# Armorlite® Type MC THHN/THWN Aluminum Conductor Feeder Cable with Green Insulated Ground 277/480V Colors

Aluminum THHN/THWN-2 Insulated Singles with 8000 series Triple E™ Aluminum Alloy. Green Insulated AlumaFlex™ Aluminum Alloy Grounding Conductor. UL Listed. 600 Volts. Rated VW-1. Lightweight Aluminum Interlocked Armor.

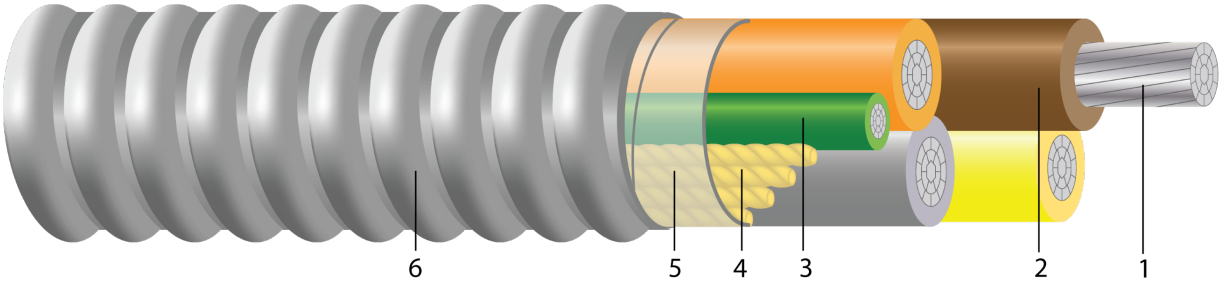


Image not to scale. See Table 1 for dimensions.

## CONSTRUCTION:

1. **Conductor:** Class B compact stranded 8000 series H14/H24 aluminum per ASTM B800 and B801 or compact round stranded 8000 series H14/H24 aluminum per ASTM B800 and B836
2. **Insulation:** All phases are insulated with Polyvinyl Chloride with Nylon Sheath Type THHN/THWN
3. **Ground:** Green insulated aluminum ground
4. **Filler:** Fillers as needed
5. **Binder:** Mylar tape
6. **Armor:** Aluminum Interlocked Armor

## APPLICATIONS AND FEATURES:

### Southwire Armorlite® Type MC Feeder cable is suitable for use as follows:

- Feeder and service power distribution in commercial, industrial, institutional, and multi-residential buildings.
- Fished or embedded in plaster.
- Concealed or exposed installations.
- Suitable for power and lighting circuits.
- Places of Assembly per NEC 518.4 and theaters per NEC 520.5.
- Environmental air-handling spaces per NEC 300.22 (C).
- Installation in cable tray and approved raceways, or as aerial cable on a messenger.
- Under raised floors for information technology equipment conductors and cables per NEC 645.5(D) & 645.5(E)
- Class I Div. 2, Class II Div 2, & Class III Div. 1 Hazardous Locations.
- Type THHN/THWN rated 90ºC Dry
- Anti-short bushings are not required for use with MC cable per NEC and UL

### Southwire Armorlite® Type MC Feeder Cable - meets or exceeds the following requirements:

- UL Online Product Guide Info - Metal-Clad Cable (PJAZ) ( www.ul.com )
- Federal Specification A-A59544 (formerly J-C-30B)
- NFPA 70 (National Electrical Code), Article 330
- Listed for use in UL 1, 2 and 3 Hour Through Penetration Firestop Systems

### Color Code


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- 3/C: Brown, Orange, Yellow
- 4/C: Brown, Orange, Yellow, Gray

## SPECIFICATIONS:

- ASTM B800 8000 Series Aluminum Alloy Wire
- ASTM B801 Concentric-Lay-Stranded Conductors of 8000 Series Aluminum Alloy
- ASTM B836 Compact Rounded Stranded Aluminum Conductors
- UL 83 Thermoplastic Insulated Wires and Cables
- UL 1569 Metal-Clad Cables
- UL 1479 Standard for Safety Fire Tests of Penetration Firestops
- UL 1685 FT4 Vertical-Tray Fire Propagation and Smoke Release Test
- IEEE 1202 FT4 Flame Test (70,000) BTU/hr Vertical Tray Test
- RoHS Compliant Lead-Free, Silicone-Free, Halogen Free
- Buy American: Compliant with Buy American Requirements, found in 49 U.S.C. § 5323(j); specify “Made in the USA Only!” when ordering to ensure your project receives American made products.

