

TS4-X-O

Module-level optimization, monitoring, and rapid shutdown for modules up to 800 W



Tigo's patented technology optimizes energy production while minimizing the effects of mismatch and shading on solar arrays. The Tigo TS4-X-O module level power electronics (MLPE) enhance energy output, safety, and system intelligence, making them ideal for both new installations and retrofits. This advanced technology ensures peak performance with high efficiency, leading to a faster return on investment. Its easy installation and durable design reduce system downtime and maintenance visits, while Tigo's Energy Intelligence platform enables faster on-site commissioning and provides comprehensive remote monitoring.

Features

- Rated 800 W, 25 A I_{SC} to accommodate the latest high-power, high-current modules
- Simple, fast installation – snaps to a standard PV module frame or mounts to racking
- Intelligent optimization – delivers the maximum energy from an array
- Module-level monitoring – full visibility into module- and system-level production
- Rapid shutdown – a UL Standards-certified component for photovoltaic rapid shutdown systems (PVRSS) worldwide
- Required - Tigo Access Point (TAP) and Cloud Connect Advanced (CCA) for rapid shutdown and module-level monitoring
- Multi-factor Rapid Shutdown capability for enhanced safety when combined with RSS Transmitter (optional)
- Works with any system – fully compatible with thousands of different inverter models from more than 50 inverter brands
- 25-year warranty

Specifications

Functionality

Optimization	✓
Monitoring	✓
Rapid shutdown	✓

Electrical

Maximum current (I_{MP}/I_{SC})	20 A/25 A
Input voltage range (V_{MP})	12 – 80 V
Maximum input voltage	80 V
Maximum system voltage (V_{MAX})	1000 V/1500 V ¹
Maximum output current (I_{MAX})	20 A
Maximum output power (P_{MAX})	800 W
Maximum efficiency	99.6%
Recommended fuse rating	30 A

AS 5033: Operational Output

Maximum output current	$I_{DCU MAX}$
Maximum output voltage	$V_{DCU MAX}$
Maximum output power	$P_{DCU MAX}$

Rapid Shutdown

TS4 conductor AWG	12
Rapid shutdown time limit	<30 sec.
PVRSE-controlled conductor limits	≤240 VA, ≤8 A, ≤30 V _{DC}
UL 1741 PVRSE	Yes
Communications	Wireless ² and/or PLC ³

¹ Depending on UL/IEC certification

² Using Tigo Access Point (TAP) and Cloud Connect Advanced (CCA)

³ Using Tigo RSS transmitter power-line communications



Specifications

Connections

Input (from module) cable lengths*	0.6 m or 1.2 m
Output (to string) cable lengths*	1.2 m or 2 m
Connectors	MC4/EVO2

Environmental

Operating temperature range	-40 – 85 °C (-40 – 185 °F)
Storage temperature range	-20 – 65 °C (-4 – 149 °F)
Maximum elevation	3000 m (9840 ft.)
Outdoor IP rating	IP68

Mechanical

Dimensions (H/W/D)	139.7 x 138.4 x 22.9 mm (5.4 x 5.5 x 0.9 in.)
Weight	520 g (1.15 lb.)

General

Standards compliance	FCC, IC, CE-EMC, CE-RED, CISPR 31, CSA 22.2, IEC 62109, UL 1741 PVRSE/PVRSS, UL3741 PVHCE
Warranty	25 years

* Exact lengths within 3%.

More Resources



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Ordering Information

Part Number	V _{MAX} Certifications UL/IEC	Cable Lengths* (input/output)	Connectors
TS4-X-O			
501-320612-2501	1500 V/1500 V	0.6/1.2 m	EVO2
501-321220-2501	1500 V/1500 V	1.2/2 m	EVO2
501-340612-2501	1500 V/1000 V	0.6/1.2 m	MC4
501-341220-2501	1500 V/1000 V	1.2/2 m	MC4

* Exact lengths within 3%.