

ONE SMART PLATFORM, FOR ANY SMART MODULE CHOICE

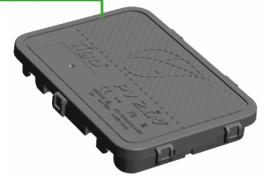
The TS4 universal platform enables plug-and-play functionality for any solar module. The base provides a single interface that can be matched with one of several electronic covers to address a range of functions and budgets. Together they form a new generation of module-level power electronics; flexible, replaceable, and upgradeable, accompanied by a powerful PV 2.0 communication-centric architecture backend.



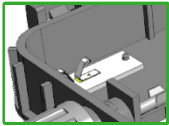
A MODULAR PLATFORM

Choice of Electronic Covers

Removable Covers with Different Levels of Functionality

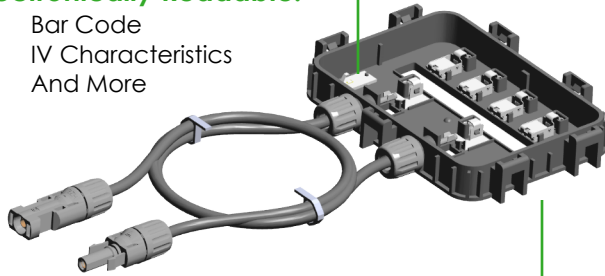


TS4-B JUNCTION BOX BASE



Electronically Readable:

- Bar Code
- IV Characteristics
- And More



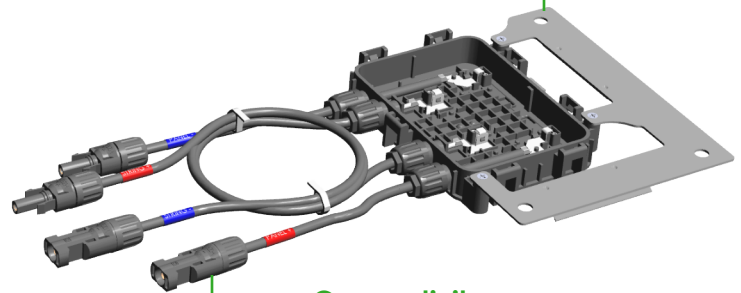
PV Module Integrated

Factory-installed for Smart Ready Solar

TS4-R RETROFIT ADD-ON BASE

Mounting Bracket

Clips to Standard Module Frame



Connectivity

Add Smart Functionality to a Standard Module

MECHANICAL SPECIFICATIONS

Mechanical

Ambient Temperature Range -40°C to +85°C (-40°F to +185°F)

Storage Temperature Range -40°C to +85°C (-40°F to +185°F)

Cooling Method Natural Convection

Dimensions (with cover) TS4-B: 152.5mm x 108mm x 25mm,
TS4-R: 195.5mm x 158mm x 23mm

Weight (without cover) TS4-B: 270g,
TS4-R: 470g

Environmental Rating IP65/67, NEMA 3R

Cabling

Cabling Type PV1-F

Output Cable Length 1.0m, other lengths on request

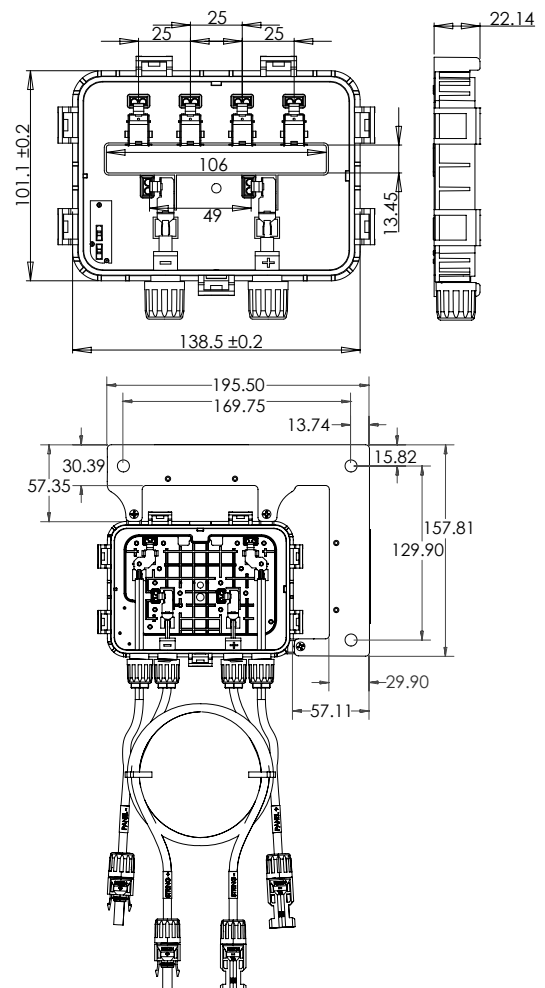
Connector MC4, MC4 compatible

UV Resistance 500hr with UVB light between 300-400nm @ 65°C

Maximum String Voltage 600V UL/IEC or 1000V UL/IEC

Outer Cable Diameter 6.25±0.25mm (600V), 7.15±0.25mm (1000V)

Wire Cross-Section 4.0mm² (12AWG)



MEET ANY PROJECT NEED WITH TS4

Tigo has expanded its smart module platform to provide five levels of customization. With a universal base and a range of covers containing the power electronics, TS4 increases your freedom of choice when selecting features for a particular project and budget. TS4 cover options range from standard diodes all the way to fully optimized performance and safety features.

