

08 01
DETAILED CATALOGUE



PowerSAFE

ELECTRIC SOLUTIONS

V0625

Introduction



POWERSAFE

As a result of the increased demand for temporary power generators which operate with high-voltage current in the areas of entertainment and industrial applications, selection of the high-current connector is particularly important, in order to guarantee safety and reliability for any application.

The single-pole PowerSAFE connectors were developed for the connection of single- and three-phase high-current circuits. They have been used and tested in the world's harshest environments, from the oil fields of Canada to data processing centres in the Arctic Circle. They are the right choice for demanding applications on account of their impressive technical capacity, safety functions, robust design, reliability and quality.

The standard safety functions include an additional locking system which requires a key to activate the connection. In addition, all electrical contacts on all plugs have finger-proof protection against electric shock, whereby the risk of accidental contact when switching on the connector is reduced.

The connectors are available in line and panel mount format with either crimp or screw contacts. The PowerSAFE connectors can be used with single-core cables between 25 and 300 mm² for high current connections up to 800 A and are currently the highest rated and safest connectors of their type on the market.



Video tutorial for PowerSAFE assembly
You will find further technical information
in the PowerSAFE connector crimping guide

Introduction

High current carrying capacity

The PowerSAFE connector's advanced contact design achieves its 800 A* continuous rating by utilising an arrangement of 29 transfer bridges. Each transfer bridge is rated at 30 A, giving a total of 870 A per contact.

* Subject to environmental factors, cable choice, etc.

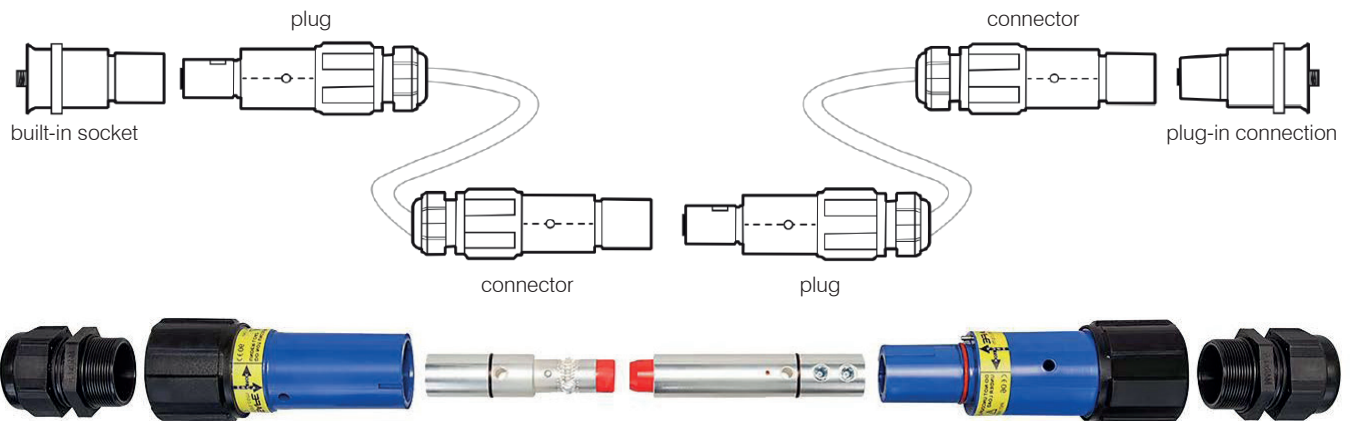
Technical Data

No. of contacts:	1
Max. continuous current rating:	up to 800 A
Surge current:	75 kA
Short circuit rating:	up to 35.5 kA
Cable cross sectional area C.S.A.:	25 mm ² to 300 mm ²
Contact termination:	Screw or crimp connection
Mating method:	Bayonet lock
Operating voltage:	1'000 VAC
Max. rated voltage to earth:	2 kVAC / 3 kVDC
Min. flashover:	9.5 kVDC
Insulation resistance:	> 5 MOhm @ 500 VDC
Protection category:	IP67
Protection against electric shock:	IP2X
Flammability:	UL94-V0
Mating cycles:	> 500
Material housing:	thermoplastic
Contact area:	silver

Product features

- maximum continuous current rating 800 A
- colour coded and mechanically keyed to prevent connection errors
- Flame retardant UL94-V0
- Locking mechanism to prevent accidental disconnection under load
- Finger proof contacts both genders (IP2X) to prevent access to electrical contacts when uncoupled
- silver-coated, self-cleaning contacts
- enhanced impact-resistant housing
- Protection category IP67
- for cables between 25 mm² and 300 mm²
- temperature resistant materials
- integrated cable strain relief
- Cable glands with generous clamping range
- Rubber protective caps to protect connectors from moisture, dirt and abrasion when uncoupled (optional)
- compatible with PowerLock, PowerLine, PowerFit and PowerSyntax
- CE-compliant in EN 60309-1, DIN-EN 61984 and IEC 60900

