HIPRO TP660M

Monocrystalline Solar Module
60 Cell Series

TALESUN

KEY FEATURES

300W
Highest power output

10 years
Material & workmanship warranty

15W
Higher than industry level

25 years
Linear power output warranty

PID Free
Certified by TUV Rheinland

- Higher power output: With passivated backside and BSF technology
- Robust design: Certified to withstand up to 2400 Pa wind load and up to 5400 Pa snow load
- Excellent low light performance on cloudy days, mornings and evenings
- High reliability, strict module BOM selection

QUALITY WARRANTY

TALESUN guarantees that defects will not appear in materials and workmanship defined by IEC61215, IEC61730 and UL1703 under normal installation, use and maintenance as specified in Talesun's installation manual for 10 years from the warranty starting date.

PowerGuard SPECIALTY INSURANCE SERVICES

SOLARIF

ABOUT TALESUN

Suzhou Talesun Solar Technologies Co., Ltd. is one of the world's largest integrated PV manufacturers. Its standard and high-efficiency product offerings are among the most powerful and cost-effective in the industry. With over 6 GW of modules installed globally, we are a leading solar energy company built upon proven product reliability and sustainable performance.

PERFORMANCE WARRANTY

Monocrystalline Solar Cell Modules

a) During the first year, TALESUN guarantees the nominal power output of the product will be no less than 97% of the labeled power output.

b) From year 2 to year 24, the nominal power decline will be no more than 0.7% in each year; by the end of year 25, the nominal power output will be no less than 80% of the labeled power output.

ELECTRICAL PARAMETERS

Performance at STC (Power Tolerance 0 - +3%)			
Maximum Power（Pmax/W）	290	295	300
Operating Voltage（Vmpp/V）	32.4	32.6	32.9
Operating Current（Impp/A）	8.96	9.05	9.12
Open-Circuit Voltage（Voc/V）	39.3	39.5	39.7
Short-Circuit Current (Isc/A)	9.47	9.52	9.58
Module Efficiency ηm(%)	17.7	18.0	18.3
Performance at NOCT			
Maximum Power（Pmax/W）	214	217	221
Operating Voltage（Vmpp/V）	29.9	30.1	30.3
Operating Current（Impp/A）	7.17	7.24	7.30
Open-Circuit Voltage（Voc/V）	36.3	36.5	36.7
Short-Circuit Current (Isc/A)	7.65	7.69	7.74

*STC: 1000W/m², 25°C,AM 1.5 *NOCT: 800W/m², 20°C, AM 1.5, Wind Speed: 1m/s

MECHANICAL SPECIFICATION

Cell Type	Mono Crystalline
Cell Dimensions	156.75*156.75mm(6inch)
Cell Arrangement	60(6*10)
Weight	18.5kg(40.8lbs)
Module Dimensions	1650*992*35mm(64.96*39.06*1.38inch)
Cable Length	900mm(35.4inch)
Cable Cross Section Size	4mm²(0.006sq.in)
Front Glass	3.2mm High Transmission, Tempered Glass
No.of Bypass Diodes	3/6
Packing Configuration (1)	30pcs/Pallet, 840pcs/40hq
Packing Configuration (2)	30pcs+5pcs/Pallet, 910pcs/40hq
Frame	Anodized Aluminium Alloy
Junction Box	IP65/IP67

OPERATING CONDITIONS

Maximum System Voltage	1000V/DC(IEC)
Operating Temp.	-40℃-+85℃
Maximum Series Fuse	15A
Static Loading	5400Pa
Conductivity at Ground	≤ 0.1Ω
Safety Class	Ⅱ
Resistance	≥100MΩ
Connector	MC4 Compatible

SUZHOU TALESUN SOLAR TECHNOLOGIES CO.,LTD.
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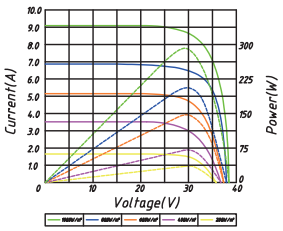
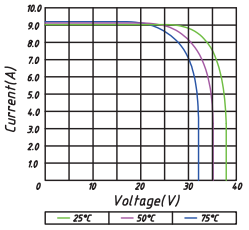
TEMPERATURE COEFFICIENT

Temperature Coefficient Pmax	-0.39%/℃
Temperature Coefficient Voc	-0.30%/℃
Temperature Coefficient Isc	+0.05%/℃
NOCT	45±2℃

