








Specifications

Series LV

Series	Standard	LV 320/400	LV160/250	LV80/120
Rated operating current *1 Main contacts Main contacts @ 95 mm ² Pilot/aux contacts	DIN VDE 0623-589 UL / CSA DIN VDE 0623-589	320 A / 380 A*1 400 A / 260 A 20 A	160 A / 250 A*1 --- / --- 20 A	80 A / 120 A*1 --- / --- 20 A
Rated voltage Altitude correction factor 1	DIN VDE 0623-589, EN 60664-1 UL / CSA	150 V 150 V / 150 V	150 V --- / ---	150 V --- / ---
Keying Rated operating voltage Keying plug	DIN VDE 0623-589	24/36/48/72/80/96 V  red*1 /  grey: wet-cell battery,  green: dry-cell battery,  yellow: vehicle plug		
Main contacts Number of Contact diameter Wire gauge AWG 5 (16 mm ²) AWG 4 (25 mm ²) AWG 1 (35 mm ²) AWG 1/0 (50 mm ²) AWG 3/0 (70 mm ²) AWG 4/0 (95 mm ²)		2 10 mm --- --- ○+LVRH 50/35*2 ● ●*3 ●*1,3	2 8.5 mm --- ○+LVRH 50/25*2 ○+LVRH 50/35*2 ●*1 --- ---	2 6 mm ○+LVRH 25/16*2 ●*1 --- --- ---
Pilot contacts Number of Contact diameter Wire gauge AWG 13 (2.5 mm ²)	DIN VDE 0623-589	2 4 mm ●	2 4 mm ●	2 2.3 mm ●
Auxiliary contacts Number of Contact diameter Wire gauge AWG 13 (2.5 mm ²)	DIN VDE 0623-589	2 4 mm ●	2 2.3 mm ●	2 2.3 mm ●
Air tube adapter Adapter for air tube size 6 mm		●	●	●
Crimped connection Main contacts Pilot contacts		w/ crimping*4 crimping	w/ crimping*4 crimping	w/ crimping*4 crimping
Ingress protection rating (IP code)	IEC 60529	IP23*5	IP23*5	IP23*5
Temperature range		-30 °C ... +90 °C*6	-30 °C ... +90 °C*6	-30 °C ... +90 °C*6
Mating cycles	EN 1175	5,000	5,000	5,000
Shells PBT GF30 (PBB and PBDE free) Integrated lock function Strain relief Flammability rating		● ● ● UL 94-V0	● ● ● UL 94-V0	● ● ● UL 94-V0
Handle styles Snap-on Screw-on		● ●	● ●	● ●
Handle colour Black Red (for emergency cutout)		● ●	● ●	● ●
Approvals		 File No. E242089	 File No. E242089	 File No. E242089
See		Page 6, 7	Page 8, 9	Page 10, 11



*1 For 380 A, 250 A and 120 A use corresponding red keying plug and observe the wire gauges as indicated by the DIN VDE 0623-589 standard.

See also page 14 for detailed information on maximum current carrying capacity of cables depending on wire gauge, and battery pulse charging.

*2 Reducers: Included with contacts whose terminals are designed for a bigger AWG wire size reducing it down to a smaller size.

*3 Drop height of 1.5 m max. for LV320/400 with wire gauge 70 mm² and 95 mm². Reduced drop height when stretched connector cable.