## SAMPLE PRINT LEGEND:

E96627 {UL} TYPE MC AWG XX THHN OR THWN CDRS FOR USE IN CABLE TRAYS 600 VOLTS


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## Table 1 – Weights and Measurements

| Stock Number | Cond. Size | Conductor Number | Color | Diameter Over Conductor | Conductor Stranding | Insulation Thickness | Ground Size | Diameter Over Armor | Overall Weight |
|---|---|---|---|---|---|---|---|---|---|
| | AWG/ Kcmil | | | inch | | mils | No. x AWG | inch | lbs/1000ft |
| 671715 | 1/0 | 3 | BN,OE,YW,GN | 0.336 | 19 | 60 | 1x4 | 1.250 | 645 |
| 674910 | 2/0 | 3 | BN,OE,YW,GN | 0.376 | 12 | 60 | 1x4 | 1.320 | 740 |
| 643336 | 3/0 | 3 | BN,OE,YW,GN | 0.422 | 16 | 60 | 1x4 | 1.469 | 898 |
| 643340 | 4/0 | 3 | BN,OE,YW,GN | 0.474 | 19 | 60 | 1x2 | 1.630 | 1130 |
| 589234 | 250 | 3 | BN,OE,YW,GN | 0.52 | 22 | 70 | 1x1/0 | 1.789 | 1395 |
| 593388 | 250 | 3 | BN,OE,YW,GN | 0.52 | 22 | 70 | 1x2 | 1.745 | 1335 |
| 640731 | 250 | 3 | BN,OE,YW,GN | 0.520 | 22 | 70 | 1x1 | 1.740 | 1340 |
| 583270 | 300 | 3 | BN,OE,YW,GN | 0.569 | 21 | 70 | 1x2 | 1.842 | 1521 |
| 599476 | 350 | 3 | BN,OE,YW,GN | 0.615 | 35 | 70 | 1x3/0 | 2.017 | 1834 |
| 593621 | 350 | 3 | BN,OE,YW,GN | 0.615 | 35 | 70 | 1x1/0 | 1.974 | 1756 |
| 575004 | 350 | 3 | BN,OE,YW, | 0.615 | 35 | 70 | 1x2 | 1.929 | 1665 |
| 672216 | 400 | 3 | BN,OE,YW,GN | 0.659 | 35 | 70 | 1x3/0 | 2.190 | 1988 |
| 678468 | 400 | 3 | BN,OE,YW,GN | 0.659 | 35 | 70 | 1x2/0 | 2.077 | 1969 |
| 593619 | 400 | 3 | BN,OE,YW,GN | 0.659 | 35 | 70 | 1x1 | 2.039 | 1906 |
| 562706 | 500 | 3 | BN,OE,YW | 0.735 | 34 | 70 | 1x2/0 | 2.188 | 2257 |
| 668399 | 500 | 3 | BN,OE,YW,GN | 0.735 | 34 | 70 | 1x3/0 | 2.253 | 2316 |
| 585135 | 500 | 3 | BN,OE,YW,GN | 0.735 | 34 | 70 | 1x250 | 2.306 | 2510 |
| 679424 | 500 | 3 | BN,OE,YW,GN | 0.735 | 34 | 70 | 1x400 | 2.374 | 2687 |
| 586227 | 500 | 3 | BN,OE,YW,GN | 0.735 | 35 | 70 | 1x2/0 | 2.208 | 2299 |
| 641832 | 500 | 3 | BN,OE,YW,GN | 0.735 | 35 | 70 | 1x1 | 2.210 | 2225 |
| 675737 | 500 | 3 | BN,OE,YW,GN | 0.735 | 34 | 70 | 1x350 | 2.568 | 2596 |
| 597891 | 600 | 3 | BN,OE,YW | 0.812 | 41 | 80 | 1x350 | 2.459 | 2941 |
| 586489 | 600 | 3 | BN,OE,YW,GN | 0.812 | 41 | 80 | 1x350 | 2.538 | 3046 |
| 674843 | 600 | 3 | BN,OE,YW GN | 0.812 | 41 | 80 | 1x3/0 | 2.448 | 2753 |
| 586488 | 600 | 3 | BN,OE,YW,GN | 0.812 | 41 | 80 | 1x400 | 2.526 | 3124 |
| 598033 | 600 | 3 | BN,OE,YW,GN | 0.812 | 41 | 80 | 1x4/0 | 2.448 | 2823 |
| 588770 | 600 | 3 | BN,OE,YW,GN | 0.812 | 41 | 80 | 1x600 | 2.635 | 3356 |
| 583311 | 750 | 3 | BN,OE,YW,GN | 0.908 | 53 | 80 | 1x1/0 | 2.608 | 3205 |
| 678410 | 750 | 3 | BN,OE,YW,GN | 0.908 | 53 | 80 | 1x3/0 | 2.621 | 3278 |
| 457000 | 750 | 3 | BN,OE,YW | 0.908 | 41 | 80 | 1x600 | 2.833 | 3816 |
| 565827 | 1 | 4 | BN,OE,YW,GY,GN | 0.298 | 8 | 50 | 1x4 | 1.345 | 732 |
| 588830 | 1 | 4 | BN,OE,YW,GY | 0.298 | 8 | 50 | 1x4 | 1.292 | 700 |
| 674893 | 1/0 | 4 | BN,OE,YW,GY,GN | 0.336 | 19 | 60 | 1x4 | 1.370 | 795 |
| 564030 | 2/0 | 4 | BN,OE,YW,GY,GN | 0.376 | 12 | 60 | 1x4 | 1.54 | 1042 |
| 139019 | 2/0 | 4 | BN,OE,YW,GY,GN | 0.376 | 19 | 60 | 1x4 | 1.510 | 985 |
| 457771 | 250 | 4 | BN,OE,YW,GY | 0.52 | 22 | 70 | 1x1/0 | 1.978 | 1781 |
| 560741 | 250 | 4 | BN,OE,YW,GY, | 0.52 | 22 | 70 | 1x1/0 | 1.919 | 1725 |
| 640669 | 250 | 4 | PK,PE,TN,GY,OE,GN | 0.52 | 22 | 60 | 1x1 | 1.96 | 1758 |
| 593602 | 250 | 4 | BN,OE,YW,GY,GN | 0.520 | 22 | 70 | 1x1 | 1.990 | 1755 |
| 139015 | 250 | 4 | BN,OE,YW,GY,GN | 0.520 | 22 | 70 | 1x2 | 1.916 | 1713 |


