

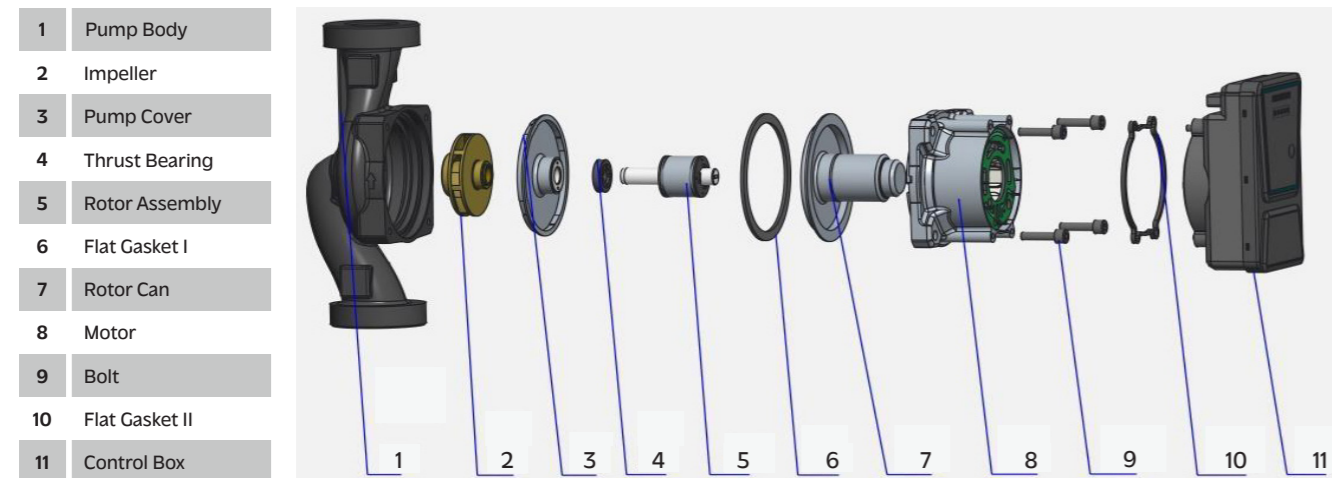
Tio APM-180A Series Pump

Intelligent frequency conversion circulation pump. For systems which require a more powerful pump.

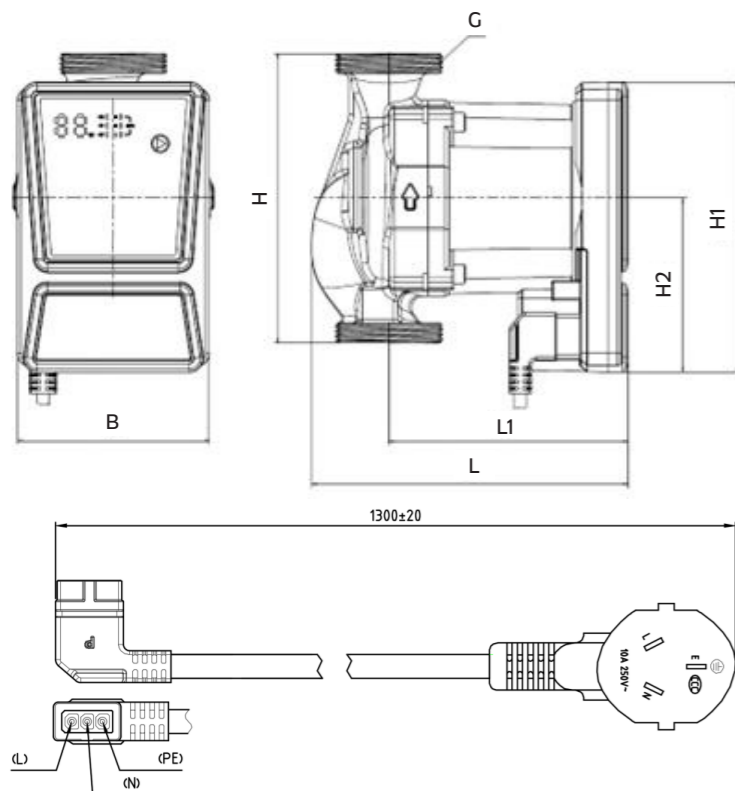
Used in HVAC and hot water circulation systems, such as floor heating mixed water systems, air energy hot water circulation systems, solar hot water circulation systems, household cold and hot water circulation and pressurisation systems.



| Product Code | Product Description |
|------------------|----------------------------------|
| TIOAPM32-8-180A | 32 x 180mm Connection - 8m head |
| TIOAPM32-10-180A | 32 x 180mm Connection - 10m head |



