

# **Photovoltaics**

Shaping the future with solar tools from CIMCO







# Reliable tools for clean energy

Providing the right tools for the energy transition

Having safe and reliable tools to use is essential when installing photovoltaic systems. We support the professionals who are busy working on the energy transition for all our sakes by supplying them with the very latest solar tools, which have been subjected to stringent testing and which we are constantly developing. Tools tailored to the particular challenges that arise when working on roofs. So nothing bad ever goes down up there.



# PV MC 4 click 'n' crimp

with exchangeable insert



Item no. 10 6034



Consistently pristine crimp quality









# Wave belt bag

with swivel function



# $\hookrightarrow$ Always to hand

The most important tools together in a practical set.



# SET 1 → Solar belt bag

· WAVE belt bag	17 0476
· PV MC 4 click 'n' crimp	10 6034
· DUOCUT cable shears	12 0108
PV-STRIP insulation stripper	12 0047
Photovoltaic-MC 4     unlocking tool	18 0004
· Cable ties, resistant to UV and cold	18 1722



Weight 1,250 g Item no.

17 0477



# SET 2 → Solar SK belt bag

· WAVE belt bag	17 0476
PV MC 4 click 'n' crimp	10 6034
· SOLAR wire stripper	10 0774
Photovoltaic-MC 4     unlocking tool	18 0004
· Cable ties, resistant to UV and cold	18 1722

Item no. 17 0680



### Tip → Leather/fabric belt

€ 00 860–1,320 mm





# Solar tools

#### for a reliable installation

Photovoltaic systems on roofs or in large solar arrays are becoming more and more important for powering the energy transition. To keep this process going or even speed it up, we need tradespeople with reliable tools who can build and maintain these complex systems professionally.



Length stop 8.5 and 15 mm, for connecting common PV plugs



Clean and reliable cutting of fine-stranded conductors



Precise, fine, 5-fold adjustment (can even strip the multi-layered insulation on solar cables)

# → Perfectly equipped The most important insulation stripping tools at a glance



# Ergonomic, automatic → Automatic wire stripper

- · For all common solar cables, 1.5-6 mm²
- Precise, fine, 5-fold adjustment (can even strip the multi-layered insulation on solar cables)
- Optical length measurement from 8 to 24 mm, 5/16" to 1"
- Integrated diagonal pliers for cables up to max. 3 mm ø



#### NEW

# Compact, manual, small → PV-Strip insulation stripper

- For PV cables, power cables and safety cables from 2.5 to 6 mm<sup>2</sup>
- Length stop 8.5 and 15 mm, for connecting common PV plugs
- · No need to adjust the blades to the cut depth
- · With fixing clip



#### Versatile

#### → 1,000 V VDE DUOCUT cable shears

- · Cable shears for copper and aluminium cables
- Large blade for sheathed cables up to max. 10 mm ø
- · Small blade for individual wires up to max. 4 mm ø
- VDE/GS approved, according to IEC 60900 and VDE 0682/Part 201
- Longitudinal cut possible



# Cables fastened on metal edges

for a professional solution



# Can be turned 90° and used in that position

→ Clip-in cable tie with fixing clip

- Clamping range 1-3 mm, bundle diameter 4-45 mm
- Cable tie can be inserted in the clip in the longitudinal or transverse direction
- · 4.6 x 200 mm
- · Material: PA 6.6, UV-stabilised
- · PU: 100 pieces
- · Colour: black





Weather-resistant for flexible use



Cables not damaged on sharp edges





# Reliable connections made to last Photovoltaic connector system

- Compatible with the MC 4 market standard and fits all common solar cables from 2.5 to 6 mm<sup>2</sup>
- Consists of a plug and socket connection system incl. plastic housing

Technical data	
Temperature range:	-40°C/+85°C
Current carrying capacity:	30 A (4 mm², 6 mm²)
Contact resistance of connector system:	5 mΩ
ø of connector contact:	4 mm
Contact material:	Copper, silver-plated
Voltage range:	1,000 V
Insulation material:	PC/PA
Protection class:	IP 67
Safety class:	II
Certification:	TÜV

