



# IQ Cabling and Accessories

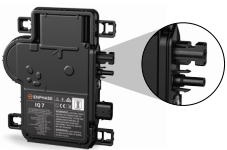
The Enphase IQ Cabling and accessories are part of the Enphase IQ System. These products support fast, simple, and reliable installations. The IQ Cabling is a UV-resistant, 2.5mm<sup>2</sup> cable gauge, continuous length cable with pre-installed connectors for IQ Series Microinverters.



**IQ7 Series Microinverters**  
The high-powered smart grid-ready IQ7 Series Microinverters - IQ7, IQ7+, and IQ7A dramatically simplify the installation process while achieving the highest system performance.



**IQ Gateway**  
Part of the Enphase Energy System, IQ7 Series Microinverters integrate with the IQ Battery, IQ Gateway, and the Enphase App monitoring and analysis software.

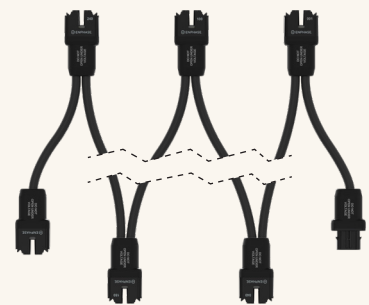


**IQ7 Series with Integrated MC4 connectors**  
Connect PV modules quickly and easily to the IQ7 Series Microinverters that has Integrated MC4 connectors.



**IQ Relay 1P and 3P**  
For production and storage circuit, integrated NS-protection device with PLC-Phase coupler (3P) and DC current injection monitoring.

- Lightweight and compact with plug-n-play connectors.
- Both single-phase and multi-phase options available.
- Fast installation with simple two-wire cabling (single-phase) or four-wire cabling (multi-phase).
- Cable numbering and plug & play connectors for quick installation and simplify cable management.



IQ7 Series Microinverters redefine reliability standards with more than one million cumulative hours of power-on testing, enabling an industry leading limited warranty of up to 25 years\*.

\* 25 years warranty is valid provided an internet connected IQ Gateway is installed.

# IQ Cabling and IQ Raw specifications

SPECIFICATIONS	
Voltage rating	600 V (Connector rating up to 250 V)
IQ Cable temperature rating	-40 °C to 90 °C wet/dry
Connector temperature rating	-40 °C to 85 °C
UV exposure rating	According to IEC60068-2-5 1008h $\leq \pm 30\%$
Environmental protection rating	IEC 60529 IP67
Compliance	RoHS, OIL RES I, CE
IQ Cable type	H07BQ-F
Cable flame rating	According to IEC 60332-1-2
IQ Cable AC connector Terminator cap	Certified to IEC 61984
IQ Cable outer diameter	Single-phase IQ Cable: 10.3 $\pm$ 0.3 mm Multi-phase IQ Cable: 12.3 $\pm$ 0.4 mm
Minimum bending radius	Single-phase IQ Cable: 5 cm Multi-phase IQ Cable: 6 cm
Conductor Resistance @20 °C	7.98 $\Omega$ /km
Conductor Resistance @85 °C	9.75 $\Omega$ /km

## IQ Cabling types / ordering options

MODEL NUMBER	PHASE	CONDUCTORS CROSS SECTIONAL AREA	MANUFACTURER RATED CURRENT @25 °C*	CABLE LENGTH BETWEEN CONNECTORS	PV MODULE ORIENTATION	CONNECTORS PER BOX	WEIGHT PER CONNECTOR**	BOX DIMENSIONS (MM)
Q-25-10-240	Single-phase	2 x 2.5 mm <sup>2</sup>	25 A	1.3 m	Portrait	240	0.27 kg	750 x 575 x 610
Q-25-17-240	Single-phase	2 x 2.5 mm <sup>2</sup>	25 A	2.0 m	Landscape (60-cell)	240	0.37 kg	975 x 575 x 610
Q-25-20-200	Single-phase	2 x 2.5 mm <sup>2</sup>	25 A	2.3 m	Landscape (72-cell)	200	0.41 kg	975 x 575 x 540
Q-25-10-3P-200	Multi-phase	4 x 2.5 mm <sup>2</sup>	25 A	1.3 m	Portrait	200	0.39 kg	750 x 575 x 650
Q-25-17-3P-160	Multi-phase	4 x 2.5 mm <sup>2</sup>	25 A	2.0 m	Landscape (60-cell)	160	0.57 kg	975 x 575 x 540
Q-25-20-3P-160	Multi-phase	4 x 2.5 mm <sup>2</sup>	25 A	2.3 m	Landscape (72-cell)	160	0.64 kg	975 x 575 x 540
Q-25-RAW-300	Single-phase	2 x 2.5 mm <sup>2</sup>	25 A	IQ Raw Cable single-phase is a reel of 300 m 2 x 2.5 mm <sup>2</sup> IQ Cable with no connectors. IQ Raw Cable single-phase spool dimensions : 500 mm x 200 mm x 400 mm				
Q-25-RAW-3P-300	Multi-phase	4 x 2.5 mm <sup>2</sup>	25 A	IQ Raw Cable multi-phase is a reel of 300 m 4 x 2.5 mm <sup>2</sup> IQ Cable with no connectors. IQ Raw Cable multi-phase spool dimensions : 500 mm x 200 mm x 400 mm				

\* Manufacturer rated current @70 °C: Single-phase IQ Cable - 19.1 A; Multi-phase IQ Cable - 17.4 A

\*\* Connector plus associated cable weight.

