXX-X |
| | AWG 2 / 35 mm ² | RCU-XXX-0SXXX-035-0AXX-X |
| | AWG 0 / 50 mm ² | RCU-XXX-0SXXX-050-0AXX-X |
| | AWG 00 / 70 mm ² | RCU-XXX-0SXXX-070-0AXX-X |

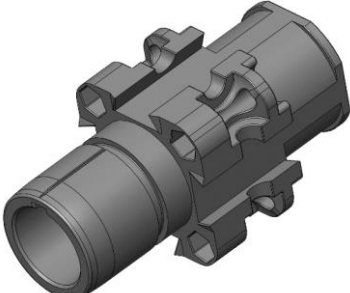
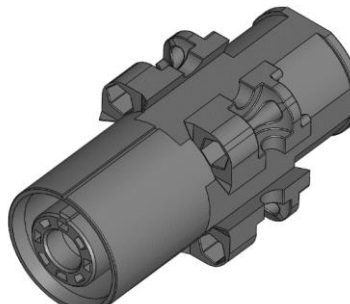
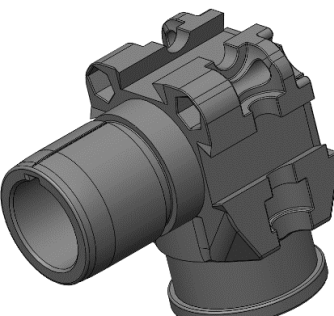
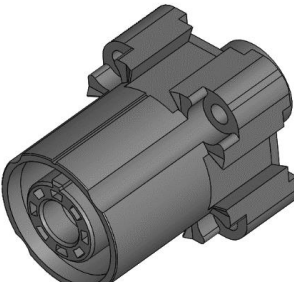
| Pin Contact with Screw Termination for lug | Part Number |
|---|--------------------------|
|  | RCU-XXX-4PXXX-XXX-0AXX-X |

| Socket Contact with Screw Termination for lug | Part Number |
|---|--------------------------|
|  | RCU-XXX-1SXXX-XXX-0AXX-X |

| Socket Contact with Flat Tail Termination | Part Number |
|---|--------------------------|
|  | RCU-XXX-5SXXX-XXX-0AXX-X |



MODULES DESCRIPTION

| Plug Straight Standard Plastic Module | Part Number |
|---|--------------------------|
|  | RCU-300-X0501-XXX-XXX1-X |
| Receptacle Straight Standard Plastic Module | Part Number |
|  | RCU-300-X0001-XXX-XXX1-X |
| Plug Right Angle Standard Plastic Module | Part Number |
|  | RCU-300-X0601-XXX-XXX1-X |
| Receptacle panel interface Standard Plastic Module | Part Number |
|  | RCU-300-X0100-XXX-XXX1-X |

ACCESSORIES

| | | | |
|---|--------------------------|--|--------------------------|
| Connector Fixing clip | Part Number | Connector Male Locking clip | Part Number |
|  | RCU-XXX-XXXXX-XXX-XX11-X |  | RCU-XXX-XXXXX-XXX-XX21-X |
| Connector Female Locking clip | Part Number | Connector Left Staking clip | Part Number |
|  | RCU-XXX-XXXXX-XXX-XX31-X |  | RCU-XXX-XXXXX-XXX-XX41-X |
| Connector Right Staking clip | Part Number | Panel Female Locking clip | Part Number |
|  | RCU-XXX-XXXXX-XXX-XX51-X |  | RCU-XXX-XXXXX-XXX-XX61-X |
| Locking pin | Part Number | Cable Gland | Part Number |
|  | RCU-XXX-XXXXX-XXX-XX71-X |  | RCU-XXX-XXXXX-XXX-XX81-X |