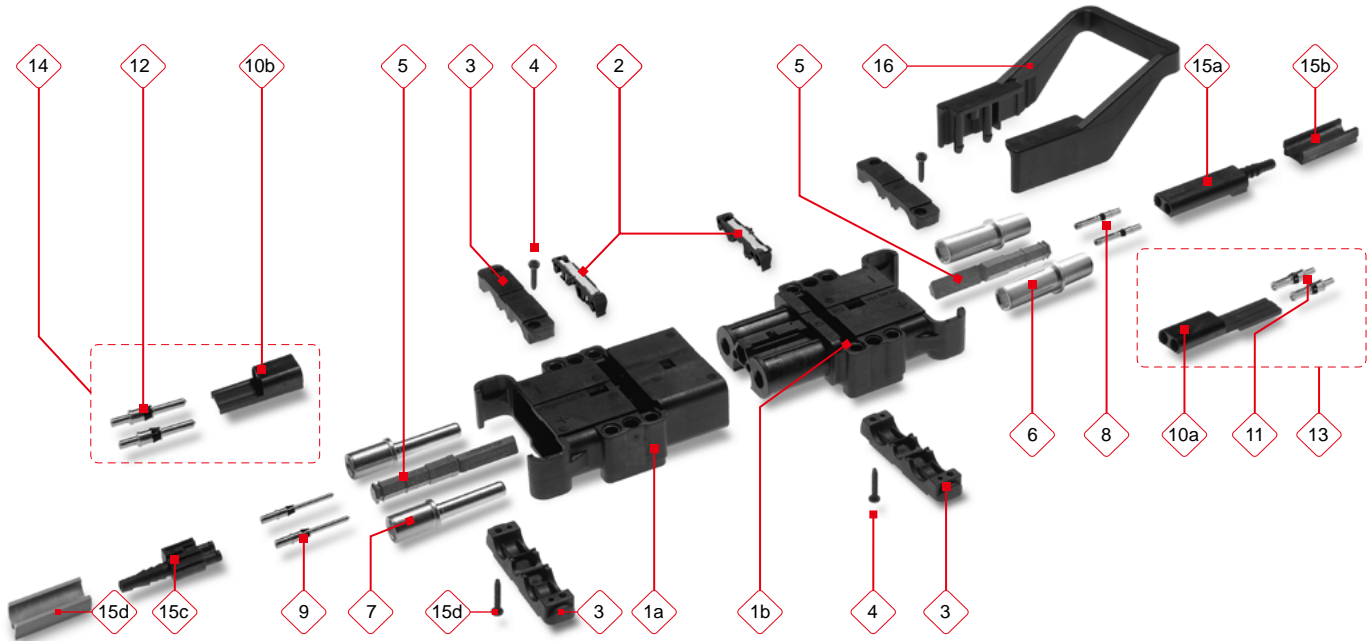
*4 Assembly and crimping instructions, see manual [A84-M.en](#)

