

veam cannon

# Interconnect Solutions for e-mobility

IEC, J1772, and GB



**ITT**

ENGINEERED FOR LIFE

# We Connect

## The future of e-mobility

Drawing upon 100 years of interconnect excellence and nearly two decades of innovation in the Electric Vehicle industry, ITT represents a committed partner to today's e-mobility industry, bringing connection solutions to the market that are truly Engineered for Life.

## Global solutions for the EV industry

### The ITT difference

- Proven application expertise
- Global capabilities & local support
- Unrivalled customization expertise
- A committed innovator & business partner

### About ITT

ITT is a diversified leading manufacturer of highly engineered critical components and customized technology solutions for the energy, transportation and industrial markets. Building on its heritage of innovation, ITT partners with its customers to deliver enduring solutions to the key industries that underpin our modern way of life. Founded in 1920, ITT is headquartered in White Plains, N.Y., with employees in more than 35 countries and sales in a total of approximately 125 countries. The company generated 2014 revenues of \$2.7 billion. For more information, visit [www.itt.com](http://www.itt.com).



# IEC, J1772 and GB e-mobility Interconnect Solutions

ITT's class leading UL and CE certified coupler connector/plugs, inlets, outlets and accessories offer recognized, trusted and proven charging solutions for today's e-mobility markets. Built in accordance with all key regional standards - IEC for Europe, J1772 for the Americas and Japan, and GB for China they provide a truly global portfolio.

ITT offers a fully comprehensive range of AC charging options— with an industry leading amperage range from 16A to 80A, single and triple phase variants, low contact resistance and a minimum of 10k mating cycles. In addition to off the shelf solutions our EV offering is fully customizable to meet specific requirements and we are able to offer variants on colors, harnesses and terminals.

By using common coupler connector/plug elements such as an ergonomically designed handle, robust contact system, innovative wire positioners and strain relief system ITT is able to serve global industry players with a consistent, recognizable look and feel to support their own product, user and brand experience.



## Key features

- Cable options certified and approved to regional requirements
- Sealing to meet and exceed specifications
- Up to 80A AC Charging option
- Low contact resistance of 20mΩ
- Minimum 10k mating cycles
- Coupler connector/plug dual locking system
- Coupler connector/plug strain relief provides protection from cable overstressing

## Applications

- Home EV Charging Units
- Public Charging Stations
- Roadside Assistance Trucks
- Fleet Trucks
- EV Mass Transit Vehicles
- Electric Watercraft
- Passenger Vehicles
- Electric Motorcycles
- Electric Agriculture Vehicles