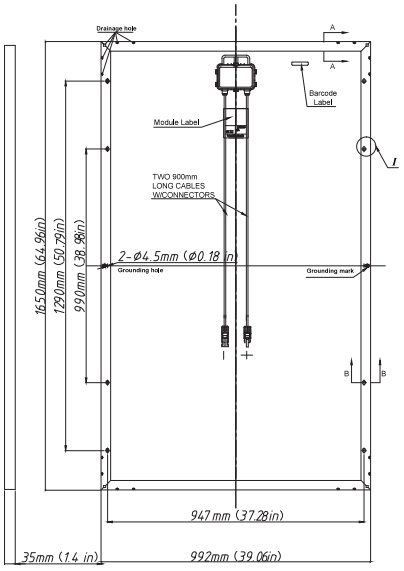
I-V CURVE

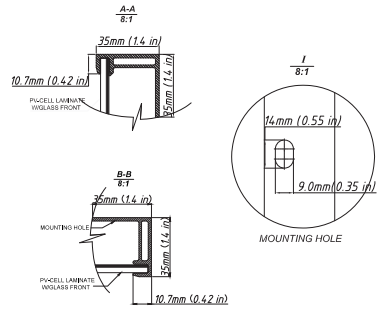
Hipro Pm(W)285





TECHNICAL DRAWINGS



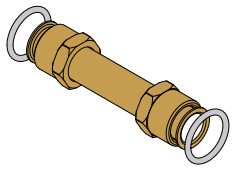


Commercial Solar Loline - Installation Overview

Installer: This pictorial guide does not replace the Owners Guide and Installation Instructions supplied with the solar controller. The installation instructions should be read in full and referred to for details. Rheem will not accept any liability for failure to read or install the water heater in accordance with the installation instructions.

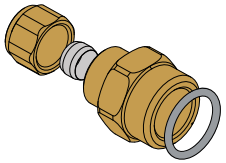
Collector union

Couple the solar collectors at the top and bottom together using the collector unions and 'O' rings.



Collector inlet/outlet

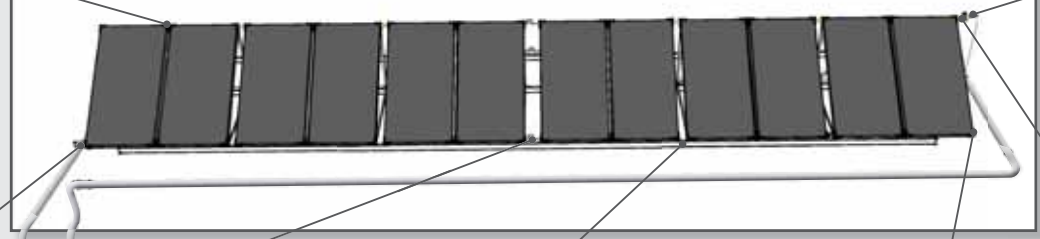
Fit an inlet/outlet connector to the inlet and outlet of the solar collector array using an 'O' ring.



Expansion tube assembly

For multiple solar collectors of more than 8 in a single array, install an expansion tube at the top and bottom of the array, at no more than every eighth collector.
Allow approx. 360mm gap between adjacent collectors.

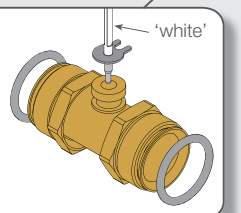
NPT200 Collector Components



Frost sensor assembly

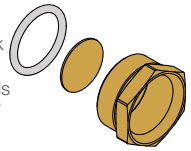
Fit the frost sensor housing at the bottom, as near as practical to the centre of an array, using the 'O' rings.

Note: The frost sensor must be fitted in all installations.



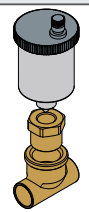
End plug assembly

Fit the end plug and disk to the unused collector connections at both ends of the array, using an 'O' ring.



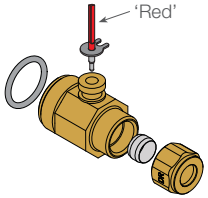
Automatic air eliminator

Fit automatic air eliminator at the highest point in each collector array, in the solar hot pipe.
NB: For pitched roofs, only one automatic air eliminator is required to be installed at the highest point of all the arrays.



