Inelco Hunter Limited

Amphenol Industrial

Industrial Plugs & Sockets

from **Amphenol**

brought to you by **Inelco Hunter**

Industrial Plugs & Sockets

Reliable, durable and safe

Introduction

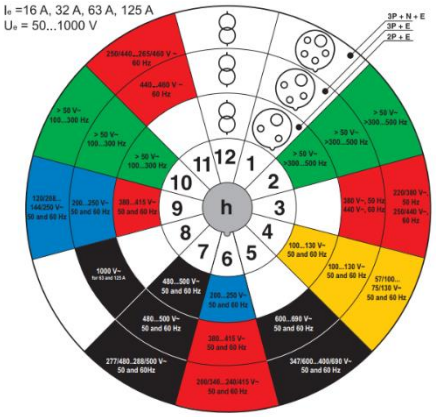
- IP&S are used for connecting equipment in all kinds of applications where it needs to be possible to connect and disconnect
- IP&S are electrical components that comply with international standards IEC 60309-1 and IEC 60309-2.
- Plugs and sockets are colour-coded according to volts *

Voltage	Frequency	Color code
20 – 25 V	50 – 60 Hz	Violet
40 – 50 V	50 – 60 Hz	White
100 – 130 V	50 – 60 Hz	Yellow
200 – 250 V	50 – 60 Hz	Blue
380 – 480 V	50 – 60 Hz	Red
500 – 1000 V	50 – 60 Hz	Black
20 – 500 V	60 – 500 Hz	Green
All	All	Grey

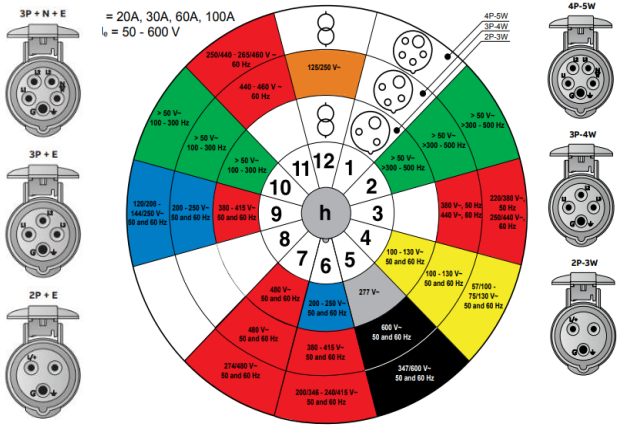
* Yellow (110 volts), blue (230 volts) and red (400 volts) are the most used.

IEC 60309-1 & IEC 60309-2 „Clock“

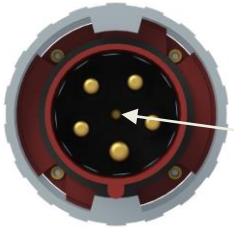
- The voltage is related to location of the female ground sleeve and the number of conductors
- 3, 4 and 5 wire conductors
- Male and female interfaces are standardised and interchangeable with IEC 60309-2 devices
- Size related to amperage – devices with the same amperage are the same size



