

SELECTION GUIDE

Steps to follow:

1. Best practice installation guide
2. Performance curves of respective pump
3. Check Pump/Wet-end selection with respect to
 - a. Motor size
 - b. Head range
 - c. Max allowed solar panel input wattage
4. Cable size selection
5. Checks and guides to follow
6. iSOLAR Selection Matrix
7. iSOLAR V3 controller timer features

SOLAR INSTALL DATA

No. of Solar Panels: _____ Invoice #: _____

Total Input Solar Wattage: _____ W (No. of solar panels X Watts per solar panel)

Pump Model: S4 _____

Connection type: Series Parallel

Motor Serial #: _____

Installation type: Option 1

Option 2

Option 3 (Refer to step 1: Installation guide)

Cable size: _____ mm²

Cable length: _____ meters

Total Voc*: _____ V (Max: 440 Voc)

Total Amps: _____ A (Max ISC*: 12A DC; 10A AC)

*Voc: Voltage open circuit

*ISC: Short circuit current

Date of Install: _____

Duty: ___ Lpm @ ___ m Total Head

Please note: The Solar Install Data must be returned to White International to register for warranty

Email: aftersales@whiteint.com.au
Phone: 1300 783 601

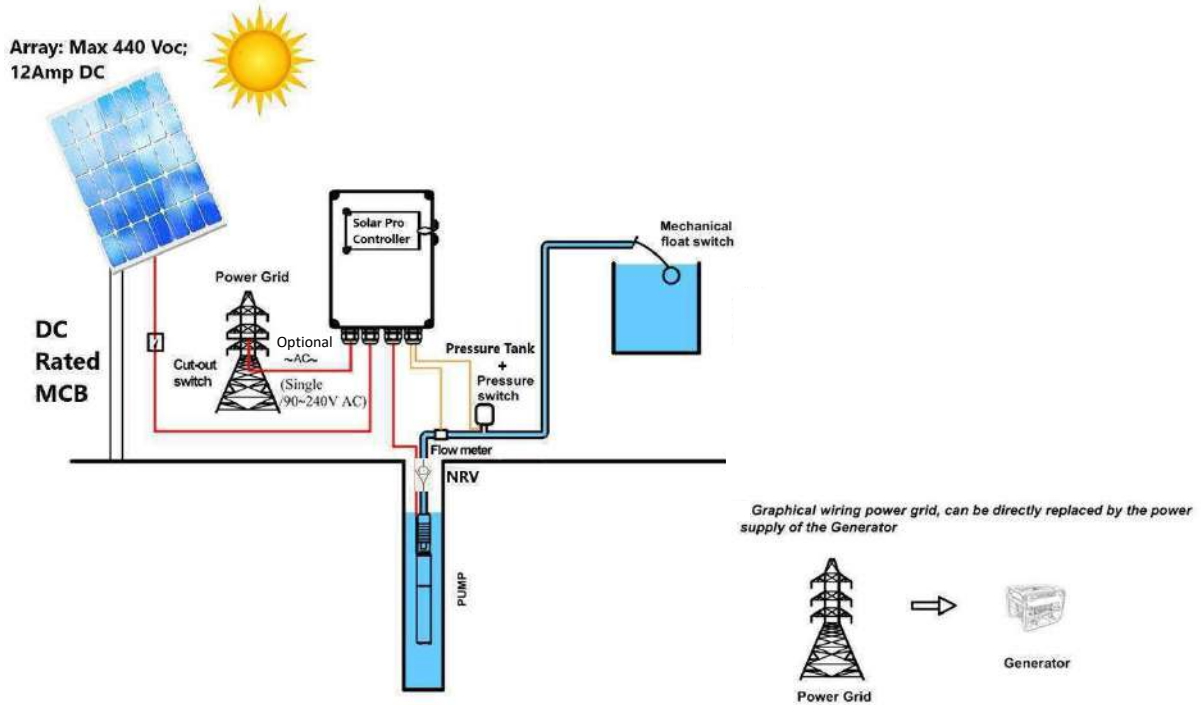
1. Best Practice Installation Guide

Option: 1

System using Mechanical float switch, Pressure switch, Flow sensor, Pressure tank, Non-Return Valve

- Pressure switch requires use of pressure tank and Non return valve.
- System guarantees longest operational life
- Backup power supply support
- Complete Low voltage circuit for input sensors

DC & AC POWER WIRING



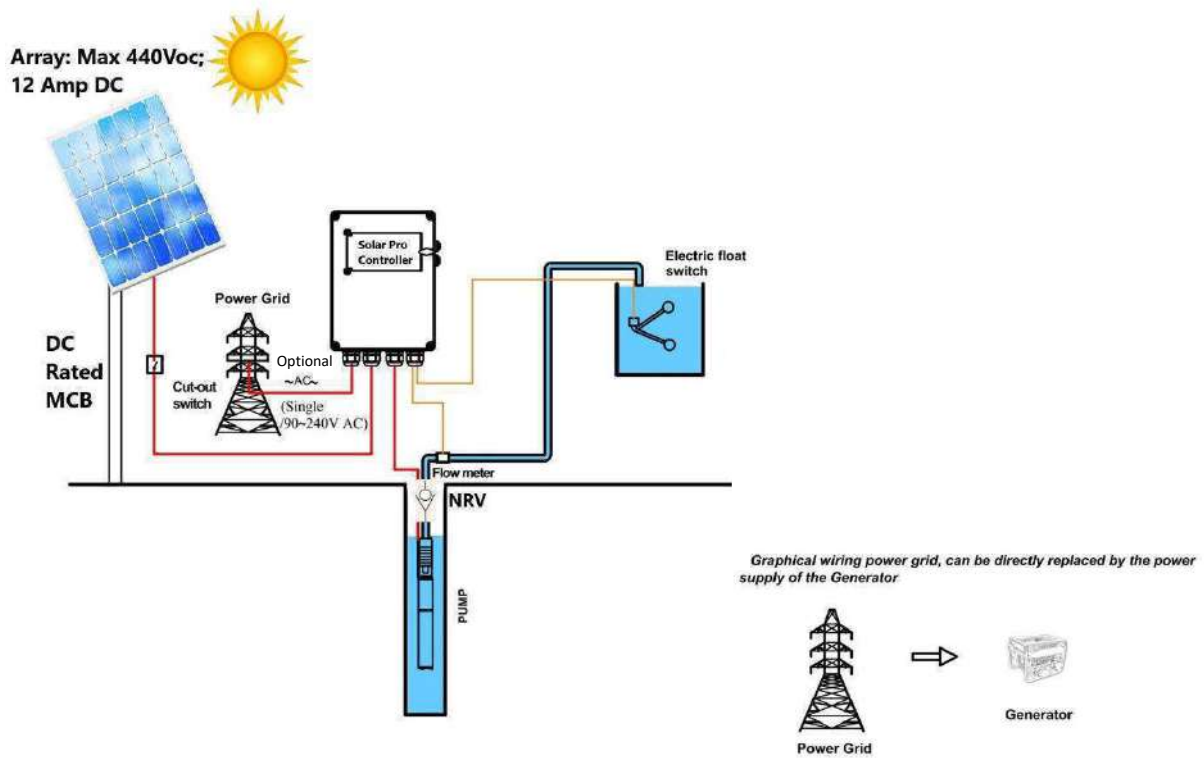
**Your site installation must follow options 1, 2 or 3 to facilitate the warranty process

Option: 2

System using Electronic float switch, Flow sensor, Non-Return Valve

- Electronic Float activates system, extra protection with flow sensor
- System guarantees longest operational life
- Backup power supply support

DC & AC POWER WIRING



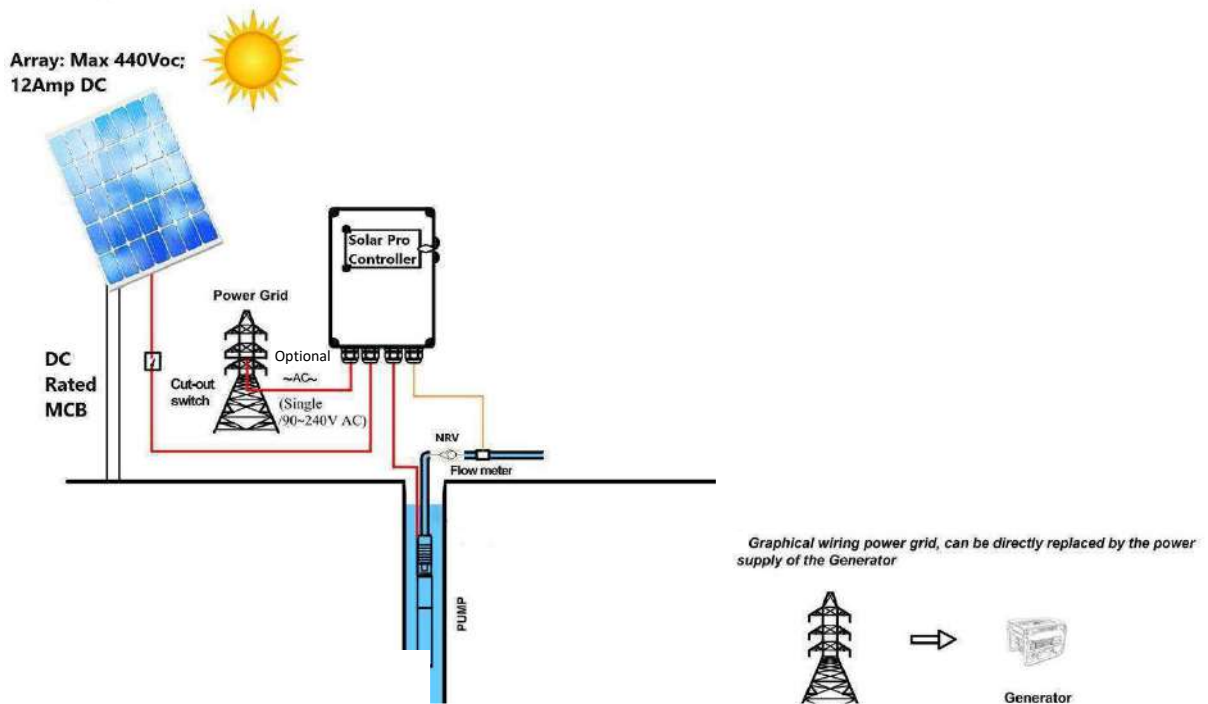
**Your site installation must follow options 1, 2 or 3 to facilitate the warranty process

Option: 3

System using Non-Return Valve and Flow sensor

- System runs as long as power is available, shuts off with zero flow
- Continues to restart using timer in control
- System guarantees longest operational life
- Backup power supply support