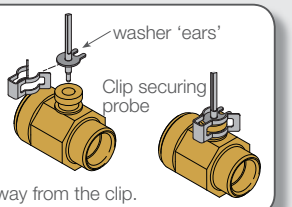
Hot sensor assembly

Fit the hot sensor assembly to the outlet of the solar collector of one array using an 'O' ring.



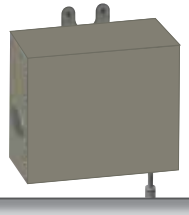
Sensor clip

Ensure one 'O' ring is fitted to the sensor fully in the housing. Position the clip over the sensor washer AND the housing with 'ears' of the washer away from the clip.

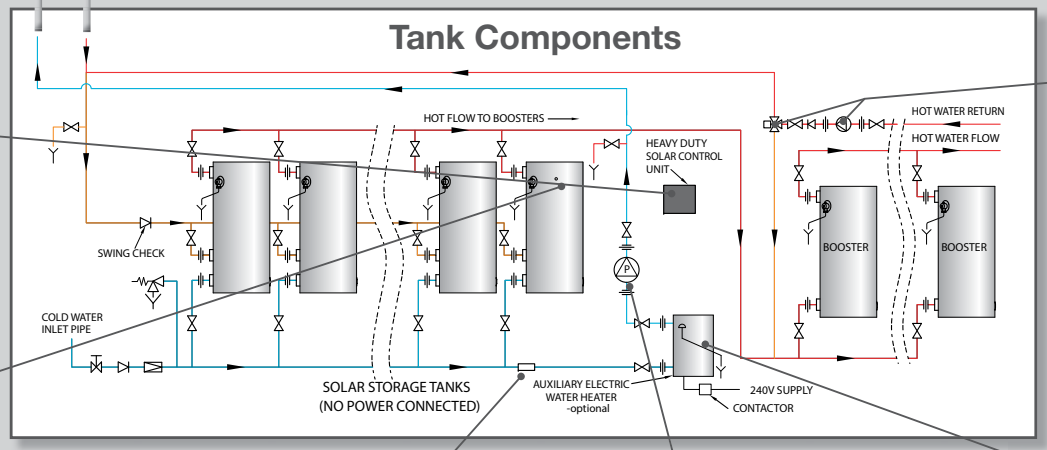


Solar control unit

Install within 5 metres of the cold sensor and tank sensor. Can be installed indoors or outdoors.

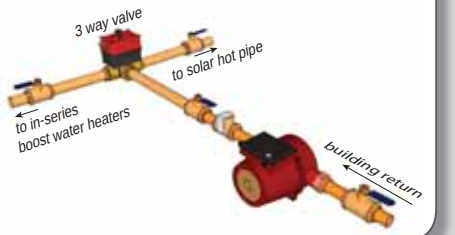


Tank Components



3 way valve & building return (optional)

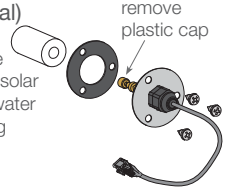
Install a 3 way valve as shown after the building return circulator, if solar hot water secondary return is being used



Tank sensor (optional)

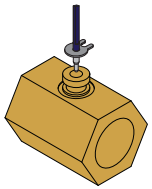
Fit the tank sensor to the solar tank closest to the solar control unit, if solar hot water secondary return is being used.

See over for details.



Cold sensor

Fit the cold sensor connector in the solar cold pipe between the last storage tank and the solar circulator



Solar circulator

Install the circulator in the solar cold pipe after the auxiliary electric water heater, if installed.

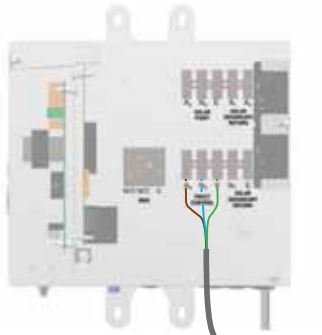
Auxiliary electric water heater (optional)

Install the auxiliary electric water heater in the solar cold pipe.
In areas not subject to freeze conditions, the auxiliary electric water heater is optional.