CRIMPING TOOLS

Manual crimping tool
Reference U-T000058

Cable cross section from 16 mm² to 70 mm²

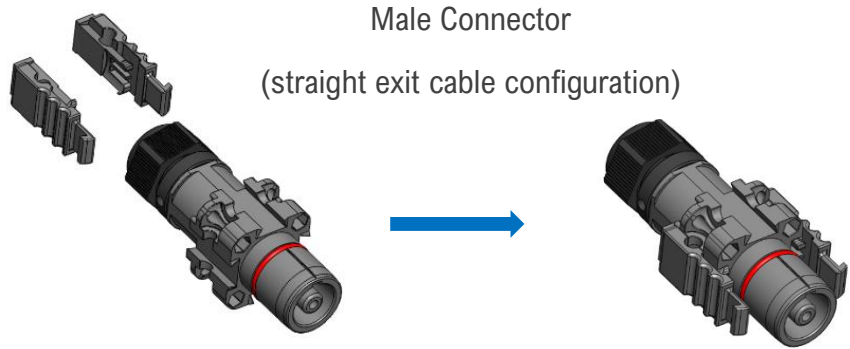


| | Cable | | Crimp Tool | Die | Die Interface |
|---|-------------------------------|-------|------------|-----------|---------------|
| 10 mm ² (Cross section) AWG 7 | Conductor Ø (mm) | 4,59 | U-T000058 | U-T000069 | / |
| | Maximum Current (A) @ 30°C | 120A | | | |
| 16 mm ² (Cross section) AWG 5 | Conductor Ø (mm) | 6,15 | U-T000058 | U-T000063 | / |
| | Maximum Current (A) @ 30°C | 160A | | | |
| 25 mm ² (Cross section) AWG 4 | Conductor Ø (mm) | 7,25 | U-T000058 | U-T000059 | / |
| | Maximum Current (A) @ 30°C | 210A | | | |
| 35 mm ² (Cross section) AWG 2 | Conductor Ø (mm) | 8,68 | U-T000058 | U-T000060 | / |
| | Maximum Current (A) @ 30°C | 265A | | | |
| 50 mm ² (Cross section) AWG 0 | Conductor Ø (mm) | 10,15 | U-T000058 | U-T000061 | / |
| | Maximum Current (A) @ 30°C | 330A | | | |
| 70 mm ² (Cross section) AWG 00 | Conductor Ø (mm) | 12,32 | U-T000058 | U-T000062 | / |
| | Maximum Current (A) @ 30°C | 400A | | | |

HIGH MODULARITY: Example of Modules Assembling

**SINGLE POLE
(50 mm²)**

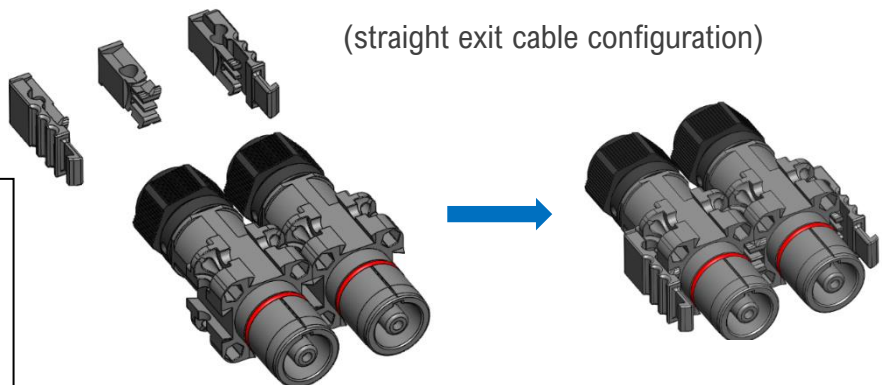
- 1x RCU-XXX-0PXXX-050-0AXX-X
- 1x RCU-300-X0501-XXX-XXX1-X
- 1x RCU-XXX-XXXXX-050-XX81-X
- 2x RCU-XXX-XXXXX-XXX-XX21-X



Male Connector
(straight exit cable configuration)