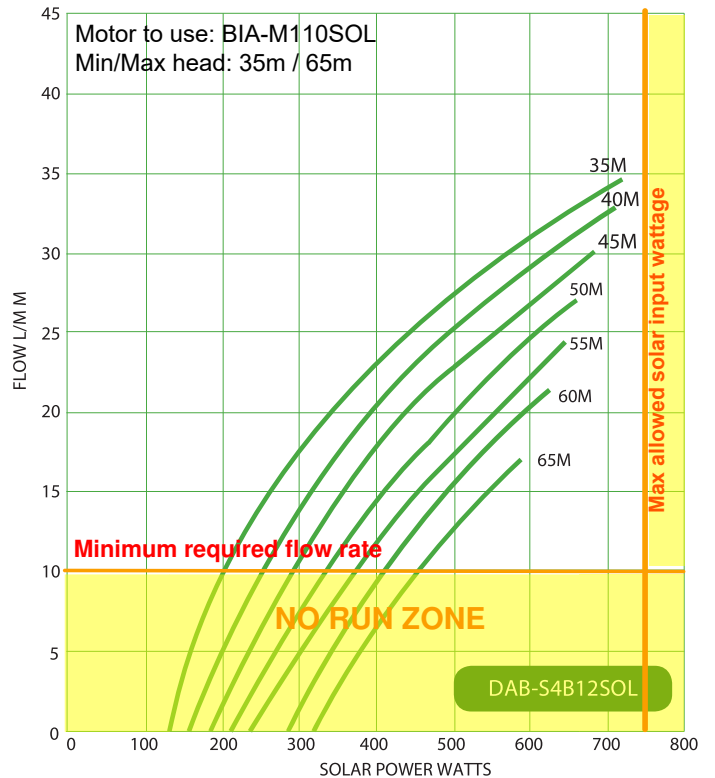
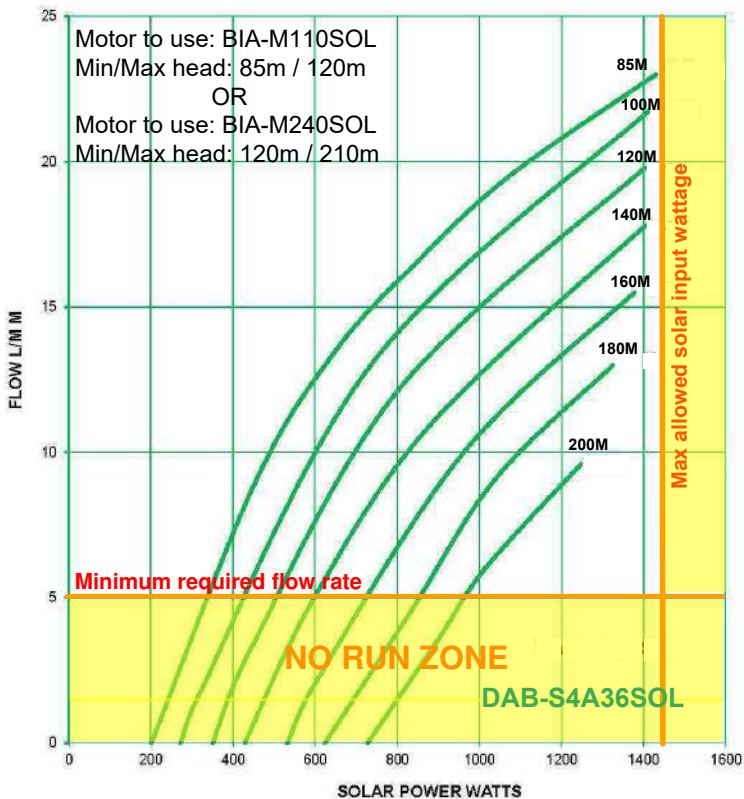
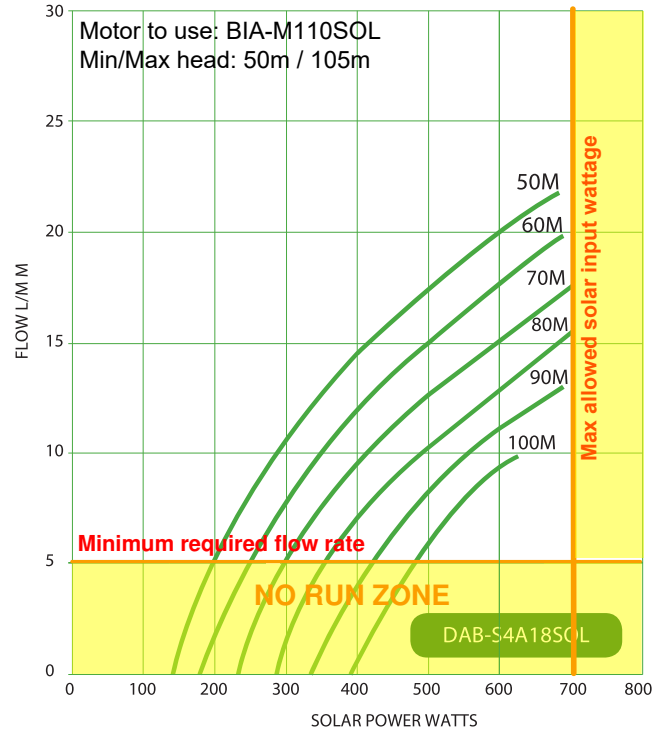
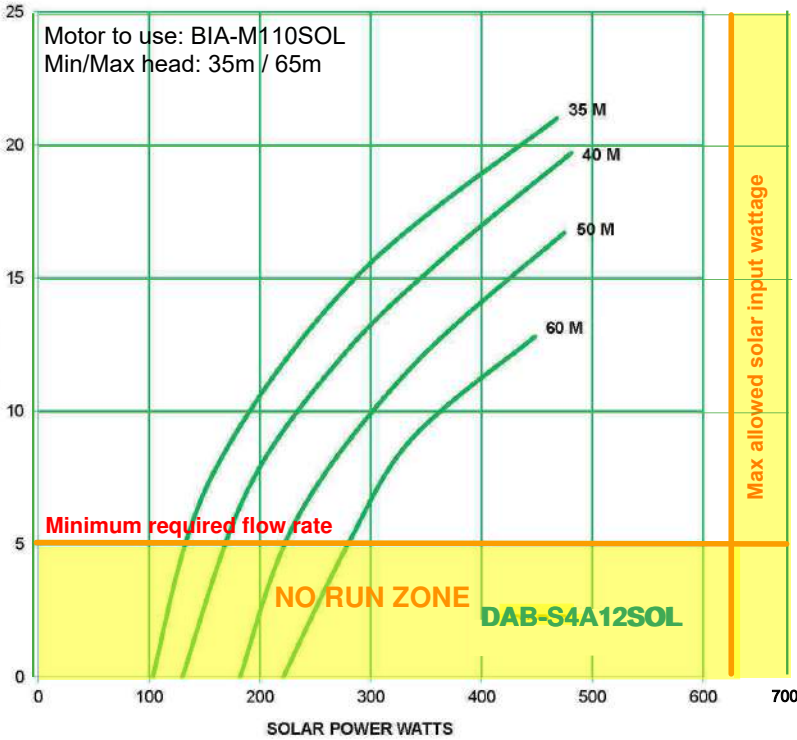
DC & AC POWER WIRING



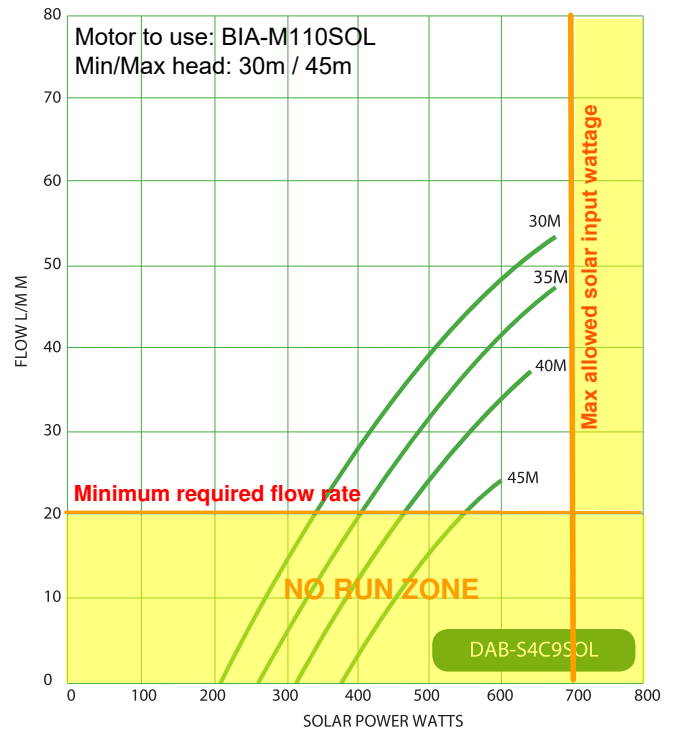
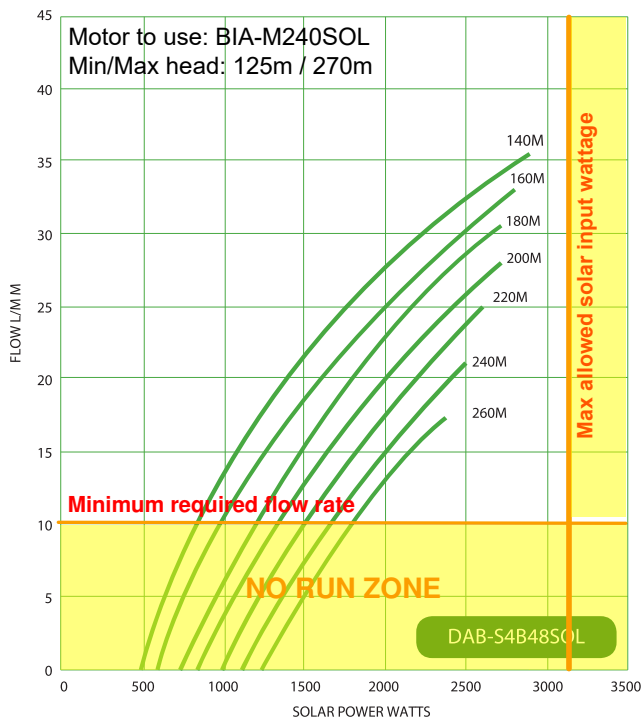
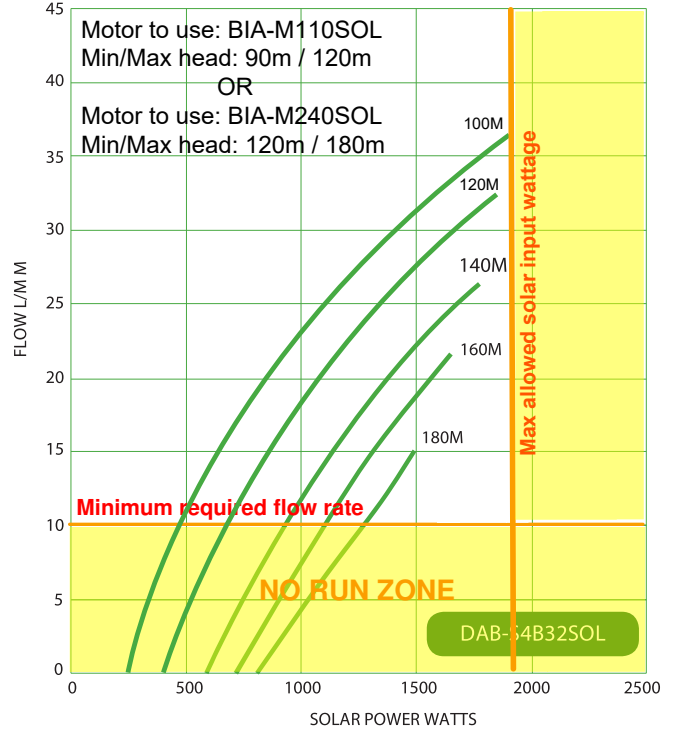
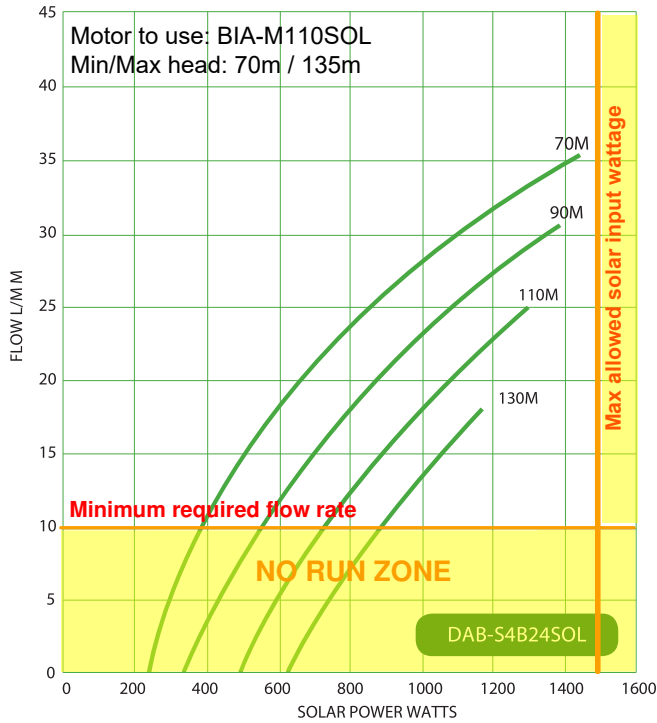
**Your site installation must follow options 1, 2 or 3 to facilitate the warranty process