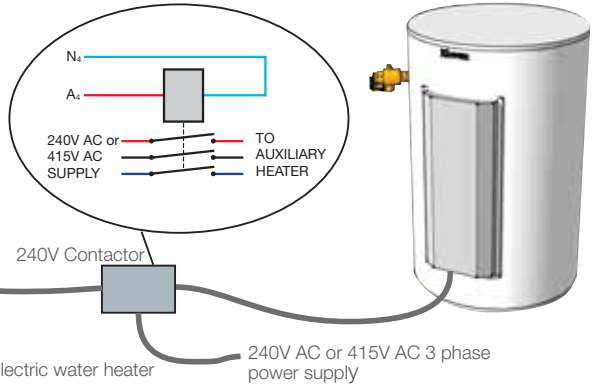
Commercial Solar Loline - Installation Overview

Electrical connections

Connection to auxiliary electric water heater



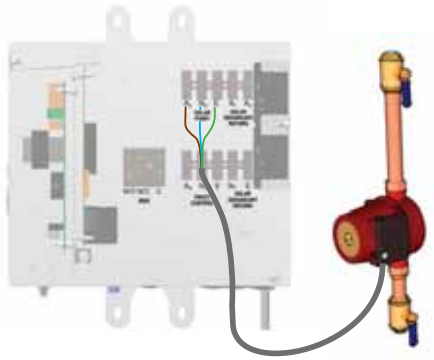
Connect the coil of the contactor to the solar controller at the terminals A4, N4 and E marked 'FROST CONTROL'



Note the electrical rating of the auxiliary electric water heater

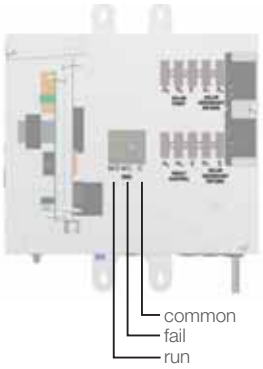
Connection to solar circulator

Connect the solar circulator to the solar controller at the terminals A3, N3 and E marked 'SOLAR PUMP'.

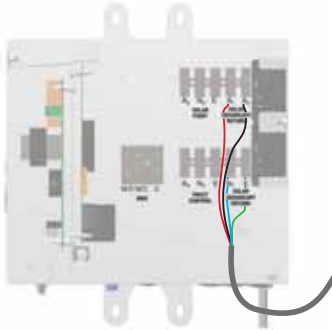


BMS

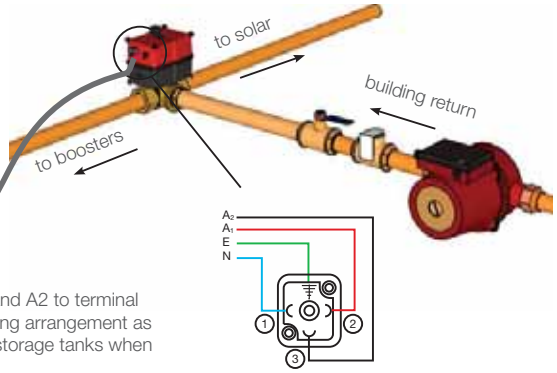
Connect the BMS system to the solar controller at the terminals N/O, N/C, C marked 'BMS'.
Note: N/O = OK
N/C = Fault



Connection to 3 way valve



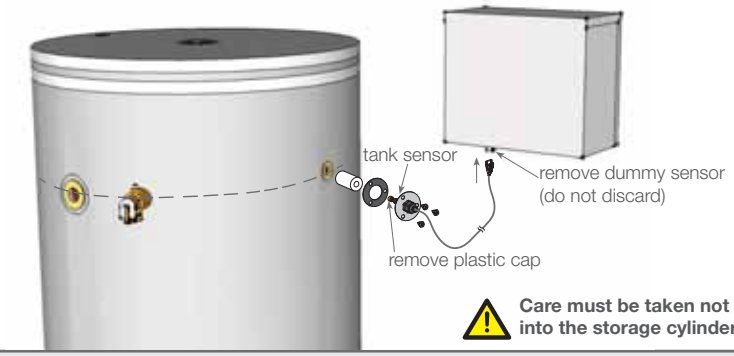
Connect the 3 way motorised valve to the solar controller at the terminals A1, A2, N1, and E marked 'SOLAR SECONDARY RETURN'



Connect the wires from A1 to terminal 2 and A2 to terminal 3 on the motorised valve. With the plumbing arrangement as shown water will be diverted to the solar storage tanks when A2 is energised.

Tank Sensor

Select a spot at the same level as the hot water outlet and using a 22mm hole saw, drill deep enough to just remove the steel outer casing jacket. The insulation thickness is between 47-54mm depending on the tank, and this should be used as a guide. Clean out the remaining foam insulation by hand until clean bare metal is exposed.
Fit tank sensor assembly securing with the 3 screws supplied.



Care must be taken not to drill into the storage cylinder.