*5 IPx3 when mounted horizontally

*6 Current-carrying capacity curves on request

Components, spare parts

Series LV



Item	Identification	Ordering code			Description
		LV320/400	LV160/250	LV80/120	
1a 1b	Plug shell Receptacle shell	LV320/400 G-P LV320/400 G-SP LV320/400 G-SL	LV160/250 G-P LV160/250 G-SP LV160/250 G-SL	LV80/120 G-P LV80/120 G-SP LV80/120 G-SL	Shell to enclose pin contacts Receptacle with pre-assembled item 10a Receptacle with added item 15a
2	Slider	black grey green LV320/400 S	LV160/250 S	LV80 S	Locks main contacts in place (LV320/400 also auxiliary contacts)
3	Clamp	LV320 D	LV160 D	LV80 D	2x for strain relief
4	Screw for clamp	SC 3.5x19 SC 3.5x25	SC 3.5x19 ---	SC 3.5x16 ---	2x self-tapping screw for strain relief: Wire gauge AWG 1/0 max. (50 mm ²) Wire gauge AWG 3/0 / AWG 4/0 (70 mm ² / 95 mm ²)
5	Keying plug	red red grey green yellow	LV250/400 NrS LV250/400 NrP LV160/320 Ngr LV160/320 Tgn LV160/320 Uge	LV120 NrS LV120 NrP LV80 Ngr LV80 Tgn LV80 Uge	for battery receptacle, high amperage, wet-cell for charging plug, high amperage, wet-cell for battery receptacle/charging plug, wet-cell for battery receptacle/charging plug, dry-cell for vehicle plug
6	Main contact (socket)	AWG 4/0 (120 mm ²) 95 mm ² AWG 3/0 (70 mm ²) AWG 1/0 (50 mm ²) AWG 4 (25 mm ²)	LV500 S10/AWG4/0 LV320 S10/95 LV320 S10/70 LV320 S10/50 ---	---	2x for battery receptacle AWG 4/0 2x for battery receptacle 95 mm ² 2x for battery receptacle AWG 3/0 2x for battery receptacle AWG 1/0 2x for battery receptacle AWG 4
7	Main contact (pin)	AWG 4/0 (95 mm ²) 95 mm ² AWG 3/0 (70 mm ²) AWG 1/0 (50 mm ²) AWG 4 (25 mm ²)	LV500 P10/AWG4/0 LV320 P10/95 LV320 P10/70 LV320 P10/50 ---	---	2x for charging plug/vehicle plug AWG 4/0 2x for charging plug/vehicle plug 95 mm ² 2x for charging plug/vehicle plug AWG 3/0 2x for charging plug/vehicle plug AWG 1/0 2x for charging plug/vehicle plug AWG 4
---	Reducer	70/50 (AWG 3/0 to 1/0) 50/35 (AWG 1/0 to 1) 50/25 (AWG 1/0 to 3) 25/16 (AWG 4 to 5)	LV RH70/50 LV RH50/35 ---	---	Reducing AWG 3/0 down to AWG 1/0 Reducing AWG 1/0 down to AWG 1 Reducing AWG 1/0 down to AWG 4 Reducing AWG 4 down to AWG 5
8 9	Aux. contacts	Socket AWG 13 (2.5 mm ²) Pin AWG 13 (2.5 mm ²)	LV320 BCC-2.5-Ag LV320 SCC-2.5-Ag	LV160 BBC-2.5-Ag LV160 SBC-2.5-Ag	2x auxiliary contact for battery receptacle 2x aux. contact for charging plug/vehicle plug
10a 10b	Pilot contact adapter	Receptacle Plug	LV160/320 PA-S LV160/320 PA-P	LV80 PA-S LV80 PA-P	Adapter for pilot contacts, sockets Adapter for pilot contacts, pins
11 12	Pilot contacts	Socket AWG 13 (2.5 mm ²) Pin AWG 13 (2.5 mm ²)	BCC-2.5-Ag SCC-2.5-Ag	LV80 BBC-2.5-Ag LV80 SBC-2.5-Ag	2x pilot contact for battery receptacle 2x pilot contact for charging plug/vehicle plug
13 14	Pilot contact set	Adapter + socket contacts Adapter + pin contacts	LV160/320 P-S/S LV160/320 P-P/S	LV80 P-S/S LV80 P-P/S	Set, including items 10a, 11 Set, including items 10b, 12
15a 15b	Air tube adapter Spacer	for receptacle for receptacle	LV160/320 LV-S LV160/320 DS-LS	LV80 LV-S LV80 DS-L	for air tube with inside Ø 6 mm for securing air tube adapter (item 15a) in recep- tacle shell (item 1b)
15c 15d	Air tube adapter Spacer	for plug for plug	LV160/320 LV-P LV160/320 DS-LP	LV80 LV-P ---	for air tube with inside Ø 6 mm for securing air tube adapter (item 15c) in recep- tacle shell (item 1a)
16	Handle	Black, snap-on Red, snap-on Black, screw-on Red, screw-on	LV160/320 H3 LV160/320 H4 LV160/320 H1/S LV160/320 H2/S	LV80 H1 LV80 H2 LV80 H1/S LV80 H2/S	Snap-on handle for receptacle / plug shell Screw-on handle for receptacle/ plug shell, including screws

Ordering code, pre-assembled cables

Series LV

Ordering code LV Series

Example: **LV320/400-R-S95-0-2-L0-H3**

Series	Amperage		Handle
	Standard	High	
LV320/400	320 A	380 A *1	None
LV160/250	160 A	250 A *1	Black, snap on *5
LV80/120	80 A	120 A *1	Red, snap on *5

Keying plug	Air tube adapter		Aux. contacts	Pilot contacts
	None	Air tube adapter *4		
R	Red, wet-cell, high amperage	None	0	0
N	Grey, wet-cell battery	Air tube adapter *4	2	2
T	Green, dry-cell battery	None	0	0
U	Yellow, vehicle plug, Universal *2	Air tube adapter *4	2	2