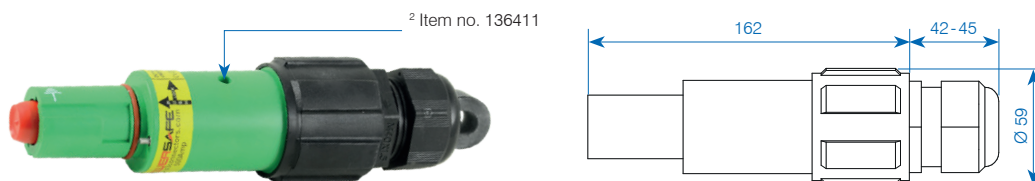
System



- ✓ = from stock, offer subject to prior sale
- further dimensions / executions on request
- various accessories and spare parts available

Plugs and connectors

Plug



		Cable diameter 25-150mm ² Screw connection max. 500 A	Cable diameter 185mm ² Crimp connection max. 800 A	Cable diameter 240mm ² Crimp connection max. 800 A	Protective cap	
		Item no.	Item no.	Item no.	IP44	IP67
L1	brown	037821 ¹ ✓	242728 ✓	104992 ✓	257463 ✓	106545 ✓
L2	black	037822 ¹ ✓	242729 ✓	104993 ✓	257463 ✓	106547 ✓
L3	grey	037823 ¹ ✓	242730 ✓	104994 ✓	257463 ✓	106548 ✓
N	blue	037824 ¹ ✓	242731 ✓	104995 ✓	257463 ✓	106544 ✓
PE	yellow-green	037825 ¹ ✓	242732 ✓	104996 ✓	257463 ✓	106543 ✓

¹ PowerSAFE reduction sleeve set 95mm²/70mm²/50mm²/35mm²/25mm² (Item no. 147795) incl. nozzle

² Accessories/spare part: Item no. 136411 (47mm)

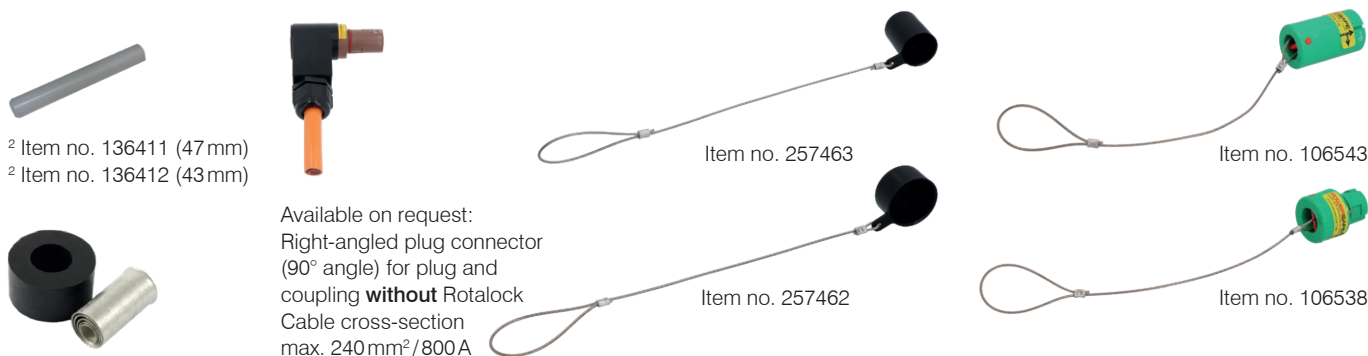
Connector with Rotalock



		Cable diameter 25-150mm ² Screw connection max. 500 A	Cable diameter 185mm ² Crimp connection max. 800 A	Cable diameter 240mm ² Crimp connection max. 800 A	Protective cap	
		Item no.	Item no.	Item no.	IP44	IP67
L1	brown	037816 ¹ ✓	242722 ✓	104981 ✓	257462 ✓	106540 ✓
L2	black	037817 ¹ ✓	242724 ✓	104982 ✓	257462 ✓	106541 ✓
L3	grey	037818 ¹ ✓	242725 ✓	104984 ✓	257462 ✓	106542 ✓
N	blue	037819 ¹ ✓	242726 ✓	104985 ✓	257462 ✓	106539 ✓
PE	yellow-green	037820 ¹ ✓	242727 ✓	104986 ✓	257462 ✓	106538 ✓