## Voice of the Customer

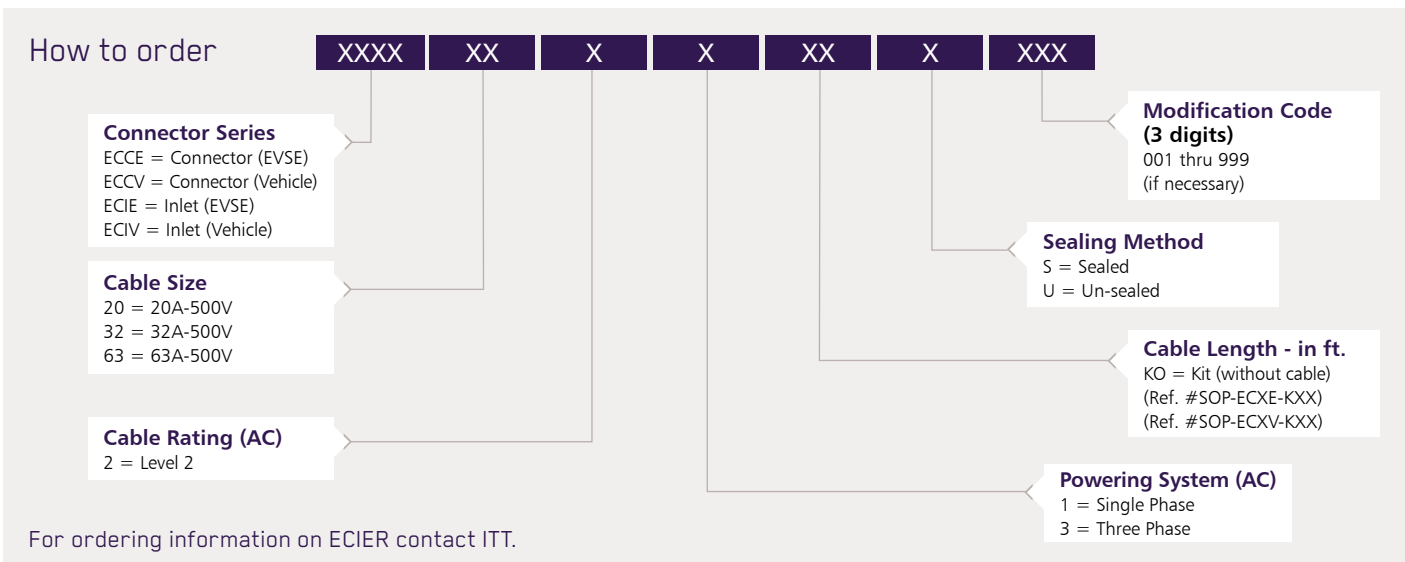
We need a partner with proven industry experience, global reach and the ability to develop truly customized solution - in order to be certain we can provide what our customers demand. ITT delivers this.

# IEC electric vehicle charging solutions

ITT's IEC e-mobility solutions are built in accordance with IEC 62196-1 and 62196-2 standards for single and three phase charging systems.

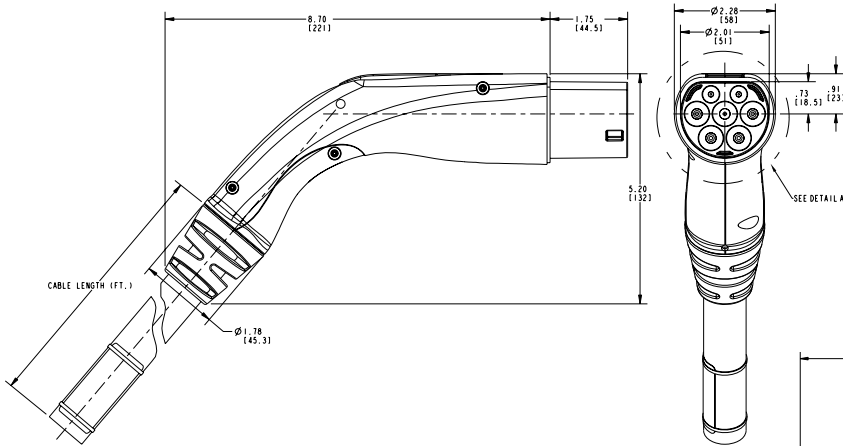
IEC performance data	
Temperature Range	- 25°C to +105°C
Durability	10,000 mating cycles min
Sealing Requirements	IP 44 min per IEC 61851-1 and tested in accordance with IEC 60525
Certifications	CE, ETL IEC 62196-1 and IEC62196-2

- ### Key Features
- Drain holes at the bottom of the coupler connector/plug – eliminates latch freezing and includes protective shield from small diameter metal penetration to the wiring.
  - Dual locking system – provides customer options of a secondary locking system for theft protection.
  - Textured coupler connector/plug handle – selected by human factor groups provides enhanced grip while in use.
  - Optional mating face protection – lanyard dust caps options for coupler connector/plug and spring cap options for inlets provide additional protection when connectors are not in use.

