

## High current plugs and sockets



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## General information

Our high current plugs and sockets are used wherever large machines and equipment with currents between 200 A and 400 A and voltages up to 1000 VAC are fitted with plug-in connections. In various designs throughout the world, on building sites, in docks and for tunnel construction.

High current plugs and sockets must guarantee a high level of protection for persons and must not be unplugged while under load. Our units are therefore equipped with two pilot contacts for electrical interlocking.

The contact bushings of sockets and connectors that are under load are fitted with contact cover disks that provide a reliable protection against contact with live parts.

The robust construction and high corrosion protection permit use under heavy-duty conditions, and the contacts are silver-plated to provide protection against aggressive environments.

Damaged contact parts (250 A/400 A) can be replaced from the front without having to remove the connected cable.

## Applications

- movable consumer loads
- on construction sites for worksite supply cabinets
- on drilling plants and conveying systems
- in the tunnelling and mining industry
- in quarries and gravel plants
- in surface mining
- in high-speed trains (ICE)
- in harbours and container transshipment depots
- for flexible power supply at large events
- in industry (e.g. for induction melting furnaces)
- for test equipment

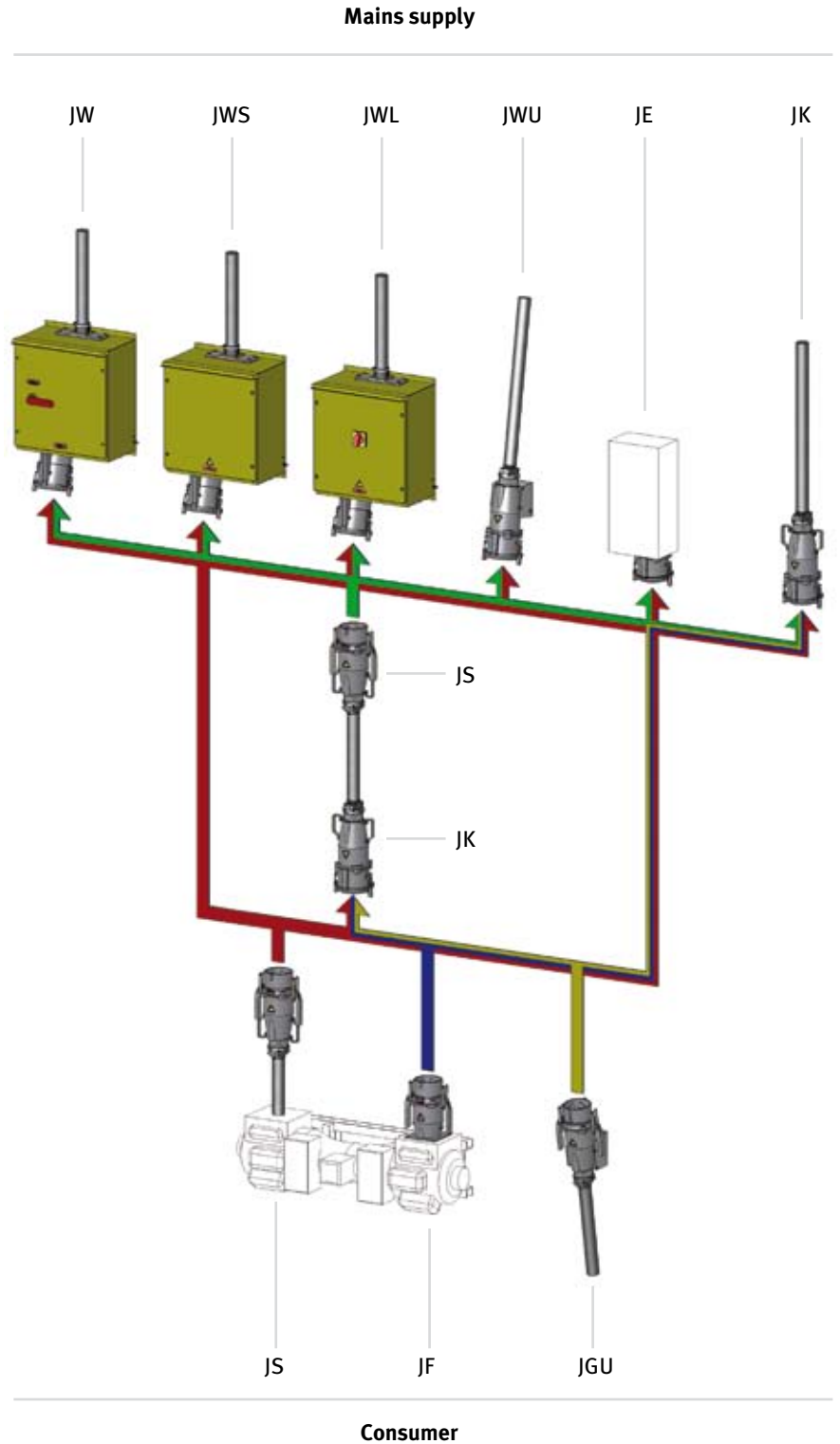


## Characteristics

- Currents of 200 A, 250 A, 400 A
- Voltages up to 1000 VAC, 50/60 Hz