4" BOREHOLE PUMPS - SOLAR POWERED

2. Performance Curves

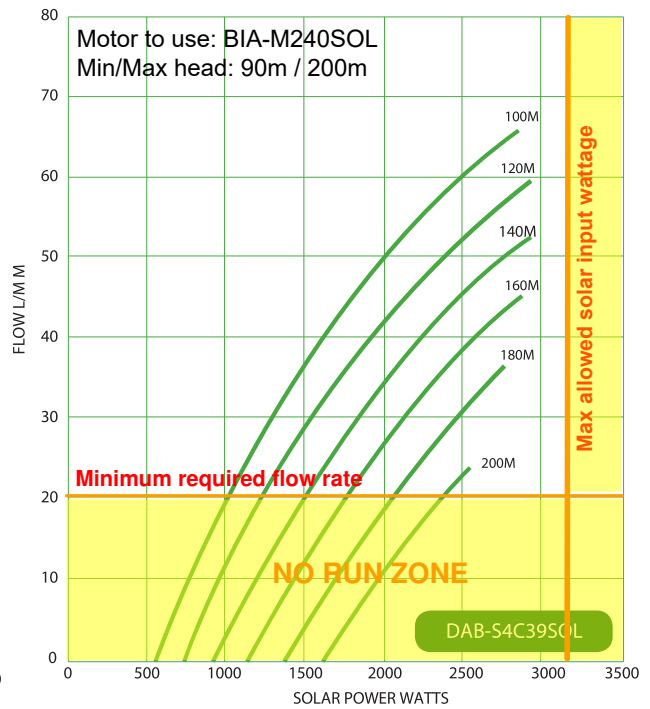
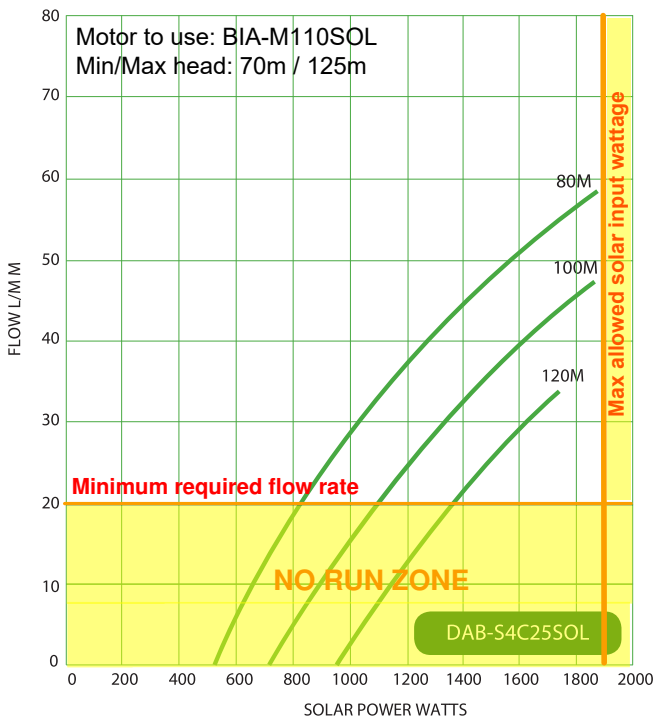
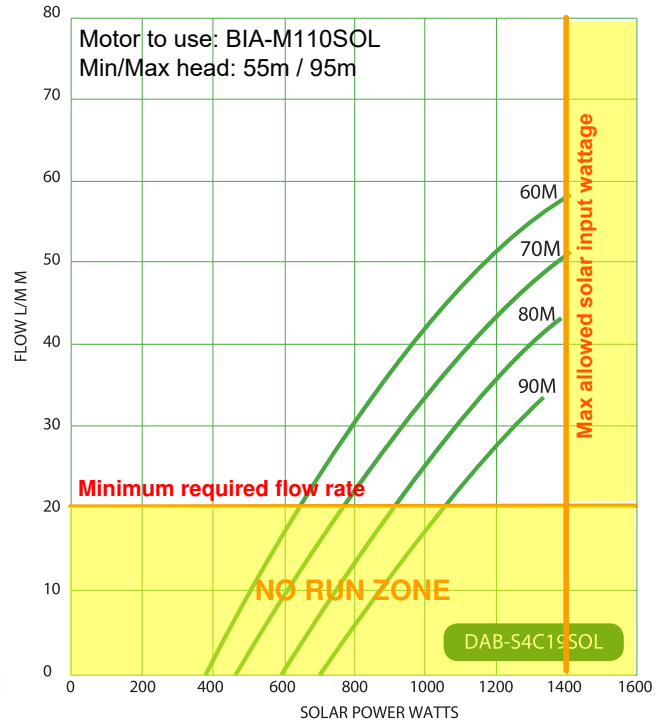
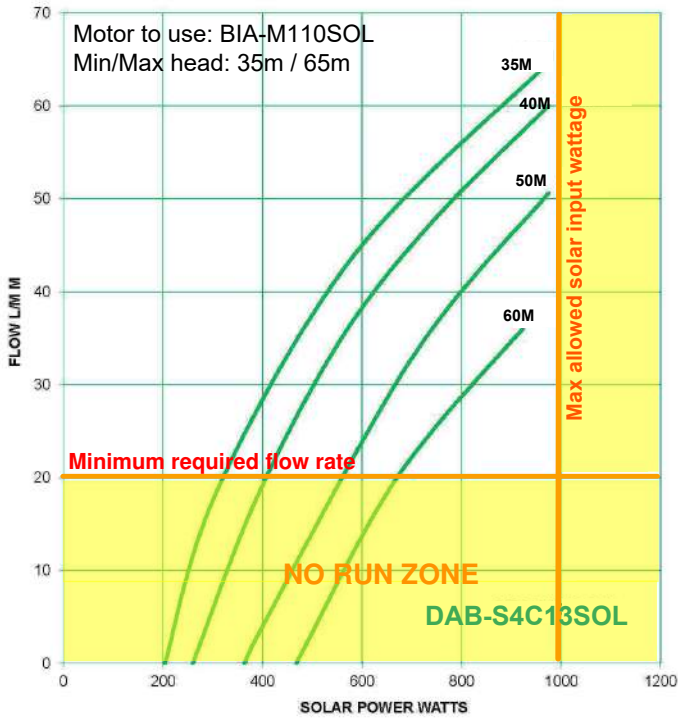


4" BOREHOLE PUMPS - SOLAR POWERED



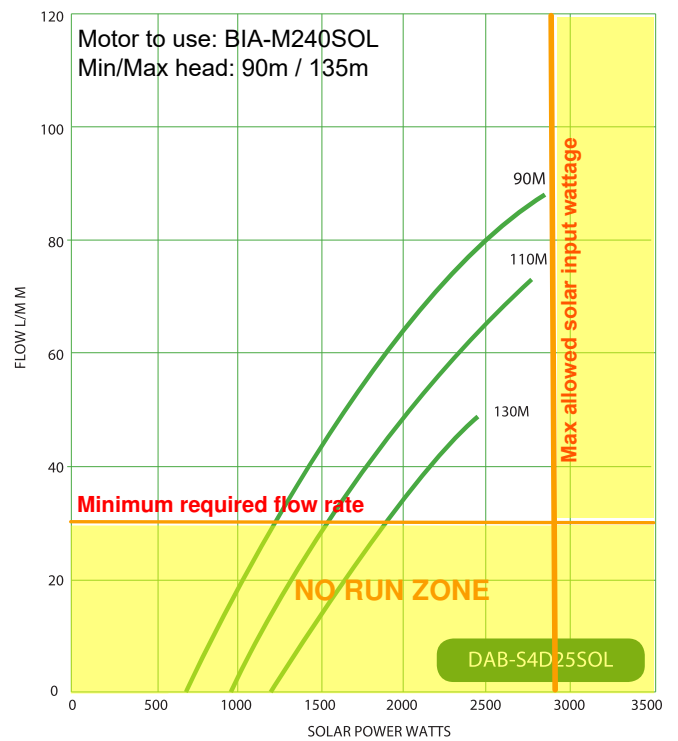
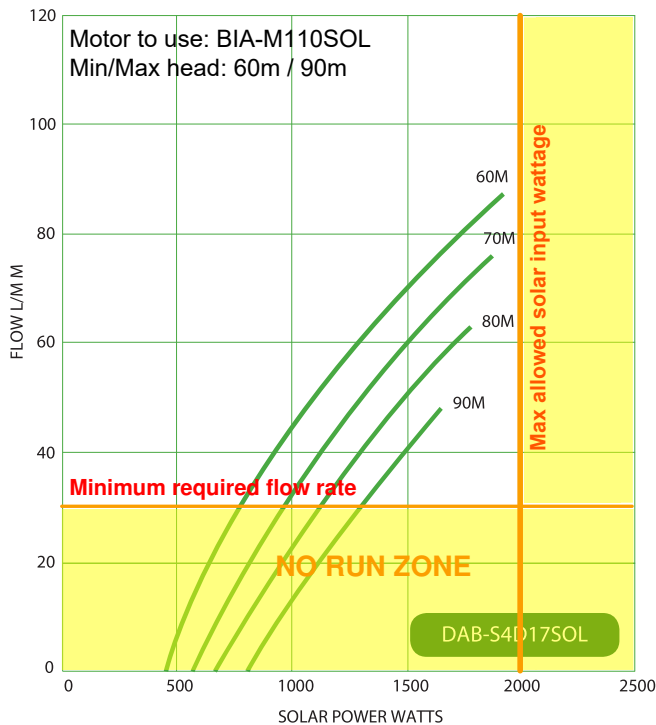
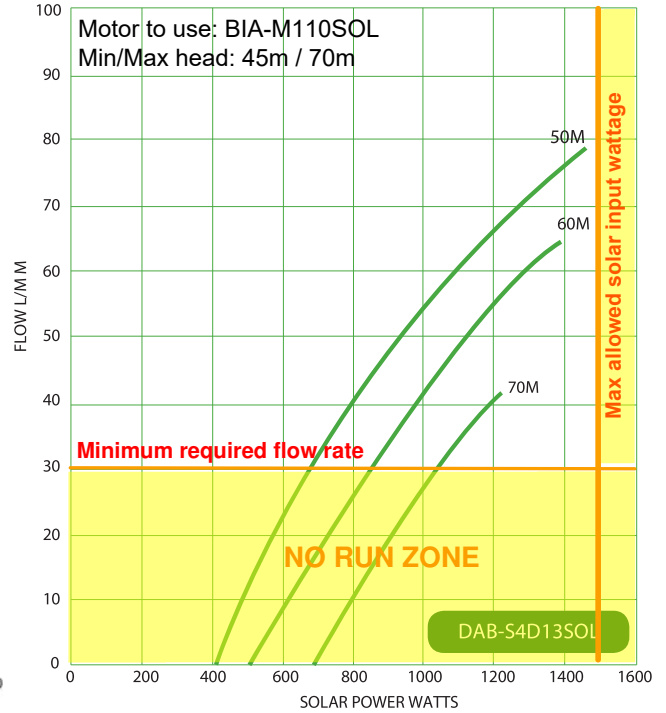
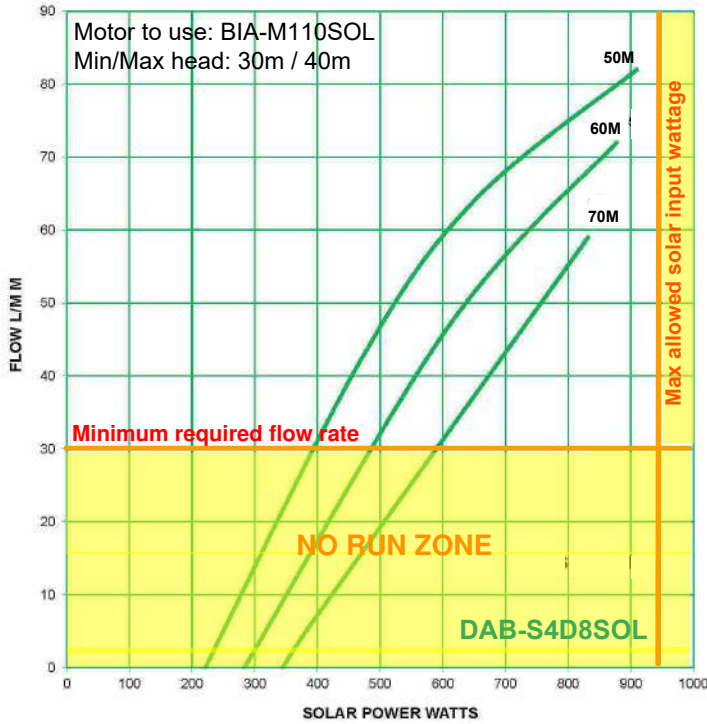
4" BOREHOLE PUMPS - SOLAR POWERED