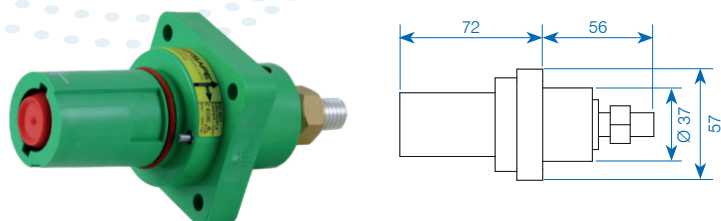
¹ PowerSAFE reduction sleeve set 95mm²/70mm²/50mm²/35mm²/25mm² (Item no. 147795) incl. nozzle

² Accessories/spare part: Item no. 136411 (47mm)



Plug-in connectors and Built-in sockets

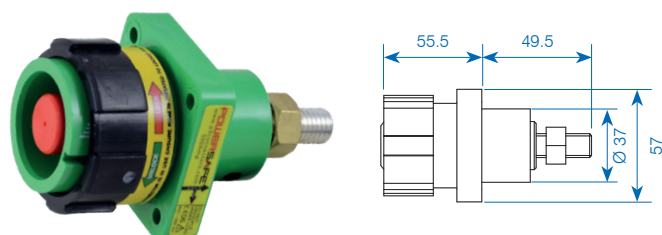
Plug-in connector



		Screw connection thread M12 max. 500 A	Screw connection thread M12 max. 800 A	Protective cap IP44	IP67
		Item no.	Item no.	Item no.	Item no.
L1	brown	038856 ✓	104997 ✓	257465 ✓	113312 ✓
L2	black	038857 ✓	104998 ✓	257465 ✓	113313 ✓
L3	grey	038858 ✓	104999 ✓	257465 ✓	113314 ✓
N	blue	038859 ✓	105000 ✓	257465 ✓	113315 ✓
PE	yellow-green	038860 ✓	105001 ✓	257465 ✓	113316 ✓

³ 45° adapter kit incl. screws for mounting

Built-in socket with Rotalock



		Screw connection thread M12 max. 500 A	Screw connection thread M12 max. 800 A	Protective cap IP44	IP67
		Item no.	Item no.	Item no.	Item no.
L1	brown	038851 ✓	104987 ✓	257464 ✓	105561 ✓
L2	black	038852 ✓	104988 ✓	257464 ✓	105563 ✓
L3	grey	038853 ✓	104989 ✓	257464 ✓	105564 ✓
N	blue	038854 ✓	104990 ✓	257464 ✓	113311 ✓
PE	yellow-green	038855 ✓	104991 ✓	257464 ✓	105565 ✓

³ 45° adapter kit incl. screws for mounting



³ Item no. 240089



Switchbox



The PowerSAFE Box is a connecting unit for connecting to a generator or the mains. The sequence of connecting and disconnecting is predetermined to ensure the safety circuits (N+PE) are the first to be connected and the last to be disconnected. The coded connections also prevent the possibility of incorrect contacts.

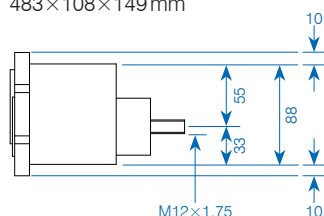
Functional description

1. The cover of the earth connection is opened by rotating it clockwise using the special key provided. Insert the PE high current plug to the end stop and then rotate it clockwise (lock).
2. After inserting the earth conductor properly, the protective cover of the neutral conductor opens – also insert the neutral conductor to the end stop and then rotate it clockwise.
3. Connect all L1 to L3 phase conductors to the switchbox in the same way – comply with correct sequence! Then the L3 phase conductor contact must also be locked with the special key in the clockwise direction. L3 is now also locked and unwanted disconnection is prevented.
4. This process triggers two processes:
 - a) It closes the L3 connection to prevent accidental interruptions under load and also prevents access to the device.
 - b) The microswitch (toggle function) is also activated and can therefore switch the switchbox on or off via an external contactor. (Leading or lagging) The load can be regulated in a controlled manner by connecting this switch to the power distribution.
5. The removing and unplugging of the individual conductors is carried out in reverse order and procedure: Open the lock at L3 using the special key and undo all connections beginning with L3.
6. Important: All protective covers close automatically after removing the plug (touch protection).