- Number of poles: 4-pole (3L + PEN), 5-pole (3L + N + PE)
- 2 pilot contacts, lagging when closing, leading when opening
- Protection class IP 67 (IP 55)
- Construction according to IEC EN 60309-1/VDE 0623, Part 1
- Voltage identification coding in accordance to IEC EN 60309-2
- Covered contacts for connectors and socket outlets
- Probe-proof according to IEC EN 60309-1
- Very robust construction
- Contact parts silver-plated
- Contact parts replaceable from the front (with 250 A and 400 A)
- Insertion and withdrawal aid, lockable
- Wide range of plugs, appliance inlets, panel mounted sockets, wall-mounted sockets, with circuit breaker, with electrical interlock, with power switches, with earth leakage current protection
- Salt-water proof models on request

**Product lines**

- JW Receptacle wall-mounted socket outlet mechanically switched and interlocked
- JWS Receptacle wall-mounted socket outlet electrically switched and interlocked
- JWL Receptacle wall-mounted socket outlet with circuit breaker
- JWU Receptacle
- JE Panel mounted receptacle
- JK Connector
- JS Plug
- JF Panel mounted inlet
- JGU Inlet



## Technical characteristics

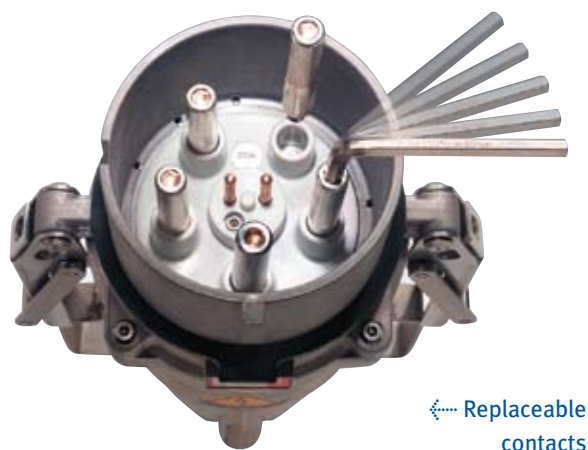
### *Finger-proof with contact cover disks*

The contact bushes on sockets and connectors are fitted with contact cover disks that provide a reliable protection against contact with live contact bushes. When the plug is inserted, the PE pin presses the contact cover disks to the side so that the openings become accessible. When pulling the plug out, a spring moves the contact cover disks back to their initial position. Probe-proof according to IEC EN 60309-1.