Contacts, wire gauge		
• LV320/400		
AWG4/0	Pin	AWG 4/0
P95	Pin	AWG 4/0 (95 mm ²)
P70	Pin	AWG 3/0 (70 mm ²)
P50	Pin	AWG 1/0 (50 mm ²) *3
AWG4/0	Socket	AWG 4/0
S95	Socket	AWG 4/0 (95 mm ²)
S70	Socket	AWG 3/0 (70 mm ²)
S50	Socket	AWG 1/0 (50 mm ²) *3
• LV160/250		
P50	Pin	AWG 1/0 (50 mm ²)
P35	Pin	AWG 1 (35 mm ²) *3
P25	Pin	AWG 4 (25 mm ²) *3
S50	Socket	AWG 1/0 (50 mm ²)
S35	Socket	AWG 1 (35 mm ²) *3
S25	Socket	AWG 4 (25 mm ²) *3
• LV80/120		
P25	Pin	AWG 4 (25 mm ²)
P16	Pin	AWG 5 (16 mm ²) *3
S25	Socket	AWG 4 (25 mm ²)
S16	Socket	AWG 5 (16 mm ²) *3

*1 Higher current-carrying capacity in compliance with DIN VDE 0623-589; requires red keying plug R.

*2 Yellow keying plug only supplied with charging and vehicle plug.

*3 Contact supplied with reducer.

*4 Schaltbau LV charging connectors can be equipped with optional pilot contacts or air tube adapters for electrolyte circulation systems.

Do you need other optional components? You will find more information in our catalogue A841 "Multifunctional adapters for LV Series charging connectors".

*5 Only available for LV80/120 Series

*6 For use with LV160/250 and LV320/400 Series

Do you need assembled connectors?

If so, do not hesitate to contact us! We supply receptacles and plugs complete with pre-assembled cables of different lengths and wire gauges and with a variety of cable terminal

Cables and terminal ends:

- Welding cables with rubber jackets according to DIN VDE 0282-6, e.g. H01N2-D
- Flex battery terminal conductor
- Perfect battery terminal conductor
- Battery terminal conductor with cable lug

Wire gauges:

- AWG 5 ... 4/0 (16 ... 95 mm²)

Wire connection:

- Main contacts: w/ crimping
- Pilot/aux. contacts: crimping

Marking of cables:

- Red shrink tube ⊕-terminal
- Blue shrink tube ⊖-terminal
- Product named on rubber jacket of cable



Note:

Presented in this catalogue are only stock items which can be supplied in short delivery time. For some variants minimum quantities apply. Please do not hesitate to ask for the conditions.

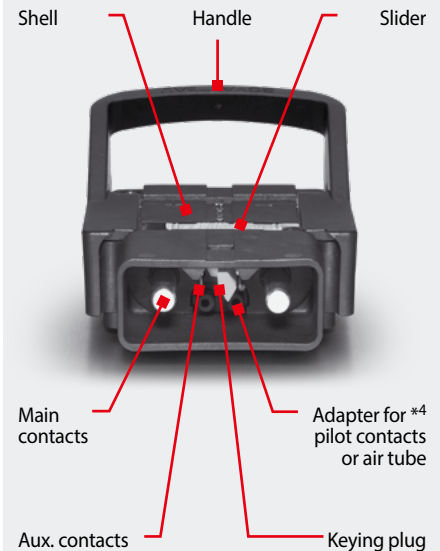


Special Variants:

If you need a special variant, please do not hesitate to contact us. Maybe the type of charging connector you are looking for is among our many special designs. If not, we can also supply customized designs. In this case, however, minimum ordering quantities apply.

Schaltbau Power Bridge

Modular design for scalable solutions between vehicle, battery and charger. The LV Series connectors guarantee a current-carrying capacity of 380 A.



LV: Charging plug/vehicle plug, front view

Pre-assembled cables

Schaltbau supplies connectors complete with pre-assembled battery terminal conductors to suit your application.