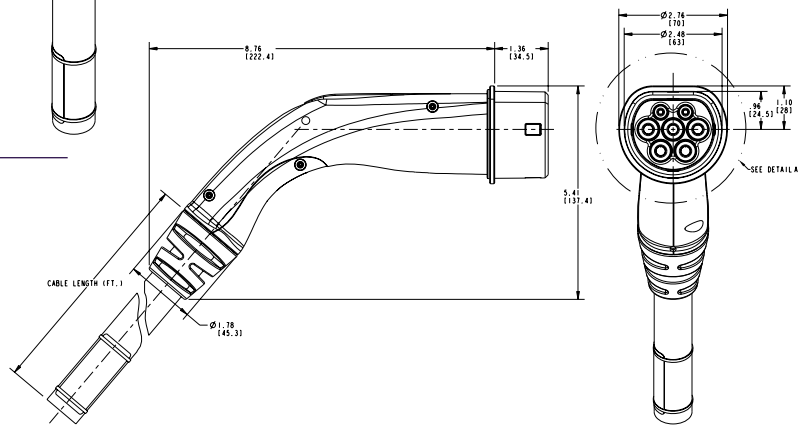


# IEC dimension drawings

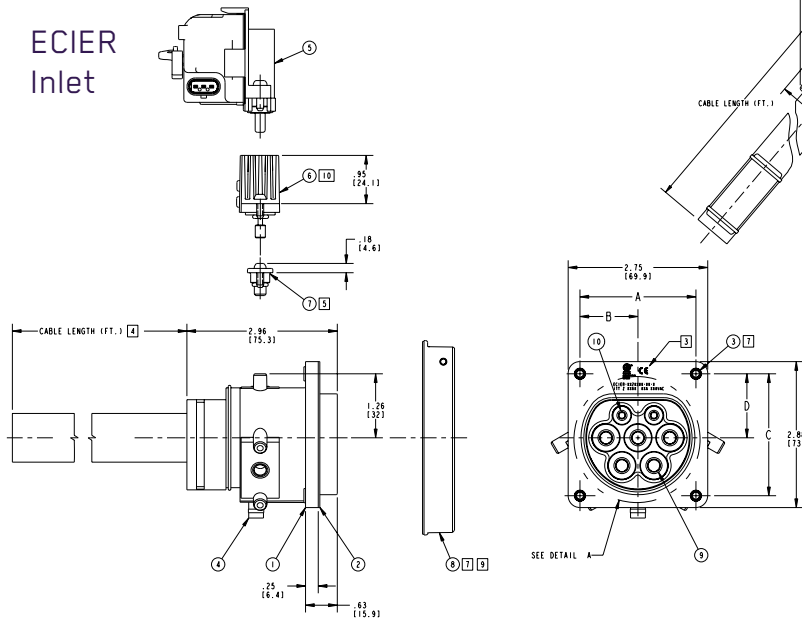
## ECCE Connector



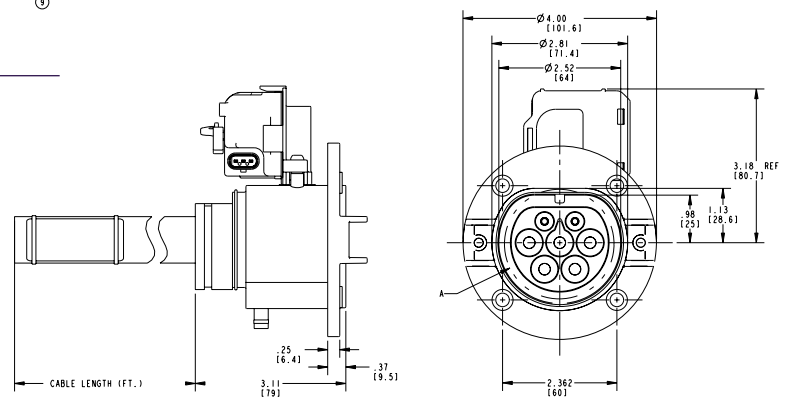
## ECCV Connector



## ECIER Inlet



## ECIV Inlet



3D models are available for download from [ittcannon.com](http://ittcannon.com)

