

Tools and accessories

Renewable Energy | Solar Photovoltaics

EN



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Tool cases and tool belt

- Tool case for MC4 and MC4-Evo 2
- MC4 tool case for use in UL markets
- Tool belt for MC4 and MC4-Evo 2



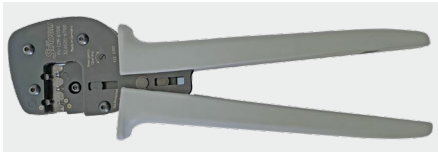
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Accessories

- Test plug MC4
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- Sealing caps MC4 and MC4-Evo 2
- Safety lock clip
- Socket wrench insert

ASSEMBLY TOOLS

Crimping pliers for MC4 and MC4-Evo 2



Crimping pliers for MC4 and MC4-Evo 2 (PV-CZM...)



Locator (PV-LOC-MC4-EVO 2...)



Locator (PV-LOC-MC4...)

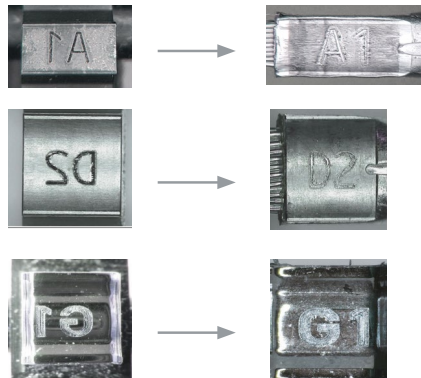


Crimping die (PV-ES-CZM...)

- PV-CZM-60100 and PV-CZM-61100 are designed to crimp open crimp contacts. Each plier comes with one crimping die and two locators for crimping MC4 and MC4-Evo 2 contacts.
- PV-CZM-63100 is designed to crimp MC4 barrel crimp contacts.
- Crimping kit PV-CZM-64100 comes with crimping die PV-ES-CZM-61100 and locator for MC4 open crimp contacts and crimping die PV-ES-CZM-63100 and locator for MC4 barrel crimp contacts.
- TÜV and UL certified product.
- Registered design feature providing traceability information about crimping tool on each individual crimp.

How to verify that each crimp is made using the suitable tool and die?

The registered design of the crimp traceability concept is providing information about the conductor size, crimp height and crimp width. For further information relating this feature please refer to assembly instruction MA704.



