



Solar Energy

Comprehensive cable management solutions for solar plants





UV Weathering Test UV-stability tested by Fraunhofer ISE



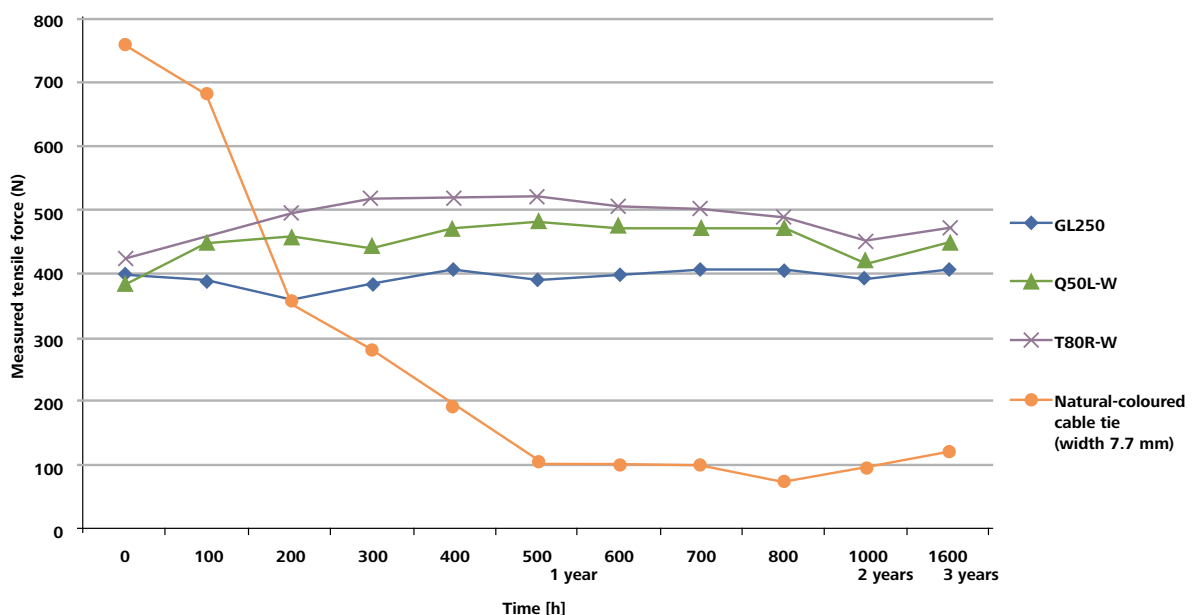
HellermannTyton commissioned the **Fraunhofer Institute for Solar Energy Systems ISE** to carry out an extended UV weathering test on cable ties.

Four HellermannTyton cable ties made from different plastics were fastened under load to cylinders and exposed to UV radiation at controlled intervals inside a test chamber. Loop strength tests were subsequently performed by VDE Institute on the ties according to section 9.5.1 of DIN EN 62275:2010-07.

The specimens were exposed to a UV dose of 156.78kWh/m² for 1600 hours, corresponding to approximately three years of Central European natural solar irradiation exposure.

The graph below depicts the mean results of the cable tie loop strength test after the artificial UV weathering. The natural-coloured standard polyamide 6.6 cable tie already showed significant material damage caused by the UV radiation after only 200 hours in the test chamber. The loop tensile strength of this non-UV-stabilised material dropped to less than 50 percent of its initial value.

In contrast, the **Q50L-W and T80R-W ties** made from UV-stabilised polyamide 6.6, and the **GL250**, made from polyamide 11, **showed** virtually **no effects of UV weathering**.





