Thermal Unit and Jumper Strap Information

Thermal Units

Always be certain the correct thermal unit(s) are installed in the starter before operating the motor. Thermal units should always be mounted so that the type designation can be read from the front of the starter. See figure below.

Melting alloy thermal units should be mounted so that the tooth of the pawl arm in the overload relay cavity can engage the teeth of the ratchet wheel when the reset button is pushed down and released. Make sure the metal pawl arm is positioned **ABOVE** the ratchet wheel as shown below. If it is positioned below the ratchet wheel, the overload will not be able to be reset properly and the overload relay contact (which is wired in series with the contactor coil) will remain open.

Three Phase Overload Relays

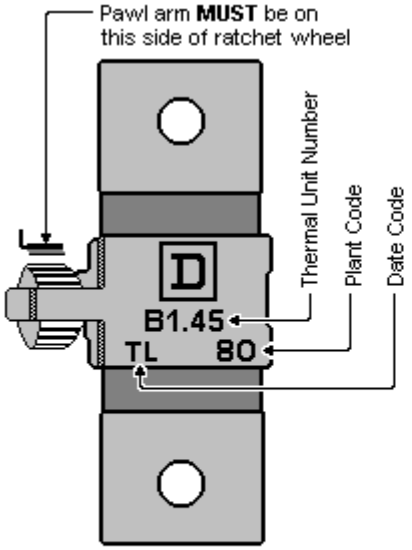
Three thermal units are required for all 3-phase applications

Jumper Strap Kit Is Used For Converting 3 Phase Starters To Single Phase Applications

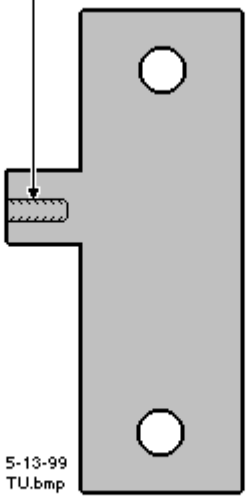
☞ Jumper strap kit is used for the conversion of a standard 3-phase starter for use on a single phase application. Typically, phases L1 and L2 are used to carry the single phase currents on 240V two wire applications. For 120V single wire applications, only L1 is used (L2 and L3 are **not** used because the neutral is not switched). L2 and L3 poles on 120V single wire applications could be used for other purposes.

The center cavity (L2 phase) receives a shorting strap which is installed to hold down the the pawl arm assembly.

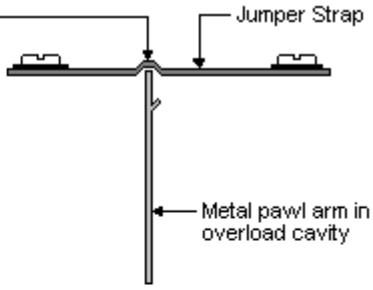
The right-most cavity (L3 phase) also receives a shorting strap also to hold down the pawl arm assembly to simulate that a thermal unit has been installed. If the pawl arms in L2 and L3 overload cavities were not permanently held down, the overload relay would **never** be able to be reset.



Typical Thermal Unit
(Melting Alloy Type)



Typical Jumper Strap



Note:

The jumper strap has a recessed area which is designed to capture the end of the metal pawl arm and hold it down so that the overload relay will function as if an actual thermal unit was installed.

Two jumper straps will be required - one in phase L2 cavity and one in Phase L3 cavity.

Side View - 3 Phase O/L Single Phase Conversion

Jumper Strap Kits

Jumper strap kits are for use on 3-phase manual or magnetic starters with melting alloy (not bimetal) overload relays only, where a standard 3-phase starter is used to control a single phase motor.

These kits include two jumper straps, a wiring diagram showing how to wire a 3-phase starter to control a single phase motor. A thermal unit selection table is also included. Remember, a single phase motor requires only **one** thermal unit for proper protection.

Class	Starter		Class 9998
	Size	Type	
ALL	00, 0, 1, 2 MO, M1, M1P	SA, SB, SC, SD M & T (Manual)	SO31
	3, 4	SE, SF	SO32
	5	SG ●	N/A

● - Units with Type DD thermal units.

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JUMPKIT.bmp