Crimping die

Finished crimp indent

Usage matrix

| Type | Conductor cross section | Open crimp contacts B-Crimp | Closed crimp contacts* O-Crimp | Crimping pliers | | | Crimping dies | | | Locators | | | | |
|---|-------------------------|---------------------------------------|--|--------------------------------------|--------------------------------------|--------------------------------------|---|---|---|--|---|--|---|---|
| | | | | PV-CZM-60100 32.6020-60100 | PV-CZM-61100 32.6020-61100 | PV-CZM-63100 32.6020-63100 | PV-ES-CZM-60100 32.6021-60100 | PV-ES-CZM-61100 32.6021-61100 | PV-ES-CZM-63100 32.6021-63100 | 4 mm², 6 mm², 10 mm² PV-LOC-MC4 32.6081 | 2.5 mm², 4 mm², 6 mm² PV-LOC-MC4 32.6082 | 4 mm², 6 mm², 10 mm² PV-LOC-MC4-EVO 2 32.6083 | 2.5 mm², 4 mm², 6 mm² PV-LOC-MC4-EVO 2 32.6084 | 14 AWG, 12-10 AWG, 8 AWG PV-LOC-MC4 14/12/10/8 32.6085 |
| PV-KBT4/2,5...-UR, PV-KST4/2,5...-UR | 2.5 mm² | ✓ | | | ✓ | | | ✓ | | | ✓ | | | |
| | 14 AWG | ✓ | | | ✓ | | | ✓ | | | ✓ | | | |
| PV-KBT4/6...-UR, PV-KST4/6...-UR | 4 mm² | ✓ | | ✓ | ✓ | | ✓ | ✓ | | ✓ | ✓ | | | |
| | 12 AWG | ✓ | | ✓ | ✓ | | ✓ | ✓ | | ✓ | ✓ | | | |
| | 6 mm² | ✓ | | ✓ | ✓ | | ✓ | ✓ | | ✓ | ✓ | | | |
| | 10 AWG | ✓ | | ✓ | ✓ | | ✓ | ✓ | | ✓ | ✓ | | | |
| PV-KBT4/10..., PV-KST4/10... | 10 mm² | ✓ | | ✓ | | | ✓ | | | ✓ | | | | |
| PV-KST4-EVO 2/2.5...-UR PV-KBT4-EVO 2/2.5...-UR | 2.5 mm² | ✓ | | | ✓ | | | ✓ | | | | | ✓ | |
| | 14 AWG | ✓ | | | ✓ | | | ✓ | | | | | ✓ | |
| PV-KST4-EVO 2/6...-UR PV-KBT4-EVO 2/6...-UR | 4 mm² | ✓ | | ✓ | ✓ | | ✓ | ✓ | | | | ✓ | ✓ | |
| | 12 AWG | ✓ | | ✓ | ✓ | | ✓ | ✓ | | | | ✓ | ✓ | |
| | 6 mm² | ✓ | | ✓ | ✓ | | ✓ | ✓ | | | | ✓ | ✓ | |
| | 10 AWG | ✓ | | ✓ | ✓ | | ✓ | ✓ | | | | ✓ | ✓ | |
| PV-KST4-EVO 2A/6... PV-KBT4-EVO 2A/6... | 4 mm² | ✓ | | ✓ | ✓ | | ✓ | ✓ | | | | ✓ | ✓ | |
| | 12 AWG | ✓ | | ✓ | ✓ | | ✓ | ✓ | | | | ✓ | ✓ | |
| | 6 mm² | ✓ | | ✓ | ✓ | | ✓ | ✓ | | | | ✓ | ✓ | |
| | 10 AWG | ✓ | | ✓ | ✓ | | ✓ | ✓ | | | | ✓ | ✓ | |
| PV-KST4-EVO 2A/10... PV-KBT4-EVO 2A/10... | 10 mm² | ✓ | | ✓ | | | ✓ | | | | | ✓ | | |
| | 8 AWG | ✓ | | ✓ | | | ✓ | | | | | ✓ | | |
| PV-KBT4/5...-UR, PV-KST4/5...-UR PV-KBT4/5...UR AU PV-KST4/5...UR AU | 14 AWG | | ✓ | | | ✓ | | | ✓ | | | | | ✓ |
| | 12 AWG | | ✓ | | | ✓ | | | ✓ | | | | | ✓ |
| | 10 AWG | | ✓ | | | ✓ | | | ✓ | | | | | ✓ |
| PV-KBT4/8...-UR, PV-KST4/8...-UR PV-KBT4/8...UR AU PV-KST4/8...UR AU | 8 AWG | | ✓ | | | ✓ | | | ✓ | | | | | ✓ |