## IQ7 Branch circuit design

SPECIFICATIONS	I07-60-2-INT	I07PLUS-72-2-INT	I07X-96-2-INT	I07A-72-2-INT
Maximum units per single / multi-phase 20 A circuit	15 (L+N) / 45 (3L+N)	12 (L+N) / 36 (3L+N)	11 (L+N) / 33 (3L+N)	10 (L+N) / 33 (3L+N)
Maximum units per single / multi-phase IQ Cable section	15 (L+N) / 24 (3L+N)	12 (L+N) / 21 (3L+N)	11 (L+N) / 21 (3L+N)	10 (L+N) / 18 (3L+N)

For IQ Cable with 2.5 mm<sup>2</sup> stranded conductors and using a 1.25 safety factor, 16 A per phase is calculated as maximum current according to IEC 60364. Safety factor applied may vary based on local regulation or best practice, also upon the characteristic the OCPD selected.

Centre feeding is best practice. These design limits should ensure voltage rise and line conductor resistance on the IQ Cable are maintained within acceptable limits. In locations with risk of high grid voltage at the point of connection, it may be necessary to decrease the maximum number of microinverters on the IQ Cable section by as much as 50%.

# Enphase IQ Cabling Accessories



## **Q-25-RAW-300** Single-Phase Raw IQ Cable

The single-phase IQ Raw Cable is a reel of 300 m of UV-resistant, 2 x 2.5 mm<sup>2</sup> IQ Cable with no connectors.

**Voltage, Current Rating:** 600 VAC, 25 A  
**Temperature Rating:** -40 °C to 90 °C  
**L x W x H:** 500 mm x 200 mm x 400 mm  
**Weight:** 49 kg



## **Q-25-RAW-3P-300** Multi-Phase Raw IQ Cable

The multi-phase IQ Raw Cable is a reel of 300 m of UV-resistant, 4 x 2.5 mm<sup>2</sup> IQ Cable with no connectors.

**Voltage, Current Rating:** 600 VAC, 25 A  
**Temperature Rating:** -40 °C to 90 °C  
**L x W x H:** 500 mm x 200 mm x 400 mm  
**Weight:** 75 kg



## **Q-CONN-R-10M** Single-Phase Field Wireable Connector (male)

Make Field connection using single-phase IQ Cable. Suitable for conductor cross sectional area of 2 x 2.5 mm<sup>2</sup> with cable outer diameter of 10.3±0.3 mm. Use Crimp tool: Multi-Contact PV-CZM-18100, -19100, or -22100 for crimping the terminal to cable.

**Voltage, Current Rating:** 250 VAC, 25 A  
**Temperature Rating:** -40 °C to 85 °C  
**L x W x H:** 98 mm x 39 mm x 28 mm



## **Q-CONN-R-10F** Single-Phase Field Wireable Connector (female)

Make Field connection using single-phase IQ Cable. Suitable for conductor cross sectional area of 2 x 2.5 mm<sup>2</sup> with cable outer diameter of 10.3±0.3 mm. Use Crimp tool: Multi-Contact PV-CZM-18100, -19100, or -22100 for crimping the terminal to cable.

**Voltage, Current Rating:** 250 VAC, 25 A  
**Temperature Rating:** -40 °C to 85 °C  
**L x W x H:** 93 mm x 39 mm x 28 mm



## **Q-CONN-3P-10M** Multi-Phase Field-Wireable Connector (male)

Make Field connection using multi-phase cable. Suitable for conductor cross sectional area of 5 x 2.5 - 6 mm<sup>2</sup> with cable outer diameter of 8-21 mm. Use Screwdriver blade width 4 mm to 3.2 mm to torque the screw on contact carrier.

**Voltage, Current Rating:** 690 VAC, 25 A  
**Temperature Rating:** -40 °C to 105 °C  
**L x W x H:** 109 mm x 38 mm x 38 mm



## **Q-CONN-3P-10F** Multi-Phase Field-Wireable Connector (female)

Make Field connection using multi-phase cable. Suitable for conductor cross sectional area of 5 x 2.5 - 6 mm<sup>2</sup> with cable outer diameter of 8-21 mm. Use Screwdriver blade width 4 mm to 3.2 mm to torque the screw on contact carrier.