Performance Curves



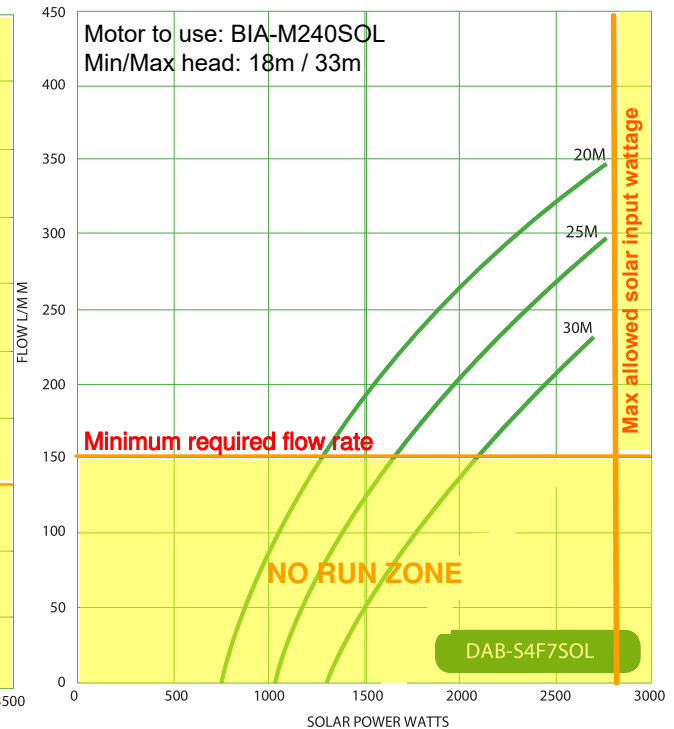
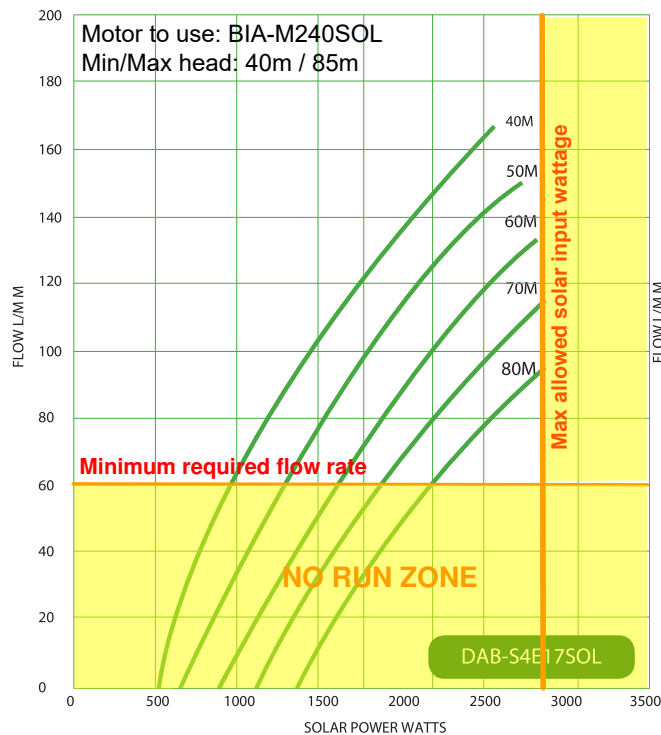
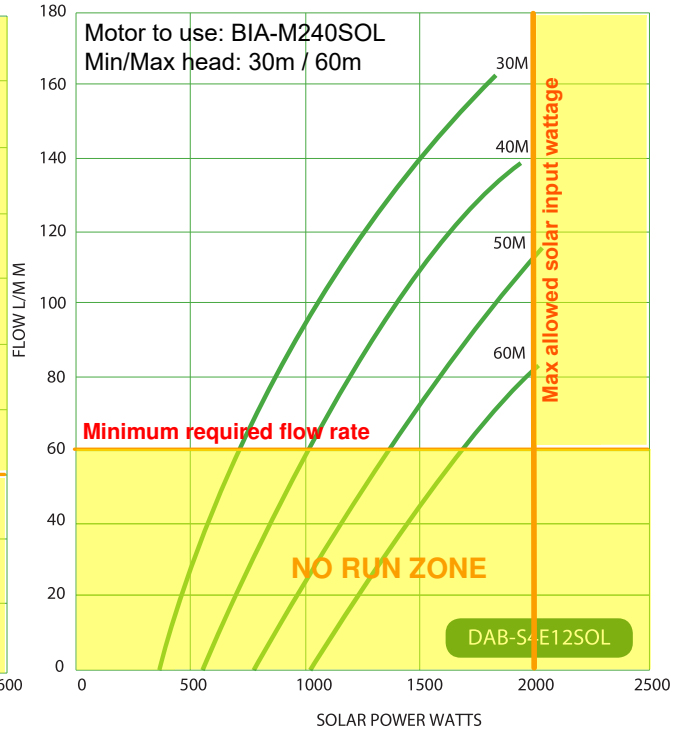
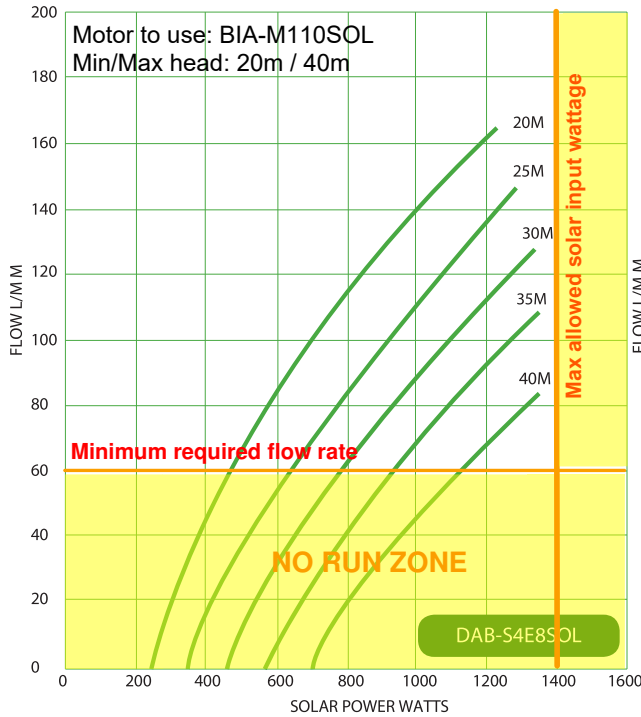
4" BOREHOLE PUMPS - SOLAR POWERED

Performance Curves



4" BOREHOLE PUMPS - SOLAR POWERED

Performance Curves



3. Pump Selection with respect to Motor Size, Head Range & Max. Allowed Solar Panel Input Wattage

| Sl. # | Pronto Code | Pump Model | Recommended Motor Sizes | Head Range | Maximum Solar Panel Input Wattage |
|-------|-------------|--------------|-------------------------|--------------|-----------------------------------|
| 1 | 802619 | DAB-S4A12SOL | BIA-M110SOL | 35m to 65m | 630W |
| 2 | 805147 | DAB-S4A18SOL | BIA-M110SOL | 50m to 105m | 700W |
| 3 | 805150 | DAB-S4A36SOL | BIA-M110SOL | 85m to 120m | 1450W |
| 4 | 806196 | | BIA-M240SOL | 120m to 210m | 1450W |
| 5 | 805148 | DAB-S4B12SOL | BIA-M110SOL | 35m to 65m | 750W |
| 6 | 805151 | DAB-S4B24SOL | BIA-M110SOL | 70m to 135m | 1500W |
| 7 | 805364 | DAB-S4B32SOL | BIA-M110SOL | 90m to 120m | 1900W |
| 8 | 806197 | | BIA-M240SOL | 120m to 180m | 1900W |
| 9 | 805155 | DAB-S4B48SOL | BIA-M240SOL | 125m to 270m | 3150W |
| 10 | 805149 | DAB-S4C9SOL | BIA-M110SOL | 30m to 45m | 700W |
| 11 | 802620 | DAB-S4C13SOL | BIA-M110SOL | 35m to 65m | 1000W |
| 12 | 805152 | DAB-S4C19SOL | BIA-M110SOL | 55m to 95m | 1400W |
| 13 | 805365 | DAB-S4C25SOL | BIA-M110SOL | 70m to 125m | 1900W |
| 14 | 805156 | DAB-S4C39SOL | BIA-M240SOL | 90m to 200m | 3150W |
| 15 | 802621 | DAB-S4D8SOL | BIA-M110SOL | 30m to 40m | 950W |
| 16 | 805153 | DAB-S4D13SOL | BIA-M110SOL | 45m to 70m | 1500W |
| 17 | 805366 | DAB-S4D17SOL | BIA-M110SOL | 60m to 90m | 2000W |
| 18 | 805146 | DAB-S4D25SOL | BIA-M240SOL | 90m to 135m | 2900W |
| 19 | 805154 | DAB-S4E8SOL | BIA-M110SOL | 20m to 40m | 1400W |
| 20 | 805367 | DAB-S4E12SOL | BIA-M240SOL | 30m to 60m | 2000W |
| 21 | 805145 | DAB-S4E17SOL | BIA-M240SOL | 40m to 85m | 2800W |
| 22 | 805144 | DAB-S4F7SOL | BIA-M240SOL | 18m to 33m | 2800W |

4. CABLE SIZING CHART

| Solar Panel Sizing | | | | | | All Electrical Data @ STC | | | | | | | | CABLE LENGTH (UPTO 'X' METRES) | | | | | | | | | |
|--------------------|---------|---------------------|-------|----------|---------|---------------------------|---------------|----------|---------------|---------|-------------|----------|-------------|--------------------------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| | | | | | | | | | | | | | | 10 | 25 | 50 | 75 | 100 | 125 | 150 | 200 | 250 | 300 |
| Solar Panel Qty | Wattage | MAX DC input power* | Brand | Size | Strings | VOC (V) | | VMPP (V) | | ISC (A) | | IMPP (A) | | CROSS SECTION MM ² | | | | | | | | | |
| 2 | 315 | 630 | PHONO | 120 cell | 1 | 40.11 | 80.22 | 33.84 | 67.68 | 9.76 | 9.76 | 9.31 | 9.31 | 2.5 | 6 | 10 | 16 | 25 | 25 | 25 | 35 | 50 | 50 |
| 3 | 315 | 945 | PHONO | 120 cell | 1 | 40.11 | 120.33 | 33.84 | 101.52 | 9.76 | 9.76 | 9.31 | 9.31 | 1.5 | 4 | 6 | 10 | 16 | 16 | 25 | 35 | 35 | 50 |
| 4 | 315 | 1260 | PHONO | 120 cell | 1 | 40.11 | 160.44 | 33.84 | 135.36 | 9.76 | 9.76 | 9.31 | 9.31 | 1.5 | 2.5 | 6 | 10 | 10 | 16 | 16 | 25 | 25 | 25 |
| 5 | 315 | 1575 | PHONO | 120 cell | 1 | 40.11 | 200.55 | 33.84 | 169.20 | 9.76 | 9.76 | 9.31 | 9.31 | 1.5 | 2.5 | 4 | 6 | 10 | 10 | 10 | 16 | 25 | 25 |
| 6 | 315 | 1890 | PHONO | 120 cell | 1 | 40.11 | 240.66 | 33.84 | 203.04 | 9.76 | 9.76 | 9.31 | 9.31 | 1.5 | 1.5 | 4 | 6 | 6 | 10 | 10 | 16 | 16 | 25 |
| 7 | 315 | 2205 | PHONO | 120 cell | 1 | 40.11 | 280.77 | 33.84 | 236.88 | 9.76 | 9.76 | 9.31 | 9.31 | 1.5 | 1.5 | 2.5 | 4 | 6 | 6 | 10 | 10 | 16 | 16 |
| 8 | 315 | 2520 | PHONO | 120 cell | 1 | 40.11 | 320.88 | 33.84 | 270.72 | 9.76 | 9.76 | 9.31 | 9.31 | 1.5 | 1.5 | 2.5 | 4 | 6 | 6 | 10 | 10 | 16 | 16 |
| 9 | 315 | 2835 | PHONO | 120 cell | 1 | 40.11 | 360.99 | 33.84 | 304.56 | 9.76 | 9.76 | 9.31 | 9.31 | 1.5 | 1.5 | 2.5 | 4 | 4 | 6 | 6 | 10 | 10 | 16 |
| 10 | 315 | 3150 | PHONO | 120 cell | 1 | 40.11 | 401.10 | 33.84 | 338.40 | 9.76 | 9.76 | 9.31 | 9.31 | 1.5 | 1.5 | 2.5 | 2.5 | 4 | 6 | 6 | 10 | 10 | 10 |

* Max DC power at corresponding number of panels

VOC: Voltage Open Circuit
 VMPP: Voltage at Max Power
 ISC: Short Circuit Current
 IMPP: Current at Max Power

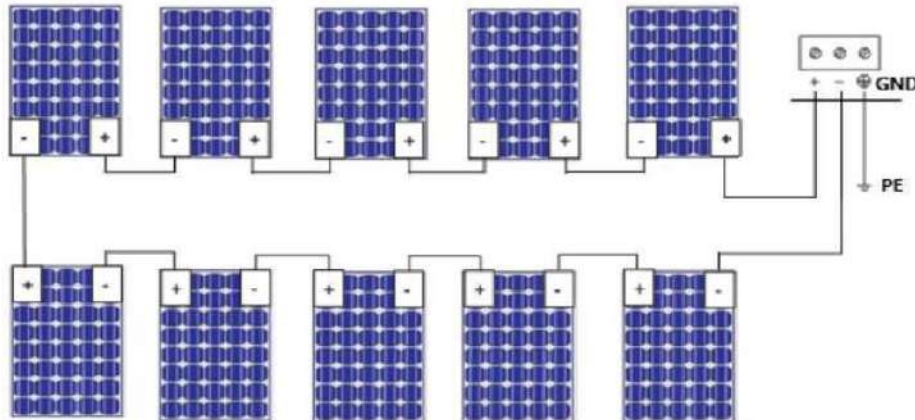
Step1: Select the Solar panel quantity for the system

Step2: Verify that the Max DC input power does not exceed the Max allowed solar panel input wattage (Refer to Step 3 on previous page)

Step3: Under the Cable length column, choose corresponding length of the cable in meters and select the correct cable size.

