EUROPE DATA SHEET



IQ Cabling and accessories

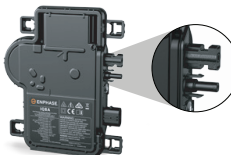
The Enphase IQ Cabling and accessories are part of the Enphase Energy System. These products support fast, simple, and reliable installations. The IQ Cabling is a UV-resistant, 2.5 mm² cable gauge, continuous length cable with pre-installed connectors for IQ Series Microinverters.



IQ7/IQ8 Series Microinverters
The high-powered smart grid-ready IQ7/IQ8 Series Microinverters dramatically simplify the installation process while achieving the highest system performance.



IQ Gateway
Part of the Enphase Energy System, IQ7/IQ8 Series Microinverters integrate with the IQ Battery, IQ Gateway, and the Enphase App monitoring and analysis software.

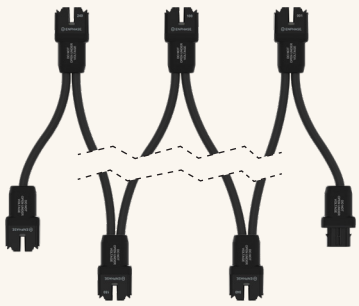


IQ7/IQ8 Series with integrated MC4 connectors
Connect PV modules quickly and easily to the IQ7/IQ8 Series Microinverters that have integrated MC4 connectors.



IQ Relay single-phase and multi-phase
For production and storage, circuit integrated, network and system protection device with PLC-phase coupler (multi-phase) and DC current injection monitoring.

- Lightweight and compact with plug-and-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-and-play connectors for quick installation and simplify cable management.



Enphase 25 year limited warranty

IQ7/IQ8 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 for microinverters is valid provided an internet-connected IQ Gateway is installed.

IQ Cabling and IQ Raw Cable 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 ≤±30%, according to IEC60068-2-5
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 IQ Terminator cap	Certified to IEC 61984
IQ Cable outer diameter	Single-phase IQ Cable: 10.3±0.3 mm Multi-phase IQ Cable: 12.3±0.4 mm
Minimum bending radius	Single-phase IQ Cable: 5 cm Multi-phase IQ Cable: 6 cm
Conductor Resistance @20°C Conductor Resistance @85°C	7.98 Ω/km 9.75 Ω/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 × 2.5 mm²	25 A	1.3 m	Portrait	240	0.27 kg	750 × 575 × 610
Q-25-17-240	Single-phase	2 × 2.5 mm²	25 A	2.0 m	Landscape (60-cell)	240	0.37 kg	975 × 575 × 610
Q-25-20-200	Single-phase	2 × 2.5 mm²	25 A	2.3 m	Landscape (72-cell)	200	0.41 kg	975 × 575 × 540
Q-25-10-3P-200	Multi-phase	4 × 2.5 mm²	25 A	1.3 m	Portrait	200	0.39 kg	750 × 575 × 650
Q-25-17-3P-160	Multi-phase	4 × 2.5 mm²	25 A	2.0 m	Landscape (60-cell)	160	0.57 kg	975 × 575 × 540
Q-25-20-3P-160	Multi-phase	4 × 2.5 mm²	25 A	2.3 m	Landscape (72-cell)	160	0.64 kg	975 × 575 × 540
Q-25-RAW-300	Single-phase	2 × 2.5 mm²	25 A	IQ Raw Cable single-phase is a reel of 300 m 2 × 2.5 mm² IQ Cable with no connectors IQ Raw Cable single-phase spool dimensions: 500 mm × 200 mm × 400 mm				
Q-25-RAW-3P-300	Multi-phase	4 × 2.5 mm²	25 A	IQ Raw Cable multi-phase is a reel of 300 m 4 × 2.5 mm² IQ Cable with no connectors IQ Raw Cable multi-phase spool dimensions: 500 mm × 200 mm × 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, IQ8 Microinverters branch circuit design

