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## **International pin and sleeve devices**

For demanding use — dual-rated  
UL/CSA and IEC



# International pin and sleeve devices

## A perfect choice

ABB's international pin and sleeve devices are a part of the comprehensive ABB program of high quality low voltage products for demanding users.

The design and materials of our plugs and sockets have been continuously improved during the more than 60 years we have been in this business. The range covers products up to 125 A and 690 V, and are certified for applicable IEC and UL standards by external certification bodies. We aim to meet customers' requirements while taking environmental aspects into consideration.

ABB's industrial plugs and sockets are the right choice in applications with high demand for safety, durability, reliability and cost saving for the end user.

- Safety - Tested and approved by third-party certification bodies
- Durability - Materials chosen for high resistance to most chemicals, to UV light and to impact
- Reliability - High quality self-cleaning and calibrated contacts ensure reliability
- Cost saving - Designed for easy installation and long time use

ABB is a complete supplier of industrial plugs and sockets, with worldwide availability.

### Perfect for the job

Different applications and environments require different products. To make your choice easier, we have categorized our range into three groups. All groups have one feature in common — safety.

### Superior performance

Our plugs and sockets comply with high quality standards required for reliability and safety. Some are made of heavy-duty plastic (PBT), others of metal. Some have advanced features while others have a straightforward functionality. Perfect for demanding applications.

### Drives productivity

The reliability of our plugs and sockets will help you maintain high up-time in operations. You will avoid unwanted interruptions.

### Perfect safety

Safety is always important. By choosing ABB's plugs and sockets, you minimize the risk of short circuits. You ensure maximum personal safety for anyone near your equipment.

### ABB's industrial plugs and sockets — a complete offering

- Approved according to IEC 60 309-1, -2, -4
- Ranging from 16 A up to 125 A
- IP44 (splashproof), IP67 and IP69K (watertight)
- With contacts that are self cleaning and calibrated to maintain accurate contact pressure, quality and performance over time
- Critical & Safe and Tough & Safe products have stainless steel external screws
- Clearly marked terminals
- Interlocked receptacles for vertical or horizontal mounting

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The structure of our main catalog is also based on these groups. Look for the symbols to make your choice.



**CRITICAL  
& SAFE**

- Select Critical & Safe products for the highest safety in fixed installations.



**EASY  
& SAFE**

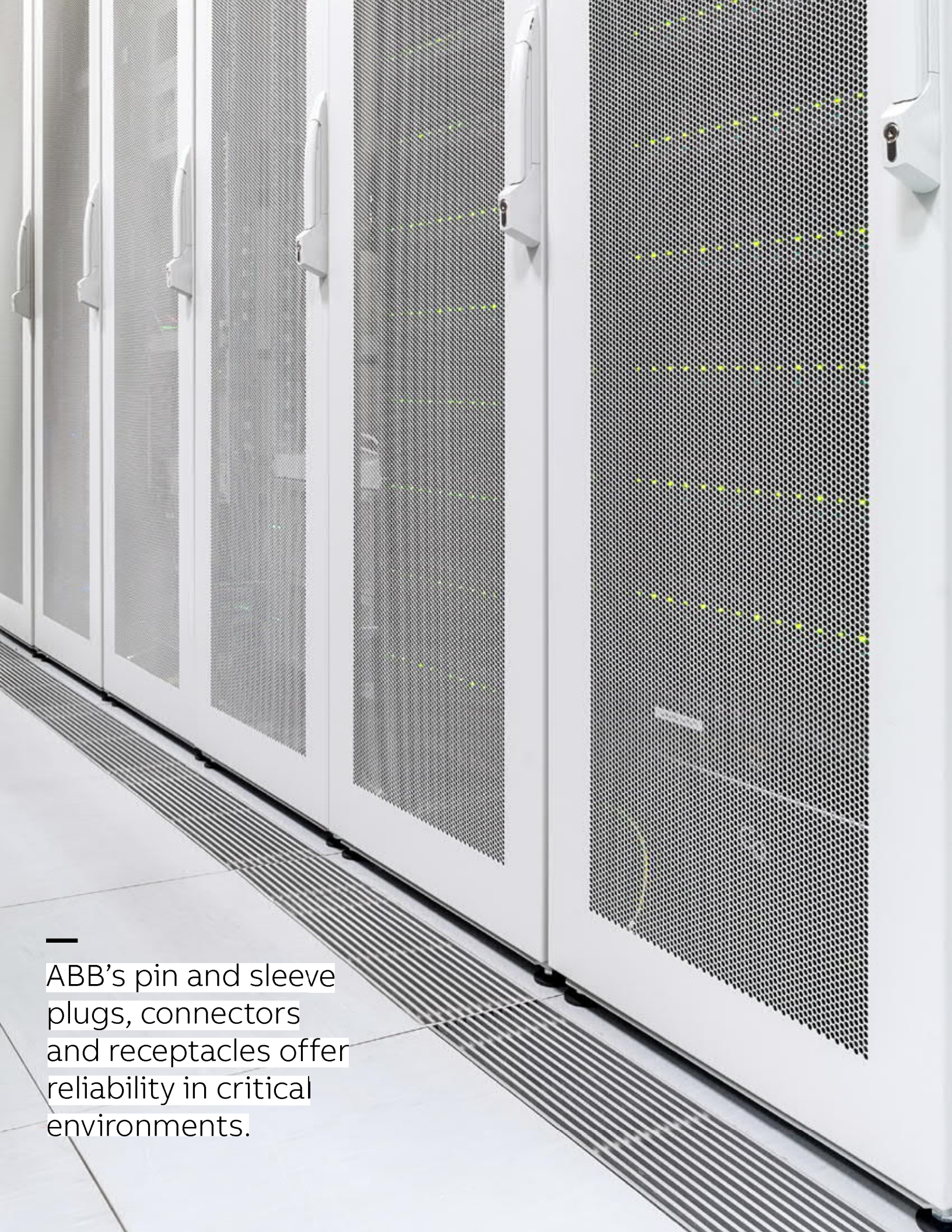
- Select Easy & Safe products for adequate functionality and ergonomic design