**TWO POLES
(50mm²)**

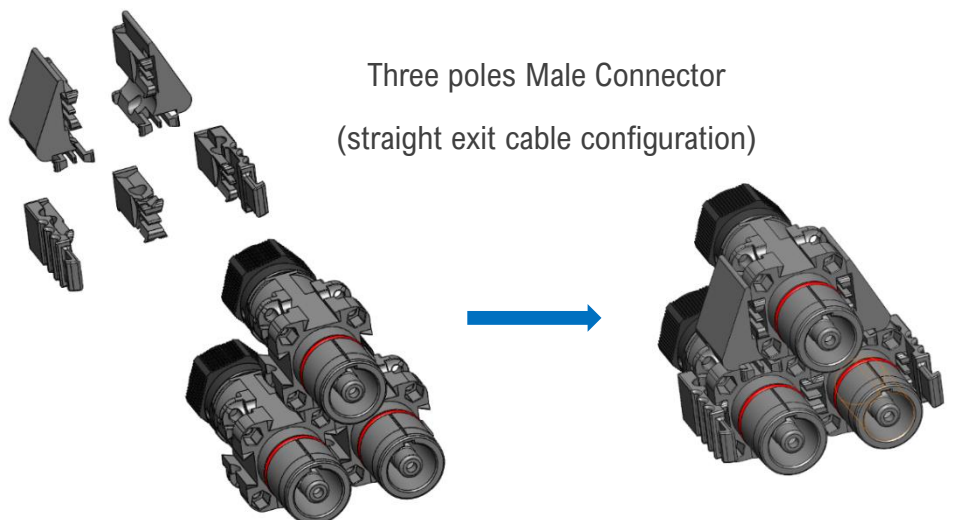
- 2x RCU-XXX-0PXXX-050-0AXX-X
- 2x RCU-300-X0501-XXX-XXX1-X
- 2x RCU-XXX-XXXXX-XXX-XX21-X
- 2x RCU-XXX-XXXXX-050-XX81-X
- 1x RCU-XXX-XXXXX-XXX-XX11-X



Two poles Male Connector
(straight exit cable configuration)

**THREE POLES
(50mm²)**

- 3x RCU-XXX-0PXXX-050-0AXX-X
- 3x RCU-300-X0501-XXX-XXX1-X
- 3x RCU-XXX-XXXXX-050-XX81-X
- 2x RCU-XXX-XXXXX-XXX-XX21-X
- 1x RCU-XXX-XXXXX-XXX-XX11-X
- 1x RCU-XXX-XXXXX-XXX-XX41-X
- 1x RCU-XXX-XXXXX-XXX-XX51-X

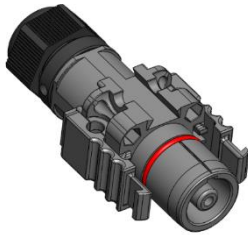


Three poles Male Connector
(straight exit cable configuration)

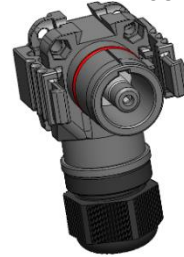
HIGH MODULAR USE CASE: Example of Configuration