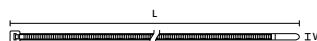
Cable Ties Inside Serrated



Cable Ties for outdoor use (UV-resistant)

T-Series in PA66W black

Polyamide 6.6,
UV-resistant (PA66W)
-40 °C to +85 °C, (+105 °C, 500 h)



- UV resistant black cable tie available in a wide range of sizes
- Made from 100 % high quality plastic, allows for good recycling
- Inside serration for a strong hold onto bundles
- Easy application either manually or with a processing tool
- Simply to insert due to bent tail

TYPE	Width (W)	Length (L)	Bundle Ø max.	N	Material	Colour	Pack Cont.	Tools	Article-No.
T18R	2.5	100.0	22.0	80	PA66W	Black (BK)	100 pcs.	2;4-6	111-01960
T18L	2.5	205.0	55.0	80	PA66W	Black (BK)	100 pcs.	2;4-6	111-02160
T25LL	2.8	330.0	95.0	110	PA66W	Black (BK)	100 pcs.	2;4-6	111-02660
T30R	3.5	150.0	35.0	135	PA66W	Black (BK)	100 pcs.	2;4-6	111-03260
T80R	4.7	210.0	55.0	355	PA66W	Black (BK)	100 pcs.	2-12	111-05060
T80I	4.7	300.0	85.0	355	PA66W	Black (BK)	100 pcs.	2-12	111-08290
T80L	4.7	390.0	110.0	355	PA66W	Black (BK)	100 pcs.	2-12	111-05460
T150R(H)	7.6	365.0	100.0	670	PA66W	Black (BK)	100 pcs.	3;9-12	111-14860
T120M	7.6	460.0	125.0	535	PA66W	Black (BK)	100 pcs.	3;9-12	111-12660
T120L	7.6	760.0	225.0	535	PA66W	Black (BK)	50 pcs.	3;9-12	111-12430

All dimensions in mm. Subject to technical changes.
Minimum Order Quantity (MOQ) may differ from package content. Other packaging options may also be available.

Cable Ties Inside Serrated



Cable Ties for bundling wires in solar power systems

Polyamide 11, UV-resistant (PA11W)
-40 °C to +105 °C



- Manufactured from polyamide 11
- High UV resistance for long-term outdoor applications
- Stable technical performance even at very low temperatures
- High resistance to chemicals, including chlorides
- Low water absorption rate for consistent technical performance and high durability

TYPE	Width (W)	Length (L)	Bundle Ø max.	N	Material	Colour	Pack Cont.	Tools	Article-No.
T18R	2.5	100.0	22.0	80	PA11	Black (BK)	100 pcs.	2;4-6	111-01718
T30R	3.5	150.0	35.0	130	PA11	Black (BK)	100 pcs.	2;4-6	111-01719
T50S	4.6	150.0	35.0	170	PA11	Black (BK)	100 pcs.	2-10	111-01720
T50R	4.6	200.0	50.0	170	PA11	Black (BK)	100 pcs.	2-10	111-01721
GL250	4.8	252.0	65.0	250	PA11W	Black (BK)	100 pcs.	2-10	111-01265
GL300	4.8	301.0	80.0	250	PA11W	Black (BK)	100 pcs.	2-10	111-01266
GL380	4.8	383.0	105.0	200	PA11W	Black (BK)	100 pcs.	2-10	111-01641
GL460	9.6	465.0	130.0	480	PA11W	Black (BK)	25 pcs.	3;9-12	111-02052
GL600	9.6	605.0	175.0	480	PA11W	Black (BK)	25 pcs.	3;9-12	111-02053

All dimensions in mm. Subject to technical changes.
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Cable Ties and Fixings

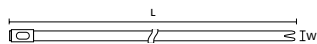
Cable Ties With Fixing Elements

Cable Ties, Stainless Steel



Cable Ties with Ball-Lock
MBT-Series, Stainless Steel 304

Stainless Steel (SS304)
-80 °C to +538 °C



- Cable ties MBT, made from stainless steel 304
- Patented non-releasable locking feature
- Corrosion resistant
- Weather resistant
- Outstanding chemical resistance
- High temperature resistant
- Non-burning

TYPE	Width (W)	Length (L)	Bundle Ø min.	Bundle Ø max.	N	Material	Pack Cont.	Tools	Article-No.
MBT14SS	4.6	362.0	17.0	102.0	900	SS304	100 pcs.	15-18	111-93148
MBT20SS	4.6	521.0	17.0	152.0	900	SS304	100 pcs.	15-18	111-93208
MBT27SS	4.6	685.0	17.0	203.0	900	SS304	100 pcs.	15-18	111-93278
MBT14HS	7.9	362.0	17.0	102.0	2,000	SS304	50 pcs.	15-18	111-94148
MBT20HS	7.9	521.0	17.0	152.0	2,000	SS304	50 pcs.	15-18	111-94208
MBT27HS	7.9	685.0	17.0	203.0	2,000	SS304	50 pcs.	15-18	111-94278

