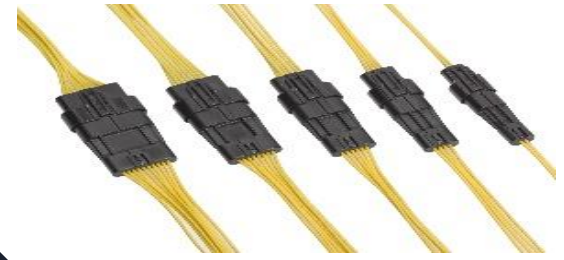


Customer Presentation

# SQUBA CONNECTOR SYSTEM

PRESENTER'S NAME:

DATE:

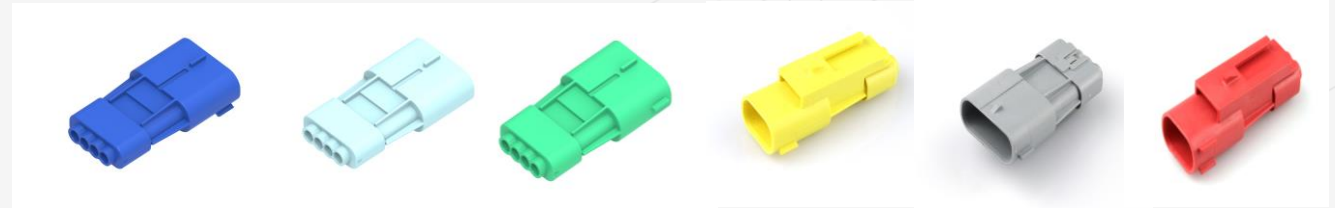


# Squba Connector System

As the trend towards miniaturization continues to accelerate, the demand for compact connector solutions increases. Squba connectors offer significant space savings to meet this demand. Exposure to moisture pose a risk to connectors for reliable performance. Squba sealed connectors are designed to protect against ingress with an IP68-seal rating and carry 14.0A of current to deliver reliable power in a wide range of space-constrained applications.

## Key Product Information

Category:	Wire-to-Wire Connectors
Voltage:	600V
Current:	14.0A
Operating temps:	-40 to +105°C



[View Product Landing Page](#)

[Download Datasheet](#)

### Series

207782  
207778

Squba Receptacle Assembly  
Squba Plug Assembly

# Vital Product Information

## Squba Connector System

### What makes this product different from the competition?

Molex Squba connectors have an IP68-seal rating to withstand the ingress of dust and moisture. These connectors also offer weather caps to provide optimal protection and guidance. This allows for reliable connections and quality performance.

### How does this product/solution create value for our customers?

Squba sealed connectors are available in various colors for easy identification that avoids mis-mating. Customers can avoid unexpected delays due to connection malfunctions and repairs because of product failures. They also offer a clip-slot for a panel-mounting option which allows for more secure connections.

### What is the Molex advantage?

HVAC customers require a cable specification that is UL1230 rated. Squba sealed connectors meet this standard to provide outstanding protection in harsh environments.