ONE POLE

1 pole
straight exit

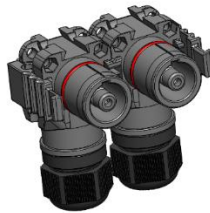


1 pole
90° Exit

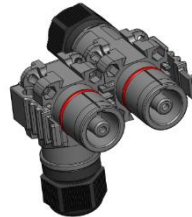


TWO POLES

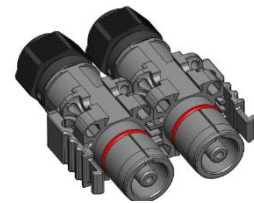
2 poles
90°Exit



2 poles
mixed

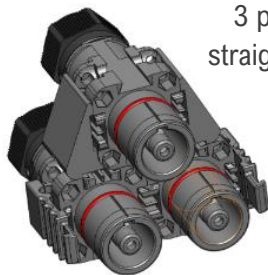


2 poles
straight exit cable

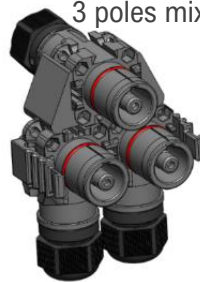


THREE POLES

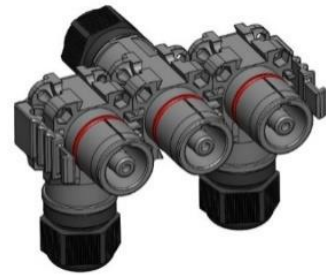
Pyramidal
3 poles
straight exit



Pyramidal
3 poles
mixed

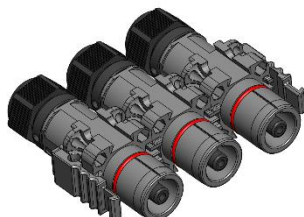


3 poles
mixed



THREE POLES

3 poles
straight exit



FIVE POLES

5 poles configuration



SPECIAL CONFIGURATION ACCORDING
TO YOUR USE CASES

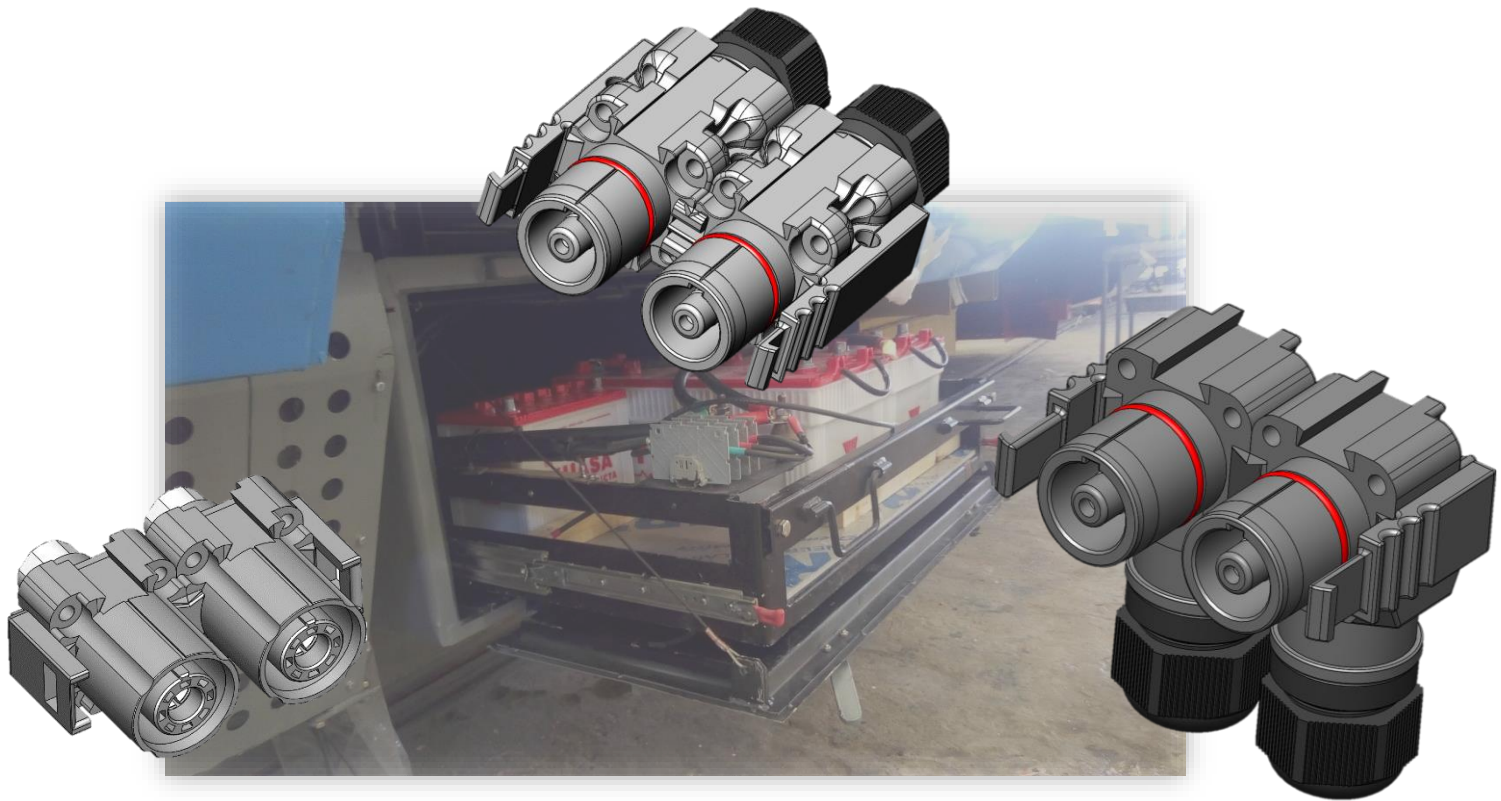


Robotics: Connector for primary circuits, spot welding gun applications (automobile, industrial...)

Industry: Unipolar cable to cable connection for severe environmental applications with mobile and fixed cables

