



AlumaFlex™ Riser MC™ THHN/THWN-2 Aluminum Conductor Feeder Cable

AlumaFlex™ THHN/THWN-2 Insulated Singles with 8000 series Triple E™ Aluminum Alloy. Bare AlumaFlex™ Aluminum Alloy Grounding Conductor. UL Listed. 600 Volts. Binder Sheath for Continuous Conductor Support. Lightweight Aluminum Interlocked Armor.



Image not to scale. See Table 1 for dimensions.

CONSTRUCTION:

1. **Conductor:** Class B compact stranded 8000 Series aluminum per ASTM B800 and ASTM B801 or B836
2. **Insulation:** All phases are insulated with Polyvinyl Chloride with Nylon Sheath Type THHN/THWN-2
3. **Ground:** Bare aluminum ground
4. **Binder:** Mylar tape
5. **Polymeric Binder:** Polymeric binder sheath under armor for continuous conductor support
6. **Aarmor:** Aluminum Interlocked Armor

APPLICATIONS AND FEATURES:

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

- Riser cable, vertical applications
- Branch, feeder and service power distribution in commercial, industrial, institutional, and multi-residential buildings.
- Fished or embedded in plaster.
- Concealed or exposed installations.
- Environmental air-handling spaces per NEC 300.22 (C).
- Places of Assembly per NEC 518.4 and theaters per NEC 520.5.
- 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.
- Class I Div. 2, Class II Div 2, & Class III Div. 1 Hazardous Locations.
- Conductors are Type THHN/THWN-2 rated 90°C Wet and Dry. Unjacketed MC cables are not rated for wet locations.

Southwire Armorlite® Type MC Riser 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

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
- ICEA S-95-658 (NEMA WC70) Power Cables Rated 2000 Volts or Less for the Distribution of Electrical Energy
- IEEE 1202 FT4 Flame Test (70,000) BTU/hr Vertical Tray Test
- 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:

{SQFTG} SOUTHWIRE {UL} X/C XX AWG COMPACT 8000 AL. --- TRIPLE E ALLOY AA8176 THHN/THWN-2 CDRS 600V GW 1
X X AWG 3E AL TYPE MC FOR CT USE.





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
583766◇	2/0	3	BK,RD,WE	0.364	19	60	1x4	1.750	1090
583913◇	3/0	3	BK,RD,WE	0.422	19	60	1x4	1.864	1245
599417	4/0	4	BK,WE,RD,BE	0.46	19	60	1x2	2.106	1811
583917◇	4/0	3	BK,RD,WE	0.460	19	60	1x2	1.943	1445
647493	250	4	BN,OE,YW,GY	0.52	22	70	1x1	2.243	2105
573432◇	250	3	BN,OE,YW	0.520	35	70	1x3/0	1.985	1693
580637◇	250	3	BN,OE,YW	0.520	35	70	1x1	1.985	1613
646549◇	300	3	BN,OE,YW	0.569	35	70	1x1	2.093	1858
677601	300	4	BK,RD,BE,WE	0.569	21	70	1x2	2.286	2296
677621◇	350	3	BN,OE,YW	0.615	35	70	1x1	2.192	2012
575252	350	4	BN,OE,YW,GY	0.615	34	70	1x1/0	2.397	2585
678297	350	4	BK,WE,RD,BE	0.615	35	70	1x1	2.397	2563
597913◇	400	3	BN,OE,YW	0.659	35	70	1x3/0	2.373	2369
677373	400	3	BN,OE,YW	0.659	35	70	1x1/0	2.333	2303
573254◇	500	3	BN,OE,YW	0.735	35	70	1x250	2.673	2818
640673	500	4	BN,OE,YW,GY,GN	0.735	34	70	1x2/0	2.8	3445
643956	500	4	BK,RD,BE,WE,GN	0.735	34	70	1x3/0	2.687	3444
641550◇	600	3	BN,OE,YW	0.812	58	80	1x4/0	2.665	3153
674367	600	4	BN,OE,YW,GY,GN	0.812	58	80	1x2/0	2.907	3996
640676	600	4	BN,OE,YW,GY,GN	0.812	41	80	1x350	3.073	4304
562700◇	750	3	BN,OE,YW	0.908	53	80	1x3/0	2.870	3682
641914◇	750	3	BN,OE,YW	0.908	58	80	1x750	3.141	4308
649342	750	4	BN,OE,YW,GY,GN	0.908	53	80	1x3/0	3.198	4796
649354◇	4	4	BK,RD,BE,WE	0.204	7	50	1x8 CU	1.298	999
643253◇	4	4	BN,OE,YW,GY	0.212	7	50	1x6	1.248	593
641362◇	2	4	BK,RD,BE,WE	0.268	7	50	1x4	1.398	775
597542◇	1	4	BK,WE,RD,BE	0.298	19	60	1x4	1.613	969
583762◇	1/0	4	BN,OE,YW,GY	0.324	19	60	1x4	1.818	1195
596279◇	2/0	4	BK,WE,RD,BE	0.364	19	60	1x4	1.768	1247
456832◇	2/0	4	BK,RD,BE,WE	0.376	12	60	1x4	1.82	1328
593349◇	3/0	4	BK,WE,RD,BE	0.409	19	60	1x4	2.017	1488
581869◇	4/0	4	BN,OE,YW,GY	0.460	19	60	1x1	2.103	1792
671853◇	4/0	4	BK,RD,BE,WE	0.460	19	60	1x1/0	2.158	1790
561133◇	250	4	BK,RD,BE,WE	0.520	35	70	1x1	2.151	1986
565212◇	250	4	BN,OE,YW,GY	0.520	35	70	1x1	2.151	1986
641535◇	300	4	BK,RD,BE,WE	0.569	35	70	1x1	2.272	2252
561135◇	350	4	BK,WE,RD,BE	0.615	35	70	1x1/0	2.383	2523
649344◇	350	4	BN,OE,YW,GY	0.615	35	70	1x2	2.428	2528
580634◇	400	4	BN,OE,YW,GY	0.659	35	70	1x3/0	2.487	2833
561136◇	500	4	BK,RD,BE,WE	0.735	35	70	1x3/0	2.673	3324