### *Contacts replaceable from the front*

In the 250/400A units, the damaged front parts of the contacts can be replaced from the front without having to dismantle the connected conductor.

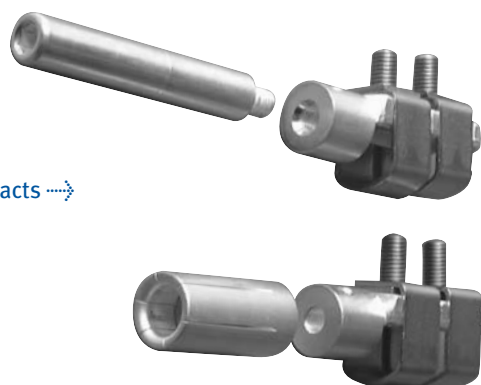


### *Two-part silver-plated contacts*

The contacts comprise a rear part for the conductor connection, which remains in the socket insert and the front part that can be replaced using an Allen key.

The U-shaped contacts are silver-plated as protection against aggressive environments and are self-cleaning when inserted.

Silver-plated contacts →





← Mechanical interlock



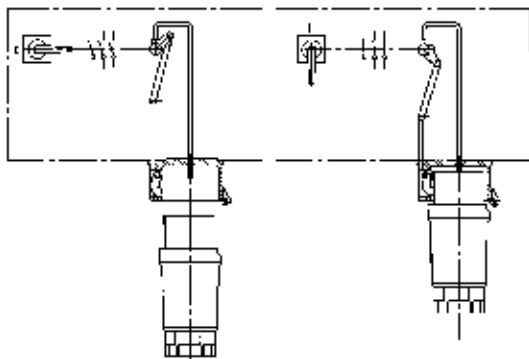
← Electrical interlock

*Electrical interlock*

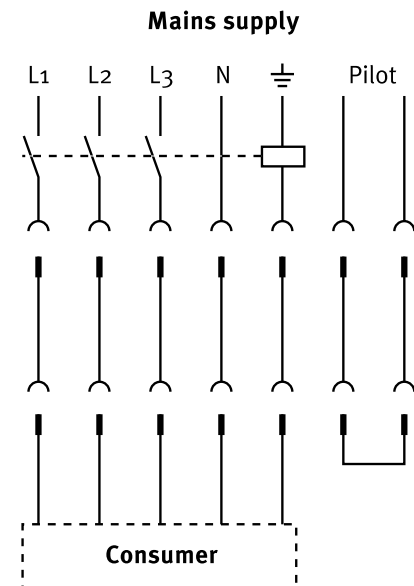
All units are equipped with two pilot contacts as standard. They close with a lag when being inserted, and open with a lead when being withdrawn. High current plugs and sockets can be interlocked electrically or mechanically.

*Mechanical interlock*

Switched receptacles have a mechanical interlock. The switch can only be switched on when the plug is inserted, and the plug can only be removed when the switch is switched off.



Circuit:



*Insertion and withdrawal aid*

All plugs and sockets are equipped with two cam levers that serve as insertion and withdrawal aids, which can be locked in their final position using a padlock.



← Insertion and withdrawal aid



← Cable insertion

*Cable insertion for IP 67*

As standard, plugs, connectors, appliance inlets and receptacles are delivered with bell-shaped cable inlets for cable diameters from 45 to 65 mm. The externally mounted tension relief clamp facilitates the connection.

Metal bell-shaped cable inlets up to  $\varnothing$  80 mm are available for the nominal values 250 A and 400 A.