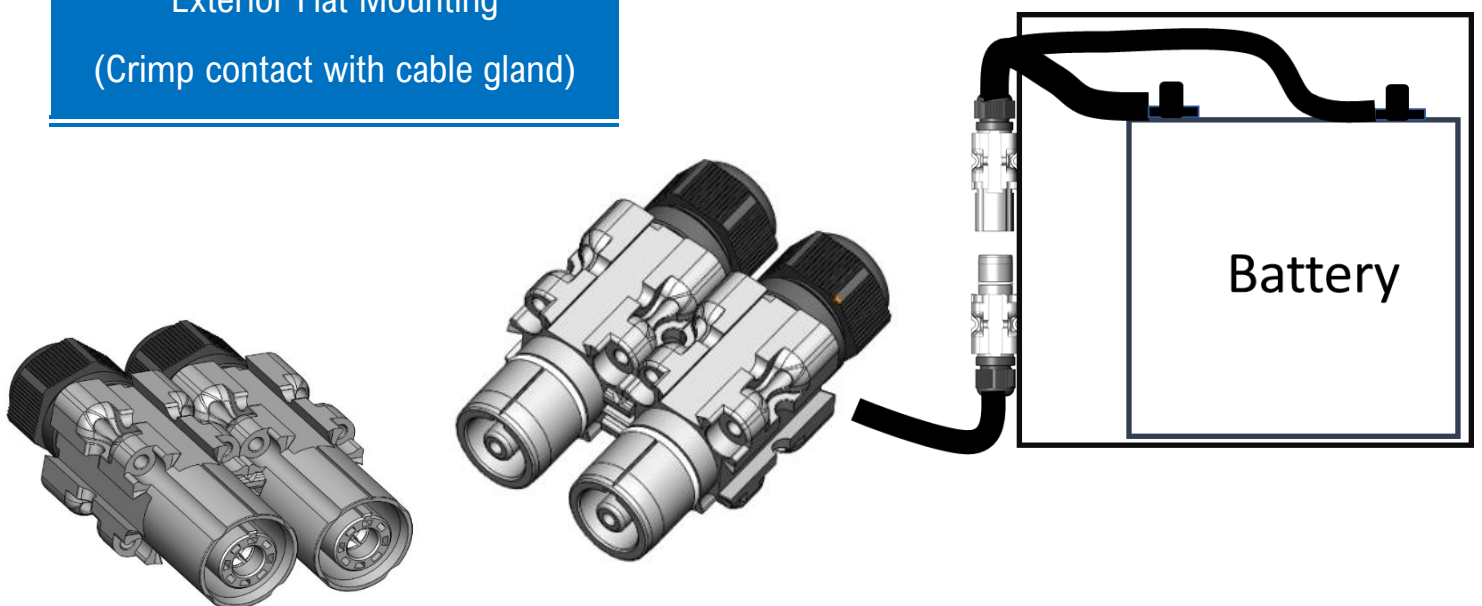


SPECIAL CONFIGURATION ACCORDING TO YOUR TECHNICAL SPECIFICATION

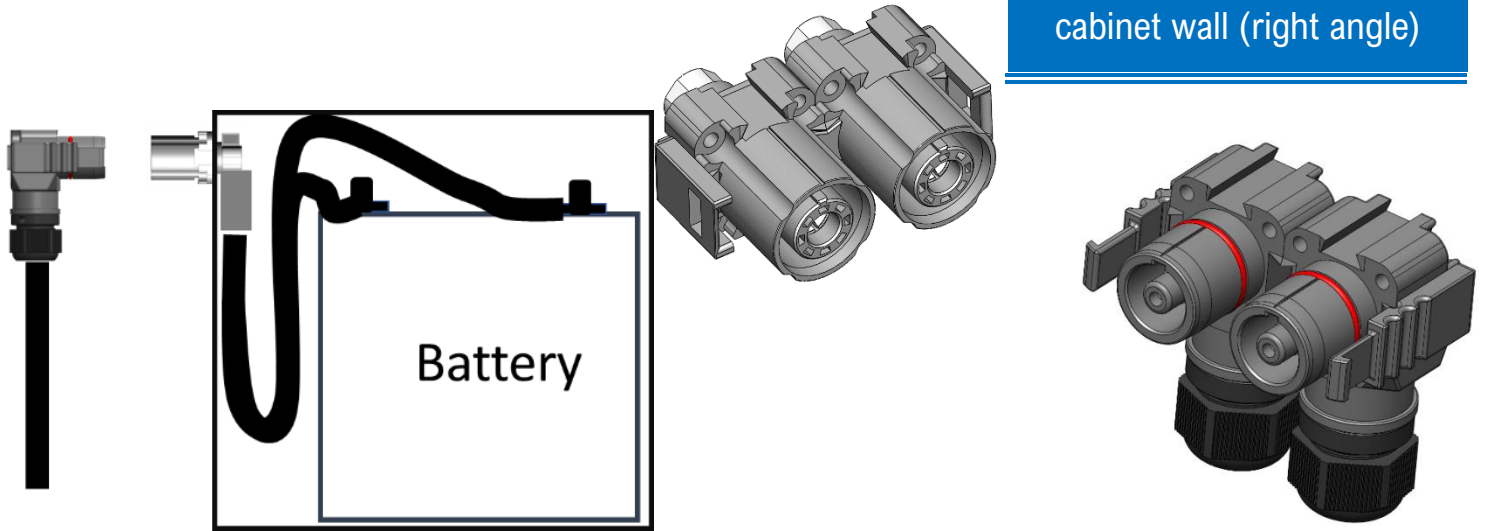