Solar Panel wiring:

Wiring for maximum 10 x 315W solar panels



5. Checks and guides to follow:

a. Dry run protection with pressure systems on the iCON Solar motors:

The motor has a software protection to prevent shutdown, so if there is no water or if it's a closed head it could take up to 30min before it shuts off completely. It is hence recommended that a best-case system install must include the iSOLAR controller, motor and flow meter on a pressure system. When using a pressure switch system, it must include a correctly sized expansion vessel and non-return valve, apart from the one installed inside the pump end.

b. Shrouding during a horizontal install:

We recommend a shroud must be used for all applications (but can be used without a shroud as well). But a shroud must be used when the current drawn by the motor is above 2kW. To estimate motor consumed wattage, consider the total power of the solar panels and then less 30%.

Rule of thumb: Above 2kW = Use shroud; If below 2kW = Not compulsory.

Example: If the total size of the solar array is 3000W, less 30% = 2100W. At peak power, it is expected to be above 2kW, hence use a shroud.

During a horizontal install, the minimum angle of install shouldn't be negative (i.e. pump end shouldn't point downwards) and the bleed hole must be in the upright position.

c. Pump end tolerances:

To ensure successful long-term motor operation, it is crucial that the pump has the correct amount of movement in its shaft. Once the motor and pump have been assembled, we can confirm that the permitted movement on the spline must be 1mm to 2 mm.

d. Shaft tensions:

When manipulating the shaft without power the shaft may appear to be tight. BIA-M240SOL motors have a tighter shaft due to the magnetic force required to support up to 320m head.

e. Over-sizing arrays:

Max power of the solar arrays must not exceed 3100W & 12Amps - DC Power and 2200W & 10Amps – AC Power.

f. Sizing up a generator:

Take total kW of the solar array, multiply by 1.1 and then divide by 0.8 to arrive at the minimum kVa required from the generator.

g. Warranty:

To be inspected for warranty, the motor must be returned with cable and joint intact. We recommend the cable be cut at least a minimum of 100mm above the joint kit.

6. iSOLAR SELECTION MATRIX

For Australia

| iSOLAR BOREPUMP SELECTION BASED ON AVERAGE 6 SOLAR HOURS/DAY SUMMER, 4 SOLAR HOURS/DAY WINTER | | | | | | | | | | | | | | | | | | | | | | LITRES/MIN, LITRES/DAY | | | |
|---|------------------------|------------------------|-------------------------|------------------------|-------------------------|-------------------------|-------------------------|-------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------|------------------------|--|--|--|
| HEAD M | 400 W | | 600 W | | 800 W | | 1000 W | | 1200 W | | 1400 W | | 1600 W | | 2000 W | | 2400 W | | 2800 W | | 3200 W | | | | |
| | SUMMER | WINTER | SUMMER | WINTER | SUMMER | WINTER | SUMMER | WINTER | SUMMER | WINTER | SUMMER | WINTER | SUMMER | WINTER | SUMMER | WINTER | SUMMER | WINTER | SUMMER | WINTER | SUMMER | WINTER | | | |
| 20 | | | S4E8SOL 84 30240 | S4E8SOL 84 20160 | S4E8SOL 115 41400 | S4E8SOL 115 27600 | S4E8SOL 140 50400 | S4E8SOL 140 33600 | S4E8SOL 161 57960 | S4E8SOL 161 38640 | S4E8SOL 165 59400 | S4E8SOL 165 39600 | | | | | | | | | | | | | |
| 20 | | | | | | | | | | | S4F7SOL 185 66600 | S4F7SOL 185 44400 | S4F7SOL 215 77400 | S4F7SOL 215 51600 | S4F7SOL 261 93960 | S4F7SOL 261 62640 | S4F7SOL 308 110880 | S4F7SOL 308 73920 | S4F7SOL 350 126000 | S4F7SOL 350 84000 | | | | | |
| 30 | S4C9SOL 27 9720 | S4C9SOL 27 6480 | S4C9SOL 48 17280 | S4C9SOL 48 11520 | | | | | | | | | | | | | | | | | | | | | |
| 30 | | | | | | | S4E8SOL 88 31680 | S4E8SOL 88 21120 | S4E8SOL 112 40320 | S4E8SOL 112 26880 | S4E8SOL 128 46080 | S4E8SOL 128 30720 | | | | | | | | | | | | | |
| 30 | | | | | S4E12SOL 76 27360 | S4E12SOL 76 18240 | S4E12SOL 96 34560 | S4E12SOL 96 23040 | S4E12SOL 112 40320 | S4E12SOL 112 26880 | S4E12SOL 128 46080 | S4E12SOL 128 30720 | S4E12SOL 147 52920 | S4E12SOL 147 35280 | S4E12SOL 163 58680 | S4E12SOL 163 39120 | | | | | | | | | |
| 30 | | | | | | | | | | | | | | | | | S4F7SOL 191 68760 | S4F7SOL 191 45840 | S4F7SOL 230 82800 | S4F7SOL 230 55200 | | | | | |
| 40 | S4B12SOL 21 7560 | S4B12SOL 21 5040 | S4B12SOL 28 10080 | S4B12SOL 28 6720 | S4B12SOL 33 11880 | S4B12SOL 33 7920 | | | | | | | | | | | | | | | | | | | |
| 40 | | | S4C9SOL 34 12240 | S4C9SOL 34 8160 | S4C9SOL 37 13320 | S4C9SOL 37 8880 | | | | | | | | | | | | | | | | | | | |
| 40 | | | | | | | | | S4E8SOL 68 24480 | S4E8SOL 68 16320 | S4E8SOL 84 30240 | S4E8SOL 84 20160 | | | | | | | | | | | | | |
| 40 | | | | | | | S4E12SOL 60 21600 | S4E12SOL 60 14400 | S4E12SOL 81 29160 | S4E12SOL 81 19440 | S4E12SOL 99 35640 | S4E12SOL 99 23760 | S4E12SOL 117 42120 | S4E12SOL 117 28080 | S4E12SOL 140 50400 | S4E12SOL 140 33600 | | | | | | | | | |
| 40 | | | | | S4E17SOL 49 17640 | S4E17SOL 49 11760 | S4E17SOL 67 24120 | S4E17SOL 67 16080 | S4E17SOL 82 29520 | S4E17SOL 82 19680 | S4E17SOL 95 34200 | S4E17SOL 95 22800 | S4E17SOL 108 38880 | S4E17SOL 108 25920 | S4E17SOL 133 47880 | S4E17SOL 133 31920 | S4E17SOL 180 64800 | S4E17SOL 180 43200 | | | | | | | |
| 50 | S4A18SOL 14 5040 | S4A18SOL 14 3360 | S4A18SOL 20 7200 | S4A18SOL 20 4800 | | | | | | | | | | | | | | | | | | | | | |
| 50 | S4B12SOL 15 5400 | S4B12SOL 15 3600 | S4B12SOL 25 9000 | S4B12SOL 25 6000 | S4B12SOL 27 9720 | S4B12SOL 27 6480 | | | | | | | | | | | | | | | | | | | |
| 50 | | | | | S4D13SOL 40 14400 | S4D13SOL 40 9600 | S4D13SOL 53 19080 | S4D13SOL 53 12720 | S4D13SOL 66 23760 | S4D13SOL 66 15840 | S4D13SOL 76 27360 | S4D13SOL 76 18240 | | | | | | | | | | | | | |
| 50 | | | | | | | | | | | S4E12SOL 63 22680 | S4E12SOL 63 15120 | S4E12SOL 82 29520 | S4E12SOL 82 19680 | S4E12SOL 113 40680 | S4E12SOL 113 27120 | | | | | | | | | |
| 50 | | | | | | | | | | | S4E17SOL 72 25920 | S4E17SOL 72 17280 | S4E17SOL 88 31680 | S4E17SOL 88 21120 | S4E17SOL 112 40320 | S4E17SOL 112 26880 | S4E17SOL 134 48240 | S4E17SOL 134 32160 | S4E17SOL 150 54000 | S4E17SOL 150 36000 | | | | | |



| ISOLAR BOREPUMP SELECTION BASED ON AVERAGE 6 SOLAR HOURS/DAY SUMMER, 4 SOLAR HOURS/DAY WINTER | | | | | | | | | | | | | LITRES/MIN, LITRES/DAY | | | | | | | | | |
|---|------------------------|------------------------|------------------------|------------------------|-------------------------|-------------------------|-------------------------|-------------------------|-------------------------|-------------------------|-------------------------|-------------------------|-------------------------|-------------------------|-------------------------|-------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------|--------|
| HEAD M | 400 W | | 600 W | | 800 W | | 1000 W | | 1200 W | | 1400 W | | 1600 W | | 2000 W | | 2400 W | | 2800 W | | 3200 W | |
| | SUMMER | WINTER | SUMMER | WINTER | SUMMER | WINTER | SUMMER | WINTER | SUMMER | WINTER | SUMMER | WINTER | SUMMER | WINTER | SUMMER | WINTER | SUMMER | WINTER | SUMMER | WINTER | SUMMER | WINTER |
| 60 | S4A18SOL 12 4320 | S4A18SOL 12 2880 | S4A18SOL 17 6120 | S4A18SOL 17 4080 | | | | | | | | | | | | | | | | | | |
| 60 | | | S4B12SOL 20 7200 | S4B12SOL 20 4800 | S4B12SOL 22 7920 | S4B12SOL 22 5280 | | | | | | | | | | | | | | | | |
| 60 | | | | | S4C19SOL 30 10800 | S4C19SOL 30 7200 | S4C19SOL 42 15120 | S4C19SOL 42 10080 | S4C19SOL 51 18360 | S4C19SOL 51 12240 | S4C19SOL 58 20880 | S4C19SOL 58 13920 | | | | | | | | | | |
| 60 | | | | | S4D13SOL 42 15120 | S4D13SOL 42 10080 | S4D13SOL 55 19800 | S4D13SOL 55 13200 | S4D13SOL 64 23040 | S4D13SOL 64 15360 | | | | | | | | | | | | |
| 60 | | | | | S4D17SOL 32 11520 | S4D17SOL 32 7680 | S4D17SOL 46 16560 | S4D17SOL 46 11040 | S4D17SOL 56 20160 | S4D17SOL 56 13440 | S4D17SOL 66 23760 | S4D17SOL 66 15840 | S4D17SOL 74 26640 | S4D17SOL 74 17760 | S4D17SOL 87 31320 | S4D17SOL 87 20880 | | | | | | |
| 60 | | | | | | | | | | | | | | | S4E17SOL 89 32040 | S4E17SOL 89 21360 | S4E17SOL 111 39960 | S4E17SOL 111 26640 | S4E17SOL 132 47520 | S4E17SOL 132 31680 | | |
| 70 | S4A18SOL 9 3240 | S4A18SOL 9 2160 | S4A18SOL 15 5400 | S4A18SOL 15 3600 | | | | | | | | | | | | | | | | | | |
| 70 | S4B24SOL 11 3960 | S4B24SOL 11 2640 | S4B24SOL 18 6480 | S4B24SOL 18 4320 | S4B24SOL 23 8280 | S4B24SOL 23 5520 | S4B24SOL 28 10080 | S4B24SOL 28 6720 | S4B24SOL 32 11520 | S4B24SOL 32 7680 | S4B24SOL 35 12600 | S4B24SOL 35 8400 | | | | | | | | | | |
| 70 | | | | | S4C19SOL 22 7920 | S4C19SOL 22 5280 | S4C19SOL 33 11880 | S4C19SOL 33 7920 | S4C19SOL 43 15480 | S4C19SOL 43 10320 | S4C19SOL 51 18360 | S4C19SOL 51 12240 | | | | | | | | | | |
| 70 | | | | | S4C25SOL 27 9720 | S4C25SOL 27 6480 | S4C25SOL 36 12960 | S4C25SOL 36 8640 | S4C25SOL 43 15480 | S4C25SOL 43 10320 | S4C25SOL 49 17640 | S4C25SOL 49 11760 | S4C25SOL 55 19800 | S4C25SOL 55 13200 | | | | | | | | |
| 70 | | | | | | | S4D17SOL 32 11520 | S4D17SOL 32 7680 | S4D17SOL 44 15840 | S4D17SOL 44 10560 | S4D17SOL 56 20160 | S4D17SOL 56 13440 | S4D17SOL 65 23400 | S4D17SOL 65 15600 | S4D17SOL 76 27360 | S4D17SOL 76 18240 | | | | | | |
| 70 | | | | | | | | | | | | | | | S4E17SOL 68 24480 | S4E17SOL 68 16320 | S4E17SOL 91 32760 | S4E17SOL 91 21840 | S4E17SOL 112 40320 | S4E17SOL 112 26880 | | |
| 80 | S4A18SOL 7 2520 | S4A18SOL 7 1680 | S4A18SOL 13 4680 | S4A18SOL 13 3120 | | | | | | | | | | | | | | | | | | |
| 80 | | | S4B24SOL 15 5400 | S4B24SOL 15 3600 | S4B24SOL 21 7560 | S4B24SOL 21 5040 | S4B24SOL 26 9360 | S4B24SOL 26 6240 | S4B24SOL 29 10440 | S4B24SOL 29 6960 | S4B24SOL 33 11880 | S4B24SOL 33 7920 | | | | | | | | | | |
| 80 | | | | | | | S4C19SOL 25 9000 | S4C19SOL 25 6000 | S4C19SOL 35 12600 | S4C19SOL 35 8400 | S4C19SOL 43 15480 | S4C19SOL 43 10320 | | | | | | | | | | |
| 80 | | | | | S4C25SOL 20 7200 | S4C25SOL 20 4800 | S4C25SOL 30 10800 | S4C25SOL 30 7200 | S4C25SOL 37 13320 | S4C25SOL 37 8880 | S4C25SOL 44 15840 | S4C25SOL 44 10560 | S4C25SOL 50 18000 | S4C25SOL 50 12000 | | | | | | | | |
| 80 | | | | | | | | | S4D17SOL 33 11880 | S4D17SOL 33 7920 | S4D17SOL 46 16560 | S4D17SOL 46 11040 | S4D17SOL 56 20160 | S4D17SOL 56 13440 | S4D17SOL 63 22680 | S4D17SOL 63 15120 | | | | | | |
| 80 | | | | | | | | | | | | | S4E17SOL 22 7920 | S4E17SOL 22 5280 | S4E17SOL 50 18000 | S4E17SOL 50 12000 | S4E17SOL 72 25920 | S4E17SOL 72 17280 | S4E17SOL 93 33480 | S4E17SOL 93 22320 | | |