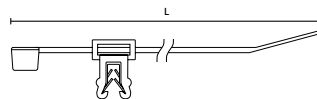
All dimensions in mm. Subject to technical changes.
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Cable Ties With Fixing Elements



2-Piece Fixing Ties for Edges,
1.0 - 3.0 mm,
• EdgeClip-Family

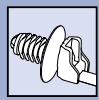
Polyamide 6.6, UV-resistant (PA66W)
-40 °C to +85 °C, (+105 °C, 500 h)



- Pre-assembled 2-piece fixing tie with EdgeClip
- Cable tie head can be moved after bundling
- For edges of 1 – 3 mm
- UV-resistant

TYPE	Drawing	Width (W)	Length (L)	Bundle Ø max.	N	Material Cable Tie	Material Foot Part	Colour	Tools	Article-No.
T50ROSEC4A-W		4.6	200.0	45.0	225	PA66W	PA66W	Black (BK)	2-10	156-00570
T50ROSEC5A-W		4.6	200.0	45.0	225	PA66W	PA66W	Black (BK)	2-10	156-00661
T50ROSEC4B-W		4.6	200.0	45.0	225	PA66W	PA66W	Black (BK)	2-10	156-01154
T50ROSEC5B-W		4.6	200.0	45.0	225	PA66W	PA66W	Black (BK)	2-10	156-00698

All dimensions in mm. Subject to technical changes.



Cable Ties With Fixing Elements



**2-Piece Fixing Ties for Edges,
3,0 - 6,0 mm**
EdgeClip-Family

Polyamide 6.6, UV-resistant (PA66W)
-40 °C to +85 °C, (+105 °C, 500 h)

- Pre-assembled 2-piece fixing tie with EdgeClip
- Cable tie head can be moved after bundling
- For minimum bundle diameters of 1 mm
- For edges of 3 – 6 mm

TYPE	Width (W)	Length (L)	Bundle Ø max.		Material Cable Tie	Material Foot Part	Colour	Tools	Article-No.
T50ROSEC23	4.6	200.0	45.0	225	PA66W	PA66W	Black (BK)	2-10	156-00843

All dimensions in mm. Subject to technical changes.

Fixing Elements



**Fixing Elements for cables with
Automatic Locking Feature**
GalvaLok Edge-Clips

Polyamide 11, UV-resistant (PA11W)
-40 °C to +105 °C

- Push and click closure for fixing 1 or 2 cables.
- Bundle diameter is from 6.4 to 7.1mm.
- Ideal for use where holes are not acceptable.
- Made of PA11, same as GalvaLok cable ties, GalvaLok Edge-Clip has excellent salt corrosion resistance and insulation resistance.

TYPE	Width (W)	Length (L)	Bundle Ø max.	Material	Colour	Article-No.
GLEC1-2J-7	15.0	30.3	7.1	PA11W	Black (BK)	151-02060

All dimensions in mm. Subject to technical changes.

Fixing Elements



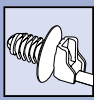
**Fixing Elements for cables with
Automatic Locking Feature**
GalvaLok Edge-Clips

Polyamide 11, UV-resistant (PA11W)
-40 °C to +105 °C

- Push and click closure for fixing 1 or 2 cables.
- Bundle diameter is from 6.4 to 7.1mm.
- Ideal for use where holes are not acceptable.
- Made of PA11, same as GalvaLok cable ties, GalvaLok Edge-Clip has excellent salt corrosion resistance and insulation resistance.

TYPE	Width (W)	Length (L)	Bundle Ø max.	Material	Colour	Article-No.
GLEC1-2VJ-7	15.0	30.0	7.1	PA11W	Black (BK)	151-02059

All dimensions in mm. Subject to technical changes.