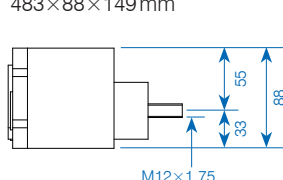


Dimensions

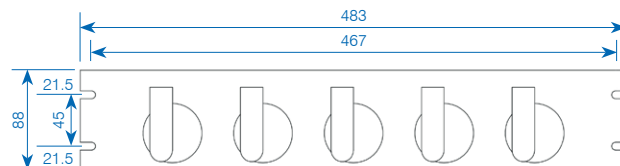
Item no. 134192 and 144558
for wall/housing assembly
483×108×149 mm



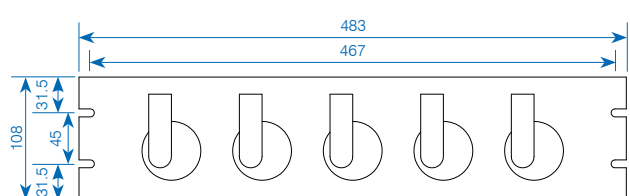
Item no. 130131
for Rack mounting
483×88×149 mm



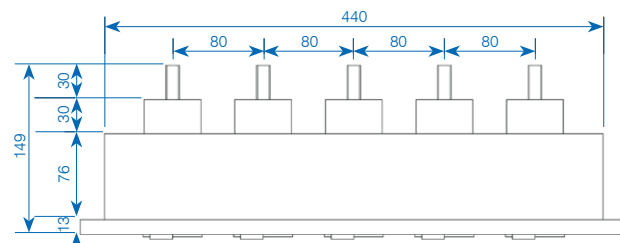
Item no. 130131
for Rack mounting 483×88×149 mm



Item no. 134192 and 144558



Item no. 134192, 144558 and 130131



It is impossible for the conductors to be connected to the unit in the wrong order or individually,
or to be disconnected by mistake!

Built-in connector box

144558 PowerSAFE Panel Box up to 800 A 3LNPE 483×108×149 mm, wall/housing assembly, 5-fold unit

Built-in socket box

177113 PowerSAFE Panel Box up to 800 A 3LPE 483×108×149 mm, wall/housing assembly, 4-fold unit

134192 PowerSAFE Panel Box up to 800 A 3LNPE 483×108×149 mm, wall/housing assembly, 5-fold unit

130131 PowerSAFE Panel Box up to 800 A 3LNPE 2 HE 483×88×149 mm, for Rack mounting, 5-fold unit

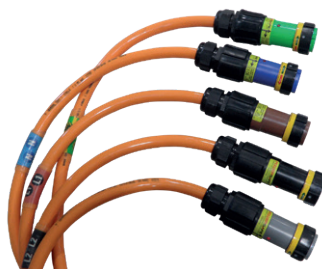
Connection and extension cables with single-conductor cable

Connection cable set 3P+N+NE, ready-made and labelled



Item no.	Plug	Cable	Length	Cable socket
157660	500 A	4×95 mm ² / 1×50 mm ²	5 m	95 mm ² / M12
157661	500 A	4×120 mm ² / 1×95 mm ²	5 m	120 mm ² / M12
157893	500 A	4×120 mm ² / 1×95 mm ²	10 m	120 mm ² / M12
141731	500 A	4×150 mm ² / 1×95 mm ²	5 m	150 mm ² / M12
148347	500 A	4×150 mm ² / 1×95 mm ²	10 m	150 mm ² / M12

Coupling cable set 3P+N+NE, ready-made and labelled



Item no.	Connector	Cable	Length	Cable socket
180157	500 A	4×95 mm ² / 1×50 mm ²	5 m	95 mm ² / M12
175473	500 A	4×120 mm ² / 1×95 mm ²	5 m	120 mm ² / M12
180158	500 A	4×120 mm ² / 1×95 mm ²	10 m	120 mm ² / M12
180159	500 A	4×150 mm ² / 1×95 mm ²	5 m	150 mm ² / M12
180160	500 A	4×150 mm ² / 1×95 mm ²	10 m	150 mm ² / M12

Extension cable set 3P+N+NE, ready-made and labelled



Item no.	Plug	Connector	Cable	Length
157812	500 A	500 A	4×95 mm ² / 1×50 mm ²	5 m
161262	500 A	500 A	4×95 mm ² / 1×50 mm ²	20 m
157813	500 A	500 A	4×120 mm ² / 1×95 mm ²	5 m
157895	500 A	500 A	4×120 mm ² / 1×95 mm ²	10 m
163908	500 A	500 A	4×120 mm ² / 1×95 mm ²	50 m
157814	500 A	500 A	4×150 mm ² / 1×95 mm ²	5 m
157816	500 A	500 A	4×150 mm ² / 1×95 mm ²	10 m



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