Batteries and cabinet: Connector for cabinet and batteries pack interface (1,2 or 3 poles)

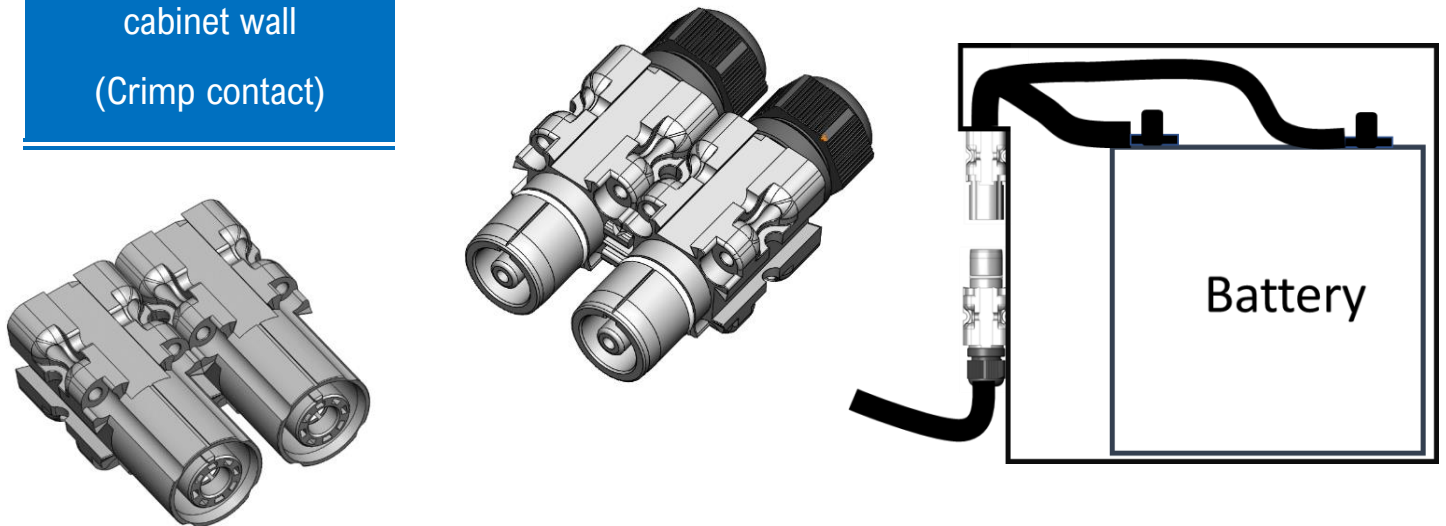
Exterior Flat Mounting
(Crimp contact with cable gland)