- 1 Pump Body
- 2 Impeller
- 3 Pump Cover
- 4 Thrust Bearing
- 5 Rotor Assembly
- 6 Flat Gasket I
- 7 Rotor Can
- 8 Motor
- 9 Bolt
- 10 Flat Gasket II
- 11 Control Box



| Model | Size (mm) | | | | | | |
|------------|-----------|-----|----|-----|-----|----|--------|
| | L | L1 | B | H | H1 | H2 | G |
| APM32X180A | 130 | 97 | 86 | 130 | 114 | 52 | G1 |
| | | | | 180 | | | G1 1/2 |
| | | | | 180 | G2 | | |
| APM258130A | 142 | 107 | 86 | 130 | 130 | 78 | G1 1/2 |
| 180 | | | | G2 | | | |
| APM328180A | | | | 180 | G2 | | |

| Parameters | Specification |
|----------------------------|---|
| Pump type | Centrifugal circulating pump (nonselfpriming) |
| Single phase power (AC/DC) | AC |
| Voltage | 220~240V |
| Frequency | 50/60Hz |
| Max input power | 4m 25W; 6m 45W; 8m 90W |
| IP class | IP44 |
| Insulation class | Class F |
| EEL | ≤0.21 |
| Max head | 8m, 10m |
| Max flow | 4m: 2.5m³/h; 6m: 3.4 m³/h; 8m: 4.5 m³/h |
| Pipe size | DN20 DN25 DN32 |
| Unions size | G1 G1.5 G2 |
| Pump efficiency | 4m/6m: 40%; 8m: 48% |
| Insulation resistance | cold≥100MΩ; hot≥5MΩ |
| Temperature rise | ≤70K |
| Ambient temperature | 0~40°C |
| Liquid temperature | 2~110°C |
| Storage temperature | 35~80°C |
| Max system pressure | 1.0Mpa (10bar) |
| Rotation direction | CW, seeing from the control box |

- Ground motor before connecting to power supply.
- Do not touch the pump while it is running.
- Do not run the pump without water.

Warning: Do not install in bathroom to prevent vapor or water or moisture from going into the junction box resulting in electric leakage.

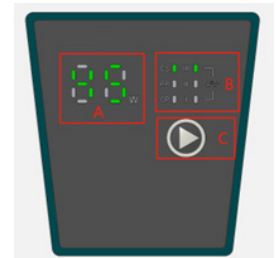
- It's strongly suggest that shutoff valves to be installed at inlet and outlet ports for the sake of following pump service and maintenance.
- When complete installing the pump, connect the power supply as pilot run and set the speed adjusting switch at max grade to check if the starting is normal. But the pilot running time can not be over 10 seconds so as to avoid idle running influencing working life of the bearing.
- When the pump is supplying water to the heating system, do not touch the pump and/or other pipes to avoid burning.
- The power plug must be strictly grounded. Securely connect the GND pin of the power plug to the power plug grounded hole. Do not attempt to change the GND plug of the pump.
- The striking security caution markings must be set up during pump working to avoid any accident.
- The power supply must be firstly disconnected before adjusting pump location or before any action that may touch the pump when the pump is working to avoid any accident.
- Regularly check the pump and timely replace in case of any damage.
- The power cable can only be replaced with corresponding cords or dedicated components.
- In winter, when the environment temperature is below 0°C, the water within the pipes must be exhausted thoroughly if the pump ceases working to avoid pump frost crack.
- The heat supply pipes can not be frequently supplemented with non-soft water to avoid the accumulated calcium inside the pipe system that that may block the rotor.

Operation and Panel display

Operation and Panel overview

After the power is turned on, all the green LED lights in area A flash 4 times.

Overview of the panel pictured to the right.



Gears are shown in the table below:

| Mode | Light status | Mode | Light status |
|------|--|------|---|
| PP3 | CS <input type="checkbox"/> III <input type="checkbox"/> AUTO PP <input checked="" type="checkbox"/> II <input type="checkbox"/> CP <input type="checkbox"/> I <input type="checkbox"/> | CP3 | CS <input type="checkbox"/> III <input type="checkbox"/> AUTO PP <input type="checkbox"/> II <input type="checkbox"/> CP <input checked="" type="checkbox"/> I <input type="checkbox"/> |
| PP2 | CS <input type="checkbox"/> III <input type="checkbox"/> AUTO PP <input checked="" type="checkbox"/> II <input checked="" type="checkbox"/> CP <input type="checkbox"/> I <input type="checkbox"/> | CP2 | CS <input type="checkbox"/> III <input type="checkbox"/> AUTO PP <input type="checkbox"/> II <input checked="" type="checkbox"/> CP <input checked="" type="checkbox"/> I <input type="checkbox"/> |
| PP1 | CS <input type="checkbox"/> III <input type="checkbox"/> AUTO PP <input checked="" type="checkbox"/> II <input type="checkbox"/> CP <input type="checkbox"/> I <input checked="" type="checkbox"/> | CP1 | CS <input type="checkbox"/> III <input type="checkbox"/> AUTO PP <input type="checkbox"/> II <input type="checkbox"/> CP <input checked="" type="checkbox"/> I <input checked="" type="checkbox"/> |
| S3 | CS <input checked="" type="checkbox"/> III <input checked="" type="checkbox"/> AUTO PP <input type="checkbox"/> II <input type="checkbox"/> CP <input type="checkbox"/> I <input type="checkbox"/> | S1 | CS <input checked="" type="checkbox"/> III <input type="checkbox"/> AUTO PP <input type="checkbox"/> II <input type="checkbox"/> CP <input type="checkbox"/> I <input checked="" type="checkbox"/> |
| S2 | CS <input checked="" type="checkbox"/> III <input type="checkbox"/> AUTO PP <input type="checkbox"/> II <input checked="" type="checkbox"/> CP <input type="checkbox"/> I <input type="checkbox"/> | AUTO | CS <input type="checkbox"/> III <input checked="" type="checkbox"/> AUTO PP <input type="checkbox"/> II <input checked="" type="checkbox"/> CP <input type="checkbox"/> I <input checked="" type="checkbox"/> |