Rest of the world

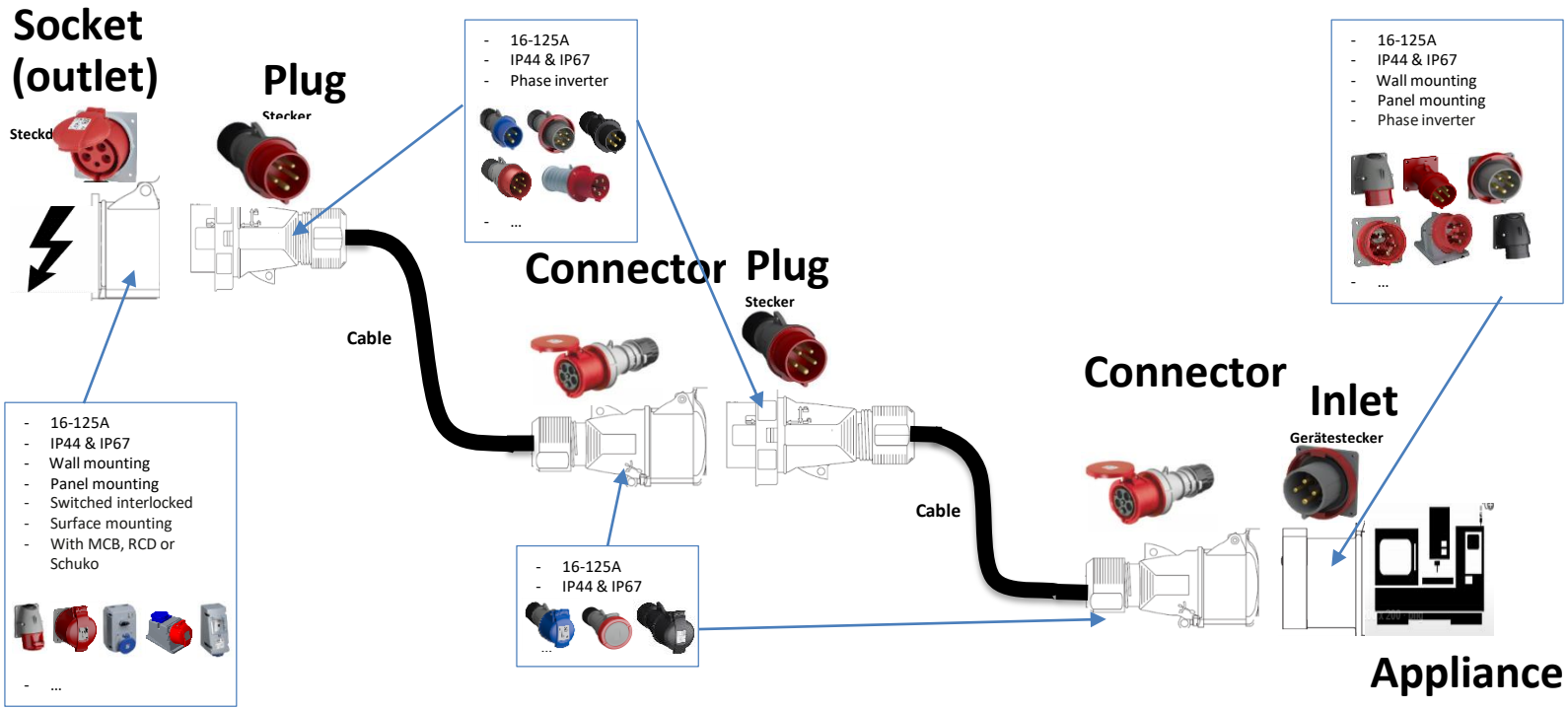


North America (UL/CSA)



Pilot contact
only for 63A and 125A
(last mate first break)