Flex battery terminal conductor



Perfect battery terminal conductor

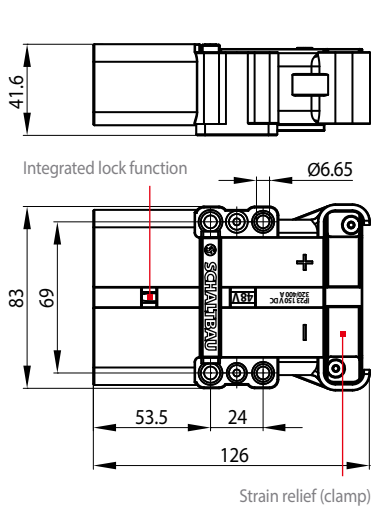


Battery terminal conductor with cable lug

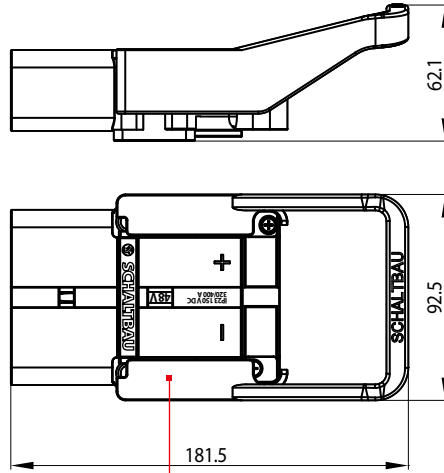
LV320/400 Series Dimension diagrams, Contacts

Series LV

• Charging plug / vehicle plug LV320/400

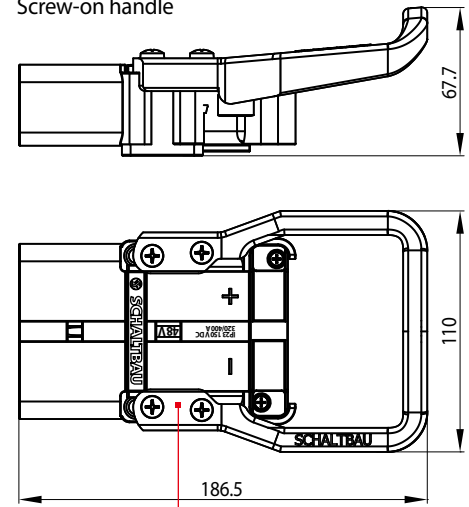


Snap-on handle



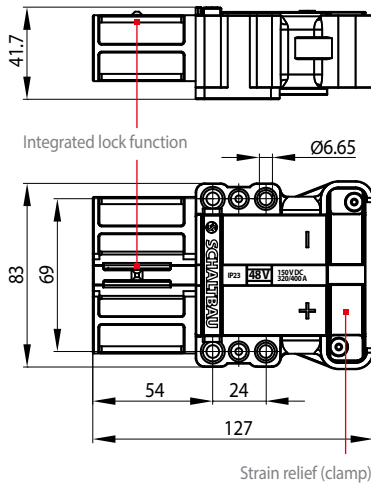
Snap-on handle
LV160/320 H3, black [●]
LV160/320 H4, red [●]

Screw-on handle

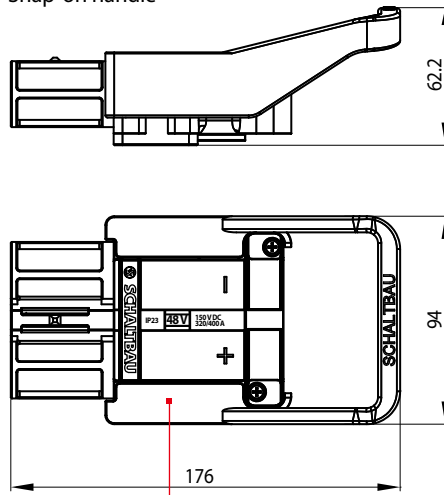


Screw-on handle
LV160/320 H1/S, black [●]
LV160/320 H2/S, red [●]

• Battery receptacle LV320/400

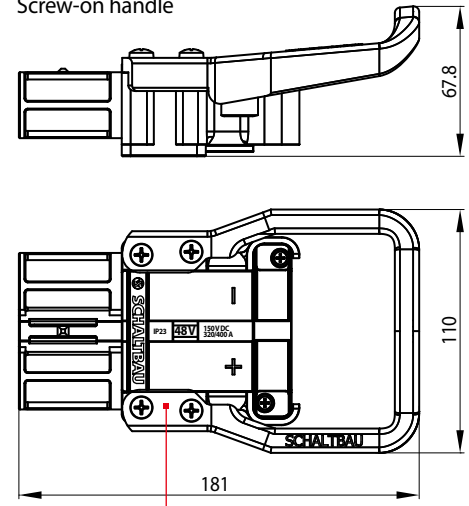


Snap-on handle



Snap-on handle
LV160/320 H3, black [●]
LV160/320 H4, red [●]

Screw-on handle



Screw-on handle
LV160/320 H1/S, black [●]
LV160/320 H2/S, red [●]