SPECIFICATIONS	UNITS	IQ7-60-2-INT/IQ7-60-M-INT	IQ7PLUS-72-2-INT/IQ7PLUS-72-M-INT	IQ7A-72-2-INT/IQ7A-72-M-INT	IQ7X-96-2-INT
Maximum units per single/ multi-phase 20 A circuit	16 A/Iacmax	15 (L+N)/45 (3L+N)	12 (L+N)/36 (3L+N)	10 (L+N)/30 (3L+N)	11 (L+N)/33 (3L+N)
		IQ8MC-72-M-INT	IQ8AC-72-M-INT	IQ8HC-72-M-INT	
		11 (L+N)/33 (3L+N)	10 (L+N)/30 (3L+N)	9 (L+N)/27 (3L+N)	
		For IQ Cable with 2.5 mm² stranded conductors and using a 1.25 safety factor, 16 A per phase is calculated as the maximum current according to IEC 60364. The safety factor applied may vary based on local regulations or best practices, as well as the characteristics of the OCPD selected.			
Maximum units per single/ multi-phase IQ Cable section		IQ7-60-2-INT/IQ7-60-M-INT	IQ7PLUS-72-2-INT/IQ7PLUS-72-M-INT	IQ7A-72-2-INT/IQ7A-72-M-INT	IQ7X-96-2-INT
		15 (L+N)/24 (3L+N)	12 (L+N)/21 (3L+N)	10 (L+N)/18 (3L+N)	11 (L+N)/21 (3L+N)
		IQ8MC-72-M-INT	IQ8AC-72-M-INT	IQ8HC-72-M-INT	
		8 (L+N)/18 (3L+N)	8 (L+N)/18 (3L+N)	8 (L+N)/18 (3L+N)	
		Centre-feeding is the 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 a 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 IQ Raw Cable

The single-phase IQ Raw Cable is a reel of 300 m of UV-resistant, 2 × 2.5 mm² IQ Cable with no connectors.

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



Q-25-RAW-3P-300
Multi-phase IQ Raw Cable

The multi-phase IQ Raw Cable is a reel of 300 m of UV-resistant, 4 × 2.5 mm² IQ Cable with no connectors.

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



Q-CONN-R-10M
Single-phase IQ Field Wireable Connector (male)

Make field connections using single-phase IQ Cable. Suitable for conductor cross-sectional area of 2 × 2.5 mm² 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 the cable.

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



Q-CONN-R-10F
Single-phase IQ Field Wireable Connector (female)

Make field connections using single-phase IQ Cable. Suitable for conductor cross-sectional area of 2 × 2.5 mm² 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 the cable.

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



Q-CONN-3P-10M
Multi-phase IQ Field Wireable Connector (male)

Make field connection using a multi-phase cable. Suitable for conductor cross-sectional area of 5 × 2.5–6 mm² with cable outer diameter of 8–21 mm. Use a screwdriver blade width of 4 mm to 3.2 mm to torque the screw on the contact carrier.

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



Q-CONN-3P-10F
Multi-phase IQ Field Wireable Connector (female)

Make field connection using a multi-phase cable. Suitable for conductor cross-sectional area of 5 × 2.5–6 mm² with cable outer diameter of 8–21 mm. Use a screwdriver blade width of 4 mm to 3.2 mm to torque the screw on the contact carrier.

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



Q-TERM-R-10
Single-phase IQ Terminator

IQ Terminator cap for unused single-phase IQ Cable ends. Suitable for conductor cross-sectional area of 2 × 2.5 mm² with cable outer diameter of 10.3±0.3 mm.

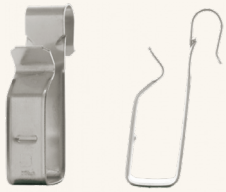
Temperature rating: -40°C to 85°C
L × W × H: 53 mm × 30 mm × 28 mm



Q-TERM-3P-10
Multi-phase IQ Terminator

IQ Terminator cap for unused multi-phase IQ Cable ends. Suitable for conductor cross -sectional area of 4 × 2.5 mm² with cable outer diameter of 12.3±0.4 mm.

Temperature rating: -40°C to 85°C
L × W × H: 46.4 mm × 36 mm × 36 mm



ET-CLIP-100
IQ Cable Clip

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

H × W: 42 mm × 10 mm



Q-DISC-10
IQ Disconnect Tool

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

L × W × H: 83 mm × 55 mm × 6 mm



Q-SEAL-10
IQ Sealing Caps (female)