Ordering information

| Order-No. | Type | Designation | Crimp contact type | | Crimping range | |
|----------------------|--------------------------|--|--------------------|---------|---|-------------------------------|
| | | | B-Crimp | O-Crimp | mm ² | AWG |
| 32.6020-61100 | PV-CZM-61100 | Size 1: Crimping pliers incl. locator for MC4 and MC4-Evo 2 | × | | 2.5 mm ² ; 4 mm ² ; 6 mm ² | 14 AWG; 12 AWG; 10 AWG |
| Consists of: | | | | | | |
| 32.6082 | PV-LOC-MC4 2.5/4/6 | Locator for MC4 | × | | 2.5 mm ² ; 4 mm ² ; 6 mm ² | 14 AWG; 12 AWG; 10 AWG |
| 32.6084 | PV-LOC-MC4-EVO 2 2.5/4/6 | Locator for MC4-Evo 2 | × | | | |
| 32.6021-61100 | PV-ES-CZM-61100 | Crimping die | × | | | |
| 32.6020-60100 | PV-CZM-60100 | Size 2: Crimping pliers incl. locator for MC4 and MC4-Evo 2 | × | | 4 mm ² ; 6 mm ² ; 10 mm ² | 12 AWG; 10 AWG; 8 AWG |
| Consists of: | | | | | | |
| 32.6081 | PV-LOC-MC4 4/6/10 | Locator for MC4 | × | | 4 mm ² ; 6 mm ² ; 10 mm ² | 12 AWG; 10 AWG; 8 AWG |
| 32.6083 | PV-LOC-MC4-EVO 2 4/6/10 | Locator for MC4-Evo 2 | × | | | |
| 32.6021-60100 | PV-ES-CZM-60100 | Crimping die | × | | | |
| 32.6020-63100 | PV-CZM-63100 | Size 3: Crimping pliers incl. locator for MC4 | | × | | 14 AWG; 12 – 10 AWG; 8 AWG |
| Consists of: | | | | | | |
| 32.6085 | PV-LOC-MC4 14/12-10/8 | Locator for MC4 | | × | | 14 AWG; 12 – 10 AWG; 8 AWG |
| 32.6021-63100 | PV-ES-CZM-63100 | Crimping die | | × | | |
| 32.6020-64100 | PV-CZM-64100 | Size 4: Crimping pliers incl. locators for MC4 | × | × | 2.5 mm ² ; 4 mm ² ; 6 mm ² | 14 AWG; 12 AWG; 10 AWG; 8 AWG |
| Consists of: | | | | | | |
| 32.6320 | PV-CZM- | Crimping pliers | | | | |
| 32.6082 | PV-LOC-MC4 2.5/4/6 | Locator for MC4 | × | | 2.5 mm ² ; 4 mm ² ; 6 mm ² | 14 AWG; 12 AWG; 10 AWG |
| 32.6021-61100 | PV-ES-CZM-61100 | Crimping die | × | | | |
| 32.6085 | PV-LOC-MC4 14/12-10/8 | Locator for MC4 | | × | | 14 AWG; 12 – 10 AWG; 8 AWG |
| 32.6021-63100 | PV-ES-CZM-63100 | Crimping die | | × | | |

Further information



Assembly instructions

For assembly instructions for “Crimping pliers for MC4 and MC4-Evo 2” please consult:
www.staubli.com/re-downloads.html → English → Assembly info → **MA704**

Crimping pliers for closed crimp contacts MC4 AWG6



Crimping pliers for closed crimp contacts MC4 (PV-CZLX/6AWG...)

- Manual crimping pliers for MC4 cable couplers with 6 AWG closed crimp terminals (PV-KBT4/13II-UR and PV-KST/13II-UR).
- Locator included for correct positioning of crimp.

Ordering information

| Order No. | Type | Designation | Connector system | Crimp range | | Crimptype | |
|-----------|--------------|--------------------------------|------------------|-----------------|-----|----------------|------------------|
| | | | | mm ² | AWG | Open crimp AWG | Closed crimp AWG |
| 32.0349 | PV-CZLX/6AWG | Crimping pliers, incl. locator | MC4 | | 6 | | 6 |

Individual parts

| | | | | | | | |
|---------|-----------------|---------|-----|--|---|--|---|
| 32.0350 | PV-CZL/6AWG-LOC | Locator | MC4 | | 6 | | 6 |
|---------|-----------------|---------|-----|--|---|--|---|

Further information



Assembly instructions

For assembly instructions for “Crimping pliers for closed crimp contacts MC4 (PV-CZLX/6AWG)” please consult:
www.staubli.com/re-downloads.html → English → Assembly info → **MA710**

Crimping pliers for semi-professional use MC4, IEC only



- Application: For occasional field assembly of IEC certified Stäubli connectors.
- Not UL certified.

