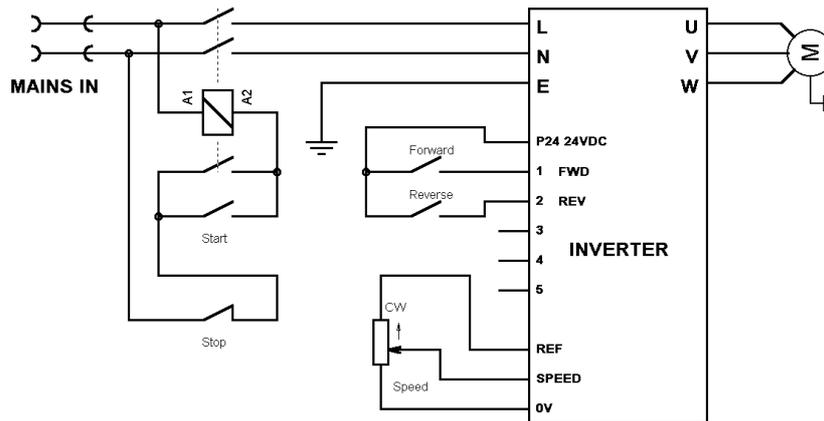


New Inverter? Want it to last forever?

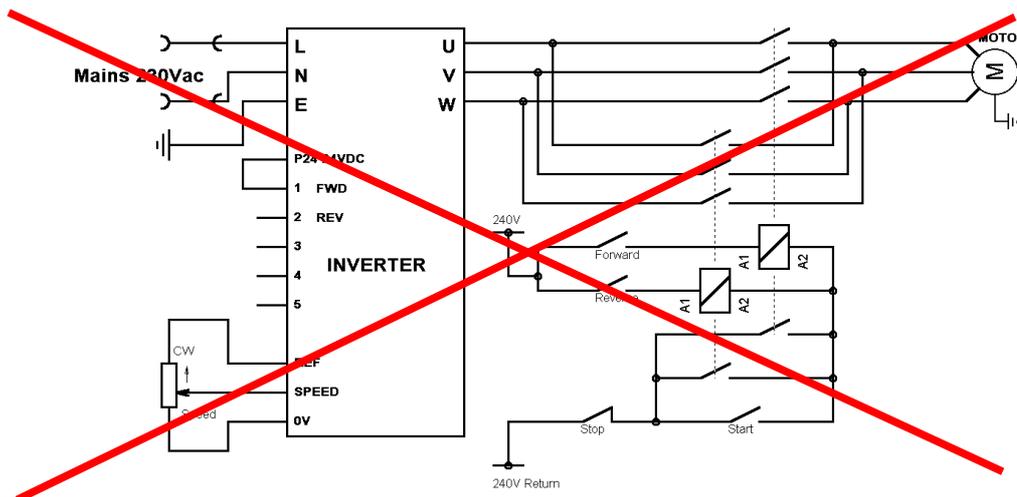
**Please take 30 seconds to scan this page, and take time to read the manual.
If in doubt ask.**

1. The Inverter is a motor control, and should be wired directly to your motor.



DO put a three phase motor directly on the u, v and w terminals.
DO wire all switching and control to the input side of the inverter.

2. The Inverter is NOT a three phase supply for your existing wiring loom.



DO NOT put any switches or contacts on the u, v or w terminals
DO NOT put a DC motor on the u, v or w terminals.
DO NOT put any lamps, or transformers on the u, v or w terminals.

See overleaf for motor wiring guidance.

Running Three Phase Motors from "Single Phase" Inverters.

If your motor was originally wired to an industrial three phase supply it is likely that the motor voltage is wired for 400V. The inverter will run the motor without harm, but the torque will be a fraction of what it should be.

Here's how to check, and if necessary alter the motor wiring.

| | | | |
|----------------------------------|--------------|-----------------------|----|
| TURNER'S ELECTRIC MOTOR Co. Ltd. | | AC MOTOR I.E.C 34-1 | |
| TYPE | | MADE IN E.U. | |
| | | | |
| 50Hz | Power kW | 2.2 | |
| | Voltage Vrms | 220-240 D / 415-380 Y | |
| | Current Arms | 8.5-8.3 / 4.9-4.8 | |
| | r/min | 1415 | |
| 60Hz | Power kW | 2.5 | |
| | Voltage Vrms | 254-277 D / 440-480 Y | |
| | Current Arms | 8.5-8.3 / 4.9-4.8 | |
| | r/min | 1700 | |
| Cos phi | 0.85 | Rating | S1 |
| Phase | 3 | Amb. deg C | 35 |
| Class | F | IP | 55 |
| | | Wt. kg | 4 |

On the left is a typical motor rating plate. In the 50Hz box of data you will see a voltage rating "Vrms 220-240 D / 380-415 Y" This information tells us that the motor can be wired for two voltage ranges.

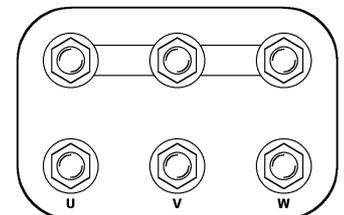
In the "D" or delta configuration the motor will run on a three phase supply from 220V to 240V phase to phase. The D is sometimes written as a triangle.

In the "Y" or star configuration the motor will run on a three phase supply from 380V to 415V phase to phase. The star is sometimes drawn as a three pointed star.

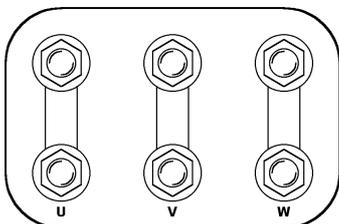
How to determine the motor configuration.

On the right is a typical motor terminal arrangement. the drawing shows the star configuration. The three wires from the inverter go directly to the U, V and W terminals. The other three terminals are linked together often with a set of brass stampings or strips. Wires are also used to make the circuit. For small motors (below 4kW) this star connection would be consistent with 400V operation.

Star Connection



Delta Connection



The motor terminals shown on the left are wired in a delta configuration. The brass strips, used to make the star connection above, are simply removed and re-arranged. If you're lucky there will be a spare strip to make the third connection. Wire the inverter output terminals directly to the U, V and W terminals as usual. In the delta case the connections will share the terminal with the brass strip. The small motor is now wired for 230V operation.

If you're unlucky enough not to have a six terminal connection on your motor it may still be possible to change the voltage rating. The "star point" will exist inside the motor body and the internal windings can be rewired. A local motor repairers will be able to do this for a nominal sum. If in doubt ask.

For large motors above 5.5kW the delta connection may set the voltage rating to 400V. The star connection will set the voltage rating even higher to 690V. Your single phase inverter will be unable to drive this type of motor to full advantage, and may even be damaged by it.