• Main contacts, aux. contacts

Main contacts Ordering code	Type	Wire gauge		Rated current	
		HPC*	Standard	HPC*1	Standard
LV320/400 S10/95 replaces LV320 S10/95*2	Socket	AWG 4/0 (95 mm ²)	AWG 4/0 (95 mm ²)	380 A	320 A
LV320/400 P10/95 replaces LV320 P10/95*2	Pin	AWG 4/0 (95 mm ²)	AWG 4/0 (95 mm ²)	380 A	320 A

Aux. contacts Ordering code	Type	Wire gauge	Rated current
LV320 BCC-2.5-Ag	Socket	AWG 13 (2.5 mm ²)	20 A
LV320 SCC-2.5-Ag	Pin	AWG 13 (2.5 mm ²)	20 A



Note:

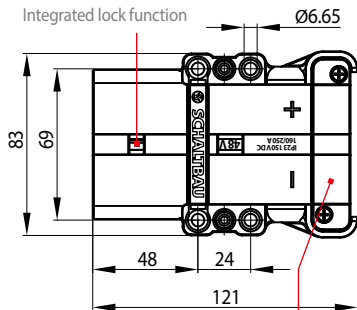
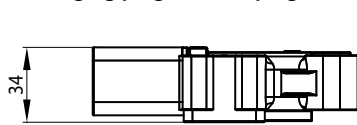
- **Wire gauge:** Reducers also reduce the current rating.
- **High Power Connectors:** Connectors with high current-carrying capacity require a wire gauge of AWG 4/0 (95 mm²). The use of reducers is not allowed.
- **Maximum current-carrying capacity curves:** Determined solely by the wire gauge – the use of reducers has no bearing on the maximum current-carrying capacity curve. The values are only valid for the main contacts with w/ crimping.

*1 High Power Connector, to be used with red keying plug

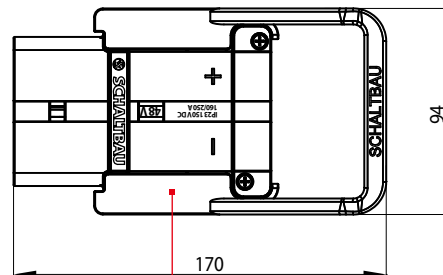
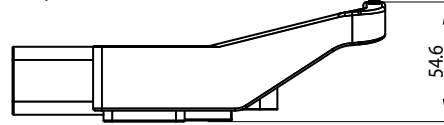
*2 Still available

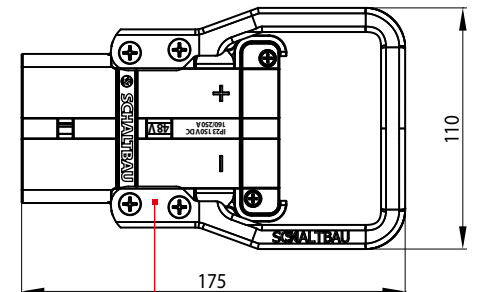
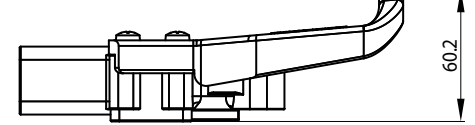
LV160/250 Series Dimension diagrams, Contacts

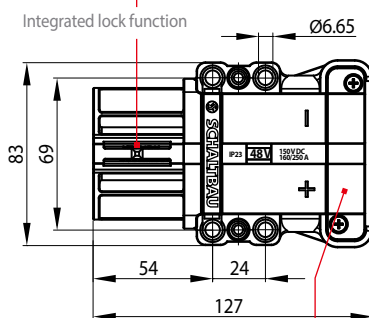
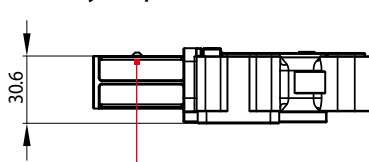
Series LV

• Charging plug / vehicle plug LV160/250


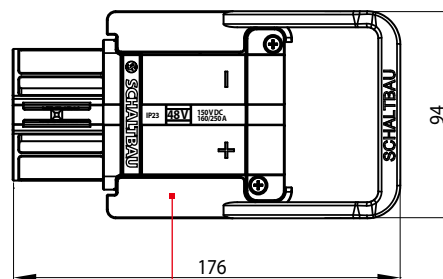
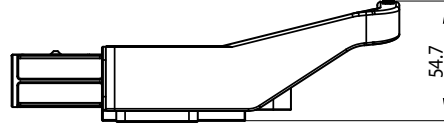
Strain relief (clamp)