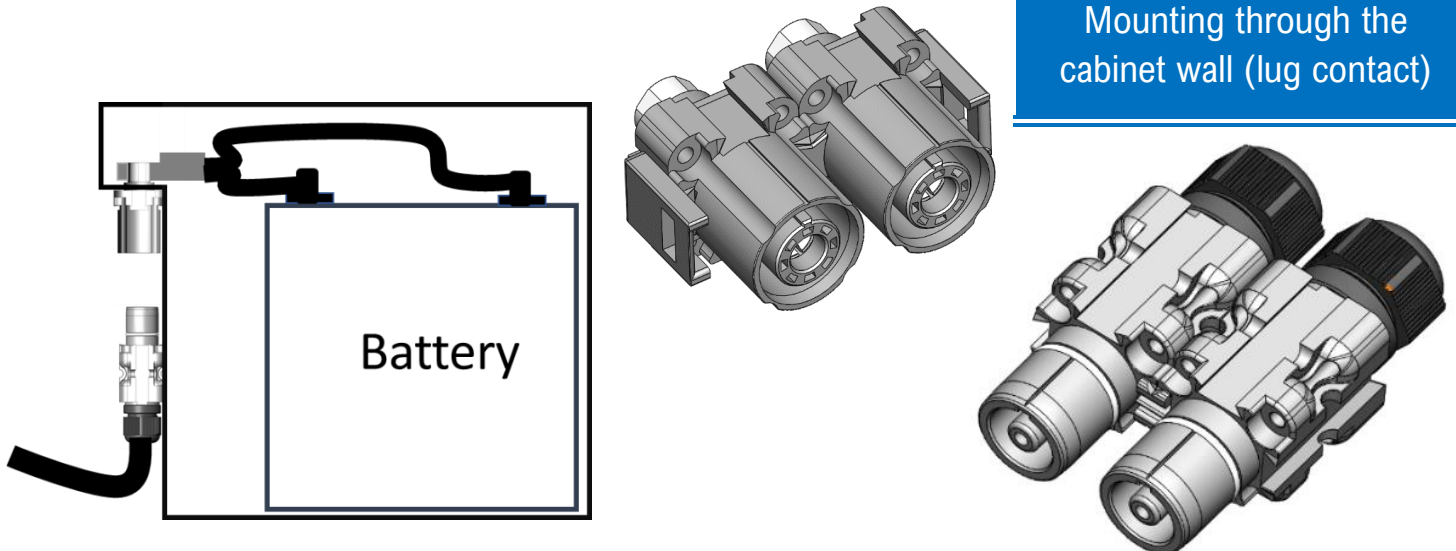
Mounting through the cabinet wall (right angle)



Mounting through the cabinet wall (Crimp contact)



Mounting through the cabinet wall (lug contact)



Our Engineering team is ready to support you to find the right solution

CONTACT US



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STEELE CONNECT
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