Dimensions shown in mm  
Specifications and dimensions subject to change

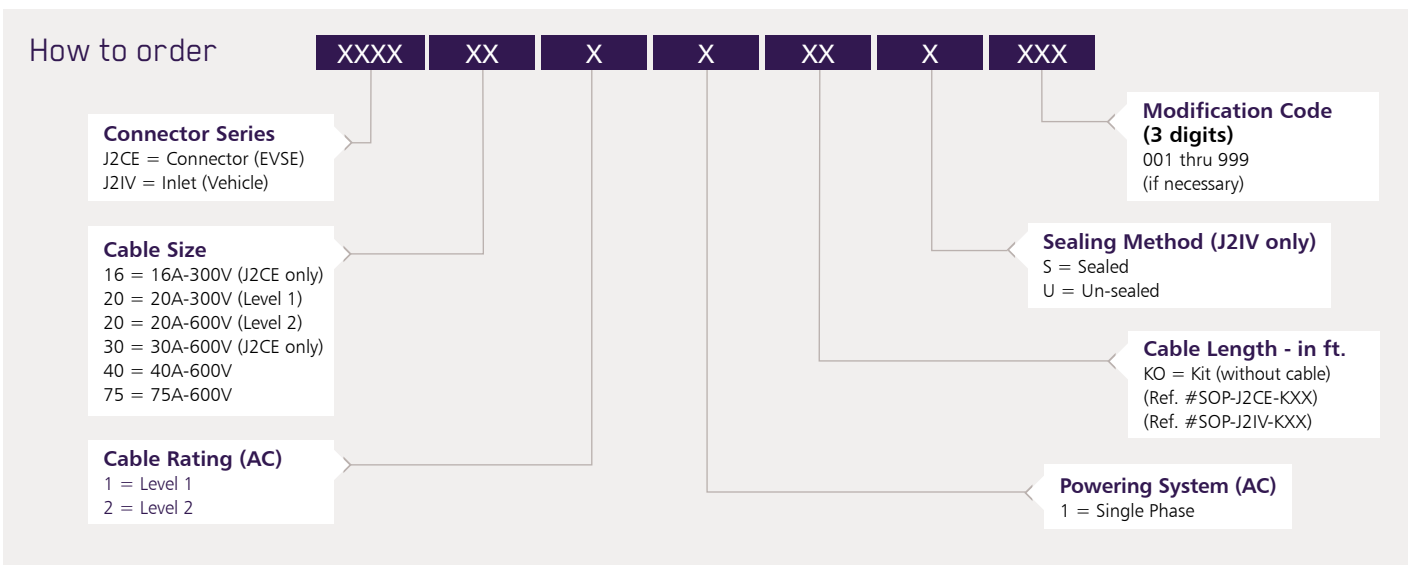
# J1772 electric vehicle charging solutions

ITT's J1772 e-mobility solutions are built in accordance with SAE J1772 standard for AC Level 1 and Level 2 charging systems.

J1772 performance data	
<b>Temperature Range</b>	- 25°C to +105°C
<b>Durability</b>	10,000 mating cycles min
<b>Sealing Requirements</b>	Meets UL50, Type 3R/3S
<b>Certifications</b>	UL File E330790, CE, PSE-JET