Crimping pliers for semi-professional use MC4 (PV-CZM-BS)

Ordering information

| Order No. | Type | Designation | Pliers cross sections | Connector system |
|----------------|-----------|-----------------|-----------------------|------------------|
| | | | mm ² | |
| 32.6025 | PV-CZM-BS | Crimping pliers | 2.5; 4; 6 | MC4 |

Further information



Assembly instructions

For assembly instructions for “Crimping pliers for semi-professional use MC4” please consult:
www.staubli.com/re-downloads.html → English → Assembly info → **MA289**

Stripping pliers



- Suitable for all PV leads; in particular Flex-Sol-Evo leads.
- For stripping small amounts of lead.
- With length stop.

Stripping pliers (PV-AZM...)

Ordering information

| Order No. | Type | Designation | Pliers cross sections | |
|--------------------|--------------|--|-----------------------|-----------|
| | | | mm ² | AWG |
| 32.6027-156 | PV-AZM-156 | Stripping pliers incl. built-in stripping blades | 1.5; 2.5; 4; 6 | |
| 32.6027-410 | PV-AZM-410 | Stripping pliers incl. built-in stripping blades | 4; 6; 10 | |
| 32.6027-128 | PV-AZM-128 | Stripping pliers incl. built-in stripping blades | | 12; 10; 8 |
| 32.6027-106 | PV-AZM-106 | Stripping pliers incl. built-in stripping blades | | 10; 8; 6 |
| 32.6057-156 | PV-M-AZM-156 | Stripping blades set | 1.5; 2.5; 4; 6 | |
| 32.6057-410 | PV-M-AZM-410 | Stripping blades set | 4; 6; 10 | |
| 32.6057-128 | PV-M-AZM-128 | Stripping blades set | | 12; 10; 8 |
| 32.6057-106 | PV-M-AZM-106 | Stripping blades set | | 10; 8; 6 |

Further information



Assembly instructions

For assembly instructions for “Stripping pliers” please consult:

www.staubli.com/re-downloads.html → English → Assembly info → **MA267**

Open-end spanner sets and unlocking tool



Open-end spanner set for MC4 (PV-MS)



Unlocking tool for MC4-Evo 2
(PV-MS-MC4-EVO 2)

- For pre-tightening and loosening the cap nut.
- For MC4 and MC4-Evo 2, also for releasing the locking of the plug-in connection.



Open-end spanner set for MC4 and
MC4-Evo 2 (PV-MS-PLS)



Open-end spanner set for MC4-Evo ready
(PV-MS-MC4-EVO READY)

Ordering information

| Order No. | Type | Designation | Material |
|----------------|---------------------|---|----------|
| 32.6024 | PV-MS | Open-end spanner set for MC4 (2 pcs.) | Plastic |
| 32.6058 | PV-MS-PLS | Open-end spanner set for MC4 and MC4-Evo 2 (2 pcs.) | Metal |
| 32.6066 | PV-MS-MC4-EVO 2 | Unlocking tool for MC4-Evo 2 | Plastic |
| 32.6070 | PV-MS-MC4-EVO READY | Open-end spanner set for MC4-Evo ready (2 pcs.) | Plastic |

Further information



Assembly instructions

For assembly instructions for "Open-end spanner set for MC4 and MC4-Evo 2" please consult:
www.staubli.com/re-downloads.html → English → Assembly info → **MA270**

Cable cutter



Cable cutter (PV-WZ-KS)

- Cable cutter with a special cutting blade geometry for an easy, clean cut.
- Ergonomic one-handed operation as it is fitted with an opening spring
- No crushing or deformation of wire.
- To cut single stranded, multiple stranded, and finely stranded copper and aluminum conductors.

Ordering information

| Order No. | Type | Designation | Max. wire diameter |
|-----------|----------|--------------|--------------------|
| 32.6080 | PV-WZ-KS | Cable cutter | 15 mm |

Note

Not to be used on steel wire, wire rope, and hard-drawn copper cable.