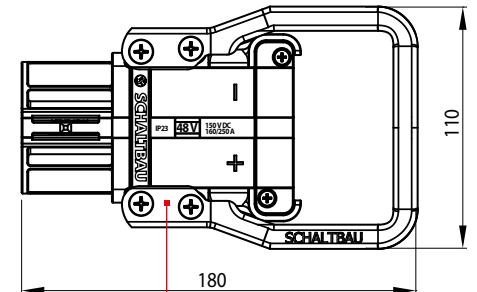
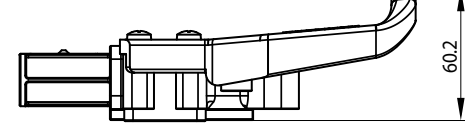
Snap-on handle

 Snap-on handle
 LV160/320 H3, black [●]
 LV160/320 H4, red [●]

Screw-on handle

 Screw-on handle
 LV160/320 H1/S, black [●]
 LV160/320 H2/S, red [●]

• Battery receptacle LV160/250


Strain relief (clamp)

Snap-on handle

 Snap-on handle
 LV160/320 H3, black [●]
 LV160/320 H4, red [●]

Screw-on handle

 Screw-on handle
 LV160/320 H1/S, black [●]
 LV160/320 H2/S, red [●]

• Main contacts, aux. contacts

Main contacts Ordering code	Type	Wire gauge		Rated current	
		HPC*	Standard	HPC*	Standard
LV160/250 S8.5/50	Socket	AWG 1/0 (50 mm ²)	AWG 1/0 (50 mm ²)	250 A	160 A
LV160 P8.5/50	Pin	AWG 1/0 (50 mm ²)	AWG 1/0 (50 mm ²)	250 A	160 A

Aux. contacts Ordering code	Type	Wire gauge		Rated current
		Standard	Area	
LV160 BBC-2.5-Ag	Socket	AWG 13	(2.5 mm ²)	20 A
LV160 SBC-2.5-Ag	Pin	AWG 13	(2.5 mm ²)	20 A

i Note:

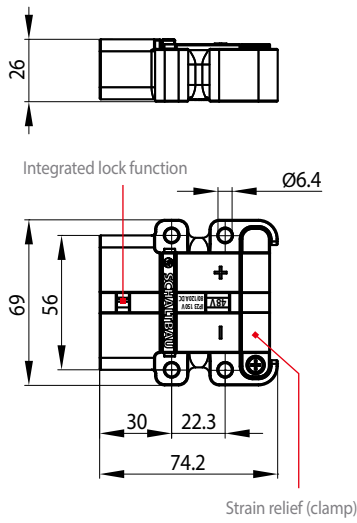
- **Wire gauge:** Reducers also reduce the current rating.
- **High Power Connectors:** They feature a high current-carrying capacity and require AWG 1/0 (50 mm²) for termination. The use of reducers is not allowed.
- **Maximum current-carrying capacity curves:** Determined solely by the wire gauge – the use of reducers has no bearing on the maximum current-carrying capacity curve. The values are only valid for the main contacts with w/ crimping.

* High Power Connector, to be used with red keying plug

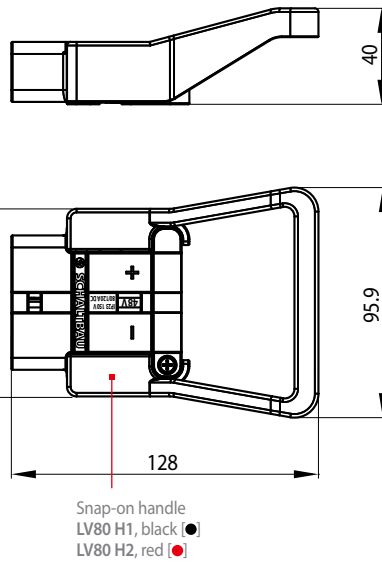
LV80/120 Series Dimension diagrams, Contacts