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

Temperature rating: –40°C to 85°C
L × W × H: 24 mm × 38 mm × 19 mm

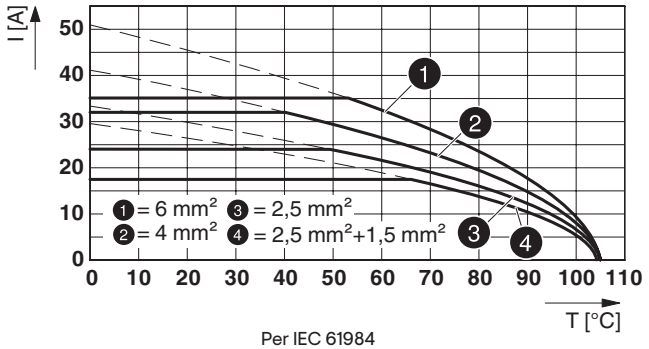


Q-DCC-2-INT
Replacement DC adaptor (MC4)

DC adaptor to Stäubli branded MC4 for IQ7 Series Microinverters.

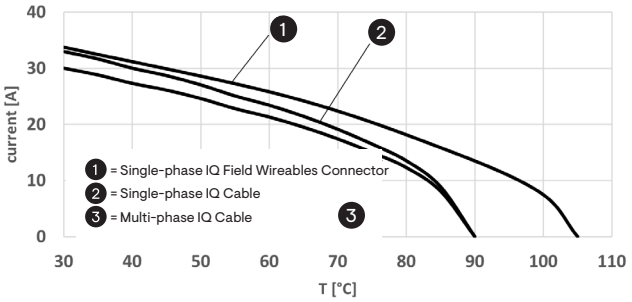
Voltage, Current rating: 100 VDC, 20 A
Temperature rating: –40°C to 85°C
L × W × H: 160 mm × 40 mm × 21 mm

Multi-phase IQ Field Wireable Connectors (Q-CONN-3P-10M and Q-CONN-3P-10F) temperature derating curve



Per IEC 61984

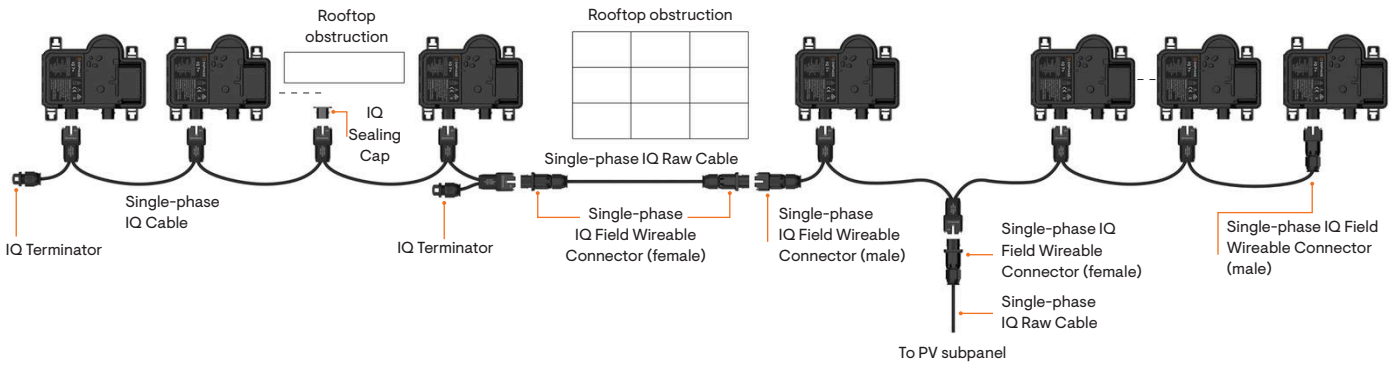
Single-phase IQ Cable, multi-phase IQ Cable and single-phase IQ Field Wireable Connectors (Q-CONN-R-10M and Q-CONN-R-10F) temperature derating curve