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| Stock Number | Cond. Size | Conductor Number | Color | Diameter Over Conductor | Conductor Stranding | Insulation Thickness | Ground Size | Diameter Over Armor | Overall Weight |
|---|---|---|---|---|---|---|---|---|---|
| | AWG/ Kcmil | | | inch | | mils | No. x AWG | inch | lbs/1000ft |
| 137867 | 300 | 4 | PK,PE,TN,GY,GN | 0.569 | 21 | 70 | 1x1 | 2.070 | 2003 |
| 593240 | 350 | 4 | BN,OE,YW,GY,GN | 0.615 | 35 | 70 | 1x1/0 | 2.19 | 2262 |
| 456842 | 350 | 4 | PK,PE,TN,GY | 0.615 | 35 | 70 | 1x2 | 2.146 | 2205 |
| 674647 | 350 | 4 | BN,OE,YW,GY,GN | 0.616 | 35 | 70 | 1x2 | 2.163 | 2180 |
| 643757 | 400 | 4 | BN,OE,YW,GY,GN | 0.659 | 35 | 70 | 1x4/0 | 2.353 | 2627 |
| 647508 | 400 | 4 | BN,OE,YW,GY,GN | 0.659 | 35 | 70 | 1x3/0 | 2.328 | 2575 |
| 593238 | 400 | 4 | BN,OE,YW,GY,GN | 0.659 | 35 | 70 | 1x1 | 2.267 | 2428 |
| 457811 | 400 | 4 | BN,OE,YW,GY | 0.659 | 35 | 70 | 1x400 | 2.455 | 2864 |
| 457823 | 500 | 4 | BN,OE,YW,GY,GN | 0.735 | 35 | 70 | 1x250 | 2.560 | 2541 |
| 674889 | 500 | 4 | BN,OE,YW,GY,GN | 0.735 | 34 | 70 | 1x3/0 | 2.518 | 2945 |
| 457823 | 500 | 4 | BN,OE,YW,GY | 0.735 | 34 | 70 | 1x250 | 2.556 | 3143 |
| 457827 | 500 | 4 | BN,OE,YW,GY | 0.735 | 34 | 70 | 1x4/0 | 2.524 | 3042 |
| 457833 | 500 | 4 | BN,OE,YW,GY | 0.735 | 34 | 70 | 1x350 | 2.604 | 3261 |
| 559870 | 500 | 4 | BN,OE,YW,GY | 0.735 | 34 | 70 | 1x250 | 2.487 | 3050 |
| 590100 | 500 | 4 | BN,OE,YW,GY,GN | 0.735 | 34 | 70 | 1x2/0 | 2.552 | 2984 |
| 456879 | 600 | 4 | BN,OE,YW,GY | 0.812 | 41 | 80 | 1x300 | 2.782 | 3753 |
| 456877 | 600 | 4 | BN,OE,YW,GY | 0.812 | 41 | 80 | 1x350 | 2.805 | 3810 |
| 589092 | 600 | 4 | BN,OE,YW,GY,GN | 0.812 | 41 | 80 | 1x600 | 2.912 | 4118 |
| 643334 | 750 | 4 | BN,OE,YW,GY,GN | 0.908 | 53 | 80 | 1x3/0 | 2.926 | 4282 |