Version	PU	Item no.
Male + female set	1	18 8010
Male + female set	10	18 8000
Male + female set	100	18 0000
Male	1	18 0001
Female	1	18 0002



Matching product: Unlocking tool

See page 18



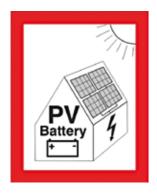
### Avoid risks caused by weather → Cable ties, UV-resistant

- UV-resistant cable ties made from PA 6.6 with a service life up to ten times longer than standard
- Resistant to cold down to -40°C, ideal for use outdoors, e.g. when installing photovoltaics
- · Self-extinguishing, flammability class UL 94 V-2
- Temperature resistance from -40°C to +85°C
- · PU: 100 pieces

WxLmm	Cable harness ø	Minimal tensile strength N	Item no.
3.5 x 140	3–36	150	18 1720
4.5 x 200	3–51	220	18 1722
4.5 x 280	5-76	220	18 1723
4.5 x 360	5-101	220	18 1724
7.5 x 360	5-101	460	18 1726



# Plugs + accessories





#### Version

storage

#### 1 Indicates a PV 18 2798 system with battery

2 Indicates a PV system

18 2799

Item no.

#### For protecting workers in the event of fire → Fire safety notices

- · Film, self-adhesive, W 105 x H 148 mm
- · White/Signal red (RAL 3001)
- · DIN 4066, VDE AR 2100-712

PV systems on the top or side of buildings are not always identifiable at first glance. Current-carrying parts can be fatal to workers in the event of a fire.

Information signs on PV systems in accordance with DIN 4066 make people safer and should be attached in an easily visible and safe location near to the main access area.



#### Version

Item no. 2023 18 2701

#### For efficient operation

#### → PV inspection sticker

- · "Geprüft PV-Anlage nach VDE" (PV system tested acc. to VDE)
- · Standard film, yellow
- · Diameter: 30 mm
- · Book of 108 labels

#### How often does a PV system need to be maintained?

It is recommended to have a photovoltaic system maintained regularly by a specialist company.

The general operating condition should be continuously monitored remotely.

A periodic inspection should be conducted every one to four years, depending on the location, structural conditions or effects of the weather (see DIN VDE 0105-100 and DIN EN 62446-1 (VDE 0126-23-1).

Insurance companies frequently stipulate in their terms and conditions that annual visual inspections and other periodic inspections must be carried out.



Item no.

11 1438



#### Rubberised housing + protective cover → Digital tape measure FVP-30

- · Measurement range up to 30 m, accuracy 2 mm/m
- · LCD, backlit
- · Distance measurement, planimetry, volume measurement or indirect measurement
- · Memory, auto-off
- · Laser class II

#### **Including load connection**

→ AC/DC voltage tester 1,000 V AC/1,500 V DC, with FI/RCD trigger and LED/LCD display

- Resistance measurement (1 to 1,999  $\Omega$ )
- · Single-pole, phase sequence and continuity test
- · Automatic polarity detection
- Frequency range 40-400 Hz
- · CAT III 1,000 V, CAT IV 600 V
- · TÜV/GS

#### **AS A SET**



Item no. 10 4041

#### The basics for every electrician → VDE universal electrician set

Diagonal pliers, 160 mm	10 0574
Slot-head screwdriver 3.0 x 0.5 x 100	11 7702
Slot-head screwdriver 4.0 x 0.8 x 100	11 7704
Special screwdriver with combination profile PZ FL 1	11 7751
Special screwdriver with combination profile PZ FL 2	11 7752
Tool case	17 0625





The universal crimping tool for various applications.