| HEAD M | ISOLAR BOREPUMP SELECTION BASED ON AVERAGE 6 SOLAR HOURS/DAY SUMMER, 4 SOLAR HOURS/DAY WINTER | | | | | | | | | | | | | | | | | | | | | |
|--------|---|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|
| | 400 W | | 600 W | | 800 W | | 1000 W | | 1200 W | | 1400 W | | 1600 W | | 2000 W | | 2400 W | | 2800 W | | 3200 W | |
| | SUMMER | WINTER | SUMMER | WINTER | SUMMER | WINTER | SUMMER | WINTER | SUMMER | WINTER | SUMMER | WINTER | SUMMER | WINTER | SUMMER | WINTER | SUMMER | WINTER | SUMMER | WINTER | SUMMER | WINTER |
| 90 | | | S4A18SOL | S4A18SOL | | | | | | | | | | | | | | | | | | |
| | | | 11 | 11 | | | | | | | | | | | | | | | | | | |
| | | | 3960 | 2640 | | | | | | | | | | | | | | | | | | |
| 90 | S4A36SOL | S4A36SOL | S4A36SOL | S4A36SOL | S4A36SOL | S4A36SOL | S4A36SOL | S4A36SOL | S4A36SOL | S4A36SOL | S4A36SOL | S4A36SOL | S4A36SOL | S4A36SOL | S4A36SOL | S4A36SOL | S4A36SOL | S4A36SOL | S4A36SOL | S4A36SOL | S4A36SOL | S4A36SOL |
| | 7 | 7 | 11 | 11 | 15 | 15 | 18 | 18 | 21 | 21 | 23 | 23 | | | | | | | | | | |
| | 2520 | 1680 | 3960 | 2640 | 5400 | 3600 | 6480 | 4320 | 7560 | 5040 | 8280 | 5520 | | | | | | | | | | |
| 90 | | | S4B24SOL | S4B24SOL | S4B24SOL | S4B24SOL | S4B24SOL | S4B24SOL | S4B24SOL | S4B24SOL | S4B24SOL | S4B24SOL | S4B24SOL | S4B24SOL | S4B24SOL | S4B24SOL | S4B24SOL | S4B24SOL | S4B24SOL | S4B24SOL | S4B24SOL | S4B24SOL |
| | | | 12 | 12 | 18 | 18 | 23 | 23 | 27 | 27 | 31 | 31 | | | | | | | | | | |
| | | | 4320 | 2880 | 6480 | 4320 | 8280 | 5520 | 9720 | 6480 | 11160 | 7440 | | | | | | | | | | |
| 90 | | | S4B32SOL | S4B32SOL | S4B32SOL | S4B32SOL | S4B32SOL | S4B32SOL | S4B32SOL | S4B32SOL | S4B32SOL | S4B32SOL | S4B32SOL | S4B32SOL | S4B32SOL | S4B32SOL | S4B32SOL | S4B32SOL | S4B32SOL | S4B32SOL | S4B32SOL | S4B32SOL |
| | | | 12 | 12 | 18 | 18 | 23 | 23 | 26 | 26 | 29 | 29 | 32 | 32 | | | | | | | | |
| | | | 4320 | 2880 | 6480 | 4320 | 8280 | 5520 | 9360 | 6240 | 10440 | 6960 | 11520 | 7680 | | | | | | | | |
| 90 | | | | | | | | | S4C19SOL | S4C19SOL | S4C19SOL | S4C19SOL | | | | | | | | | | |
| | | | | | | | | | 28 | 28 | 34 | 34 | | | | | | | | | | |
| | | | | | | | | | 10080 | 6720 | 12240 | 8160 | | | | | | | | | | |
| 90 | | | | | | | | S4C25SOL | S4C25SOL | S4C25SOL | S4C25SOL | S4C25SOL | S4C25SOL | S4C25SOL | S4C25SOL | S4C25SOL | S4C25SOL | S4C25SOL | S4C25SOL | S4C25SOL | S4C25SOL | S4C25SOL |
| | | | | | | | | 23 | 23 | 32 | 32 | 37 | 37 | 44 | 44 | | | | | | | |
| | | | | | | | | 8280 | 5520 | 11520 | 7680 | 13320 | 8880 | 15840 | 10560 | | | | | | | |
| 90 | | | | | | | S4C39SOL | S4C39SOL | S4C39SOL | S4C39SOL | S4C39SOL | S4C39SOL | S4C39SOL | S4C39SOL | S4C39SOL | S4C39SOL | S4C39SOL | S4C39SOL | S4C39SOL | S4C39SOL | S4C39SOL | S4C39SOL |
| | | | | | | | 24 | 24 | 32 | 32 | 37 | 37 | 43 | 43 | 53 | 53 | 61 | 61 | 66 | 66 | 66 | 66 |
| | | | | | | | 8640 | 5760 | 11520 | 7680 | 13320 | 8880 | 15480 | 10320 | 19080 | 12720 | 21960 | 14640 | 23760 | 15840 | 23760 | 15840 |
| 90 | | | | | | | | | | | S4D17SOL | S4D17SOL | S4D17SOL | S4D17SOL | S4D17SOL | S4D17SOL | S4D17SOL | S4D17SOL | S4D17SOL | S4D17SOL | S4D17SOL | S4D17SOL |
| | | | | | | | | | | | 34 | 34 | 46 | 46 | 48 | 48 | | | | | | |
| | | | | | | | | | | | 12240 | 8160 | 16560 | 11040 | 17280 | 11520 | | | | | | |
| 90 | | | | | | | | | | | S4D25SOL | S4D25SOL | S4D25SOL | S4D25SOL | S4D25SOL | S4D25SOL | S4D25SOL | S4D25SOL | S4D25SOL | S4D25SOL | S4D25SOL | S4D25SOL |
| | | | | | | | | | | | 38 | 38 | 47 | 47 | 65 | 65 | 78 | 78 | 86 | 86 | | |
| | | | | | | | | | | | 13680 | 9120 | 16920 | 11280 | 23400 | 15600 | 28080 | 18720 | 30960 | 20640 | | |
| 100 | | | S4A18SOL | S4A18SOL | | | | | | | | | | | | | | | | | | |
| | | | 9 | 9 | | | | | | | | | | | | | | | | | | |
| | | | 3240 | 2160 | | | | | | | | | | | | | | | | | | |
| 100 | S4A36SOL | S4A36SOL | S4A36SOL | S4A36SOL | S4A36SOL | S4A36SOL | S4A36SOL | S4A36SOL | S4A36SOL | S4A36SOL | S4A36SOL | S4A36SOL | S4A36SOL | S4A36SOL | S4A36SOL | S4A36SOL | S4A36SOL | S4A36SOL | S4A36SOL | S4A36SOL | S4A36SOL | S4A36SOL |
| | 5 | 5 | 10 | 10 | 14 | 14 | 17 | 17 | 20 | 20 | 22 | 22 | | | | | | | | | | |
| | 1800 | 1200 | 3600 | 2400 | 5040 | 3360 | 6120 | 4080 | 7200 | 4800 | 7920 | 5280 | | | | | | | | | | |
| 100 | | | | | S4B24SOL | S4B24SOL | S4B24SOL | S4B24SOL | S4B24SOL | S4B24SOL | S4B24SOL | S4B24SOL | S4B24SOL | S4B24SOL | S4B24SOL | S4B24SOL | S4B24SOL | S4B24SOL | S4B24SOL | S4B24SOL | S4B24SOL | S4B24SOL |
| | | | | | 15 | 15 | 21 | 21 | 25 | 25 | 28 | 28 | | | | | | | | | | |
| | | | | | 5400 | 3600 | 7560 | 5040 | 9000 | 6000 | 10080 | 6720 | | | | | | | | | | |
| 100 | | | S4B32SOL | S4B32SOL | S4B32SOL | S4B32SOL | S4B32SOL | S4B32SOL | S4B32SOL | S4B32SOL | S4B32SOL | S4B32SOL | S4B32SOL | S4B32SOL | S4B32SOL | S4B32SOL | S4B32SOL | S4B32SOL | S4B32SOL | S4B32SOL | S4B32SOL | S4B32SOL |
| | | | 11 | 11 | 16 | 16 | 21 | 21 | 24 | 24 | 27 | 27 | 30 | 30 | | | | | | | | |
| | | | 3960 | 2640 | 5760 | 3840 | 7560 | 5040 | 8640 | 5760 | 9720 | 6480 | 10800 | 7200 | | | | | | | | |
| 100 | | | | | | | | | S4C25SOL | S4C25SOL | S4C25SOL | S4C25SOL | S4C25SOL | S4C25SOL | S4C25SOL | S4C25SOL | S4C25SOL | S4C25SOL | S4C25SOL | S4C25SOL | S4C25SOL | S4C25SOL |
| | | | | | | | | | 26 | 26 | 32 | 32 | 38 | 38 | | | | | | | | |
| | | | | | | | | | 9360 | 6240 | 11520 | 7680 | 13680 | 9120 | | | | | | | | |
| 100 | | | | | | | | S4C39SOL | S4C39SOL | S4C39SOL | S4C39SOL | S4C39SOL | S4C39SOL | S4C39SOL | S4C39SOL | S4C39SOL | S4C39SOL | S4C39SOL | S4C39SOL | S4C39SOL | S4C39SOL | S4C39SOL |
| | | | | | | | | 20 | 20 | 27 | 27 | 33 | 33 | 39 | 39 | 49 | 49 | 58 | 58 | 64 | 64 | 66 |
| | | | | | | | | 7200 | 4800 | 9720 | 6480 | 11880 | 7920 | 14040 | 9360 | 17640 | 11760 | 20880 | 13920 | 23040 | 15360 | 23760 |
| 100 | | | | | | | | | S4D25SOL | S4D25SOL | S4D25SOL | S4D25SOL | S4D25SOL | S4D25SOL | S4D25SOL | S4D25SOL | S4D25SOL | S4D25SOL | S4D25SOL | S4D25SOL | S4D25SOL | S4D25SOL |
| | | | | | | | | | 22 | 22 | 30 | 30 | 39 | 39 | 55 | 55 | 69 | 69 | 80 | 80 | | |
| | | | | | | | | | 7920 | 5280 | 10800 | 7200 | 14040 | 9360 | 19800 | 13200 | 24840 | 16560 | 28800 | 19200 | | |