**TOUGH  
& SAFE**

- Select Tough & Safe products for best performance in demanding and heavy-duty applications.





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ABB's pin and sleeve  
plugs, connectors  
and receptacles offer  
reliability in critical  
environments.



## Critical & Safe



Mechanical interlock, 16–125 A, Valox®



Mechanical interlock, 16–32 A, IP67 and IP69K

### Critical & Safe

Critical & Safe is the range for applications with high demands on safety, durability and performance. It is perfect for applications with frequent connection and disconnection, and for use in public areas. The housing is made of Valox or aluminum.

Valox is a tough plastic material that withstands heavy-duty usage and most chemicals found in industrial environments. The aluminum housings are die-casted, made of silumin. Silumin has excellent resistance to corrosion, impact and UV light.

### Features

- IP67 and IP69K watertight
- 16–125 A, 50–690 V AC
- Flame safe UL 94 5VA and V0
- UV stabilized UL 746C
- IEC 60 309-1, -2, -4
- All external screws are made of stainless steel
- Also available with fuses and miniature circuit breakers



Mechanical interlock, 63–125 A, IP67 and IP69K

### Use Critical & Safe for:

- Reliability
- Personal safety (interlocked to prevent access to live components)
- Frequent connection and disconnection of portable equipment
- Increased productivity
- Enhanced safety

Note: Valox is a registered trademark of Sabic Global Technologies B.V.

## Tough & Safe



### Plugs, 16–125 A, Valox housing



Plug, 16–32 A, IP67 and IP69K

Plug, 60–63 A, IP67 and IP69K

### Connectors, 16–125 A, Valox housing



Connector, 16–32 A, IP67 and IP69K

Connector, 60–125 A, IP67 and IP69K

### Receptacles, 16–125A, Valox housing



Receptacle, 16–32 A, IP67 and IP69K



Receptacle, 63–125 A, IP67 and IP69K



Inlet 16–32 A, IP67 and IP69K



Inlet, 60–125 A, IP67 and IP69K

### Tough & Safe

Tough & Safe is the range for applications in environments with high demands on reliability and safety. The housings have very robust design with two cable clamps and are made of heavy-duty material Valox. The range Tough & Safe is available as watertight to IP67 and IP69K. In addition, the 60 to 125 A devices are equipped with two connection screws per terminal.

### Features

- IP67 and IP69K watertight
- 16–125 A, 50–690 V AC
- IEC 60 309-1, -2
- UV resistance In accordance with UL 746C f1
- All components V2 for internal parts and V0 for external parts on 20 A and 30 A devices per UL94 or CSA 22.2 No. 0.6; V0 on 60 A and 100 A
- All external screws are made of stainless steel

### Use Tough & Safe for:

- Reliability
- Demanding environments
- 16 A to 125 A applications
- In reefer containers, harbors, airports, train stations, construction sites, mines, industries, workshops, fairs, arenas, on portable equipment, etc.

## Easy & Safe



Plugs, 16–32 A, nylon housing



Plug, 16–32 A, IP44

Plug, 16–32 A, IP67

Connectors, 16–32 A, nylon housing



Connector, 16–32 A, IP44

Connector, 16–32 A, IP67

Panel-mounted receptacle outlets, 16–32 A, nylon housing



Receptacle, 16–32 A, IP44

Receptacle, 16–32 A, IP67

Panel-mounted inlets, 16–32 A, nylon housing



Inlet, 16–32 A, IP44

Inlet, 16–32 A, IP67

### Easy & Safe

Without compromising quality, Easy & Safe is our basic range. The plugs and connectors have a combined gland and cable clamp for easy tightening of the strain relief with the gland nut. The products have a unique design and are full of small practical features. Clear terminal markings make the installation easy and safe. When the cables are connected, the housing is easily closed by a twist. The plastic material PA is used to provide a device that meets the requirements of quality and safety.