Further information



Assembly instructions

For assembly instructions for "Cable cutter" please consult:

www.staubli.com/re-downloads.html → English → Assembly info → **MA705**

Torque tool set



Torque tool set (PV-WZ-TORQUE-SET)

- Adjustable torque tool set with optimized design.
Easy insertion and removal of the lead to be assembled.
- Ergonomic handle
- One-handed operation
- For manual final assembly of the cap nut with the correct torque for original MC4 and MC4-Evo 2 connectors
- Comes with a multi-component special pistol grip which provides a safe and comfortable fit in the hand and high-power transfer.

Technical data

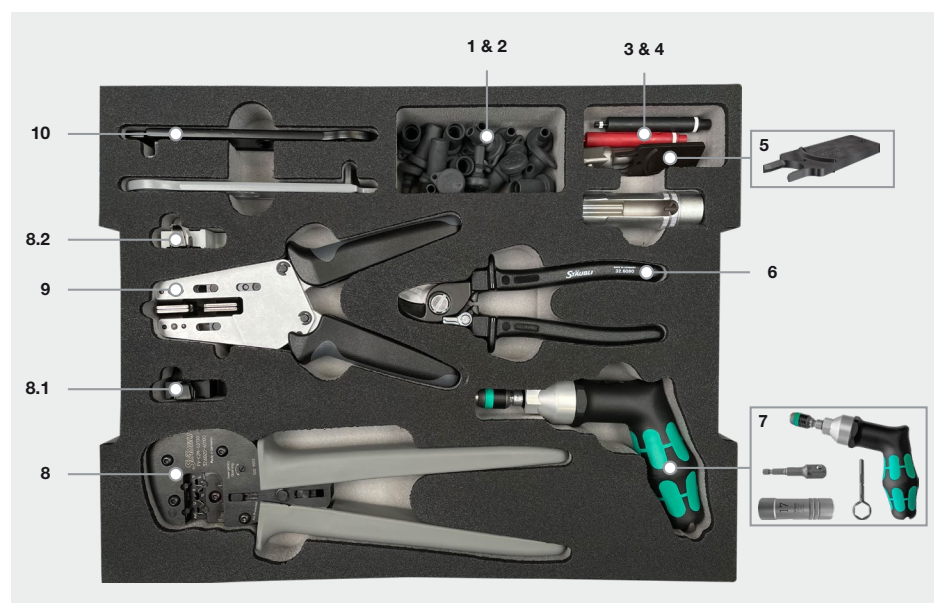
| Technical data | |
|---------------------------|--------------------|
| Range | 3.0 N m – 6.0 N m |
| Accuracy | ±6 % (EN ISO 6789) |
| Display of the set torque | Numerical scale |

Ordering information

| Order No. | Type | Designation |
|-----------|------------------|--|
| 32.0065 | PV-WZ-TORQUE-SET | Torque tool set: consisting of torque tool (incl. extra tool integrated in handle to set torque), adapter and socket wrench insert |

TOOL CASES AND TOOL BELT

Tool case for MC4 and MC4-Evo 2



- Robust plastic case with tools for the assembly of MC4 and MC4-Evo 2.
- Equipped for metric cable sizes (mm²).
- Equipped for open crimp contacts (4 mm², 6 mm², 10 mm²).

Tool case for MC4 and MC4-Evo 2

Ordering information

| Pos. | Order No. | Type | Description | Dimensions (length × width × height) |
|------|----------------|----------------------------|---------------------------------|---|
| | 32.6126 | PV-Installer Tool Case SET | Tool case for MC4 and MC4-Evo 2 | 444 mm × 350 mm × 118 mm |