| ISOLAR BOREPUMP SELECTION BASED ON AVERAGE 6 SOLAR HOURS/DAY SUMMER, 4 SOLAR HOURS/DAY WINTER | | | | | | | | | | | | | | | | | | | LITRES/MIN, LITRES/DAY | | | | | | | |
|---|--------|--------|-----------------------|-----------------------|------------------------|------------------------|------------------------|------------------------|------------------------|------------------------|-------------------------|------------------------|-------------------------|-------------------------|-------------------------|-------------------------|-------------------------|-------------------------|-------------------------|-------------------------|-------------------------|-------------------------|--|--|--|--|
| HEAD M | 400 W | | 600 W | | 800 W | | 1000 W | | 1200 W | | 1400 W | | 1600 W | | 2000 W | | 2400 W | | 2800 W | | 3200 W | | | | | |
| | SUMMER | WINTER | SUMMER | WINTER | SUMMER | WINTER | SUMMER | WINTER | SUMMER | WINTER | SUMMER | WINTER | SUMMER | WINTER | SUMMER | WINTER | SUMMER | WINTER | SUMMER | WINTER | SUMMER | WINTER | | | | |
| 110 | | | S4A36SOL 9 3240 | S4A36SOL 9 2160 | S4A36SOL 13 4680 | S4A36SOL 13 3120 | S4A36SOL 17 6120 | S4A36SOL 17 4080 | S4A36SOL 19 6840 | S4A36SOL 19 4560 | S4A36SOL 26 9360 | S4A36SOL 26 6240 | | | | | | | | | | | | | | |
| 110 | | | | | S4B24SOL 12 4320 | S4B24SOL 12 2880 | S4B24SOL 17 6120 | S4B24SOL 17 4080 | S4B24SOL 23 8280 | S4B24SOL 23 5520 | S4B24SOL 25 9000 | S4B24SOL 25 6000 | | | | | | | | | | | | | | |
| 110 | | | | | S4B32SOL 13 4680 | S4B32SOL 13 3120 | S4B32SOL 18 6480 | S4B32SOL 18 4320 | S4B32SOL 23 8280 | S4B32SOL 23 5520 | S4B32SOL 26 9360 | S4B32SOL 26 6240 | S4B32SOL 28 10080 | S4B32SOL 28 6720 | | | | | | | | | | | | |
| 110 | | | | | | | | | S4C25SOL 20 7200 | S4C25SOL 20 4800 | S4C25SOL 27 9720 | S4C25SOL 27 6480 | S4C25SOL 34 12240 | S4C25SOL 34 8160 | | | | | | | | | | | | |
| 110 | | | | | | | | | S4C39SOL 23 8280 | S4C39SOL 23 5520 | S4C39SOL 28 10080 | S4C39SOL 28 6720 | S4C39SOL 35 12600 | S4C39SOL 35 8400 | S4C39SOL 45 16200 | S4C39SOL 45 10800 | S4C39SOL 53 19080 | S4C39SOL 53 12720 | S4C39SOL 60 21600 | S4C39SOL 60 14400 | S4C39SOL 63 22680 | S4C39SOL 63 15120 | | | | |
| 110 | | | | | | | | | | | | | S4D25SOL 34 12240 | S4D25SOL 34 8160 | S4D25SOL 48 17280 | S4D25SOL 48 11520 | S4D25SOL 61 21960 | S4D25SOL 61 14640 | S4D25SOL 73 26280 | S4D25SOL 73 17520 | | | | | | |
| 120 | | | | | S4B24SOL 10 3600 | S4B24SOL 10 2400 | S4B24SOL 15 5400 | S4B24SOL 15 3600 | S4B24SOL 20 7200 | S4B24SOL 20 4800 | S4B24SOL 21 7560 | S4B24SOL 21 5040 | | | | | | | | | | | | | | |
| 120 | | | S4A36SOL 8 2880 | S4A36SOL 8 1920 | S4A36SOL 12 4320 | S4A36SOL 12 2880 | S4A36SOL 16 5760 | S4A36SOL 16 3840 | S4A36SOL 18 6480 | S4A36SOL 18 4320 | S4A36SOL 24 8640 | S4A36SOL 24 5760 | | | | | | | | | | | | | | |
| 120 | | | | | S4B32SOL 12 4320 | S4B32SOL 12 2880 | S4B32SOL 17 6120 | S4B32SOL 17 4080 | S4B32SOL 21 7560 | S4B32SOL 21 5040 | S4B32SOL 24 8640 | S4B32SOL 24 5760 | S4B32SOL 27 9720 | S4B32SOL 27 6480 | | | | | | | | | | | | |
| 120 | | | | | | | | | | | S4C25SOL 22 7920 | S4C25SOL 22 5280 | S4C25SOL 28 10080 | S4C25SOL 28 6720 | | | | | | | | | | | | |
| 120 | | | | | | | | | | | | | S4D25SOL 25 9000 | S4D25SOL 25 6000 | S4D25SOL 41 14760 | S4D25SOL 41 9840 | S4D25SOL 54 19440 | S4D25SOL 54 12960 | S4D25SOL 58 20880 | S4D25SOL 58 13920 | | | | | | |
| 130 | | | S4A36SOL 6 2160 | S4A36SOL 6 1440 | S4A36SOL 11 3960 | S4A36SOL 11 2640 | S4A36SOL 14 5040 | S4A36SOL 14 3360 | S4A36SOL 17 6120 | S4A36SOL 17 4080 | S4A36SOL 19 6840 | S4A36SOL 19 4560 | | | | | | | | | | | | | | |
| 130 | | | | | | | | S4B24SOL 13 4680 | S4B24SOL 13 3120 | S4B24SOL 17 6120 | S4B24SOL 17 4080 | S4B24SOL 17 6120 | S4B24SOL 17 4080 | | | | | | | | | | | | | |
| 130 | | | | | | | | S4B32SOL 15 5400 | S4B32SOL 15 3600 | S4B32SOL 18 6480 | S4B32SOL 18 4320 | S4B32SOL 22 7920 | S4B32SOL 22 5280 | S4B32SOL 25 9000 | S4B32SOL 25 6000 | | | | | | | | | | | |
| 130 | | | | | S4B48SOL 11 3960 | S4B48SOL 11 2640 | S4B48SOL 15 5400 | S4B48SOL 15 3600 | S4B48SOL 19 6840 | S4B48SOL 19 4560 | S4B48SOL 22 7920 | S4B48SOL 22 5280 | S4B48SOL 25 9000 | S4B48SOL 25 6000 | S4B48SOL 29 10440 | S4B48SOL 29 6960 | S4B48SOL 32 11520 | S4B48SOL 32 7680 | S4B48SOL 35 12600 | S4B48SOL 35 8400 | S4B48SOL 36 12960 | S4B48SOL 36 8640 | | | | |
| 130 | | | | | | | | | | | S4C39SOL 20 7200 | S4C39SOL 20 4800 | S4C39SOL 27 9720 | S4C39SOL 27 6480 | S4C39SOL 37 13320 | S4C39SOL 37 8880 | S4C39SOL 45 16200 | S4C39SOL 45 10800 | S4C39SOL 53 19080 | S4C39SOL 53 12720 | S4C39SOL 56 20160 | S4C39SOL 56 13440 | | | | |
| 130 | | | | | | | | | | | | | | S4D25SOL 34 12240 | S4D25SOL 34 8160 | S4D25SOL 47 17280 | S4D25SOL 47 11520 | S4D25SOL 50 20880 | S4D25SOL 50 13920 | | | | | | | |



| ISOLAR BOREPUMP SELECTION BASED ON AVERAGE 6 SOLAR HOURS/DAY SUMMER, 4 SOLAR HOURS/DAY WINTER | | | | | | | | | | | | | | | | | | | | | | |
|---|--------|--------|------------------------|------------------------|------------------------|------------------------|------------------------|------------------------|------------------------|------------------------|------------------------|-------------------------|-------------------------|-------------------------|-------------------------|-------------------------|-------------------------|-------------------------|-------------------------|-------------------------|-------------------------|------------------------|
| HEAD M | 400 W | | 600 W | | 800 W | | 1000 W | | 1200 W | | 1400 W | | 1600 W | | 2000 W | | 2400 W | | 2800 W | | 3200 W | |
| | SUMMER | WINTER | SUMMER | WINTER | SUMMER | WINTER | SUMMER | WINTER | SUMMER | WINTER | SUMMER | WINTER | SUMMER | WINTER | SUMMER | WINTER | SUMMER | WINTER | SUMMER | WINTER | SUMMER | WINTER |
| 140 | | | S4A36SOL 10 3600 | S4A36SOL 10 2400 | S4A36SOL 13 4680 | S4A36SOL 13 3120 | S4A36SOL 16 5760 | S4A36SOL 16 3840 | S4A36SOL 18 6480 | S4A36SOL 18 4320 | | | | | 12240 | 8160 | 16920 | 11280 | 18000 | 12000 | | |
| 140 | | | | | S4B32SOL 13 4680 | S4B32SOL 13 3120 | S4B32SOL 17 6120 | S4B32SOL 17 4080 | S4B32SOL 20 7200 | S4B32SOL 20 4800 | S4B32SOL 23 8280 | S4B32SOL 23 5520 | | | | | | | | | | |
| 140 | | | | | S4B48SOL 13 4680 | S4B48SOL 13 3120 | S4B48SOL 17 6120 | S4B48SOL 17 4080 | S4B48SOL 20 7200 | S4B48SOL 20 4800 | S4B48SOL 24 8640 | S4B48SOL 24 5760 | S4B48SOL 28 10080 | S4B48SOL 28 6720 | S4B48SOL 31 11160 | S4B48SOL 31 7440 | S4B48SOL 34 12240 | S4B48SOL 34 8160 | S4B48SOL 36 12960 | S4B48SOL 36 8640 | | |
| 140 | | | | | | | | | | S4C39SOL 23 8280 | S4C39SOL 23 5520 | S4C39SOL 34 12240 | S4C39SOL 34 8160 | S4C39SOL 42 15120 | S4C39SOL 42 10080 | S4C39SOL 50 18000 | S4C39SOL 50 12000 | S4C39SOL 53 19080 | S4C39SOL 53 12720 | | | |
| 150 | | | S4A36SOL 8 2880 | S4A36SOL 8 1920 | S4A36SOL 12 4320 | S4A36SOL 12 2880 | S4A36SOL 14 5040 | S4A36SOL 14 3360 | S4A36SOL 17 6120 | S4A36SOL 17 4080 | | | | | | | | | | | | |
| 150 | | | | | S4B32SOL 10 3600 | S4B32SOL 10 2400 | S4B32SOL 14 5040 | S4B32SOL 14 3360 | S4B32SOL 18 6480 | S4B32SOL 18 4320 | S4B32SOL 22 7920 | S4B32SOL 22 5280 | | | | | | | | | | |
| 150 | | | | | S4B48SOL 11 3960 | S4B48SOL 11 2640 | S4B48SOL 15 5400 | S4B48SOL 15 3600 | S4B48SOL 19 6840 | S4B48SOL 19 4560 | S4B48SOL 22 7920 | S4B48SOL 22 5280 | S4B48SOL 26 9360 | S4B48SOL 26 6240 | S4B48SOL 30 10800 | S4B48SOL 30 7200 | S4B48SOL 34 12240 | S4B48SOL 34 8160 | S4B48SOL 37 12240 | S4B48SOL 37 8160 | S4B48SOL 40 12240 | S4B48SOL 40 8160 |
| 150 | | | | | | | | | | | | S4C39SOL 30 10800 | S4C39SOL 30 7200 | S4C39SOL 38 13680 | S4C39SOL 38 9120 | S4C39SOL 46 16560 | S4C39SOL 46 11040 | S4C39SOL 48 17280 | S4C39SOL 48 11520 | | | |
| 160 | | | S4A36SOL 7 2520 | S4A36SOL 7 1680 | S4A36SOL 11 3960 | S4A36SOL 11 2640 | S4A36SOL 13 4680 | S4A36SOL 13 3120 | S4A36SOL 15 5400 | S4A36SOL 15 3600 | | | | | | | | | | | | |
| 160 | | | | | S4B32SOL 13 4680 | S4B32SOL 13 3120 | S4B32SOL 17 6120 | S4B32SOL 17 4080 | S4B32SOL 21 7560 | S4B32SOL 21 5040 | | | | | | | | | | | | |
| 160 | | | | | S4B48SOL 14 5040 | S4B48SOL 14 3360 | S4B48SOL 18 6480 | S4B48SOL 18 4320 | S4B48SOL 20 7200 | S4B48SOL 20 4800 | S4B48SOL 25 9000 | S4B48SOL 25 6000 | S4B48SOL 29 10440 | S4B48SOL 29 6960 | S4B48SOL 33 11880 | S4B48SOL 33 7920 | S4B48SOL 33 11880 | S4B48SOL 33 7920 | S4B48SOL 33 11880 | S4B48SOL 33 7920 | | |
| 160 | | | | | | | | | | | | S4C39SOL 27 9720 | S4C39SOL 27 6480 | S4C39SOL 35 12600 | S4C39SOL 35 8400 | S4C39SOL 43 15480 | S4C39SOL 43 10320 | S4C39SOL 45 16200 | S4C39SOL 45 10800 | | | |
| 180 | | | S4A36SOL 8 2880 | S4A36SOL 8 1920 | S4A36SOL 11 3960 | S4A36SOL 11 2640 | S4A36SOL 13 4680 | S4A36SOL 13 3120 | | | | | | | | | | | | | | |
| 180 | | | | | | | | S4B32SOL 13 4680 | S4B32SOL 13 3120 | S4B32SOL 15 5400 | S4B32SOL 15 3600 | | | | | | | | | | | |
| 180 | | | | | S4B48SOL 11 3960 | S4B48SOL 11 2640 | S4B48SOL 14 5040 | S4B48SOL 14 3360 | S4B48SOL 17 6120 | S4B48SOL 17 4080 | S4B48SOL 22 7920 | S4B48SOL 22 5280 | S4B48SOL 27 9720 | S4B48SOL 27 6480 | S4B48SOL 31 11160 | S4B48SOL 31 7440 | S4B48SOL 31 11160 | S4B48SOL 31 7440 | S4B48SOL 31 11160 | S4B48SOL 31 7440 | | |
| 180 | | | | | | | | | | | | | | S4C39SOL 28 12240 | S4C39SOL 28 8160 | S4C39SOL 36 14400 | S4C39SOL 36 9600 | S4C39SOL 36 14400 | S4C39SOL 36 9600 | S4C39SOL 36 14400 | S4C39SOL 36 9600 | |