All dimensions are nominal and subject to normal manufacturing tolerances
◊ Cable marked with this symbol is a standard stock item
* Strand count meets minimum number per ASTM


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## Table 2 – Electrical and Engineering Data

| Cond. Size | Conductor Number | Min. Bend Radius | Max Pull Tension | DC Resistance at 25°C | AC Resistance at 75°C | Inductive Reactance @ 60Hz | Allowable Ampacity Raceway 75°C | Allowable Ampacity Raceway 90°C |
|---|---|---|---|---|---|---|---|---|
| AWG/ Kcmil | | Inches | Lbs | Ω/1000ft | Ω/1000ft | Ω/1000ft | Amp | Amp |
| 1/0 | 3 | 8.8 | 1900 | 0.168 | 0.201 | 0.044 | 120 | 135 |
| 2/0 | 3 | 9.3 | 2395 | 0.133 | 0.16 | 0.043 | 135 | 150 |
| 3/0 | 3 | 10.3 | 3020 | 0.105 | 0.126 | 0.042 | 155 | 175 |
| 4/0 | 3 | 8.8 | 1900 | 0.084 | 0.100 | 0.041 | 180 | 205 |
| 250 | 3 | 12.5 | 4500 | 0.071 | 0.086 | 0.041 | 205 | 230 |
| 250 | 3 | 12.2 | 4500 | 0.071 | 0.086 | 0.041 | 205 | 230 |
| 250 | 3 | 12.2 | 4500 | 0.071 | 0.086 | 0.041 | 205 | 230 |
| 300 | 3 | 12.9 | 5400 | 0.059 | 0.071 | 0.04 | 230 | 260 |
| 350 | 3 | 14.1 | 6300 | 0.05 | 0.062 | 0.04 | 250 | 280 |
| 350 | 3 | 13.8 | 6300 | 0.05 | 0.062 | 0.04 | 250 | 280 |
| 350 | 3 | 13.5 | 6300 | 0.05 | 0.062 | 0.04 | 250 | 280 |
| 400 | 3 | 15.3 | 7200 | 0.044 | 0.054 | 0.040 | 270 | 305 |
| 400 | 3 | 14.5 | 7200 | 0.044 | 0.054 | 0.04 | 270 | 305 |
| 400 | 3 | 14.3 | 7200 | 0.044 | 0.054 | 0.04 | 270 | 305 |
| 500 | 3 | 15.3 | 9000 | 0.035 | 0.044 | 0.039 | 310 | 350 |
| 500 | 3 | 15.8 | 9000 | 0.035 | 0.044 | 0.039 | 310 | 350 |
| 500 | 3 | 16.1 | 9000 | 0.035 | 0.044 | 0.039 | 310 | 350 |
| 500 | 3 | 16.6 | 9000 | 0.035 | 0.044 | 0.039 | 310 | 350 |
| 500 | 3 | 15.5 | 9000 | 0.035 | 0.044 | 0.039 | 310 | 350 |
| 500 | 3 | 15.5 | 9000 | 0.035 | 0.044 | 0.039 | 310 | 350 |
| 500 | 3 | 18.0 | 9000 | 0.035 | 0.044 | 0.039 | 310 | 350 |
| 600 | 3 | 17.2 | 10800 | 0.029 | 0.037 | 0.039 | 340 | 385 |
| 600 | 3 | 17.8 | 10800 | 0.029 | 0.037 | 0.039 | 340 | 385 |
| 600 | 3 | 17.1 | 10800 | 0.029 | 0.037 | 0.039 | 340 | 385 |
| 600 | 3 | 17.7 | 10800 | 0.029 | 0.037 | 0.039 | 340 | 385 |
| 600 | 3 | 17.1 | 10800 | 0.029 | 0.037 | 0.039 | 340 | 385 |
| 600 | 3 | 18.4 | 10800 | 0.029 | 0.037 | 0.039 | 340 | 385 |
| 750 | 3 | 18.3 | 13500 | 0.024 | 0.031 | 0.038 | 385 | 435 |
| 750 | 3 | 18.3 | 13500 | 0.024 | 0.031 | 0.038 | 385 | 435 |
| 750 | 3 | 19.8 | 13500 | 0.024 | 0.031 | 0.038 | 385 | 435 |
| 1 | 4 | 9.4 | 1606 | 0.211 | 0.254 | 0.046 | 80 | 92 |
| 1 | 4 | 9 | 1606 | 0.211 | 0.254 | 0.046 | 80 | 92 |
| 1/0 | 4 | 9.6 | 2027 | 0.168 | 0.201 | 0.044 | 96 | 108 |
| 2/0 | 4 | 10.8 | 2555 | 0.133 | 0.16 | 0.043 | 108 | 120 |
| 2/0 | 4 | 10.6 | 2395 | 0.133 | 0.160 | 0.043 | 108 | 120 |
| 250 | 4 | 13.8 | 4800 | 0.071 | 0.086 | 0.041 | 164 | 184 |
| 250 | 4 | 13.4 | 4800 | 0.071 | 0.086 | 0.041 | 164 | 184 |
| 250 | 4 | 13.7 | 4800 | 0.071 | 0.086 | 0.041 | 164 | 184 |
| 250 | 4 | 13.9 | 4800 | 0.071 | 0.086 | 0.041 | 164 | 184 |
| 250 | 4 | 13.4 | 4800 | 0.071 | 0.097 | 0.027 | 164 | 184 |