**Voltage, Current Rating:** 690 VAC, 25 A  
**Temperature Rating:** -40 °C to 105 °C  
**L x W x H:** 107 mm x 38 mm x 38 mm



## **Q-TERM-R-10** Single-phase IQ Cable Terminator

Terminator cap for unused single-phase IQ Cable ends. Suitable for conductor cross sectional area of 2 x 2.5 mm<sup>2</sup> with cable outer diameter of 10.3±0.3 mm.

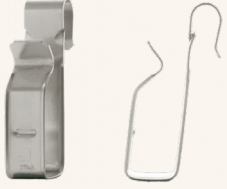
**Temperature Rating:** -40 °C to 85 °C  
**L x W x H:** 53 mm x 30 mm x 28 mm



## **Q-TERM-3P-10** Multi-phase IQ Cable Terminator

Terminator cap for unused multi-phase IQ Cable ends. Suitable for conductor cross sectional area of 4 x 2.5 mm<sup>2</sup> with cable outer diameter of 12.3±0.4 mm.

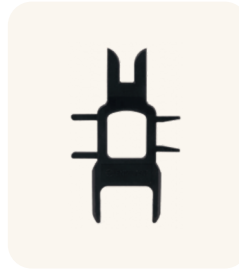
**Temperature Rating:** -40 °C to 85 °C  
**L x W x H:** 46.4 mm x 36 mm x 36 mm



**ET-CLIP-100**  
IQ Cable Clip

Used to fasten cabling to the racking or to secure looped cabling. Clip can be used to hold up to 2 single-phase IQ Cables

**H x W:** 42 mm x 10 mm



**Q-DISC-10**  
Disconnect tool

Disconnect tool for IQ Cable connectors, DC connectors, and AC module mount.

**L x W x H:** 83 mm x 55 mm x 6 mm



**Q-SEAL-10**  
IQ Cable Sealing Caps (female)

One needed to cover any unused connector on the IQ Cabling.

**Temperature Rating:** -40 °C to 85 °C  
**L x W x H:** 24 mm x 38 mm x 19 mm

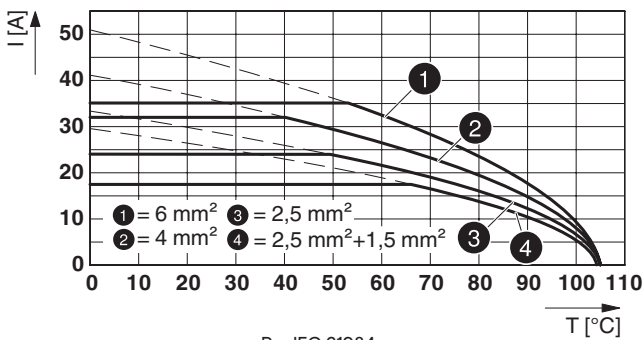


**Q-DCC-2-INT**  
Replacement DC Adaptor (MC4)

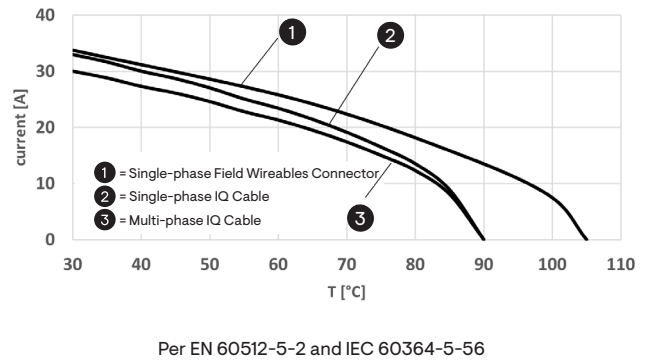
DC adaptor to Stäubli branded MC4 for IQ7 Series Microinverters.

**Voltage, Current Rating:** 100 VDC, 20 A  
**Temperature Rating:** -40 °C to 85 °C  
**L x W x H:** 160 mm x 40 mm x 21 mm

Multi-phase Field-Wireable Connectors (Q-CONN-3P-10M and Q-CONN-3P-10F) Temperature Derating Curve