What we are offering…

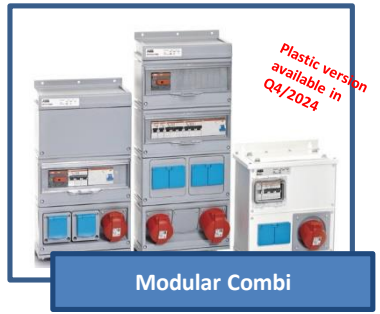


Categories

Easy&Safe

Tough&Safe

Critical&Safe



Modular Combi

High Current 200-400A

Black for entertainment

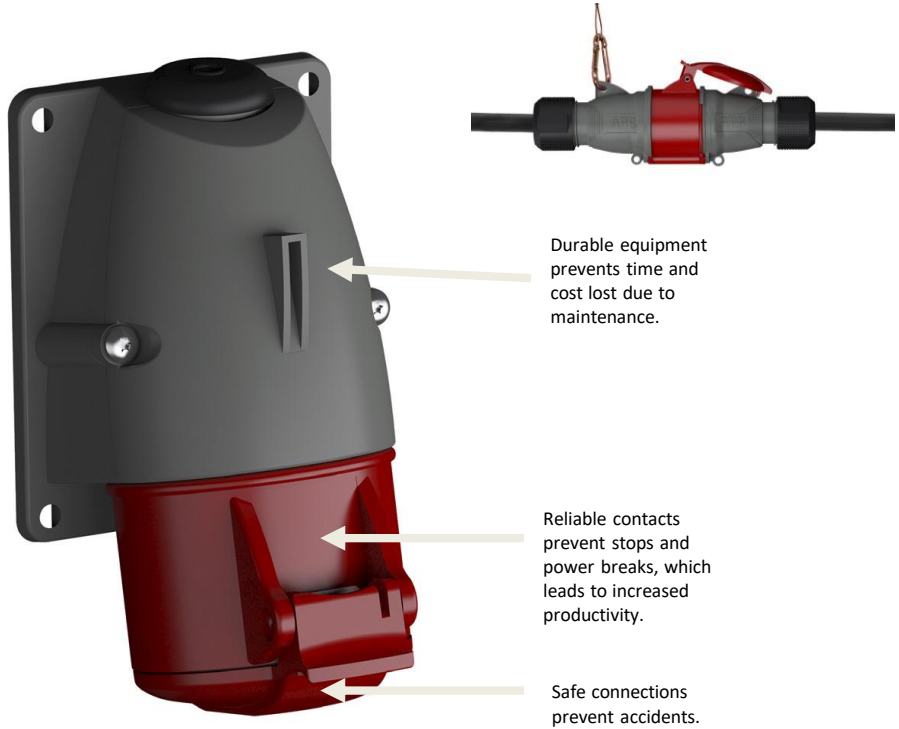
Extra Low Voltage 24V or 50 V

Special plugs & sockets

Easy & Safe

- Robust & modern design
- Complete range of IP67 and IP44
- Plugs, connectors, socket outlets and inlets
- Self cleaning contacts
- Reliable, safe and easy to work with
- Water and dust protection of contacts prolong plug and socket lifetime
- Minimizss the risk of accidents, injuries and damage of the connected equipment

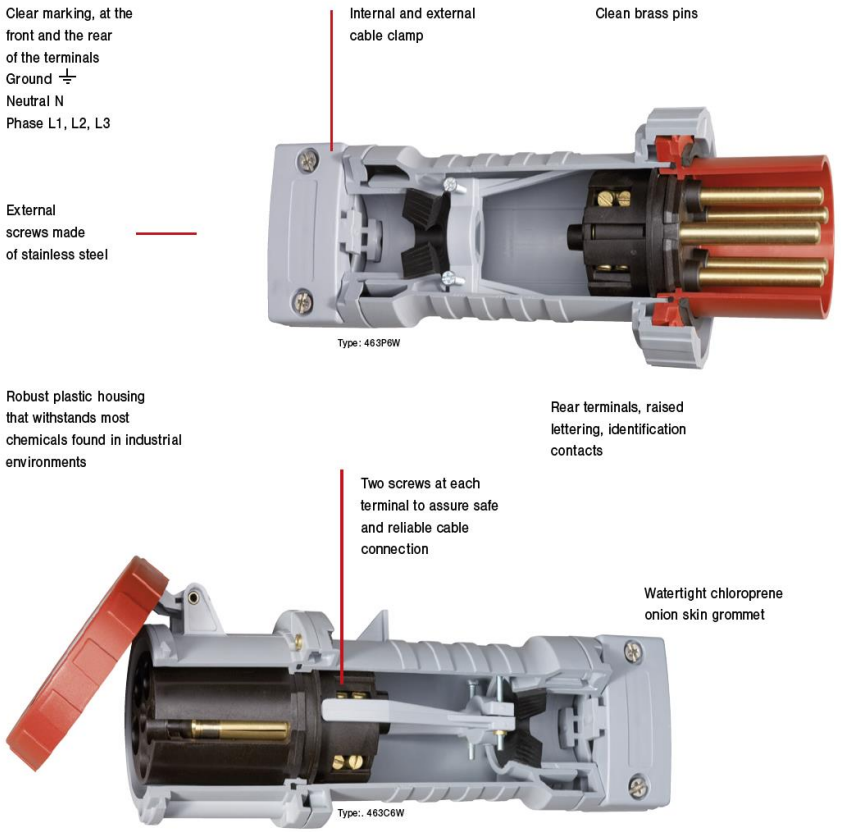
EASY & SAFE



Tough & Safe

- For environments that have high demands of functionality and safety
- Robust housing that made of PBT plastic
- IP67 Watertight (16-125A) or IP44 Splash proof (63A)
- 16-125 A, 50-690 VAC
- IEC 60309-1, -2
- All external screws are made of stainless steel

TOUGH & SAFE



Critical & Safe

- For applications with frequent connection /disconnection
- The housing is made of PBT or aluminum
- IP67 Watertight or IP44 Splash-proof
- 16 - 125A, 50-690 VAC
- IEC 60309-1, -2, -4
- All external screws are made of stainless steel

CRITICAL & SAFE

Features

- Wide range of plugs, connectors, sockets and inlets
- 16-125A in IP44 and IP67/IP69
- Very robust design
- Over 60 years in the market
- The IP67 cable gland could be re-used
  – Increases strain relief and sealing performance
  – Works with a bigger span of cable diameters