# Product Overview

## Squba Connector System

### Sealed Components with Proven Performance

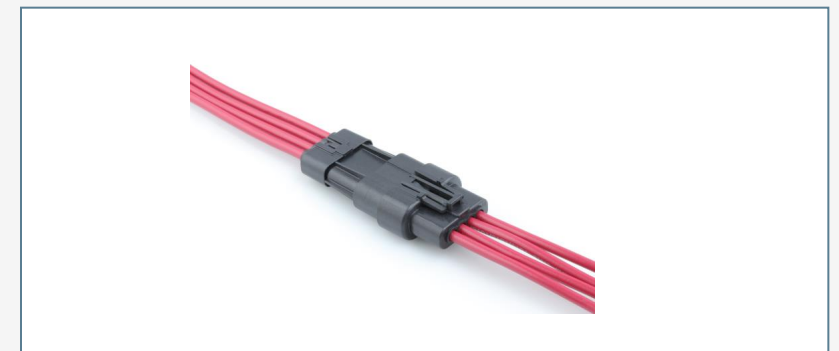
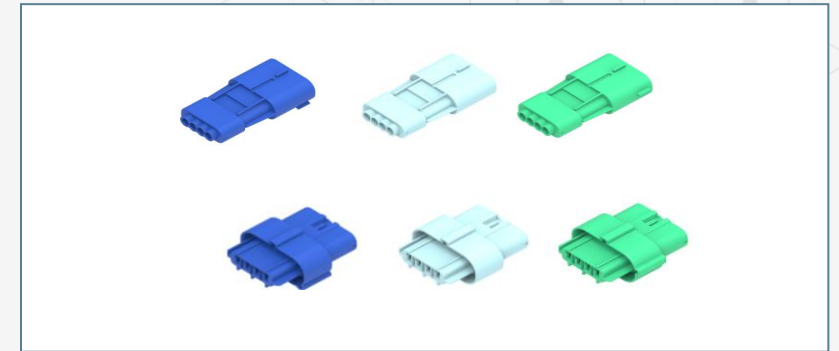
The Squba Connector System has an IP68-seal rating to withstand the ingress of dust and moisture. These connectors also offer weather caps to provide optimal protection and guidance. This allows for reliable connections and quality performance.

### Colored Connectors with Clip-Slot Feature

Squba sealed connectors are available in various colors for easy identification that avoids mis-mating which can lead to product failure and compromise safety and reliability. Potential downtime for repairs can increase production costs and delay timelines. They also offer a clip-slot for a panel-mounting option which ensures a more secure and stable connection.

### UL 1230 Rated for Excellent Protection

HVAC customers require a cable specification that is UL1230 rated. Squba sealed connectors meet this standard to provide outstanding protection in harsh environments.



# Markets and Applications

## Squba Connector System



*HVAC Equipment*



*Recreational Vehicles*

### CONSUMER

- HVAC equipment
- Home Appliances
- Landscaping equipment
- Liquid dispensing equipment
- Vending machines
- Washing machines

### COMMERCIAL VEHICLE

- ATVs
- Buses
- Forklifts
- Marine: under-das wiring, lighting
- Recreational vehicles
- Trucks

# Markets and Applications Cont.

## Squba Connector System



*Food Processing Equipment*



*Home Automation Systems*

### INDUSTRIAL AUTOMATION

- Food processing facilities
- Food processing equipment
- Industrial controllers
- Industrial machines and motors machines
- Robotics

### CONNECTED HOME

- Home automation systems
- Home health and wellness systems
- Security and surveillance equipment
- Smart appliances

# Solving Industry Challenges

## Squba Connector System

Industry Need	Industry Challenge	Industry Solution	Anticipated Results
<b>Compactness</b>	As devices in the commercial vehicle, consumer and industrial markets become increasingly smaller, the need for compact connectors grows. Also, as more and more capabilities are expected in applications, real estate for all the necessary electrical components gets crowded.	The Squba Connector System is compact enough for many space-constrained applications.	Manufacturers from a wide range of industries will turn to Squba Connectors to meet power needs.
<b>Economical Power Delivery</b>	Typically, as current ratings increase so do wire gauges, compromising compactness and increasing costs for consumer device manufacturers.	Squba connectors support up to 14.0A with 16 to 24 AWG wire, delivering more power over a smaller wire than competitors.	Customers can deliver more power with a smaller wire, supporting space constrained applications and decreasing costs.
<b>IP67 Rating</b>	Many commercial vehicle, consumer and industrial applications experience wet conditions that could cause failure in unsealed connectors.	The Squba Connector System offers an IP68 rating to ensure a reliable connection even in wet conditions.	Customers' end products will be more reliable due to Squba connectors' IP68 rating.
<b>Seal Caps</b>	Seals can be damaged during assembly, handling, shipping and use, which can, in turn, cause end-product failure.	All Squba connectors feature caps to protect seals, leading to more reliable connections. Caps also provide guidance for terminal insertion to protect seal from being punctured by terminals during assembly.	Consumer, commercial vehicle and industrial end products will be more reliable due to protected seals.

