





Q.TRON AC

Q.TRON BLK M-G2+/AC Q.TRON BLK M-G2.H1+/AC Q.TRON BLK M-G2.F1+/AC Q.TRON BLK M-G2.C1+/AC







Q.TRON AC

AC module powered by Q.ANTUM NEO Technology



Monitoring and Control

 The Q.OMMAND PRO App enables installers to monitor system performance at the module level, while the user-friendly Q.OMMAND HOME App provides homeowners with real-time PV production insights.



Streamlined Installation and **Product Management**

- Fast installation enabled by integrated Qcells microinverter
- Improved inventory management enabled by reduced SKU counts and one complete module and MLPE solution
- Seamlessly couples with Qcells' residential energy storage system to form one complete Q.HOME SMART system



Superior Module Performance

 Q.TRON AC is powered by Q.ANTUM NEO Technology, boosting module efficiency up to 22.5% which results in more power production over time.



Top Quality Customer Support

• While the detachable microinverter simplifies on-site maintenance, Qcells' first-class customer support offers rapid system troubleshooting.



Dependably Backed by One Warrantor

• 25-year product and performance warranty with an integrated module and microinverter solution from Qcells.



Includes Domestic Content

- Q.TRON BLK M-G2.H1+/AC, Q.TRON BLK M-G2.F1+/AC and Q.TRON BLK M-G2.C1+/AC contains U.S. manufactured components which can contribute to qualifying for the 10% domestic content bonus for applicable investment and production tax credits.1
- Module and microinverter both assembled in the USA by America's No.1 residential module manufacturer

1 This statement should not be relied on as tax advice and is subject to change based on changes made to the applicable rules and regulations. Please consult a qualified tax professional for specific guidance.

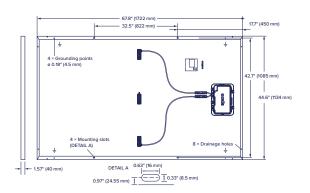


■ Description

The Q.TRON AC SERIES is a N-type TOPCon PV module with an integrated microinverter. The module, with its embedded microinverter, provides optimized power output while also acting as a rapid shutdown compliant solution for optimal system safety. The solution includes a microinverter, DC cables and a junction box, enabling a streamlined installation experience.

■ Mechanical Specification

Format	67.8 in \times 44.6 in \times 1.57 in (including frame) (1722 mm \times 1134 mm \times 40 mm)
Weight	50.59 lbs (22.95 kg)
Front Cover	0.13 in (3.2 mm) thermally pre-stressed ARC solar glass
Back Cover	Composite film
Frame	Black anodized aluminum
Cell	6 × 18 monocrystalline Q.ANTUM NEO solar half cells
Junction Box	$2.09\text{-}3.98$ in \times 1.26-2.36 in \times 0.59-0.71 in (53-101 mm \times 32-60 mm \times 15-18 mm), Protection class IP67, with bypass diodes
Cable	$4 \text{ mm}^2 \text{ Solar cable}$; (+) $\geq 25.8 \text{ in (655 mm)}$, (-) $\geq 25.2 \text{ in (640 mm)}$
Connector	Stäubli MC4; IP68



■ AC Output Electrical Characteristics

Q.MI.349B-G1 (Model Name)					
Peak Output Power	[VA]	366	Power Factor (adjustable)		0.85 leading0.85 lagging
Max Continuous Output Power	[VA]	349	Max. number of AC Modules per Q.HOME COMBINER 80 G1	[ea]	44 (Q.HOME COMBINER CB : Max 4)
Nominal (L-L) Voltage/Range	[V]	240/211 to 264	Max Units per 20 A (L-L) Branch Circuit	[ea]	11
Nominal Rated Output Current	[A]	1.45	Total Harmonic Distortion	[%]	<5
Nominal Frequency/Range	[Hz]	60/59.3 to 60.5	Overvoltage Class AC Port		III
Extended Frequency Range	[Hz]	50 to 66	Night-Time Power Consumption	[mW]	60
Power Factor at Rated Power		1.0	CEC Efficiency	[%]	97