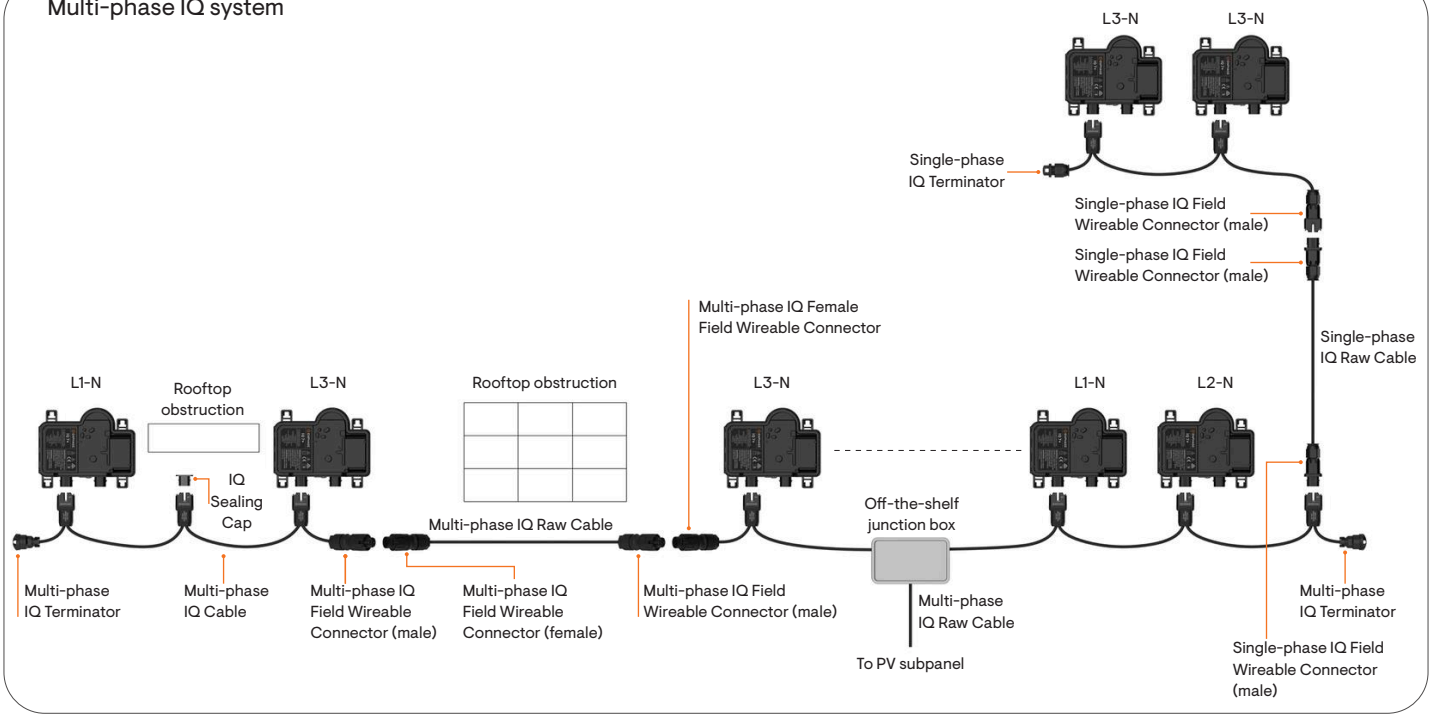
Per EN 60512-5-2 and IEC 60364-5-56

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.

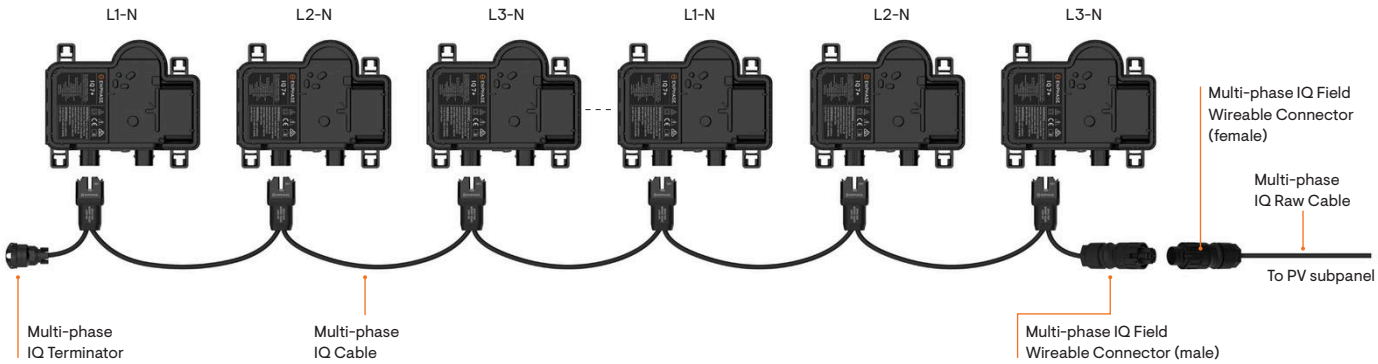
Single-phase IQ system



Multi-phase IQ system



Multi-phase IQ system



Assembled in China.
Manufacturer: Enphase Energy Inc., 47281 Bayside Pkwy, Fremont, CA, 94538, United States of America, PH: +1 (707) 763-4784
Importer: Enphase Energy NL B.V., Het Zuiderkruis 65, 5215MV, 's-Hertogenbosch, The Netherlands, PH: +31 73 3035859