Consisting of:

| | | | | |
|-----|----------------------|------------------|------------------------------------|--|
| 1 | 32.0716 | PV-BVK4 | Sealing caps socket (10 pcs.) | |
| 2 | 32.0717 | PV-SVK4 | Sealing caps plug (10 pcs.) | |
| 3 | 32.6028 | PV-PST | Test plug MC4 | |
| 4 | 32.6073 | PV-EVO-PST | Test plug MC4-Evo 2 | |
| 5 | 32.6066 | PV-MS-MC4-EVO 2 | Unlocking tool | |
| 6 | 32.6080 | PV-WZ-KS | Cable cutter | |
| 7 | 32.0065 | PV-WZ-TORQUE-SET | Torque tool | |
| 8 | 32.6020-60100 | PV-CZM-60100 | Crimping pliers for MC4, MC4-Evo 2 | |
| 8.1 | 32.6081 | PV-LOC-MC4 | Locator for MC4 | |
| 8.2 | 32.6083 | PV-LOC-MC4-Evo 2 | Locator for MC4-Evo 2 | |
| 9 | 32.6027-410 | PV-AZM-410 | Stripping pliers | |
| 10 | 32.6058 | PV-MS-PLS | Assembly and unlocking tool | |

MC4 tool case for use in UL markets



MC4 tool case for use in UL markets

- Robust plastic case with tools for assembly of MC4 connectors.
- Configured for American Wire Gauge (AWG) cable sizes (14 AWG to 8 AWG).
- Available fully populated with basic content and crimp tool kit PV-CZM-64100. The kit includes crimping plier PV-CZM with crimp insert PV-ES-CZM-63100 and locator PV-LOC-MC4 14/12-10/8 preinstalled for crimping of closed crimp contacts. It also includes crimp insert PV-ES-CZM-61100 and locator PV-LOC-MC4 2.5/4/6 for crimping of open crimp contacts.
- Also available only with basic content (no crimping pliers).

Ordering information

| Pos. | Order No. | Type | Designation | Dimension (length × width × height) |
|------|----------------------|---------------------|--|--|
| | 32.6128-64100 | PV-WZ/AWG-SET-64100 | includes basic content and tool kit PV-CZM-64100 (open contacts 14/12/10 AWG, closed contacts 14/12/10/8 AWG) | 444 mm × 350 mm × 118 mm |
| | 32.6128-00000 | PV-WZ/AWG-SET | includes basic content (crimping pliers not included) | |

Basic content

| | | | | |
|---|--------------------|------------------|---|--|
| 1 | 32.6058 | PV-MS-PLS | Assembly and unlocking tool | |
| 2 | 32.0065 | PV-WZ-Torque-Set | Torque tool | |
| 3 | 32.6027-128 | PV-AZM-128 | Stripping pliers (cable sizes 12/10/8 AWG) | |
| 4 | 32.6080 | PV-WZ-KS | Cable cutter | |
| 5 | 32.6028 | PV-PST | Test plug | |
| 6 | 32.0716 | PV-BVK4 | Sealing cap for female cable couplers (10 pcs.) | |
| 7 | 32.0717 | PV-SVK4 | Sealing cap for male cable couplers (10 pcs.) | |

Tool belt for MC4 and MC4-Evo 2



Tool pouch



Material pouch



Tool belt for MC4 and MC4-Evo 2

- The correct tool is always at hand in the tool belt for MC4 and MC4-Evo 2.
- The tool belt for MC4 and MC4-Evo 2 consists of:
 - a tool bag with leather holders, integrated elastic compartments, and D-ring to keep all tools needed for on-site assembly.
 - a material bag with zipper for safe storage of connectors and other small parts. The material bag can be kept open thanks to a snap fastener.
 - a belt with quick fastener.
- Long-lasting thanks to heavy-duty, weatherproof material.

- Easy to put the tool belt on and take it off thanks to an adjustable snap fastener.
- Stable seating, the tool belt will not twist.

Note:

The tool belt for MC4 und MC4-Evo 2 is delivered without the tools and materials shown here.

Ordering information

| Order No. | Type | Designation | Dimensions (length × width × height) |
|-----------|-------------------------|---------------------------------|---|
| 32.0387 | Installer Tool Belt SET | Tool belt for MC4 and MC4-Evo 2 | |

Consists of:

| | | |
|--|--------------------------|-----------------------------|
| | Tool pouch | 26 cm × 14.5 cm × 27 cm |
| | Material pouch | 17.5 cm × 10.5 cm × 18.5 cm |
| | Belt with quick fastener | 155 cm × 5.5 cm |

ACCESSORIES

Test plug MC4



Test plug MC4 (PV-PST)

- This test plug is used to verify the correct location of the MC4 contact in the insulation.