Cable Ties and Fixings

Cable Ties With Fixing Elements

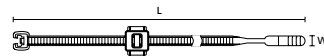
Cable Ties With Fixing Elements



2-Piece Fixing Ties for Edges, 1.0 - 3.0 mm, Top Fixing

- EdgeClip-Family

Polyamide 6.6, UV-resistant (PA66W)
-40 °C to +85 °C, (+105 °C, 500 h)



- Pre-assembled 2-piece fixing tie with EdgeClip and Q-tie
- A perfect complement within our Q-Series range
- Unique and innovative cable tie with open-head design
- Time saving solution due to quick and simple installation
- Q-tie saves more than 25 % of usual working time
- Cable tie head can be moved after bundling
- For edges of 1 – 3 mm

TYPE	Drawing	Width (W)	Length (L)	Bundle Ø max.	N	Material Cable Tie	Material Foot Part	Colour	Tools	Article-No.
Q50REC4A		4.7	210.0	45.0	220	PA66W	PA66W	Black (BK)	2-10	156-01085
Q50REC4B		4.7	210.0	45.0	220	PA66W	PA66W	Black (BK)	2-10	156-01086
Q50REC5A		4.7	210.0	45.0	220	PA66W	PA66W	Black (BK)	2-10	156-01087
Q50REC5B		4.7	210.0	45.0	220	PA66W	PA66W	Black (BK)	2-10	156-01088

All dimensions in mm. Subject to technical changes.

Fixing Elements



Fixing Elements for Tubes and Harnesses, for Edges

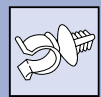
EdgeClip-Family

Stainless Steel (SS304)
-80 °C to +538 °C

- Integrated design allows for easy insertion by hand
- The panel thickness range allows for multiple applications
- Double-compression design that accommodates various sizes of wire and cable
- Presents a high extraction force for withstanding extreme conditions
- Made from stainless steel

TYPE	Width (W)	Length (L)	Panel Thickness	Material	Colour	Article-No.
MSC2LP	9.5	17.0	1.5 - 2.0	SS304	Metal (ML)	151-01699
MSC2	13.0	24.0	1.0 - 3.0	SS304	Metal (ML)	151-00982

All dimensions in mm. Subject to technical changes.



Fixing Elements



Fixing Elements for Tubes and Harnesses

Harness Clip with arrowhead

Polyamide 6.6, UV-resistant (PA66W)
-40 °C to +85 °C, (+105 °C, 500 h)

- Click wires into clip to be held securely in place
- 360° rotatable clip, this allows movement of wires if needed
- Just push the arrowhead into place for very quick and simple fixing

TYPE	Hole Ø (FH)	Material	Colour	Article-No.
HC2x7.3AH13-PV	13,0 - 15,0	PA66W	Black (BK)	151-00899

All dimensions in mm. Subject to technical changes.

Fixing Elements



Fixing Elements with FirTree

Solar Cable (SC) Series

Polyamide 6.6, high impact modified, heat and UV stabilised (PA66HIRHSUV)
-54 °C to +110 °C

- Pre-drilled holes allow for easy installation by hand
- Cable can be removed and reinstalled without removing the clip, providing multiple use options

TYPE	Width (W)	Height (H)	Bundle Ø max.	Hole Ø (FH)	Panel Thickness	Material	Colour	Article-No.
SC6.6	18.3	33.4	7.6	6,6	0.7 - 6.4	PA66HIRHSUV	Black (BK)	151-00927

All dimensions in mm. Subject to technical changes.



For detailed information on thermal transfer printers please refer to our main catalogue.

Wire and Cable Markers



Identification tags for cable bundle, „Ladder Style“, thermal transfer

TAGPU - UV-stabilised Tiptags

Polyurethane (PUR)
-25 °C to +80 °C

- TAGPU is a special UV-stabilised Tiptag
- Thermal transfer or laser beam printable
- Halogen Free
- Meets MIL-STD 202G Method 215K mark permanence tests
- Good mechanical strength and highly flexible
- Delivery in convenient storage boxes
- Easy label design with TagPrint Pro

TYPE	Length (L)	Width (W)	Pack Cont.	Colour	Article-No.
TAGPU12X60-4BU	60.0	11.6	1,000 pcs.	Blue (BU)	556-80513
TAGPU12X60-4RD	60.0	11.6	1,000 pcs.	Red (RD)	556-80512

All dimensions in mm. Subject to technical changes.

Minimum Order Quantity (MOQ) may differ from package content. Other packaging options may also be available. More colours on request.