Enphase IQ Cable accessories

IQ CABLE SPECIFICATIONS	
Voltage rating	600 V (connector rating up to 250 V)
Cable temperature rating	90°C wet/dry
UV exposure rating	EN ISO 492-2
Environmental protection rating	IEC 60529 IP67
Compliance	RoHS, OIL RES I, CE, UV resistant
Cable insulator rating	H07BQ-F
Flame rating	IEC 60332-1-2

IQ CABLE TYPES/ORDERING OPTIONS

Model number	Max. nominal voltage	Ampacity rating	Connector spacing	PV Module orientation	Connector count per box
Q-25-10-240 (single-phase) Q-25-10-240-A* (single-phase)	250 VAC	25 A	1.3 m	Portrait	240
Q-25-17-240 (single-phase) Q-25-17-240-A* (single-phase)	250 VAC	25 A	2.0 m	Landscape (60-cell)	240
Q-25-20-200 (single-phase) Q-25-20-200-A* (single-phase)	250 VAC	25 A	2.3 m	Landscape (72-cell)	200
Q-25-10-3P-200 (three-phase)	250 VAC	25 A	1.3 m	Portrait	200
Q-25-17-3P-160 (three-phase)	250 VAC	25 A	2.0 m	Landscape (60-cell)	160
Q-25-20-3P-160 (three-phase)	250 VAC	25 A	2.3 m	Landscape (72-cell)	160

ENPHASE IQ CABLE ACCESSORIES

Name	Model number	Description
IQ Raw Cable (single-phase)	Q-25-RAW-300	300 meters cable with no connectors
IQ Raw Cable (three-phase)	Q-25-RAW-3P-300	300 meters cable with no connectors
IQ Field Wireable Connector (male)	Q-CONN-R-10M	Make connections using single-phase cable
IQ Field Wireable Connector (male)	Q-CONN-3P-10M	Make connections using three-phase cable
IQ Field Wireable Connector (female)	Q-CONN-R-10F	Make connections from any IQ Cable (single-phase) open connector
IQ Field Wireable Connector (female)	Q-CONN-3P-10F	Make connections from any IQ Cable (three-phase) open connector
IQ Cable Clip	ET-CLIP-100	Used to fasten cabling to the racking or to secure looped cabling
IQ Disconnect Tool	Q-DISC-10	Disconnect tool for IQ Cable connectors, DC connectors, and AC module mount
IQ Disconnect Tool	Q-DISC-3P-10	Disconnect tool for three-phase Field wireable connectors
IQ Sealing Caps (female)	Q-SEAL-10	One needed to cover each unused connector on the cabling
IQ Terminator (single-phase)	Q-TERM-R-10	Terminator cap for unused single-phase cable ends
IQ Terminator (three-phase)	Q-TERM-3P-10	Terminator cap for unused three-phase cable ends
Replacement DC adaptor (MC4)	Q-DCC-2-INT	DC adaptor to MC4 (max voltage 100 VDC)
Replacement DC adaptor (MC4) IQ8P	Q-DCC-2-P-INT	DC adapter to MC4 (max voltage 100 VDC)

*** Models with "A" designation for use only in Australia and New Zealand.**



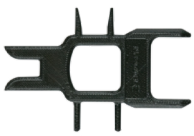
IQ TERMINATOR

Terminator cap for unused cable ends, sold in packs of ten (Q-TERM-R-10/Q-TERM-3P-10)



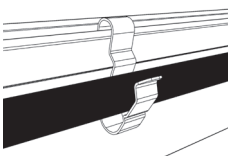
IQ SEALING CAPS

Sealing caps for unused cable connections, sold in packs of ten (Q-SEAL-10)



IQ DISCONNECT TOOL

Plan to use at least one per installation, sold in packs of ten (Q-DISC-10)
Three-phase model (Q-DISC-3P-10)



IQ CABLE CLIP

Used to fasten cabling to the racking or to secure looped cabling, sold in packs of one hundred (ET-CLIP-100)