

TYPICAL WIRING DIAGRAM: STAR-DELTA START MOTORS <1>

The below diagrams show typical wiring connections for D.O.L. (across the line starting) of Tsurumi Pumps supplied with Star Delta Start motors.

Diagram A applies to series: B, BZ, C with 15 - 20 HP (11 - 15 kW) • 4P (1800 RPM) motors. The motors are supplied with (2) Power cables, (1) Thermal Protector cable and supplied as an option, (1) Seal Sensor cable. Power cable #1 contains: (1) red conductor "U1", (1) white conductor "V1", (1) black conductor "W1". Power cable #2 contains: (1) green conductor "G", (1) red conductor "V2", (1) white conductor "W2" and (1) black conductor "U2". In order to connect the unit for D.O.L start, the conductors in Power cable #1 and Power cable #2 must be connected together at the motor contactor output terminals,(shown below as 1T1, 1T2 & 1T3) in the following manner: "U1" & "V2" connected to 1T1, "V1" & "W2" connected to 1T2, "W1" & "U2" connected to 1T3, and "G" connected to ground.

**STAR DELTA MOTOR CONNECTED FOR D.O.L. START
SERIES B, BZ, C (15 - 20 HP. (11 - 15 kW) • 4P (1800 RPM) (3 PHASE UNITS)**

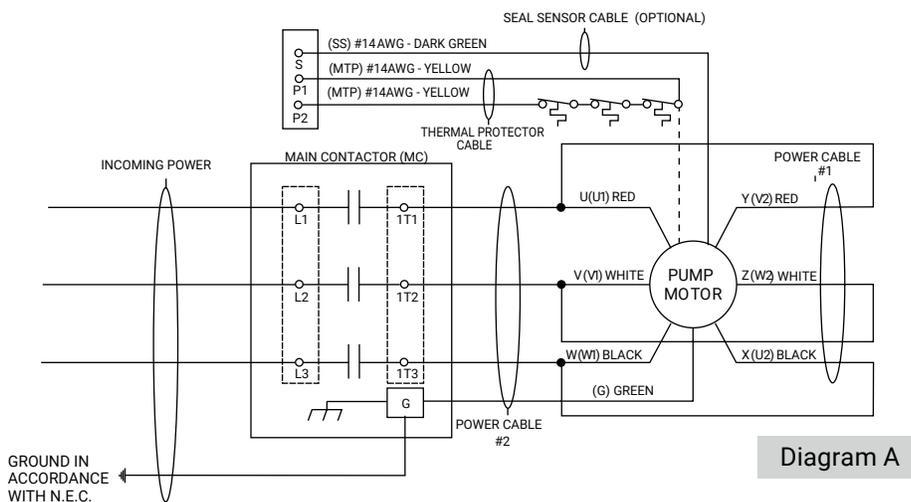


Diagram A

Diagram B applies to model: B pumps with 30 HP (22 kW) • 4P (1800 RPM), 6P (1200 RPM) motors. The motors are supplied with (1) Power cable, The power cable contains: (2) Yellow Thermal Protector conductors "P1& P2", (1) White Seal Sensor conductor "S", (1) green conductor "G" (ground), (1) red conductor "U1", (1) white conductor "V1", (1) black conductor "W1", (1) red conductor "V2", (1) white conductor "W2" and (1) black conductor "U2". In order to connect the unit for D.O.L start, the conductors must be connected together at the motor contactor output terminals,(shown below as 1T1, 1T2 & 1T3) in the following manner: "U1" & "V2" connected to 1T1, "V1" & "W2" connected to 1T2, "W1" & "U2" connected to 1T3, and "G" connected to ground.

**STAR DELTA MOTOR CONNECTED FOR D.O.L. START
SERIES B, 30 HP (22 kW) • 4P (1800 RPM) & 6P (1200 RPM)**

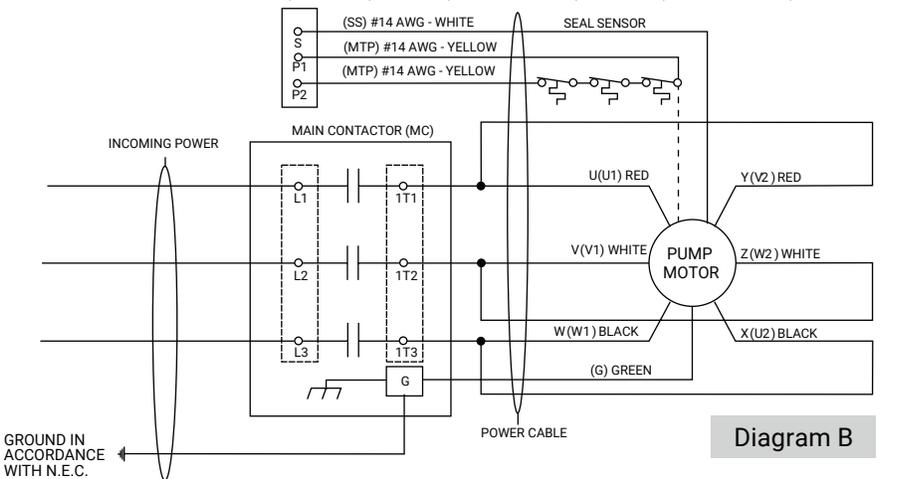


Diagram B