

# Twisted Pump 600 Volt Cable Type THW

600 Volts, Solid or Stranded Copper Conductors. Polyvinyl Chloride (PVC) Insulation. Water Well Cable, Moisture Resistant, Twisted Configuration. Rated 75°C,



Image not to scale. See Table 1 for dimensions.

## CONSTRUCTION:

- Conductor:** Solid soft drawn or fully annealed bare copper per ASTM B3. Stranded class B compressed bare copper ASTM B8
- Insulation:** Polyvinyl Chloride (PVC) Type THW

## APPLICATIONS AND FEATURES:

For use in residential, farm and industrial water well applications where the cable is not subject to repeated handling caused by frequent servicing of the pump units. Grounded and ungrounded water well cable systems. Conductors are twisted and colored black, red, and yellow when supplied with three conductors and green ground. Cable is supplied without an overall jacket. For use within well casings.

## SPECIFICATIONS:

- ASTM B3 Soft or Annealed Copper Wire
- ASTM B8 Concentric-Lay-Stranded Copper Conductors
- UL 83 Thermoplastic Insulated Wires and Cables

**Table 1 – Weights and Measurements**

| Stock Number | Cond. Size<br>AWG/Kcmil | Cond. Number<br>No. | Cond. Strands<br>No. | Diameter Over Conductor<br>inch | Insul. Thickness<br>mil | Ground<br>No. x AWG | Approx. OD<br>inch | Approx. Weight<br>lb/1000ft |
|--------------|-------------------------|---------------------|----------------------|---------------------------------|-------------------------|---------------------|--------------------|-----------------------------|
| 563703◇      | 14                      | 2                   | Solid                | 0.064                           | 30                      | 1 x 14              | 0.334              | 66                          |
| 563704◇      | 14                      | 3                   | Solid                | 0.064                           | 30                      | 1 x 14              | 0.373              | 88                          |
| 563705◇      | 12                      | 2                   | Solid                | 0.080                           | 30                      | 1 x 12              | 0.345              | 92                          |
| 563706◇      | 12                      | 3                   | Solid                | 0.080                           | 30                      | 1 x 12              | 0.414              | 122                         |
| 563707◇      | 10                      | 2                   | Solid                | 0.101                           | 30                      | 1 x 10              | 0.414              | 131                         |
| 563708◇      | 10                      | 3                   | Solid                | 0.101                           | 30                      | 1 x 10              | 0.462              | 176                         |
| 563709◇      | 8                       | 2                   | 19                   | 0.143                           | 45                      | 1 x 10              | 0.574              | 195                         |
| 563710◇      | 8                       | 3                   | 19                   | 0.143                           | 45                      | 1 x 10              | 0.610              | 274                         |
| 563711◇      | 6                       | 3                   | 19                   | 0.179                           | 60                      | 1 x 8               | 0.700              | 402                         |
| 563712◇      | 4                       | 3                   | 19                   | 0.226                           | 60                      | 1 x 8               | 0.792              | 564                         |
| 563713◇      | 2                       | 3                   | 19                   | 0.286                           | 60                      | 1 x 6               | 0.929              | 852                         |

All dimensions are nominal and subject to normal manufacturing tolerances  
◇ Cable marked with this symbol is a standard stock item





**Table 2 – Electrical and Engineering Data**

| Cond. Size    | DC Resistance @ 25°C | AC Resistance @ 90°C | Inductive Reactance | Max Pull Tension | Max Pull Tension | Min Bending Radius | Allowable Ampacity At 75°C | Allowable Ampacity At 90°C |
|---------------|----------------------|----------------------|---------------------|------------------|------------------|--------------------|----------------------------|----------------------------|
| AWG/<br>Kcmil | Ω/1000ft             | Ω/1000ft             | Ω/1000ft            | lb               | lb               | inch               | Amp                        | Amp                        |
| 14            | 2.631                | 3.170                | 0.058               | 65               | 65               | 1.3                | 20                         | 25                         |
| 14            | 2.631                | 3.170                | 0.058               | 98               | 98               | 1.5                | 20                         | 25                         |
| 12            | 1.662                | 2.002                | 0.054               | 104              | 104              | 1.4                | 25                         | 30                         |
| 12            | 1.662                | 2.002                | 0.054               | 156              | 156              | 1.7                | 25                         | 30                         |
| 10            | 1.040                | 1.253                | 0.050               | 166              | 166              | 1.7                | 35                         | 40                         |
| 10            | 1.040                | 1.253                | 0.050               | 249              | 249              | 1.8                | 35                         | 40                         |
| 8             | 0.653                | 0.786                | 0.052               | 264              | 264              | 2.3                | 50                         | 55                         |
| 8             | 0.653                | 0.786                | 0.052               | 396              | 396              | 2.4                | 50                         | 55                         |
| 6             | 0.411                | 0.495                | 0.051               | 629              | 629              | 2.8                | 65                         | 75                         |
| 4             | 0.258                | 0.310                | 0.048               | 1001             | 1001             | 3.2                | 85                         | 95                         |
| 2             | 0.162                | 0.195                | 0.045               | 1592             | 1592             | 3.7                | 115                        | 130                        |

\* Inductive impedance is based on non-ferrous conduit with one diameter spacing.