Series LV

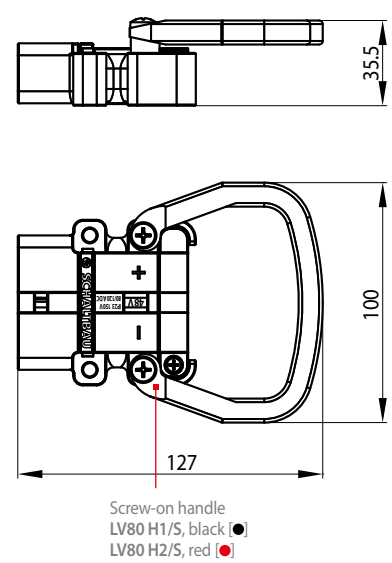
• Charging plug / vehicle plug LV80/120



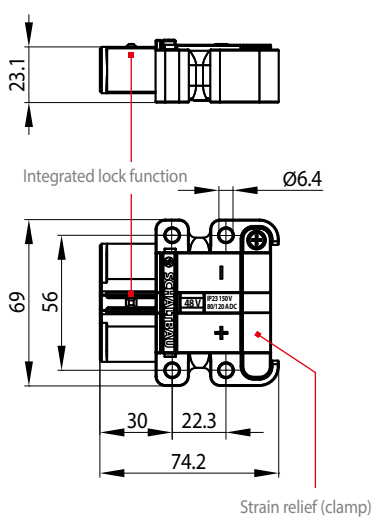
Snap-on handle



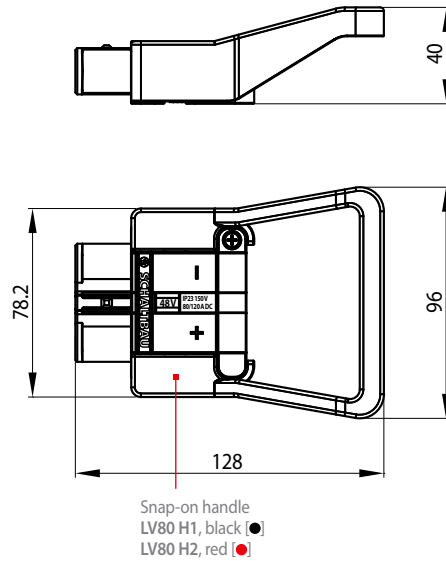
Screw-on handle



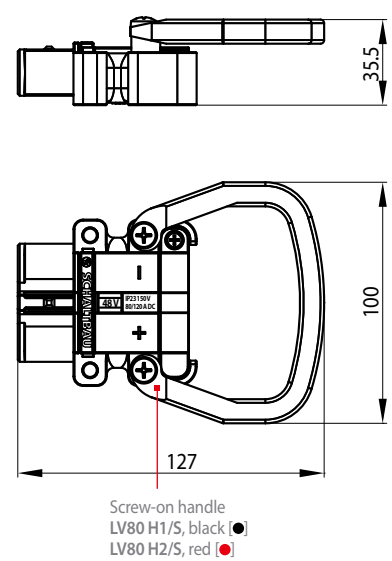
• Battery receptacle LV80/120



Snap-on handle



Screw-on handle



• Main contacts, aux. contacts

Main contacts Ordering code	Type	Wire gauge		Rated current	
		HPC*	Standard	HPC*	Standard
LV80/120 S6/25	Socket	AWG 4 (25 mm ²)	AWG 4 (25 mm ²)	120 A	80 A
LV80 P6/25	Pin	AWG 4 (25 mm ²)	AWG 4 (25 mm ²)	120 A	80 A

Aux. contacts Ordering code	Type	Wire gauge	Rated current
LV80 BBC-2.5-Ag	Socket	AWG 13 (2.5 mm ²)	20 A
LV80 SBC-2.5-Ag	Pin	AWG 13 (2.5 mm ²)	20 A

- i** Note:
- **Wire gauge:** Reducers also reduce the current rating.
 - **High Power Connectors:** They feature a high current-carrying capacity and require AWG 4 (25 mm²) for termination. The use of reducers is not allowed.
 - **Maximum current-carrying capacity curves:** Determined solely by the wire gauge – the use of reducers has no bearing on the maximum current-carrying capacity curve. The values are only valid for the main contacts with w/ crimping.

* High Power Connector, to be used with red keying plug