TS4-R MODULE RETROFIT KIT
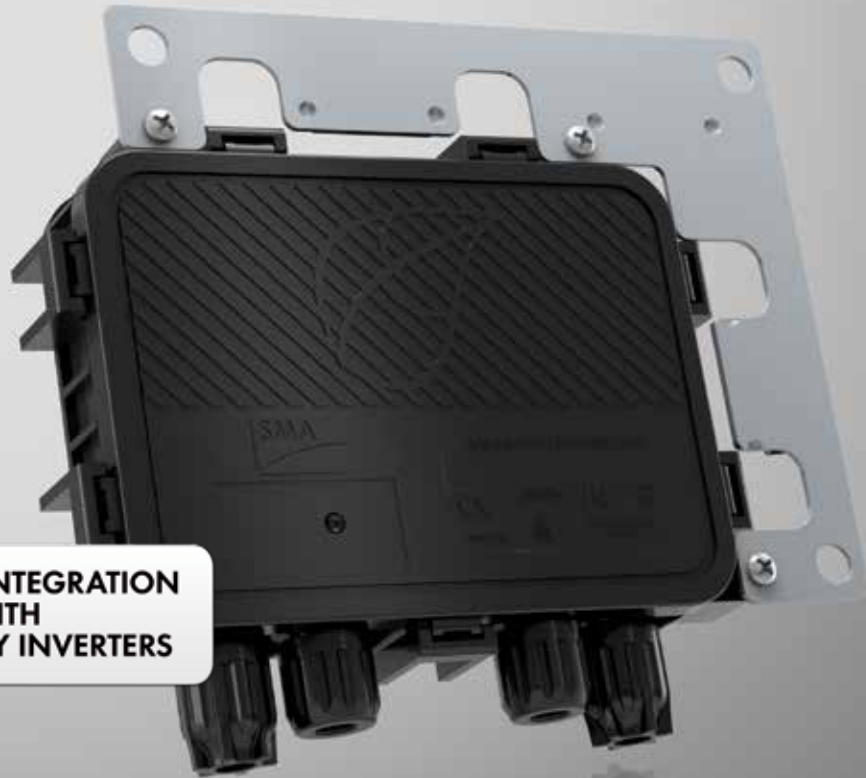
SUPERIOR INTEGRATION WITH SUNNY BOY INVERTERS

RETROFIT KIT COMPATIBLE WITH ALL MAJOR INVERTER BRANDS.

Ultimate flexibility

- Works with any module, so installers can leverage their preferred panel suppliers
- Use the exact functionality needed—no more, no less

Simple logistics

- Maximize warehouse space by stocking fewer module components
- Compatible with all standard modules

Fast installation

- Save up to 90 minutes per install compared to other MLPE solutions
- Reduce roof-time by attaching MLPE on the ground or prior to the site visit

Less risk

- Technical support through SMA's #1 ranked service organization
- Simple, safe repair or replacement of proprietary snap-in cover—no cabling work

TS4-R MODULE RETROFIT KIT

The new speed of solar

Nothing installs faster or easier while boosting performance. Whether it's for shading, shutdown or other challenges, the TS4 Retrofit Kit is the ultimate answer to the challenges of residential PV installations. As part of SMA's revolutionary Power+ Solution, the TS4 modular platform is a game-changer that is delivering installers unparalled flexibility in tackling the toughest problems while driving down system costs and maintenance risk.

Technical data	TS4-R-S[3] 476-00240-00	TS4-R-S 476-00252-40	TS4-R-O 471-00252-40
Electrical ratings			
Rated DC input power	375 W	475 W	475 W
Max. PV module open circuit voltage (Voc) @ STC	52 V	75 V	75 V
Max. PV module open circuit voltage (Voc) @ lowest temperature	66 V	90 V	90 V
Max current Isc		12 A	
Output			
Output power range	0 - 375 W	0 - 475 W	0 - 475 W
Output voltage range		0 - Voc	
Communication type	802.15.4 2.4 GHz	802.15.4 2.4 GHz	802.15.4 2.4 GHz
Rapid shutdown compliant (NEC 2017 690.12)	Yes[1][2]	Yes[1][2]	Yes[1]
Impedance matching capability	No	No	Yes
Maximum system voltage	600 V	1000 V	1000 V
Max. series fuse rating		15 A	
Mechanical			
Operating temperature range		−40°C to +75°C (−40°F to +167°F)	
Storage temperature range		−40°C to +75°C (−40°F to +167°F)	
Cooling method		Natural convection	
Dimensions with cover		195.5 mm x 158 mm x 23 mm	
Weight (with cover)	670 g	670 g	720 g
Environmental rating		IP65 / IP67, NEMA 3R	
Cabling			
Cabling type / Output cable length		PV1-F, PV wire / 1.0 m	
Connector		MC4	
UV resistance		500 hr with UVB light between 300 and 400 nm at 65° C	
Outer cable diameter	6.25 mm ± 0.25 mm	7.15 mm ± 0.25 mm	7.15 mm ± 0.25 mm
Cable cross-section		4.0 mm^2 (12 AWG)	

[1] Rooftop Communication Kit including Gateway are required for rapid shutdown compliance.

[2] Reference certification documents for NEC compliance of specific inverter/TS4-R-S combinations

[3] Unit ships with non-SMA branded cover

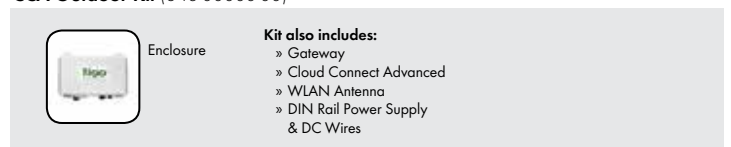| Type designation	TS4-R-S 476-00240-00	TS4-R-S 476-00252-40	TS4-R-O 471-00252-40

Communication Kits

The Rooftop Communication Kit is a convenient bundle enabling simple, fast integration with SMA Sunny Boys on site. Module-based data is transmitted wirelessly across the rooftop from the TS4-R units to the Gateway, which is connected to the Gateway Interface Board. The Gateway Interface Board is installed in the connection area of SMA's newest Sunny Boys and eliminates the need for external enclosures. View performance data on Sunny Portal—the world's largest PV monitoring repository. The CCA Outdoor Kit (NEMA 4X) for systems using inverters other than the SBX.X-1SP-US-40 is also available.

Rooftop Communication Kit* (ROOFCOMMKIT-P2-US)

Gateway Interface Board

Gateway

CCA Outdoor Kit (348-00000-00)

Enclosure

Kit also includes:
» Gateway
» Cloud Connect Advanced
» WLAN Antenna
» DIN Rail Power Supply
  & DC Wires

*Only for the SBX.X-1SP-US-40

TS4 Modular Platform with Progressive Functionality

The TS4 modular platform is a unique plug-and-play concept that enables customized functionality with a simple exchange of a cover featuring integrated power electronics. The TS4 is available in module integrated versions from leading suppliers and retrofit models available exclusively from SMA.

Shutdown
• NEC 2017 rapid shutdown compliant [1][2]
• Module-level monitoring

Optimization
• Shade and age tolerance
• Improved energy yield
• Maximized roof usage
• NEC 2017 rapid shutdown compliant [1]

SMA America, LLC