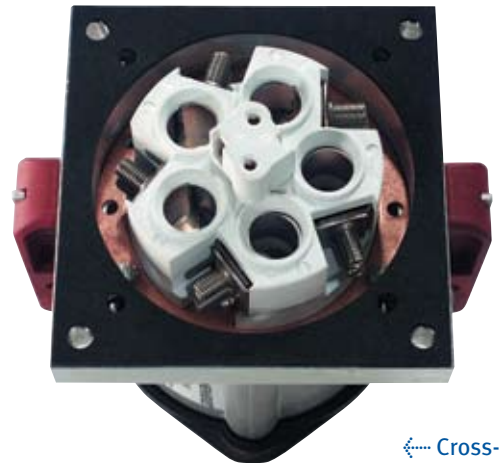


**Additional information**

*Conductor cross-sections and permissible rated currents*

Stainless steel frame clamps permit the following conductor cross-sections according to the thermal rated currents:

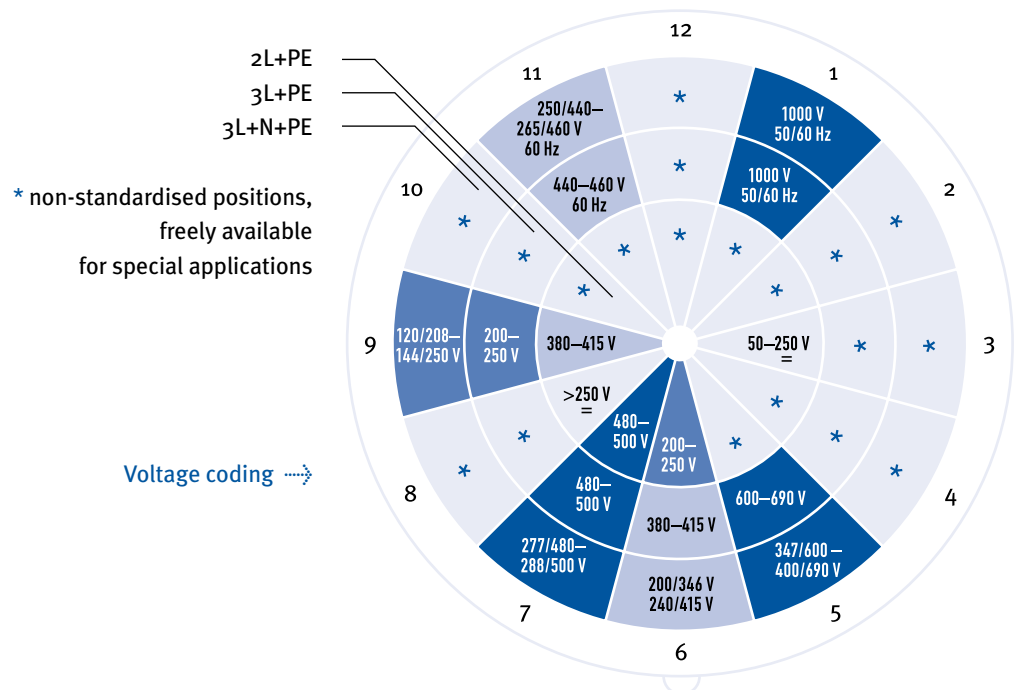
Nominal value	Nominal current $I_{th}$	Flexible conductor	Single and multi-wire conductors
<b>200 A</b>	200 A	70 mm <sup>2</sup>	70 mm <sup>2</sup>
	250 A	150 mm <sup>2</sup>	150 mm <sup>2</sup>
<b>250 A</b>	250 A	120 mm <sup>2</sup>	120 mm <sup>2</sup>
	315 A	150 mm <sup>2</sup>	150 mm <sup>2</sup>
<b>400 A</b>	400 A	185 mm <sup>2</sup>	240 mm <sup>2</sup>
	450 A	185 mm <sup>2</sup>	240 mm <sup>2</sup>



← Cross-section

*Voltage identification coding*

Arrangement of the PE contact bush with respect to the polarising slot for the various voltages and frequencies according to clock position, based on Table 104 from EN 60309-2:1999.



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### Application examples



Industry: Oil treatment plant Switzerland



Tunnelling: Tunneling jumbo Norway



Industry: Timesavers Holland



Gravel works: Switzerland