# Product Advantages and Features

## Squba Connector System

### Ensures a wire size that supports the HVAC industry and its requirements

Squba Connectors are a UL1230 compatible option.

### Helps prevent mis-mating

These connectors are colored and mechanically keyed for enhanced efficiency and reliability.

### Ensures connector stability and performance

The clip-slot option secures the connector to a panel.

### Avoids seal punctures

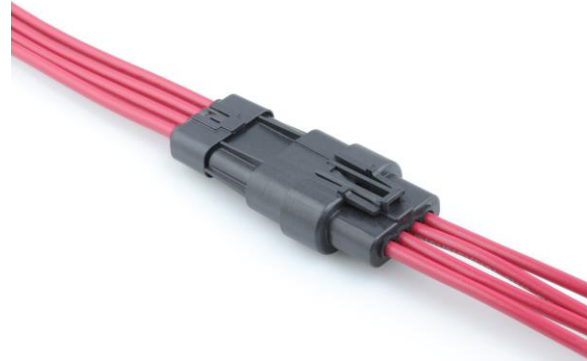
The clean-body terminals have wraparound insulation crimp.

### Delivers reliable connection in high-vibration applications

A primary lock enables 30N of terminal retention.

### Protects seals from damage and keeps terminals aligned

Seal caps allow for improved protection.



### Key Specifications

Pitch	3.60mm
Current	14.0A
Voltage	600V
Height	0.90mm
Operating Temperatures	-40 to +105°C

# Unique and Useful Differentiation vs. Similar Molex Product

## Squba Connector System

	Molex   Squba Connectors		Molex   Mizu-P25	
Series Number	Receptacle	Plug	Receptacle	Plug
	207782	207778	52117	52116
Pitch (mm)	3.60		2.50	
Operating Temperatures (°C)	-40 to +105		-40 to +105	
Current (A)	14.0		4.0	
Seal Cap	Yes		No	

# Unique and Useful Differentiation vs. Competitors' Products

## Squba Connector System

	Molex   Squba Connectors		Competitor A   Competitor A Product	
Series Number	Receptacle	Plug	-	-
	207782	207778		
Pitch (mm)	3.60		2.00	
Temperature (°C)	-40 to +105		-40 to +85	
Current (A)	14.0		3.0	
Seal Cap	Yes		No	

# Product Specifications

## Squba Connector System

### Reference Information

Receptacle Packaging: Tray  
Plug Packaging: Bulk  
Crimp Terminal Packaging: Reels  
UL File No.: TBD  
CSA File No.: TBD

#### 1.80mm Pitch

Use With: 22 to 24 AWG  
Insulation Diameter: 0.95 to 1.40mm

#### 3.60mm Pitch

Use With: 16 to 20 AWG  
Insulation Diameter: 1.50 to 2.40mm

Designed In: Millimeters

RoHS: Yes

Halogen Free: No

Glow Wire Capable: TBD

IP Rating: IP68

### Physical

Housing: Plastic

Contact: Copper Alloy

Plating:

Overall — Tin

Underplating — Nickel

Operating Temperature: -40 to +105°C

### Electrical

#### 1.80mm Pitch

Voltage (max.): 125V

Current (max.): 6.0A

#### 3.60mm Pitch

Voltage (max.): 600V

Current (max.): 14.0A

Contact Resistance: 10 milliohms

Dielectric Withstanding Voltage: Leakage < 5mA

Insulation Resistance (min.): 100 Megohms

### Mechanical

Terminal Retention to Housing (min.): 30N

Mating Force (max.): 45N

Unmating Force (max.): 35N

Durability (max.): 10 Cycles

### Additional Resources

Web Overview Page	<a href="https://www.molex.com/en-us/products/connectors/wire-to-wire-connectors/squba-connectors">https://www.molex.com/en-us/products/connectors/wire-to-wire-connectors/squba-connectors</a>
Datasheet	<a href="#">987651-7401</a>
Global Product Manager	Jaime Lopez



THANK YOU

*creating connections for life*

**molex**