Ordering information

| Order No. | Type |
|-----------|--------|
| 32.6028 | PV-PST |

Test plug MC4-Evo 2



Test plug MC4-Evo 2 (PV-EVO-PST)

- This test plug is used to verify the correct location of the MC4-Evo 2 metal contact in the insulation.

Ordering information

| Order No. | Type |
|-----------|------------|
| 32.6073 | PV-EVO-PST |

Sealing caps MC4 and MC4-Evo 2



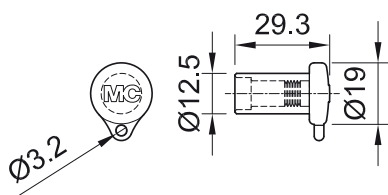
Sealing cap for female cable couplers
(PV-BVK4)



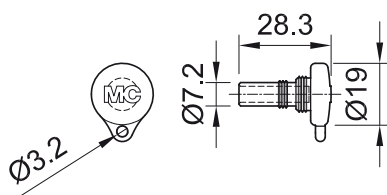
Sealing cap for male cable couplers
(PV-SVK4)

- Sealing caps for protective purpose of unplugged PV connectors.

Dimensional drawings, in mm



Sealing cap for female cable couplers
(PV-BVK4)



Sealing cap for male cable couplers
(PV-SVK4)

Ordering information

| Order No. | Type | Suitable for socket side | Suitable for plug side | Material | Connector system |
|-----------|---------|--------------------------|------------------------|----------|------------------|
| 32.0716 | PV-BVK4 | x | | TPE | MC4/MC4-Evo 2 |
| 32.0717 | PV-SVK4 | | x | TPE | MC4/MC4-Evo 2 |

Further information



Assembly instructions

For assembly instructions for "Sealing caps MC4 and MC4-Evo 2" please consult:
www.staubli.com/re-downloads.html → English → Assembly info → **MA258**

Safety lock clip



Safety lock clip (PV-SSH4)

- The pluggable safety lock clip secures the PV plug connection. The plug connection can only be unlocked with the open-end spanner set (PV-MS or PV-MS-PLS).
- The safety lock clip is suitable for MC4 connector systems.

Ordering information

| Order No. | Type | Designation | Connector system |
|-----------|---------|------------------|------------------|
| 32.5280 | PV-SSH4 | Safety lock clip | MC4 |

Further information



Assembly instructions

For assembly instructions for "Safety lock clip" please consult:

www.staubli.com/re-downloads.html → English → Assembly info → **MA252**

Socket wrench insert



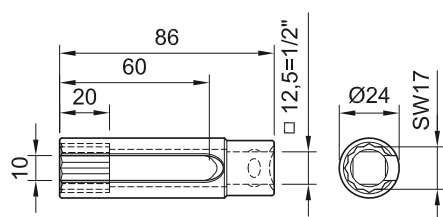
Socket wrench insert to tighten
(PV-WZ-AD/GWD)



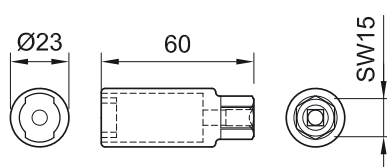
Socket wrench insert to secure (PV-SSE-AD4)

- Stäubli recommends these socket wrench inserts for a simple and safe assembly of the panel receptacles.

Dimensional drawings in mm



Socket wrench insert to tighten
(PV-WZ-AD/GWD)



Socket wrench insert to secure (PV-SSE-AD4)

Ordering information

| Order No. | Type | Designation |
|----------------|--------------|---------------------------------|
| 32.6006 | PV-WZ-AD/GWD | Socket wrench insert to tighten |
| 32.6026 | PV-SSE-AD4 | Socket wrench insert to secure |



● Stäubli Units ○ Representatives/Agents

Global presence of the Stäubli Group

www.staubli.com