LONG STRINGS

TS4-L



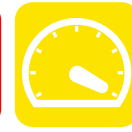
Diodes



Monitoring



Safety



Optimization



Long Strings

- String length increased by up to 30%
- Fewer BOS components
- Faster installation
- Inverter optimization
- Lower wire-losses
- Plus all the benefits of Optimization

OPTIMIZATION

TS4-O



Diodes



Monitoring



Safety



Optimization

- Shade and age tolerance
- Enhanced energy yield
- Greater design flexibility
- Maximized roof usage
- Plus all the benefits of Safety

SAFETY

TS4-S



Diodes



Monitoring



Safety

- NEC 2014 690.12 rapid shutdown compliant
- Module-level deactivation
- Automatic or manual shutdown
- Over-temperature protection
- Plus all the benefits of Monitoring

MONITORING

TS4-M



Diodes



Monitoring

- Reduced O&M costs
- PV-2.0 data synchronization
- Module bar code tracking
- CRM integration
- Warranty tracking
- Fleet management

DIODES

TS4-D



Diodes

- Similar to a standard junction box
- Standardization on basic TS4 baseplate
- Applicable to conventional and smart modules
- Field replaceable and upgradeable
- Heat dissipation away from the module

TS4 COVERS



ELECTRICAL RATINGS

DIODES
TS4-D

MONITORING
TS4-M

SAFETY
TS4-S

OPTIMIZATION
TS4-O

LONG STRINGS
TS4-L

Available As:

TS4-B (Module-Integrated)	Yes	Yes	Yes	Yes	Yes
TS4-R (Retrofit)	No	Yes	Yes	Yes	No
Diode Type	Schottky	Schottky	Schottky	Schottky	Schottky
Number of Bypass Diodes	3	3	3	3	3
Diode Junction Temp Max	200°C	200°C	200°C	200°C	200°C
Input Current Rating (I _{sc})	12A	12A	12A	10A	10A
Maximum Continuous Input Current (I _{MP})	n/a	n/a	n/a	9.5A	9.5A
Maximum Input Voltage (V _{oc})	n/a	n/a	52V	52V	52V
MPPT Voltage Range (V _{MP})	n/a	n/a	n/a	16-48V	16-40V
Rated String Voltage	1000V IEC 600V/1000V UL	1000V IEC 600V/1000V UL	1000V IEC 600V/1000V UL	1000V IEC 600V/1000V UL	1000V IEC 600V/1000V UL
Nominal Input Power	n/a	n/a	n/a	375W	375W
Maximum Output Power	n/a	n/a	n/a	375W	375W
Communication Type	n/a	802.15 2.4GHz	802.15 2.4GHz	802.15 2.4GHz	802.15 2.4GHz
Rapid Shutdown Verified (NEC 2014 690.12)	Need additional RS device	Need additional RS device	Yes	Yes	Yes
Impedance Matching Capability	No	No	No	Yes	Yes
Output Voltage Limit	No	No	No	No	Yes

ORDERING INFORMATION

	Base	Covers	Pre-Assembled
PV Integrated	TS4-B		
• Diodes		TS4-D	
• Monitoring		TS4-M	
• Safety		TS4-S	
• Optimization		TS4-O	
• Long Strings		TS4-L	
PV Add-On/Retrofit	TS4-R		
• Monitoring			TS4-R-M
• Safety			TS4-R-S
• Optimization			TS4-R-O

Module-Integrated (TS4-B)

Factory-integrated. Ask for TS4-based modules.

Retrofit (TS4-R)

For add-on/retrofit systems.

*Available pre-assembled with TS4-M, TS4-S, or TS4-O covers.

Covers Available Separately

Specify TS4-D, TS4-M, TS4-S, TS4-O, or TS4-L.

For sales info:

contact: sales@tigoenergy.com
or call: 1.408.402.0802

For product info:

Visit www.tigoenergy.com/products

For TS4-R retrofit units:

Contact your local distributor or sales@tigoenergy.com

For technical info:

<http://support.tigoenergy.com>

For additional info and product selection assistance, use Tigo's online design tool at www.tigoenergy.com/design