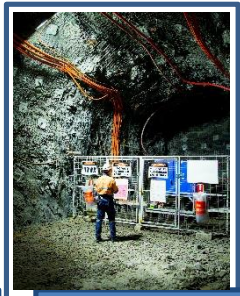
Applications

Data Centres

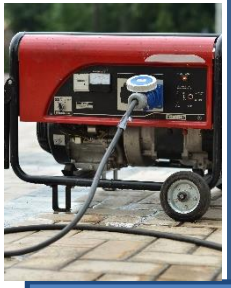
Construction Sites

Industrial Applications

Office Containers



Tunnel Construction



Generators

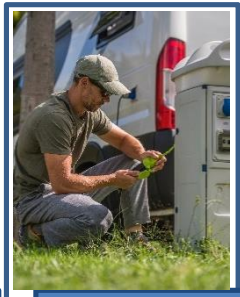
Gensets

Reefer Containers

Harbours

Samwills

Food & Beverage



Infrastructure

Concerts

Machines

Project Examples

Tough & Safe

IGIS Hanam Datacentre - South Korea

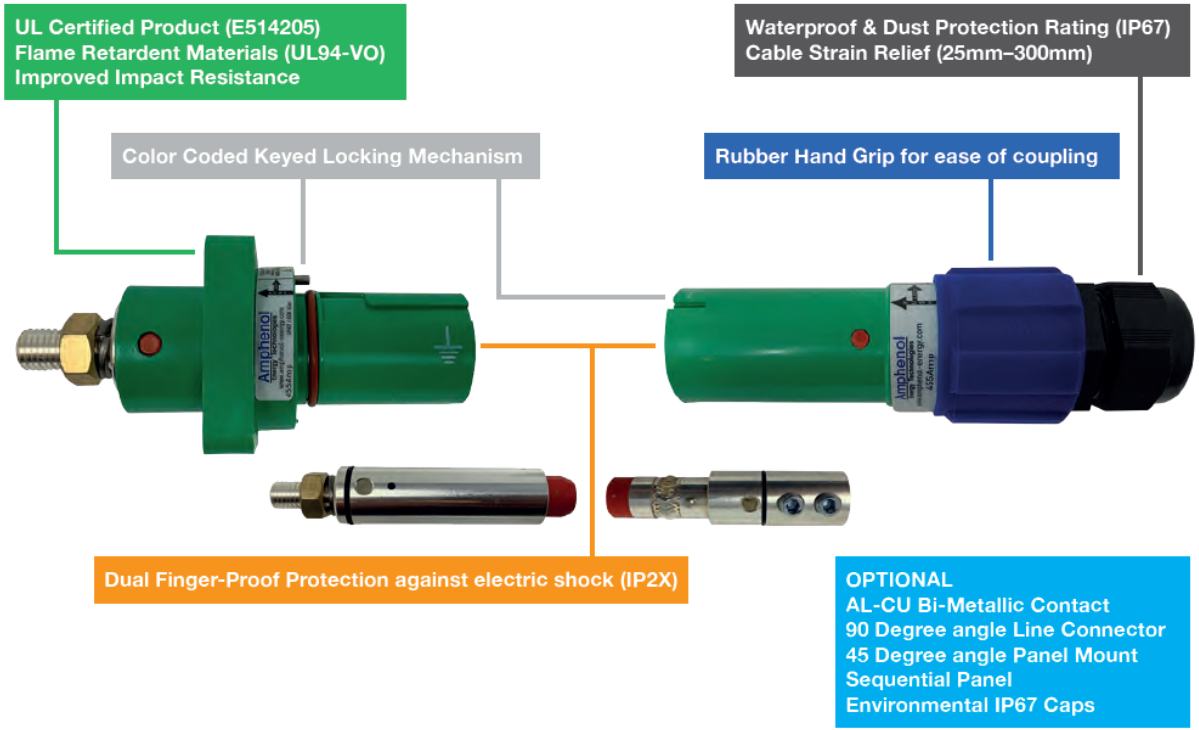
Tough & Safe

Battery systems - Switzerland

High Current

eDumper drives with battery - Switzerland

Amphe-Phase – Single Pole Power Connector



Performance Enhancements

- Increased Current Carrying Capacity (500A/800A)
- Increased Short Circuit Ratings (35.5Ka)
- Reduced Insertion Force
- Rubber Hand Grip for ease of coupling
- Cable Strain Relief (25mm-300mm)
- Manufactured to ISO 9001:2015

Safety Improvements

- Waterproof & Dust Protection Rating (IP67)
- Colour Coded Keyed Locking Mechanism
- Finger-Proof Protection against electric shock (IP2X)
- Flame Retardant Materials (UL94-VO)
- Improved Impact Resistance
- Environmental Caps
- UL Certified Product

Amphe-Phase.