■ DC Power Electrical Characteristics

Power Class			415	420	425	430	435	440
MINIMUM PERFORMANCE AT STA	ANDARD TEST CONDITIONS, ST	C1 (POWER		V/-0W)				
Power at MPP ¹	P _{MPP}	[W]	415	420	425	430	435	440
Short Circuit Current ¹	I _{sc}	[A]	13.49	13.58	13.66	13.74	13.82	13.90
Open Circuit Voltage ¹	V _{oc}	[V]	38.47	38.75	39.03	39.32	39.60	39.88
Current at MPP	I _{MPP}	[A]	12.83	12.91	12.98	13.05	13.13	13.20
Voltage at MPP	V_{MPP}	[V]	32.34	32.54	32.74	32.94	33.14	33.33
Efficiency ¹	η	[%]	≥21.3	≥21.5	≥21.8	≥22.0	≥22.3	≥22.5
MINIMUM PERFORMANCE AT NORMAL OPERATING CONDITIONS, NMOT ²								
Power at MPP	P _{MPP}	[W]	313.7	317.5	321.2	325.0	328.8	332.6
Short Circuit Current	I _{sc}	[A]	10.87	10.94	11.00	11.07	11.14	11.20
. Open Circuit Voltage	V _{oc}	[V]	36.50	36.77	37.04	37.31	37.58	37.84

10.10

31.07

 $^{1}\text{Measurement tolerances P}_{\text{MPP}}\pm3\%; I_{\text{SC}}; V_{\text{OC}}\pm5\% \text{ at STC: } 1000\,\text{W/m}^{2}, 25\pm2\,^{\circ}\text{C, AM 1.5 according to IEC 60904-3} \bullet ^{2}800\,\text{W/m}^{2}, \text{NMOT, spectrum AM 1.5 according to IEC 60904-3} \bullet ^{2}800\,\text{W/m}^{2}, \text{NMOT, spectrum AM 1.5 according to IEC 60904-3} \bullet ^{2}800\,\text{W/m}^{2}, \text{NMOT, spectrum AM 1.5 according to IEC 60904-3} \bullet ^{2}800\,\text{W/m}^{2}, \text{NMOT, spectrum AM 1.5 according to IEC 60904-3} \bullet ^{2}800\,\text{W/m}^{2}, \text{NMOT, spectrum AM 1.5 according to IEC 60904-3} \bullet ^{2}800\,\text{W/m}^{2}, \text{NMOT, spectrum AM 1.5 according to IEC 60904-3} \bullet ^{2}800\,\text{W/m}^{2}, \text{NMOT, spectrum AM 1.5 according to IEC 60904-3} \bullet ^{2}800\,\text{W/m}^{2}, \text{NMOT, spectrum AM 1.5 according to IEC 60904-3} \bullet ^{2}800\,\text{W/m}^{2}, \text{NMOT, spectrum AM 1.5 according to IEC 60904-3} \bullet ^{2}800\,\text{W/m}^{2}, \text{NMOT, spectrum AM 1.5 according to IEC 60904-3} \bullet ^{2}800\,\text{W/m}^{2}, \text{NMOT, spectrum AM 1.5 according to IEC 60904-3} \bullet ^{2}800\,\text{W/m}^{2}, \text{NMOT, spectrum AM 1.5 according to IEC 60904-3} \bullet ^{2}800\,\text{W/m}^{2}, \text{NMOT, spectrum AM 1.5 according to IEC 60904-3} \bullet ^{2}800\,\text{W/m}^{2}, \text{NMOT, spectrum AM 1.5} \bullet ^{2}8000\,\text{W/m}^{2}, \text{NMOT, spectrum AM 1.5} \bullet ^{2}8000\,\text$

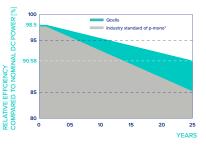
[A]

[V]

Qcells Performance Warranty

Current at MPP

Voltage at MPP



At least 98.5% of nominal DC power during first year. Thereafter max. 0.33% degradation per year. At least 95.53% of nominal DC power up to 10 years. At least 90.58% of nominal DC power up to 25 years.