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
649347◇	500	4	BN,OE,YW,GY	0.735	35	70	1x1	2.728	3299
564942◇	500	4	BN,OE,YW,GY	0.735	35	70	1x3/0	2.673	3324
567308◇	600	4	BN,OE,YW,GY	0.812	58	80	1x400	3.138	4302
456861◇	600	4	RD,BE,WE,GN	0.812	58	80	1x600	3.205	4625
643618◇	750	4	BK,RD,BE,WE	0.908	58	80	1x750	3.450	5434
643936◇	750	4	BK,RD,BE,WE	0.908	58	80	1x600	3.450	5276
561137◇	750	4	BK,RD,BE,WE	0.908	58	80	1x3/0	3.145	4623
580975◇	900	4	BN,OE,YW,GY	0.999	58	80	1x250	3.393	5506

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

TBA stock codes are estimations only and actual product may vary. Please wait until a stock code is assigned to purchase connectors and/or fittings.





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
2/0	3	12.3	2395	0.081	0.097	0.043	135	150
3/0	3	13.0	3020	0.105	0.126	0.042	155	175
4/0	4	14.7	4062	0.051	0.061	0.041	144	164
4/0	3	13.6	3808	0.051	0.061	0.041	180	205
250	4	15.7	6000	0.071	0.086	0.041	164	184
250	3	13.0	4500	0.071	0.086	0.041	205	230
250	3	13.0	4500	0.071	0.086	0.041	205	230
300	3	13.7	5400	0.059	0.071	0.041	230	260
300	4	16	7200	0.059	0.071	0.04	184	208
350	3	14.4	6300	0.050	0.062	0.040	250	280
350	4	16.8	8400	0.05	0.062	0.04	200	224
350	4	16.8	8400	0.05	0.062	0.04	200	224
400	3	15.1	7200	0.044	0.054	0.040	270	305
400	3	16.3	7200	0.044	0.054	0.04	270	305
500	3	16.3	9000	0.035	0.044	0.039	310	350
500	4	19.6	12000	0.022	0.029	0.039	248	280
500	4	18.8	12000	0.022	0.029	0.039	248	280
600	3	17.9	10800	0.029	0.037	0.039	340	385
600	4	20.3	14400	0.029	0.037	0.039	272	308
600	4	21.5	14400	0.029	0.037	0.039	272	308
750	3	20.2	13500	0.024	0.031	0.038	385	435
750	3	19.4	13500	0.024	0.031	0.038	385	435
750	4	22.4	18000	0.024	0.031	0.038	308	348
4	4	9.1	801	0.258	0.310	0.048	52	60
4	4	8.7	801	0.424	0.510	0.048	52	60
2	4	9.8	1274	0.267	0.321	0.045	72	80
1	4	11.3	1606	0.211	0.254	0.046	80	92
1/0	4	12.7	2027	0.102	0.122	0.044	96	108
2/0	4	12.4	2555	0.081	0.097	0.043	108	120
2/0	4	12.7	2555	0.133	0.16	0.043	108	120
3/0	4	14.1	3221	0.064	0.077	0.042	124	140
4/0	4	14.7	4062	0.051	0.061	0.041	144	164
4/0	4	15.1	4062	0.051	0.061	0.041	144	164
250	4	14.2	4800	0.071	0.086	0.041	164	184
250	4	14.2	4800	0.071	0.086	0.041	164	184
300	4	15.0	5760	0.059	0.071	0.041	184	208
350	4	15.8	6720	0.050	0.062	0.040	200	224
350	4	15.8	6720	0.050	0.062	0.040	200	224
400	4	16.6	7680	0.044	0.054	0.040	216	244
500	4	18.1	9600	0.035	0.044	0.039	248	280





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
500	4	18.1	9600	0.035	0.044	0.039	248	280
500	4	18.1	9600	0.035	0.044	0.039	248	280
600	4	19.7	11520	0.029	0.037	0.039	272	308
600	4	22.4	11520	0.029	0.037	0.039	272	308
750	4	21.3	14400	0.024	0.031	0.038	308	348
750	4	21.3	14400	0.024	0.031	0.038	308	348
750	4	21.3	14400	0.024	0.031	0.038	308	348
900	4	23.0	17280	0.020	0.027	0.037	340	384

* 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.