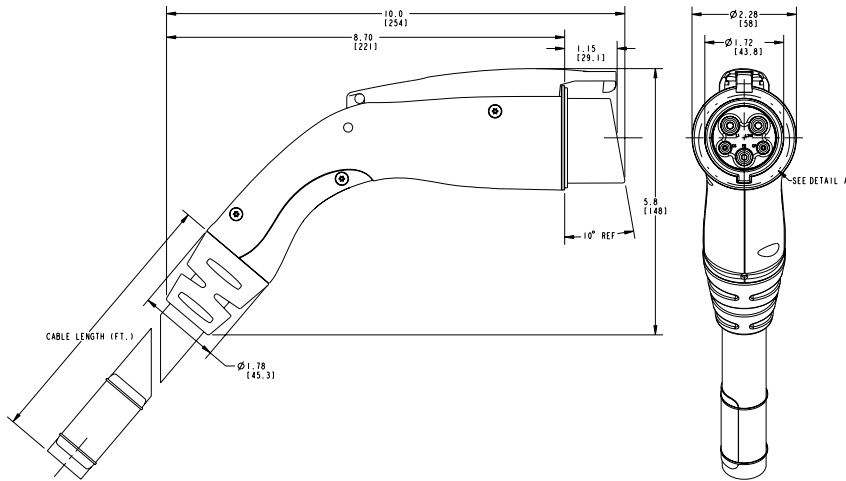
## Key Features

- Drain holes at the bottom of the coupler connector/plug – eliminates latch freezing and includes protective shield from small diameter metal penetration to the wiring.
- Dual locking system – provides customer options of a secondary locking system for theft protection.
- Textured coupler connector/plug handle – selected by human factor groups provides enhanced grip while in use.
- Optional mating face protection – lanyard dust caps options for coupler connector/plug and spring cap options for inlets provide additional protection when connectors are not in use.

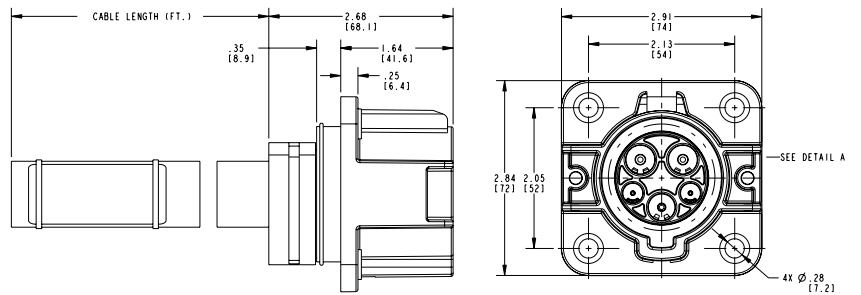


# J1772 dimension drawings

## J2CE Connector



## J2IV Inlet



3D models are available for  
download from [ittcannon.com](http://ittcannon.com)

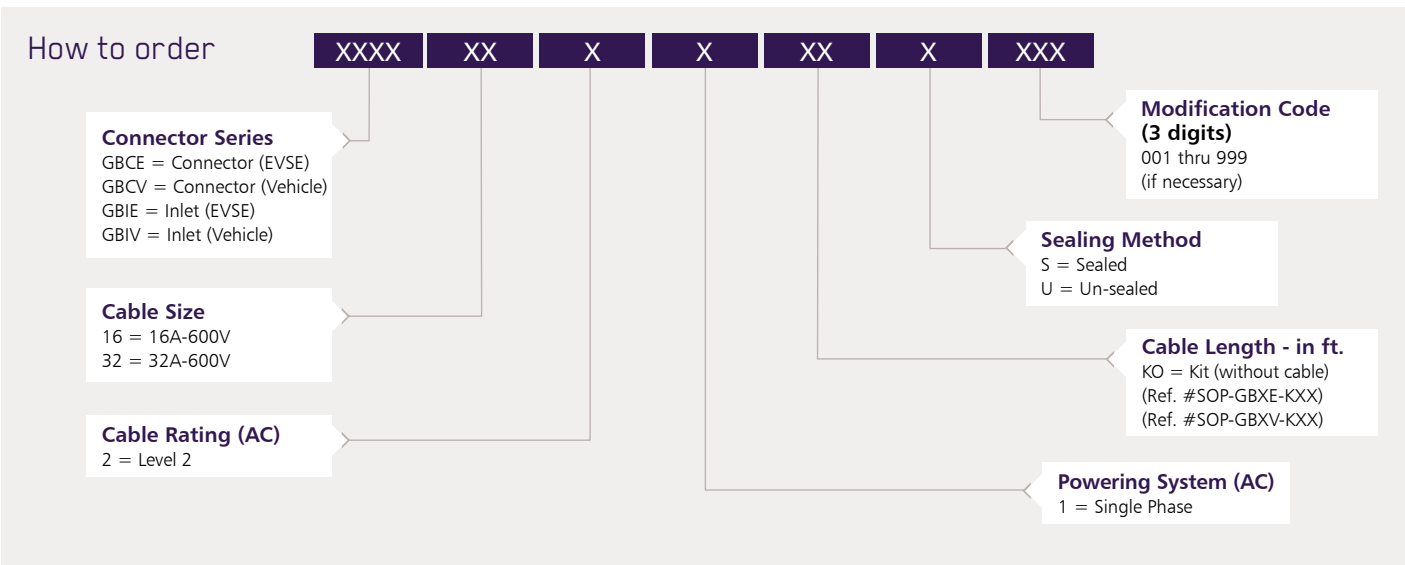
Dimensions shown in mm  
Specifications and dimensions subject to change