#### click'n' crimp vstem click 'n' crimp sets **→** With crimping profile inserts **SET 1 Electrical engineering** Crimping profile inserts: Item no. 10 6010, 10 6011, 10 6012 10 6000 **SET 2 Automotive** Crimping profile inserts: Item no. 10 6010, 10 6011, 10 6013 10 6002 Exchangeable **SET 3 Data network technology** Crimping profile inserts: inserts available 10 6015, 10 6017, 10 6019 10 6009 Inserts changed without needing tools SET 4 Solar technology Space for up to Crimping profile inserts: 2 inserts in the handle Item no. 10 6010, 10 6027, 10 6028 10 6052 of the pliers

# click 'n' crimp crimping profile inserts

	Designation	Cross section	Item no.
IS	Insulated connectors (red/blue/yellow)	0.5–6 mm²	10 6010
R	Tubular cable lugs	0.5–10 mm²	10 6011
Q	Crimping cable lugs	0.5–10 mm²	10 6011
AE	Wire end ferrules	0.5–10 mm² 16–35 mm² 25 and 50 mm²	10 6012 10 6014 10 6071
PV	PV photovoltaics	MC 3 cross section: 2.5–6 mm <sup>2</sup> MC 4 cross section: 2.5–6 mm <sup>2</sup>	10 6027 10 6028
FL	Uninsulated blade terminals	0.5–6 mm²	10 6013
BNC	BNC/TNC coax	RG58, RG59, RG62AU, RG174	10 6015
NW	Network	RJ11, RJ12 (SS, AMP) RJ45 (SS, AMP) RJ45 (CAT5)	10 6016 10 6017 10 6019





# Steel cable ties

#### for extreme demands

Ideal for use where extreme demands must be met, e.g. in machine and vehicle construction, signalling systems, shipbuilding, mining, the food and chemicals industries, power plants, subways, buildings, switch cabinets, on oil rigs



### Unshakeable strength guaranteed. → Stainless steel cable ties\*

- Cable ties made from AISI 316 stainless steel (DIN 1.4401), with ball lock
- Resistant to corrosion and radiation, anti-magnetic
- · Resistant to aggressive chemicals
- Steel thickness:0.26 mm (width 4.6/7.9 mm)0.32 mm (width 12 mm)
- Black version: Coated with polyester, UV-stabilised and halogen-free
- · Temperature resistance:
- -80°C to +538°C (natural)
- -80°C to +538/150°C (black, steel/polyester)
- · Certification: UL, DNV, LR



#### Versions\*

Width mm	Length mm	Max. cable harness ø	Minimal tensile strength N	PU	Item no. (uncoated)	<b>Item no.</b> (coated black)
4.6	100	20	550	100	18 6000	18 6100
	125	27		100	18 6001	18 6101
	150	44		100	18 6002	18 6102
	200	50		100	18 6003	18 6103
	290	75		100	18 6004	18 6104
	360	102		100	18 6005	18 6105
	520	152		25	18 6006	18 6106
7.9	200	50	1,200	100	18 6010	18 6110
	290	75		100	18 6011	18 6111
	360	102		100	18 6012	18 6112
	520	152		25	18 6013	18 6113
	680	203		50	18 6014	18 6114
	840	254		25	18 6015	18 6115
	1,000	318		25	18 6016	18 6116
12.0	290	75	2,200	25	18 6020	18 6120
	360	102		25	18 6021	18 6121
	520	152		25	18 6022	18 6122
	680	203		25	18 6023	18 6123
	840	254		25	18 6024	18 6124
	1,000	318		25	18 6025	18 6125





#### Top quality

#### ⇒ "Skinny Soft" work gloves

- · Nylon gloves with knitted cuff + PU coating
- · Part-coated on palm and fingertips
- · Very close-fitting
- · Colour: grey

Size	PU	Item no.
8/M	1	14 1248
9/L	1	14 1260
10/XL	1	14 1261
11/XXL	1	14 1262



#### For releasing plug connections

→ MC 4 photovoltaics unlocking tool

Unlocking tool for releasing the plug connection of photovoltaic connectors.



For an extra-strong grip and dextrous working.



# Sicher seit 1827.







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