

- Voltage: Power Pin: 600V;
Signal Pin: 30V
- Operating temperature:
up to $-40^{\circ}\text{C} \sim +125^{\circ}\text{C}$
- 5000 durability cycles
- Panel to panel connection
- Blind mating
- Poka-Yoke to avoid mismating
- $\pm 1.5\text{mm}$ X and Y float

SWAPPING CONNECTOR

New

Best solution for
E-Mobility
Swappable Battery

The swappable connector solutions offered in 2 power & 8 signal configurations. These connectors can carry a continuous current of 50A with 5,000 mating cycles and IP67 rated in mated and unmated conditions.



Plug
(Battery side connector)



Socket
(Vehicle side connector)

Unrivaled InterConnects for Harsh Environments

About ALTW



3

Production Sites
(Taiwan, China, Mexico)

30+

Market Applications

90,000+

Products

Since 1993, Amphenol LTW Technology “ALTW” lives and breathes to create, innovate, design and produce “**unrivaled interconnects for harsh environments**”. With over 300 worldwide patents, not only does ALTW offer the broadest and widest range of rugged interconnects in the industry but also customization with the mission of “Customer Satisfaction First”. Undoubtedly, ALTW is the leader in rugged interconnects, highly recognized for its uncompromising quality, short lead time, fast and tailored service and its very competitive pricing.

Regardless of the challenging environments that your products will be subject to; there is a very good chance that you will find what you are looking for with ALTW.

Swapping Connector

Plug		Socket	
Part Number	PWMD-18PMFC-QS7001	Part Number	PWMD-11PFMC-QS7001
Configuration	2 Power Pin / 16 Signal Pin	Configuration	3 Power Pin / 8 Signal Pin

General Specification:

- ✓ Operating Temperature: -40°C ~ 125°C
- ✓ Mating Style: Snap In
- ✓ Durability: 5000 cycles
- ✓ Operating Voltage: Power Pin: 600V; Signal Pin: 30V
- ✓ Nominal Current: Power Pin: 50A; Signal Pin: 5A
- ✓ Plug: IP67 (mated or unmated) / Socket IP67 (mated)
- ✓ Salt Spray: 48h
- ✓ Insulation Resistance: $\geq 200\text{M}\Omega$ (500V DC)
- ✓ Withstanding Voltage: Power Pin 2200V AC; Signal Pin 500V AC
- ✓ Current Temperature Rise Test: 50A, $\Delta t \leq 55^\circ\text{C}$
- ✓ IEC 61984 (Pollution degree: 3; Overvoltage category: III)
- ✓ UL Material Certification



Application:

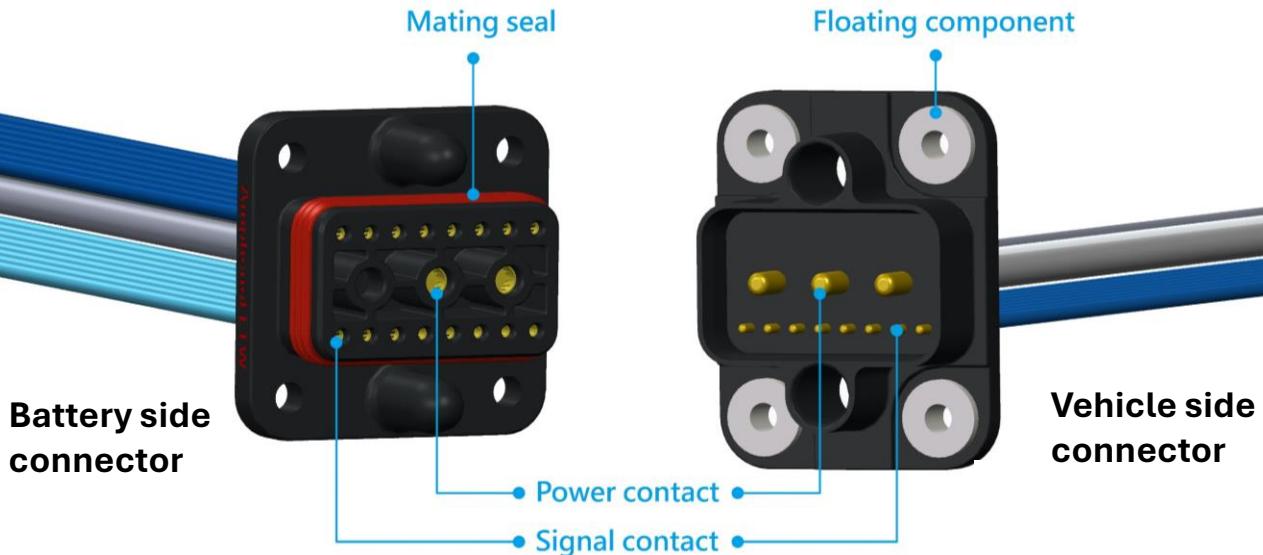


Battery side connector



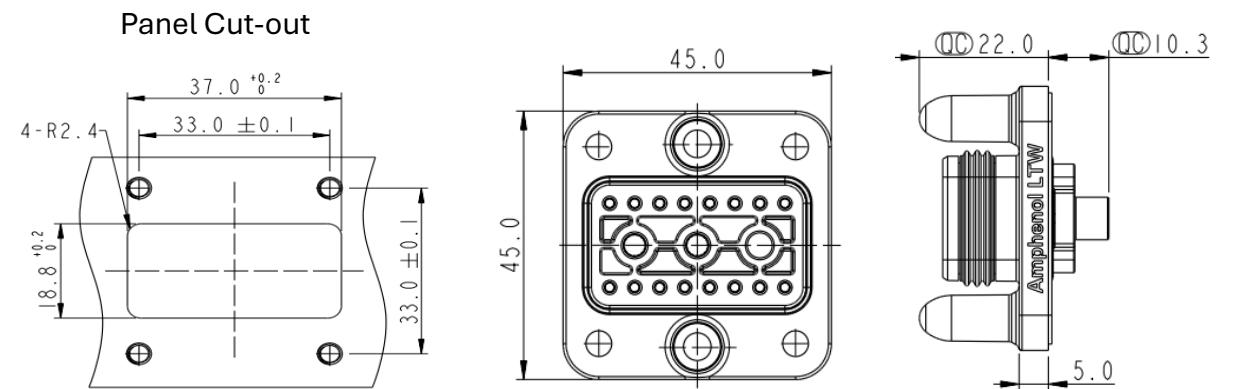
Vehicle side connector

Swapping Connector

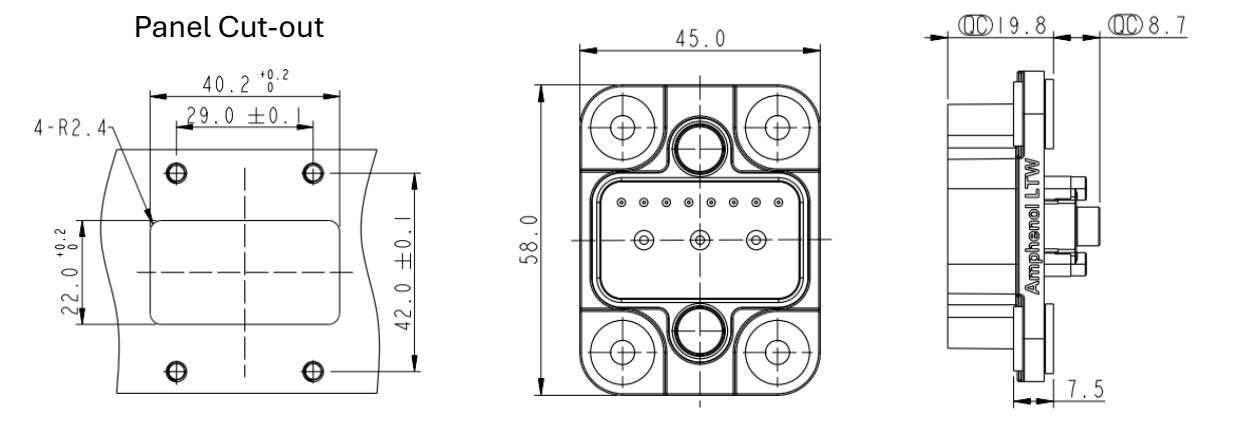


unit: mm

Battery side connector



Vehicle side connector



Assembly Instructions

Select unshielded cables that fulfill the following requirements	<table border="1"> <thead> <tr> <th>Cable Spec.</th><th>OD (mm)</th></tr> </thead> <tbody> <tr> <td>6mm²</td><td>≤4.9mm</td></tr> <tr> <td>0.5mm² or 0.75mm²</td><td>≤2.3mm</td></tr> </tbody> </table>		Cable Spec.	OD (mm)	6mm ²	≤4.9mm	0.5mm ² or 0.75mm ²	≤2.3mm								
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Strip the cable jacket to the specified size	 <table border="1"> <tr> <td>A (mm)</td><td>8.5±0.5</td><td>Power terminals</td></tr> <tr> <td></td><td>6.5±0.5</td><td>Signal terminals</td></tr> </table>		A (mm)	8.5±0.5	Power terminals		6.5±0.5	Signal terminals								
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Insert the cable conductor into the terminal crimping barrel and rivet it	<p>The tensile strength after riveting shall not be less than the following values:</p>  <table border="1"> <thead> <tr> <th>Cable Spec</th><th>Pulling Force (N)</th></tr> </thead> <tbody> <tr> <td>6mm²</td><td>780</td></tr> <tr> <td>0.75mm²</td><td>80</td></tr> <tr> <td>0.5mm²</td><td>70</td></tr> </tbody> </table> <table border="1"> <thead> <tr> <th>Terminal Type</th><th>OD (mm) after crimping</th></tr> </thead> <tbody> <tr> <td>Power</td><td>≤4.6mm</td></tr> <tr> <td>Signal</td><td>≤2.1mm</td></tr> </tbody> </table>		Cable Spec	Pulling Force (N)	6mm ²	780	0.75mm ²	80	0.5mm ²	70	Terminal Type	OD (mm) after crimping	Power	≤4.6mm	Signal	≤2.1mm
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Assembling the connectors		Video  watch the video														
Electrical test	<ul style="list-style-type: none"> Continuity test: 100% Insulation resistance: ≥200MΩ (500V DC) Withstand voltage: Power-Power, Power-Signal: 2200VAC 1min, Leakage Current ≤5mA Signal-Signal: 500VAC 1min, leakage current ≤5mA 															
Recommended tightening torque	<table border="1"> <thead> <tr> <th>Screw</th><th>Torque (N.m)</th><th>Material</th></tr> </thead> <tbody> <tr> <td>M4</td><td>0.8-1.0</td><td>Aluminum / Iron</td></tr> <tr> <td></td><td>0.8-1.2</td><td>Steel</td></tr> <tr> <td>ST2.2</td><td>0.16-0.2</td><td>Plastic</td></tr> </tbody> </table>		Screw	Torque (N.m)	Material	M4	0.8-1.0	Aluminum / Iron		0.8-1.2	Steel	ST2.2	0.16-0.2	Plastic		
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