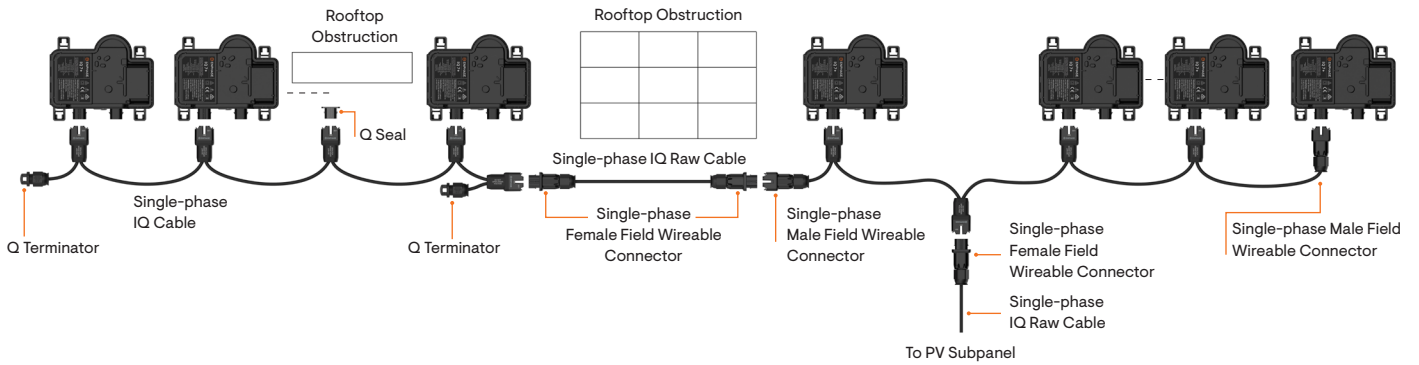


Single-phase IQ Cable, Multi-phase IQ Cable and Single-phase Field Wireable Connectors (Q-CONN-R-10M and Q-CONN-R-10F) Temperature Derating Curve

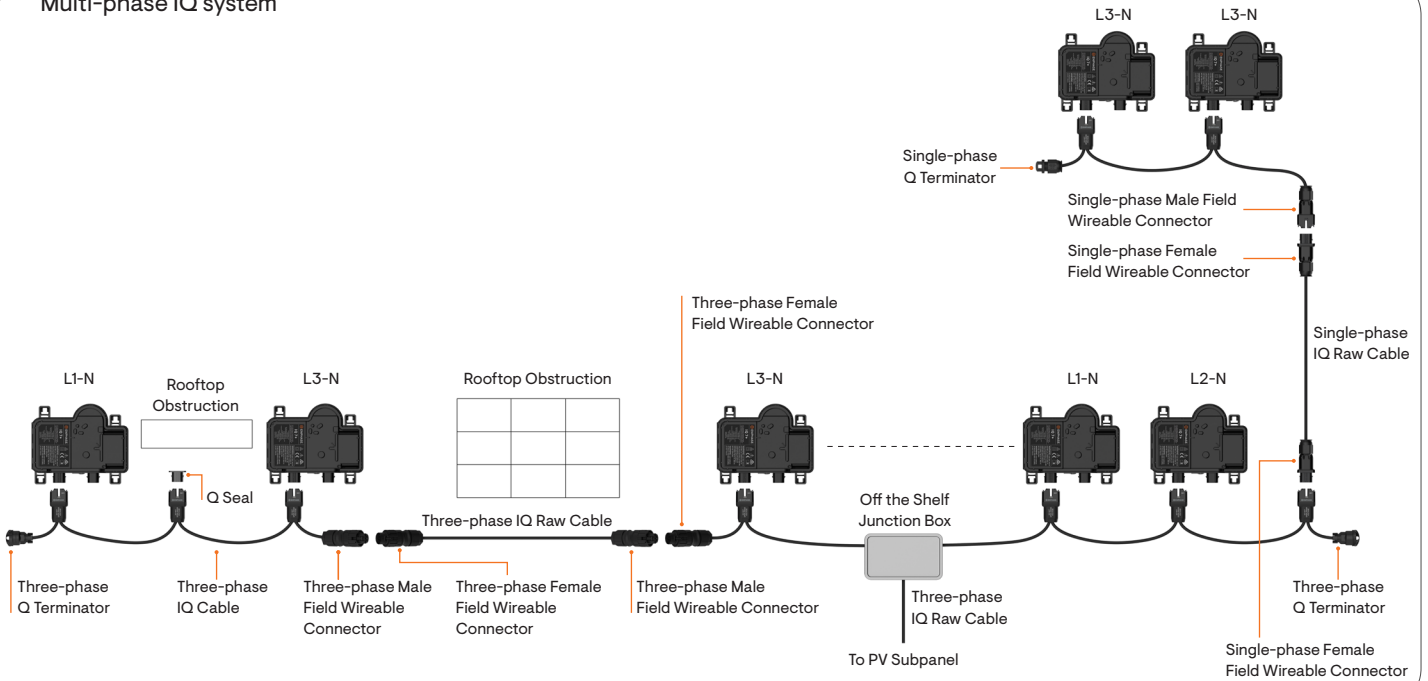


Note: It is recommended to increase the ambient temperature by 20 °C to account for solar radiation and under module heating impact on IQ Cable temperature.

### Single-phase IQ system



### Multi-phase IQ system



### Multi-phase IQ system