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| Cond. Size | Conductor Number | Min. Bend Radius | Max Pull Tension | DC Resistance at 25°C | AC Resistance at 75°C | Inductive Reactance @ 60Hz | Allowable Ampacity Raceway 75°C | Allowable Ampacity Raceway 90°C |
|---|---|---|---|---|---|---|---|---|
| AWG/ Kcmil | | Inches | Lbs | Ω/1000ft | Ω/1000ft | Ω/1000ft | Amp | Amp |
| 300 | 4 | 14.5 | 5760 | 0.059 | 0.071 | 0.04 | 184 | 208 |
| 350 | 4 | 15.3 | 8400 | 0.05 | 0.062 | 0.04 | 200 | 224 |
| 350 | 4 | 15 | 6720 | 0.05 | 0.062 | 0.04 | 200 | 224 |
| 350 | 4 | 15.1 | 6720 | 0.051 | 0.069 | 0.026 | 200 | 224 |
| 400 | 4 | 16.5 | 9600 | 0.044 | 0.054 | 0.04 | 216 | 244 |
| 400 | 4 | 16.3 | 9600 | 0.044 | 0.054 | 0.04 | 216 | 244 |
| 400 | 4 | 15.8 | 7680 | 0.043 | 0.058 | 0.034 | 216 | 244 |
| 400 | 4 | 17.2 | 7680 | 0.044 | 0.054 | 0.04 | 216 | 244 |
| 500 | 4 | 17.9 | 9600 | 0.035 | 0.044 | 0.039 | 248 | 280 |
| 500 | 4 | 17.8 | 9600 | 0.035 | 0.044 | 0.039 | 248 | 280 |
| 500 | 4 | 17.9 | 9600 | 0.035 | 0.044 | 0.039 | 248 | 280 |
| 500 | 4 | 17.7 | 9600 | 0.035 | 0.044 | 0.039 | 248 | 280 |
| 500 | 4 | 18.2 | 9600 | 0.035 | 0.044 | 0.039 | 248 | 280 |
| 500 | 4 | 17.4 | 12000 | 0.035 | 0.044 | 0.039 | 248 | 280 |
| 500 | 4 | 17.8 | 9600 | 0.035 | 0.044 | 0.039 | 248 | 280 |
| 600 | 4 | 19.5 | 11520 | 0.029 | 0.037 | 0.039 | 272 | 308 |
| 600 | 4 | 19.6 | 11520 | 0.029 | 0.037 | 0.039 | 272 | 308 |
| 600 | 4 | 20.4 | 14400 | 0.029 | 0.037 | 0.039 | 272 | 308 |
| 750 | 4 | 20.5 | 18000 | 0.024 | 0.031 | 0.038 | 308 | 348 |

* Ampacities based upon 2023 NEC Table 310.16. See NEC sections 310.15 and 110.14(C) for additional requirements.
* Ampacities have been adjusted for more than Three Current-Carrying Conductors.


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