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Region	Earth (E)	Neutral (N)	Line 1 (L1)	Line 2 (L2)	Line 3 (L3)
Europe & UK					
UK (Old)					
Australia					
USA (LV)					
USA (HV)					

Amphe-Phase. – Key Specifications

Amphe-Power Range – Key Specification

No of Contacts:	1
Maximum Continous Current Rating:*	Up to 800A
Surge Current:	75kA
Short Circuit Rating:	Up to 35.5kA
Cables Cross Sectional Area C.S.A:	25mm2 to 300mm 2
Contact Termination:	Screw or Crimp
Mating Method:	Bayonet Lock
Operating Voltage:	1000V AC
Max Rated Voltage to Earth:	2kV AC / 3kV DC
Minimum Flashover:	9.5kV DC or AC Peak
Insulation Resistance:	>5M ohms @ 500V DC
Ingress Protection:**	IP67
Protection against Electrical Shock:	IP2X
Flammability:	UL94-V0
Mating Cycles:	>500
Shell Material:	High Temperature Thermoplastic
Contact Plating:	Silver

*Subject to environmental factors and cable choice etc. **In accordance with EN60529.

E514205

Amphe-Phase – Single Pole Power Connector – Applications and Specs

Amphe-Phase connectors are designed to easily mate and have inline and panel mount source and drain styles to enable daisy chain circuit solutions. With set screw contact options you can install these connectors without the need for expensive custom tooling.

Typical applications for Amphe-Phase Single pole connectors include Generators, three phase motors, utilities cabinets, light distribution panels, welding units and load banks.

Connectors are available in cable and panel-mount formats with either crimp or screw contacts. Rated at 500A and 800A for single core cables from 25 - 300mm²

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No of Contacts:	1
Maximum Continuous Current Rating:*	Up to 800A
Surge Current:	75kA
Short Circuit Rating:	Up to 35.5kA
Cables Cross Sectional Area C.S.A:	25mm² to 300mm²
Contact Termination:	Screw or Crimp
Mating Method:	Bayonet Lock
Operating Voltage:	1000V AC
Max Rated Voltage to Earth:	2kV AC / 3kV DC
Minimum Flashover:	9.5kV DC or AC Peak
Insulation Resistance:	>5M ohms @ 500V DC
Ingress Protection:**	IP67
Protection against Electrical Shock:	IP2X
Flammability:	UL94-V0
Mating Cycles:	>500
Shell Material:	High Temperature Thermoplastic
Ambient Temperature	-30 to +125°C
Contact Plating:	Silver

*Subject to environmental factors and cable choice etc. **In accordance with EN60529.

International Electrical Colour Coding Standards

Region	Earth Key E	Neutral Key N	Line 1 Key 1	Line 2 Key 2	Line 3 Key 3
European & UK (Harmonised)					
UK (Traditional)					
Australia					
USA - LV					
USA - HV					

Styles

Panel Source

Panel Drain

Line Source

Line Drain

Amphe-Phase. – Options

Bi-Metalic Contact

Amphe-Phase Bimetal Connector are Amphenol's solution to connect aluminium cables in high current circuits that incorporate copper cable and busbars.

The bimetallic power connector is manufactured using the best raw materials, allowing for a flawless friction weld process producing the highest quality conductor. Bimetallic industrial plugs can be terminated onto aluminium cable meaning lugs can be replaced with a safer insulated termination.

Right-Angled Connector

Amphe-Phase Right Angled Connectors allow cables to be hung at 90 degrees from Panel Mount Connectors. The device allows for reduced cable protrusion, this is a useful option where minimal space is available for connection of temporary power cables.

The Right Angled Connector is fully compatible with all other Amphe-Phase connectors. Termination of the cable is simple with nothing more than spanner required. A cable lug can be locked onto a threaded post inside the backshell. Standard sizes are supplied with a 120 x M12 Lug. Source, Drain and Rotalock configurations can be supplied. Other colours and sizes are available.

Gen Lok.

About Gen Lok Distribution Box:

- Gen Lok Sequential Mating Box available as source or drain versions
- Available with either 5 ports or 4 ports (no neutral). Alternatively, ask us about a Dummy Plug to turn a 5 port box into a 4 port box temporarily.
- The Gen Lok Box has a sequential mating locking system to ensure safety circuits are connected first and disconnected last (FMLB).


Inelco Hunter Limited
Your partner for Interconnect
Solutions, from Amphenol