### Features

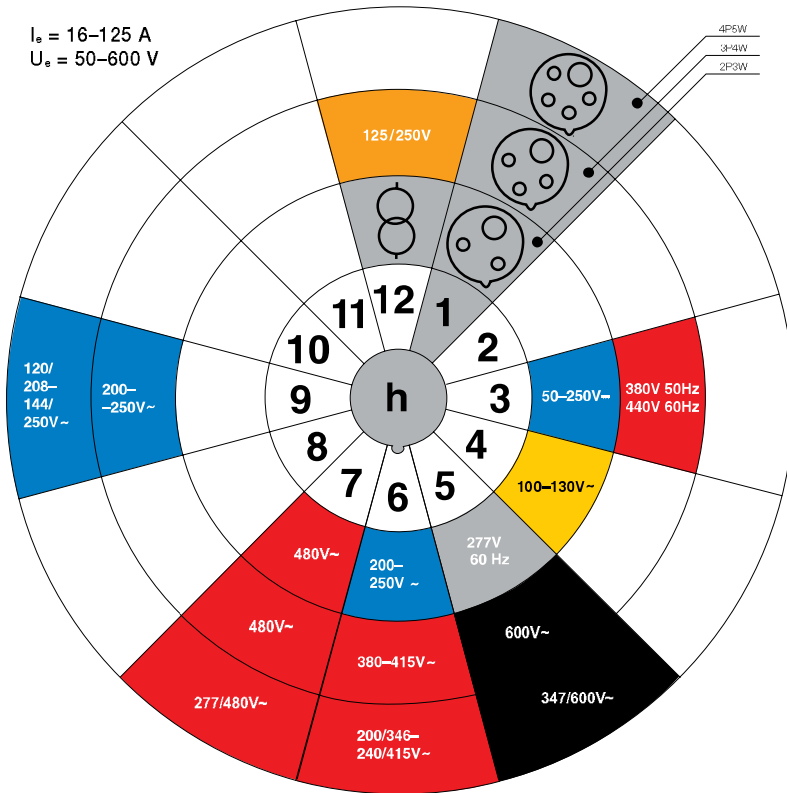
- IP44 and IP67
- 16–32 63 A, 50–600 V AC
- IEC 60 309-1, -2
- Nylon housing

### Use Easy & Safe for:

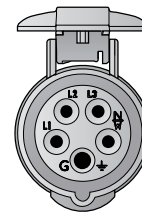
- Data centers, entertainment and stage lighting, lighting, heating, pumps, fans, motors, portable equipment, etc.
- In building sites, industries, workshops, restaurants, supermarkets, train stations, sports arenas, fairs, etc.

# International pin and sleeve devices

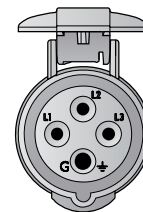
## IEC 60 309-2 “clock”



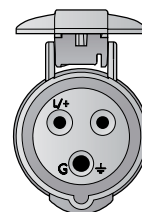
$I_s = 16-125 \text{ A}$   
 $U_s = 50-600 \text{ V}$



4P5W



3P4W



2P3W

The CEE/IEC standard states that it must be impossible to connect apparatus with different numbers of poles, different voltages, frequencies or current ratings. This clock diagram shows how this is achieved. The position of the earthing sleeve relative to the keyway differs for different voltages and frequencies. The keyway of the outlet is always at the 6 o'clock position.

In addition, color coding is used to make it easier to tell the difference between devices for different voltages and frequencies. Dimensions also vary with current rating. Under the CEE/IEC system, pins and sleeves must be differently spaced in devices with different numbers of poles, and the earthing pin and earthing sleeve are larger than the other pins and sleeves.

## Explanation of type code

Example: ABB 416P6W: 4 = Number of wires, 16 = Amperes, P = Type, 6 = Position of earthing according to “clock,” W = Degree of protection.

Number of wires	3	2P+E	Type	Degree of protection
	4	3P+E	P Plug	SP IP44 splashproof
	5	3P+N+E	C Connector	W IP67 and IP69K watertight
			R, RU Receptacle	E IP67 watertight
			B, BU Inlet	
Amperes	16	16 A		
	20	20 A		
	30	30 A		
	32	32 A		
	60	60 A		
	63	63 A		
	100	100 A		
	125	125 A		

Note: BU and RU are IP44 devices. For a complete list of types, see our main catalog.

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