



## TFN/TFFN Copper

600 Volt. Copper Conductor. PVC Insulation/Nylon Sheath. Heat, Moisture, Oil, and Gasoline Resistant II. Also Rated MTW and AWM.



See Table 3 For Other Color Options



Image not to scale. See Table 1 for dimensions.

### CONSTRUCTION:

- Conductor:** Solid soft drawn bare copper per ASTM B3 for TFN. Class K bunch-stranded soft drawn bare copper per ASTM B174 for TFFN.
- Insulation:** Heat and moisture resistant PVC
- Sheath:** Nylon

### APPLICATIONS AND FEATURES:

#### APPLICATION

Southwire Type TFN/TFFN or MTW or AWM may be used as fixture wire, machine tool wiring, or appliance wiring material as specified in the National Electrical Code® and other applicable codes and standards. Voltage for all applications is 600 volts. Allowable temperatures are as follows:

- TFN/TFFN- Dry locations not to exceed 90°C
- AWM- When rated as appliance wiring material in dry locations, conductor temperatures not to exceed 105°C
- MTW- Wet locations or when exposed to oil at temperatures not to exceed 60°C or dry locations not to exceed 90°C (with ampacity limited to that for 75°C conductor temperature per NFPA 79)

#### FEATURES

- Gasoline and Oil Resistant II
- MTW- Stranded Constructions Only
- RoHS Compliant

### SPECIFICATIONS:

- ASTM B3 Soft or Annealed Copper Wire
- ASTM B174 Standard Specification for Bunch-Stranded Copper
- UL 66 Fixture Wire
- UL 758 Standard for Appliance Wiring Material
- UL 1063 Machine Tool Wiring (MTW)

### SAMPLE PRINT LEGEND:

E30071 (UL) XX AWG CU TYPE TFFN OR MTW OR GASOLINE AND OIL RESISTANT II OR AWM 600 VOLTS --- RoHS





**Table 1 – Weights and Measurements**

Cond. Size AWG/Kcmil	Cond. Number	Strand Count No. of Strands	Diameter Over Conductor inch	Insul. Thickness mil	Jacket Thickness mil	Approx. OD inch	Copper Weight lb/1000ft	Approx. Weight lb/1000ft
18	1	16	0.045	15	5	0.085	4	7

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 AWG/ Kcmil	Cond. Number	Min Bending Radius inch	DC Resistance @ 25°C Ω/1000ft	AC Resistance @ 75°C Ω/1000ft	Inductive Reactance @ 60Hz Ω/1000ft	Allowable Ampacity At 75°C Amp	Allowable Ampacity At 90°C Amp
18	1	0.3	7.148	8.613	0.036	-	14

\* Ampacities based on 2023 NEC Table 402.5.  
 \* Inductive impedance is based on non-ferrous conduit with one diameter spacing center-to-center.

**Table 3 - Stock Code Colors ( / means stripe. Blue/White: Blue with White Stripe)**

Size (Strand)	Black	Red	Blue	White	Brown	Orange	Yellow	Gray	Pink	Purple	Tan	Violet
18 (Solid)	269779	269795	269803	269787	269845	269837	269829	269878		269860		
16 (Solid)	269886	269902	269910	269894	269951	269944	269936	269985		269977		
18 (16)	270215	270231	270249	270223	270280	270272	270264	270314	270298	270306	297549	561595
16 (26)	270322	270348	270355	270330	270397	270389	270371	270421	270405	270413	297531	

**Table 3 Cont. - Stock Code Colors ( / means stripe. Blue/White: Blue with White Stripe)**

Size (Strand)	Black/Orange	Black/Yellow	Black/Gray	Black/Violet	White/Black	White/Red	White/Blue	Blue/White	Green	Black/Red	Black/Blue	Black/White	Black/Brown
18 (Solid)						589281	558028		269811				
16 (Solid)								567169	269928				
18 (16)	587084	587087	587082	587081	587091				270256	587083	587085	587090	587086
16 (26)									270363				