# GB electric vehicle charging solutions

ITT's GB e-mobility solutions are built in accordance with GB/T20234-1,2,3,2011 standards for charging systems.

GB performance data	
Temperature Range	- 30°C to +105°C
Durability	10,000 mating cycles min
Sealing Requirements	IP54/IP55
Certifications	CQC 13029087619

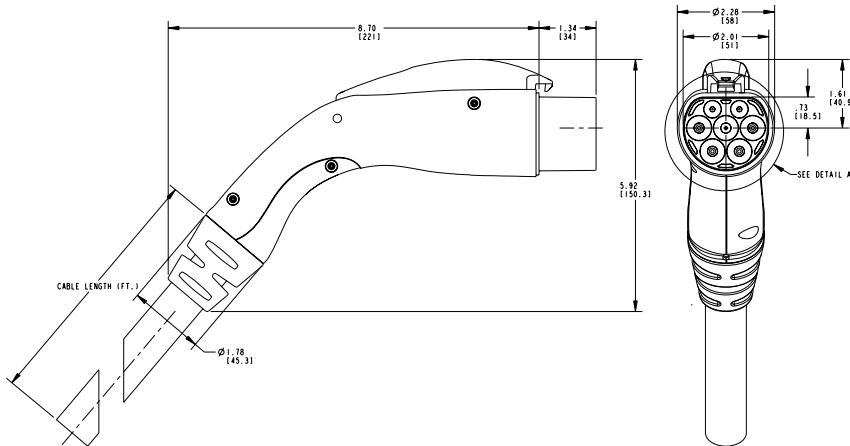
- ### Key Features
- Drain holes at the bottom of the coupler connector/plug – eliminates latch freezing and includes protective shield from small diameter metal penetration to the wiring.
  - Dual locking system – provides customer options of a secondary locking system for theft protection.
  - Textured coupler connector/plug handle – selected by human factor groups provides enhanced grip while in use.
  - Optional mating face protection – lanyard dust caps options for coupler connector/plug and spring cap options for inlets provide additional protection when connectors are not in use.