| ISOLAR BOREPUMP SELECTION BASED ON AVERAGE 6 SOLAR HOURS/DAY SUMMER, 4 SOLAR HOURS/DAY WINTER | | | | | | | | | | | | | | | | | | LITRES/MIN, LITRES/DAY | | | | |
|---|--------|--------|--------|--------|--------|--------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|------------------------|----------|----------|----------|----------|
| HEAD M | 400 W | | 600 W | | 800 W | | 1000 W | | 1200 W | | 1400 W | | 1600 W | | 2000 W | | 2400 W | | 2800 W | | 3200 W | |
| | SUMMER | WINTER | SUMMER | WINTER | SUMMER | WINTER | SUMMER | WINTER | SUMMER | WINTER | SUMMER | WINTER | SUMMER | WINTER | SUMMER | WINTER | SUMMER | WINTER | SUMMER | WINTER | SUMMER | WINTER |
| 200 | | | | | | | S4A36SOL | S4A36SOL | S4A36SOL | S4A36SOL | S4A36SOL | S4A36SOL | | | | | 10080 | 6720 | 12960 | 8640 | 12960 | 8640 |
| | | | | | | | 6 | 6 | 9 | 9 | 10 | 10 | | | | | | | | | | |
| | | | | | | | 2160 | 1440 | 3240 | 2160 | 3600 | 2400 | | | | | | | | | | |
| 200 | | | | | | | | | | | S4B48SOL | S4B48SOL | S4B48SOL | S4B48SOL | S4B48SOL | S4B48SOL | S4B48SOL | S4B48SOL | S4B48SOL | S4B48SOL | S4B48SOL | S4B48SOL |
| | | | | | | | | | | | 11 | 11 | 14 | 14 | 19 | 19 | 24 | 24 | 28 | 28 | 28 | 28 |
| | | | | | | | | | | | 3960 | 2640 | 5040 | 3360 | 6840 | 4560 | 8640 | 5760 | 10080 | 6720 | 10080 | 6720 |
| 200 | | | | | | | | | | | | | | | | S4C39SOL | S4C39SOL | S4C39SOL | S4C39SOL | S4C39SOL | S4C39SOL | S4C39SOL |
| | | | | | | | | | | | | | | | | 21 | 21 | 24 | 24 | 24 | 24 | 24 |
| | | | | | | | | | | | | | | | | 7560 | 5040 | 8640 | 5760 | 8640 | 5760 | |
| 220 | | | | | | | | | | | S4B48SOL | S4B48SOL | S4B48SOL | S4B48SOL | S4B48SOL | S4B48SOL | S4B48SOL | S4B48SOL | S4B48SOL | S4B48SOL | S4B48SOL | S4B48SOL |
| | | | | | | | | | | | 12 | 12 | 17 | 17 | 22 | 22 | 25 | 25 | 25 | 25 | 25 | 25 |
| | | | | | | | | | | | 4320 | 2880 | 6120 | 4080 | 7920 | 5280 | 9000 | 6000 | | | | |
| 240 | | | | | | | | | | | | | | | S4B48SOL | S4B48SOL | S4B48SOL | S4B48SOL | S4B48SOL | S4B48SOL | S4B48SOL | S4B48SOL |
| | | | | | | | | | | | 15 | 15 | 20 | 20 | 20 | 20 | 21 | 21 | 21 | 21 | 21 | 21 |
| | | | | | | | | | | | 5400 | 3600 | 7200 | 4800 | 7200 | 4800 | 7560 | 5040 | | | | |
| 260 | | | | | | | | | | | | | | | S4B48SOL | S4B48SOL | S4B48SOL | S4B48SOL | S4B48SOL | S4B48SOL | S4B48SOL | S4B48SOL |
| | | | | | | | | | | | 13 | 13 | 18 | 18 | 18 | 18 | 18 | 18 | 18 | 18 | 18 | 18 |
| | | | | | | | | | | | 4680 | 3120 | 6480 | 4320 | 6480 | 4320 | 6480 | 4320 | | | | |

7. iSOLAR V3 Controller timer features:

1. AUTO MODE – Controller selects the power source and uses this to run the pump depending on input signals. Bias is always DC power source.
2. When in AUTO mode, DC or AC light flashes every 10 sec depending on if it is using DC or AC power.
3. When switching between modes, the motor needs to dissipate the energy stored within the internal capacitors. This process takes 2 minutes; hence it would start a 120sec countdown timer. Repeated switching between modes will restart the dissipation cycle, causing extended delays before the pump will run.
4. The flow sensor looks for water for 3min before shutting of the signal in the controller.
5. Analogue dial for flow meter restart timer: If no flow sensor is used, set dial to zero. If a flow sensor is connected, dial can be set from 10 minutes to 60 minutes in 10-minute intervals before restart is attempted after zero flow is detected.
6. Analogue dial for generator off delay: If no generator is used, set dial to zero. If generator is connected, dial can be set from 10 minutes to 60 minutes in 10-minute intervals before the generator shuts down when DC voltage falls below the motor's starting voltage. Requires a generator that is able to accept signals from the iSOLAR controller.
7. When a generator is being used, the generator will start only when the DC voltage drops below 40V and shut off once the DC voltage goes above 90V
(Note: The generator will run for 3min before shut down, once the voltage has gone above 90V and switches to DC)
8. If a generator is being connected, the generator starts and runs on demand when connected to iSOLAR controller. A compatible remote start generator needs to be connected via "GEN Signal" in the controller. (An Auto transfer generator system (ATS) or a generator with an integrated delay shutdown timer are compatible)
9. The iSOLAR controller can take signals from two float switches placed in a tank or similar.
10. The high-level float switch signal indicates on iSOLAR controller that the reservoir/tank is full and at this point the controller stops the pump. When the water level of the storage tank drops, the float drops and the pump returns to operation after 10 minutes. For 10min, the "TANK FULL" signal light remains on and the display starts counting down from "600" to "0." The countdown ends and the "TANK FULL" indicator goes off and the pump system restarts.
11. The low-level float switch signal indicates to the controller that the reservoir/tank is empty and at this point the controller starts the pump. When the water wells or pools without water, the water under the float drops, this signals to the iSOLAR controller the "TANK EMPTY" signal light and directs the pump system to shut down immediately. When the water level rises, the float rises and the pump returns to operation after 10 minutes. For 10 minutes, the "TANK EMPTY" signal light remains on and the display starts counting down from "600" to "0." The countdown is over and the "TANK EMPTY" indicator goes off and the pump system restarts. On power up, if tank is not full, then the iSOLAR controller powers the pump to fill the tank.

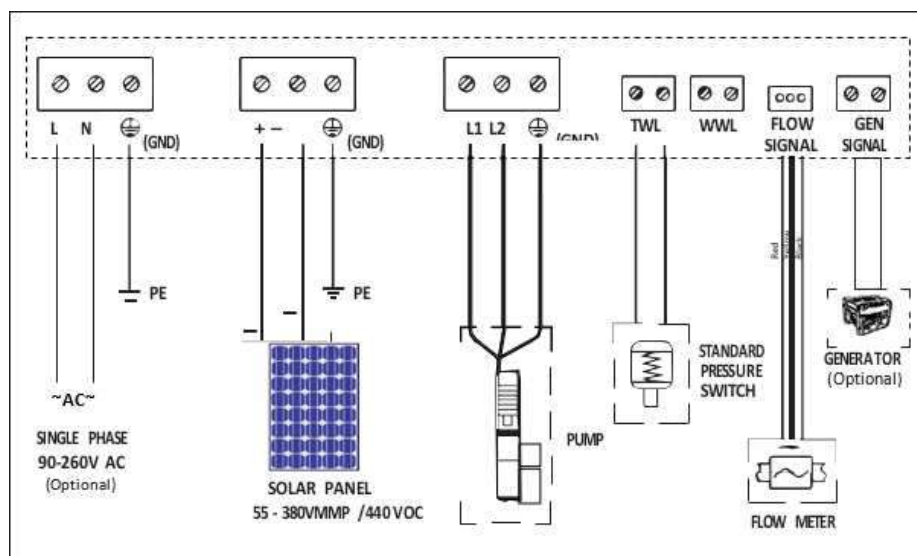
Technical specification of V3 controller:

The iSOLAR controller is a microcontroller, designed, developed and manufactured for the DAB ICON SOLAR pump.

- It is suitable for simultaneous AC and DC incoming power supplies.
- Manually or automatically switchable between two power supplies depending on solar irradiation.
- IP65 weatherproof enclosure.
- Suitable for up to 2.4 kW (3.2hp) bore pumps.
- AC voltage input range 90 – 280 VAC. (Terminals L N & GRD)
- DC voltage input range 55 – 380VMPP (440VOC) DC for BIA-M110SOL (Terminals + - & GRD)
- DC voltage input range 90 – 380VMPP (440VOC) DC for BIA-M240SOL (Terminals + - & GRD)
- Input connections for 1 or 2 float switches. (TWL & WWL)
- Input connection for pressure switch. (WWL)
- Input connection for matching flow meter.

(FLOW SIGNAL -> REF. Setting flow meter function (on next pg.))

- Indication for power on, input power, pump on, pump off, water tank full or tank empty.
- Auto operation via 1 or 2 float switches.
- Auto operation via pressure switch.
- Auto off via flow meter.
- Auto starting of generator via volt free contacts. GEN SIGNAL • Manual operation.
- Auto switching from AC to DC supply with DC bias. DC switching point is 55V for BIA-M110SOL and 90V for BIA-M240SOL.



If you have any questions please do not hesitate to contact us on our Customer Service Hot Line
1300 783 601



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