

Lead Free & Silicone-Free 1/C CU 600V EPR RHH/RHW-2 USE-2 CPE-TS Power Cable Royal Guard[®]

Power Cable 600Volt Single Conductor Copper, Lead Free Ethylene Propylene Rubber (EPR) insulation RHH/RHW-2 USE-2 Cross-Linked/Thermoset Chlorinated Polyethylene (CPE-TS) Jacket



Image not to scale. See Table 1 for dimensions.

CONSTRUCTION:

- Conductor:** Class B compressed stranded tinned copper per ASTM B33 and ASTM B8
- Binder Tape:** Mylar Tape
- Insulation:** Lead Free Ethylene Propylene Rubber (EPR) Type RHH/RHW-2 USE-2
- Overall Jacket:** Lead Free & Silicone-Free Cross-Linked/Thermoset Chlorinated Polyethylene (CPE-TS) Jacket

APPLICATIONS AND FEATURES:

Southwire's 600 Volt power cables are suited for use in wet and dry areas, conduits, ducts, troughs, trays, direct burial, aerial supported by a messenger, and where superior electrical properties are desired. These cables are capable of operating continuously at the conductor temperature not in excess of 90°C for normal operation in wet and dry locations, 130°C for emergency overload, and 250°C for short circuit conditions. For uses in Class I, II, and III, Division 2 hazardous locations per NEC Article 501 and 502. Sunlight and oil resistant.

SPECIFICATIONS:

- ASTM B3 Standard Specification for Soft or Annealed Copper Wire
- ASTM B8 Concentric-Lay-Stranded Copper Conductors
- ASTM B33 Standard Specification for Tin-Coated Soft or Annealed Copper Wire
- UL 44 Thermoset-Insulated Wires and Cables
- UL 854 Service Entrance Cable
- 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
- CT USE Sizes 1/0 AWG and Larger
- IEEE 1202 FT4 Flame Test (70,000) BTU/hr Vertical Tray Test
- VW-1 (Vertical-Wire) Flame Test

SAMPLE PRINT LEGEND:

SOUTHWIRE{R} ROYAL GUARD{R} XX AWG ({mm²}) E32071 MASTER-DESIGN {UL} RHH/RHW-2 OR USE-2 90{D}C 600V SUN RES VW-1 PRI PRII -40{D}C FT4 -- IEEE 1202 {MM/DD/YY} {SEQUENTIAL FOOTAGE MARKS} SEQ FEET



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Table 1 – Weights and Measurements

Stock Number	Cond. Size	Diameter Over Conductor	Insul. Thickness	Diameter Over Insulation	Jacket Thickness	Approx. OD	Copper Weight	Approx. Weight
	AWG/ Kcmil	inch	mil	inch	mil	inch	lb/1000ft	lb/1000ft
592004	8	0.139	45	0.229	15	0.259	51	73
589493	6	0.174	45	0.264	30	0.324	81	116
589492	4	0.221	45	0.311	30	0.371	129	171
652233 [^]	4	0.221	45	0.311	30	0.371	129	171
589491	2	0.277	45	0.367	30	0.427	205	257
594504 [^]	2	0.277	45	0.367	30	0.427	205	257
589490	1	0.321	55	0.431	30	0.491	258	322
589495 [◇]	1/0	0.360	55	0.470	45	0.560	326	412
589496 [◇]	2/0	0.404	55	0.514	45	0.604	411	506
594506 ^{◇^}	2/0	0.404	55	0.514	45	0.604	411	506
592011 [◇]	3/0	0.454	55	0.564	45	0.654	518	623
589500 [◇]	4/0	0.510	55	0.620	45	0.710	653	769
594507 [^]	4/0	0.510	60	0.620	50	0.795	653	789
589497 [◇]	250	0.558	65	0.688	65	0.872	772	984
589502	300	0.611	65	0.747	65	0.877	926	1095
589499 [◇]	350	0.661	65	0.791	65	0.921	1081	1273
589501 [◇]	500	0.789	65	0.919	65	1.049	1544	1767
595421	600	0.893	90	1.05	75	1.20	1853	2152
592017 [◇]	750	0.968	80	1.128	65	1.258	2316	2608
589488	1000	1.117	80	1.277	65	1.407	3088	3418

All dimensions are nominal and subject to normal manufacturing tolerances

◇ Cable marked with this symbol is a standard stock item

† Ampacities are based on Table 310.16 of the NEC 2020 Edition. Ampacities of insulated conductors rated up to and including 2000 Volts with not more than three current-carrying conductors in raceway, cable or direct buried based on ambient temperature of 30°C (86°F).

[^] Green Color



Table 2 – Electrical and Engineering Data

Stock Number	Cond. Size	Min Bending Radius	Max Pull Tension	DC Resistance @ 25°C	AC Resistance @ 90°C	Inductive Reactance @ 60Hz	Allowable Ampacity At 60° C†	Allowable Ampacity At 75° C†	Allowable Ampacity At 90° C†
	AWG/Kcmil	inch	lb	Ω/1000ft	Ω/1000ft	Ω/1000ft	Amp	Amp	Amp
592004	8	1.0	132	0.652	0.815	0.036	40	50	55
589493	6	1.3	210	0.411	0.514	0.036	55	65	75
589492	4	1.5	334	0.258	0.323	0.034	70	85	95
652233 [^]	4	1.5	334	0.258	0.323	0.034	70	85	95
589491	2	1.7	531	0.162	0.203	0.032	95	115	130
594504 [^]	2	1.7	531	0.162	0.203	0.032	95	115	130
589490	1	2.0	670	0.129	0.161	0.031	110	130	145
589495◇	1/0	2.2	845	0.102	0.128	0.032	125	150	170
589496◇	2/0	2.4	1065	0.081	0.102	0.031	145	175	195
594506◇ [^]	2/0	2.4	1065	0.081	0.102	0.031	145	175	195
592011◇	3/0	2.6	1342	0.064	0.081	0.030	165	200	225
589500◇	4/0	2.8	1693	0.051	0.064	0.029	195	230	260
594507 [^]	4/0	2.8	1693	0.051	0.064	0.029	195	230	260
589497◇	250	3.1	2000	0.043	0.055	0.029	215	255	290
589502	300	3.5	2400	0.036	0.046	0.03	240	285	320
589499◇	350	3.7	2800	0.031	0.039	0.029	260	310	350
589501◇	500	5.2	4000	0.022	0.028	0.028	320	380	430
595421	600	6	4800	0.018	0.024	0.026	350	420	475
592017◇	750	6.3	6000	0.014	0.020	0.028	400	475	535
589488	1000	7.0	8000	0.011	0.016	0.027	455	545	615

† Ampacities are based on Table 310.16 of the NEC 2020 Edition. Ampacities of insulated conductors rated up to and including 2000 Volts with not more than three current-carrying conductors in raceway, cable or direct buried based on ambient temperature of 30°C (86°F).

[^] Green Color

Size and Color

Size	GRN
4	652233
2	594504
2/0	594506
4/0	594507