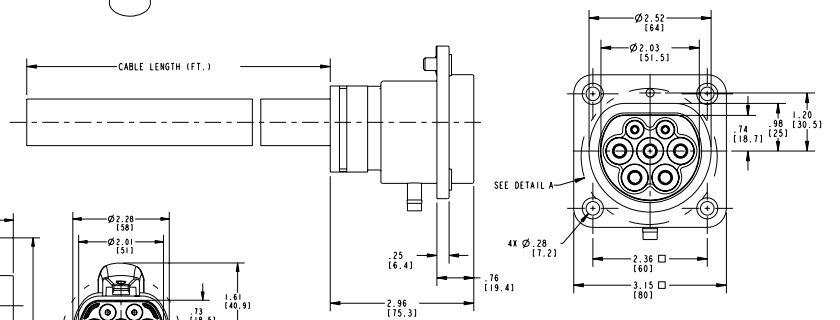


# GB dimension drawings

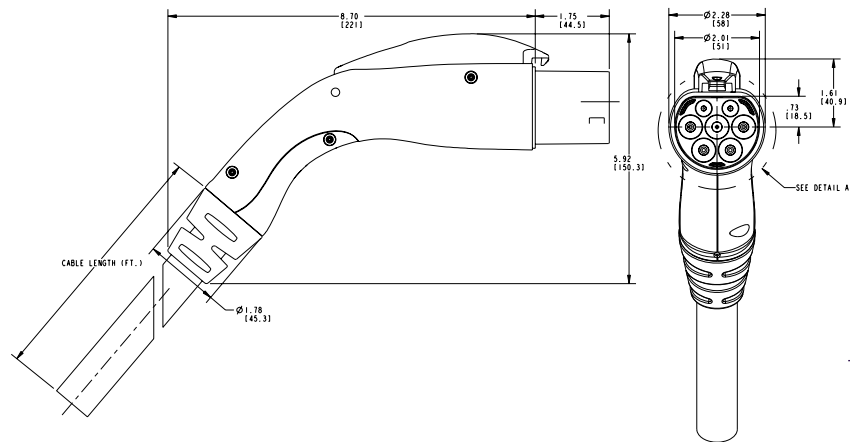
## GBCV Connector



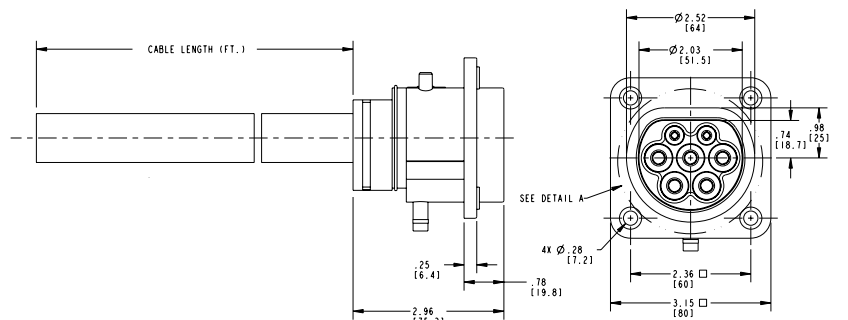
## GBIV Inlet



## GBCE Connector



## GBIE Inlet



3D models are available for download from [ittcannon.com](http://ittcannon.com)

Dimensions shown in mm  
Specifications and dimensions subject to change

# EV charging Accessories

ITT has an extensive selection of accessories for our EV product portfolio. Some examples are detailed below.

- Inlet Spring Cap cover
- Inlet rear rubber boot
- Inlet actuators for IEC and GB
- Ring cap assembly for ECIER rear mount inlets
- Coupler connector/plug lanyard dust cap covers
- Right angle strain relief for ECCE coupler plug (20A and 32A single phase versions)
- Double ended coupler connector/plug jumper assemblies
- Custom cable end terminations (to customer request)
- Custom cables (to customer request)
- Custom coupler connector/plug colors (to customer request and subject to minimum factory production run)



# Additional ITT Veam and Cannon products for e-mobility applications



## APD SERIES

This full-plastic, proven bayonet series with IP69K sealing and color and mechanical coding is an ideal solution for harsh environments that require high sealing grades.



## TRIDENT SERIES

This versatile range of metal and plastic electrical connectors with fully interchangeable contacts is available in rectangular and circular configurations, supporting the widest variety of harsh-environment applications.



## SURE SEAL SERIES

These watertight, chemical and ozone-resistant connectors feature a simple, one-piece, molded elastomeric body that ensures they are easily serviceable in the field, whatever the conditions.



## CTC SERIES

This series was designed as a high-performance, cost effective cable-to-cable solution for use in applications where reliable signal circuits are critical to operating performance.



## CLC/SLC SERIES

The super tough, environmentally sealed Snap Lock and Clip Lock Circular series are designed to ensure a tightly sealed connection that can withstand extreme heat, shock and vibration.

Connect with your ITT Interconnect Solutions representative today or visit us at [www.ittcannon.com](http://www.ittcannon.com)

## Connect with the experts

ITT Interconnect Solutions is a world leader in the design and manufacture of highly engineered solutions for the global e-mobility market.



ENGINEERED FOR LIFE

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