 V_{MPP}

All data within measurement tolerances. Full warranties in accordance with the warranty terms of the Qcells sales organization of your respective country.

*Standard terms of guarantee for the 5 PV companies with the highest production capacity in 2021 (February 2021)

Performance at low Irradiance

10.15

31.26

10.21

31.46

10.27

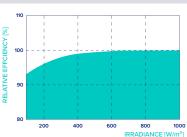
31.65

10.33

31.84

10.38

32.03



Typical module performance under low irradiance conditions in comparison to STC conditions (25 °C, 1000 W/m²).

Temperature Coefficients							
Temperature Coefficient of I _{sc}	α	[%/K]	+0.04	Temperature Coefficient of V_{oc}	β	[%/K]	-0.24
Temperature Coefficient of P _{MPP}	γ	[%/K]	-0.30	Nominal Module Operating Temperature	NMOT	[°F]	109±5.4 (43+3°C)

■ Properties for System Design

Maximum System Voltage	\mathbf{V}_{SYS}	[V]	1000 (UL)	PV Module Classification	Class II
Maximum Series Fuse Rating		[A DC]	25	Fire Rating Based on ANSI/UL 61730	C / TYPE 2
Max. Design Load, Push/Pull ³		[lbs/ft²]	113 (5400 Pa)/75 (3600 Pa)	Permitted Module Temperature on Continuous Duty ²	-40°F up to +140°F (-40°C up to +60°C)
Max. Test Load, Push/Pull ³		[lbs/ft²]	169 (8100 Pa)/113 (5400 Pa)	Storage Temperature Range ²	-4°F up to +113°F (-20°C up to +45°C)

² According to the Q.MI.349B-G1, the maximum temperature is stated as "60°C (+140°F)", but the maximum temperature of the connected DC module is up to "+85°C (+185°F)".

■ Qualifications and Certificates

Base DC module (Q.TRON BLK M-G2(,XY)+ solar module series, where "X" can be any letter between A to W and "Y" can be any number between 1 to 9.) UL 61730-1 & UL 61730-2, CE-compliant; IEC 61215:2016; IEC 61730:2016. This data sheet complies

Qcells Microinverter (Q.MI.349B-G1)

UL9703 E493181

with DIN EN 50380.

This product is UL listed as PV Rapid Shut Down Equipment UL1741, UL 1741SA, UL 1741SB, CSA C22.2 No 107.

AC Module (Q.TRON BLK M-G2(.XY)+/AC solar module series, where "X" can be any letter between A to W and "Y" can be any number between 1 to 9.) UL 1741, CSA C22.2 No. 107, IEEE E1547.







■ Accessories (Additional parts, not included in AC module package)

Model		Category
	Type 1: CAS-HQ-LO-1000 CAS-HQ-SH-650	Type 1: AC Cable Long (1000 mm) AC Cable Short (650 mm)
UL9703 E493181	Type2: CAS-HQ-LO-1300 CAS-HQ-SH-800	Type 2: AC Cable Long (1300 mm) AC Cable Short (800 mm)
	CAB-HQ-KIT-200	AC Cable (Raw): 200 m cable without AC connector for the free design of AC PV installation. - Detail components: 200 meter (656 ft)
UL3003 E533140		
	CON-HQ-KIT-20	AC Connector : To assemble the AC cable (CAB-HQ-KIT-200) by installer themselves. - Detail components : 20pcs Female + 20pcs Male
UL6703 E479328		
	ECAP-HQ-KIT-20	End Cap: To close the end of AC cable. - Detail components: 20pcs Female + 20pcs Male
UL9703 E493181		
Sugar Contraction of the sugar	UNT-HQ-TOOL-G1	AC cable and DC cable Unlocking Tool



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³ See Installation Manual