



DLO TCU 2000V EPDM Insulation Thermoset CPE Jacket. RHH/RHW-2/ RW90 MSHA Approved.

UL Listed as 2kV Heavy Duty Flexible Power Cable (HDFPC) DLO, Rated 90°C Dry or Wet. 2kV Type RHH/RHW-2 Flexible Power Cable Rated for Dry or Wet. CSA Listed as 2kV Type RW90. Composite Thermoset Wall EPDM Insulation Thermoset CPE Jacket. Silicone-Free. MSHA Approved



Image not to scale. See Table 1 for dimensions.

CONSTRUCTION:

1. **Conductor:** Flexible stranded rope-lay class I tinned copper per ASTM B33 and B172 (as applicable)
2. **Binder Tape:** Mylar tape
3. **Insulation:** Black Thermoset Ethylene Propylene Diene Monomer (EPDM)
4. **Jacket:** Thermoset Chlorinated Polyethylene (CPE). Other colors available (see table below)

APPLICATIONS AND FEATURES:

HDFPC-DLO is a 2kV flexible power cable with a variety of possible applications such as but not limited to: Drilling rigs, railroad and transit car wiring, mining and other industrial equipment, and as flexible motor leads and wind turbine applications. The cable is suited for use in wet and dry areas, conduits, ducts, troughs, trays, and where superior electrical properties are desired. HDFPC-DLO is oil, heat, flame, abrasion, and sunlight resistant. Approved for use per the NEC® as Type RHH/RHW-2 and per the CE Code as 2kV Type RW90. 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. Sizes 1/0 AWG and larger are rated for CT Use.

WARNING: Mechanical connectors should not be used on products constructed with rope-lay, high-strand-count conductors. Only compression connectors should be used with these conductor designs.

SPECIFICATIONS:

- ASTM B3 Soft or Annealed Copper Wire
- ASTM B33 Standard Specification for Tin-Coated Soft or Annealed Copper Wire
- ASTM B172 Standard Specification for Rope-Lay-Stranded Copper Conductors Having Bunch-Stranded Copper Conductors (As Applicable)
- UL 44 Thermoset-Insulated Wires and Cables
- UL 1685 Vertical-Tray Fire Propagation and Smoke Release Test (1/0 and Larger)
- UL 2806 Heavy Duty Flexible Power Cable (HDFPC-DLO)
- CSA C22.2 No. 38 Thermoset-insulated wires and cables
- CSA C22.2 No.230 Tray Cables - Rated TC-ER (1/0 AWG and Larger)
- 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





- MSHA Approved
- Made in America: Compliant with both Buy American and Buy America Act (BAA) requirements per 49 U.S.C. § 5323(j) and the Federal Transit Administration Buy America requirements per 49 C.F.R. part 661

SAMPLE PRINT LEGEND:

Sizes 12 AWG and 10 AWG:

{SQFTG} SOUTHWIRE® ROYAL® XX AWG (XXmm²) E30117 (UL) TYPE RHH/RHW-2 90°C DRY 90°C WET 2KV (-40°C) PRI
 PRII SR --- EPR/CPE DLO --- P-07-KA100013-MSHA---RoHS

Sizes 8 AWG to 1 AWG:

SOUTHWIRE® ROYAL® XX AWG (XX{mm²}) E30117 {UL} TYPE HDFPC EPR/CPE 2KV DLO 90°C DRY 90°C WET OR TYPE
 RHH/RHW-2 90°C DRY 90°C WET 2KV -40°C PRI PRII SR VW-1 -- {CSA} 156205 RW90 90°C DRY 90°C WET 2KV -40°C PRI
 PRII FT1 SR {SEQUENTIAL FOOTAGE MARKS} SEQ FEET

Sizes 1/0 AWG and larger:

{SQFTG} SOUTHWIRE® ROYAL® XX AWG XX STRAND CLASS XX (XX{mm²}) E30117 {UL} TYPE HDFPC EPR/CPE 2KV DLO
 90°C DRY 90°C WET OR TYPE RHH/RHW-2 90°C DRY 90°C WET 2KV -40°C PRI PRII SR FOR CT USE FT4 -- {CSA} 156205
 RW90 90°C DRY 90°C WET TC-ER 2KV -40°C PRII FT1 FT4 SR

Table 1 – Weights and Measurements

Stock Number	Cond. Size	Strand Count	Diameter Over Conductor	Min. Avg. Insul. Thickness	Jacket Thickness	Approx. OD	Copper Weight	Approx. Weight	Jacket Color
	AWG/ Kcmil	No. of Strands	inch	mil	mil	inch	lb/1000ft	lb/1000ft	
665468	12	19	0.091	45	15	0.210	20	36	GN
665473	10	19	0.125	55	25	0.265	32	58	GN
167014	8	41	0.145	55	30	0.330	52	92	RD
665482	6	65	0.186	50	30	0.370	81	127	GN
653627	4	105	0.235	60	35	0.440	133	196	GN
138241	2	161	0.290	60	35	0.500	210	282	GN
167020	1	210	0.330	85	60	0.635	267	400	BK
138246	1/0	266	0.379	75	55	0.645	327	450	GN
138251	2/0	342	0.400	80	50	0.690	423	566	GN
562064	3/0	418	0.480	80	55	0.760	518	676	BK
138260	4/0	532	0.530	80	60	0.815	638	815	GN
665455	262.2	646	0.565	80	60	0.845	740	974	GN
665460	313.3	779	0.650	90	70	0.980	896	1139	GN
678902	373.7	931	0.701	95	70	1.040	1076	1343	GN
167030	444.4	1121	0.782	90	65	1.105	1378	1654	BK
677552	535.3	1330	0.843	105	75	1.212	1549	1889	GN
138218	646.4	1628	0.890	115	80	1.290	1898	2292	GN
640983	777.7	1924	0.966	120	90	1.405	2246	2727	GY
664206	929.2	2300	1.113	90	65	1.470	2745	3171	BK
138224	1111	2745	1.168	115	95	1.640	3560	4161	GN

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

Stock Number	Cond. Size	Min Bending Radius	Max Pull Tension	DC Resistance @ 25°C	AC Resistance @ 75°C	Inductive Reactance @ 60Hz	Allowable Ampacity At 75°C	Allowable Ampacity At 90°C
	AWG/Kcmil	inch	lb	Ω/1000ft	Ω/1000ft	Ω/1000ft	Amp	Amp
665468	12	0.8	52	1.774	2.301	0.054	25	30
665473	10	1.1	83	1.081	1.302	0.050	35	40
167014	8	1.3	132	0.679	0.818	0.052	50	55
665482	6	1.5	209	0.435	0.524	0.051	65	75
653627	4	1.8	333	0.274	0.330	0.048	85	95
138241	2	2.0	530	0.172	0.207	0.045	115	130
167020	1	2.5	670	0.143	0.186	0.046	130	145
138246	1/0	2.6	844	0.109	0.131	0.044	150	170
138251	2/0	2.8	1064	0.087	0.104	0.043	175	195
562064	3/0	3.0	1342	0.069	0.083	0.042	200	225
138260	4/0	3.3	1692	0.055	0.067	0.041	230	260
665455	262.2	3.4	2097	0.026	0.033	0.031	264	301
665460	313.3	3.9	2506	0.039	0.048	0.031	298	332
678902	373.7	5.2	2989	0.033	0.042	0.031	323	365
167030	444.4	5.5	3555	0.026	0.040	0.029	358	405
677552	535.3	6.1	4282	0.021	0.028	0.030	394	446
138218	646.4	6.5	5171	0.018	0.025	0.030	439	496
640983	777.7	7.0	6221	0.016	0.024	0.030	483	543
664206	929.2	7.4	7433	0.012	0.019	0.028	527	593
138224	1111	8.2	8888	0.011	0.016	0.029	570	648

* Ampacities in raceway are based upon 2023 NEC Table 310.16 and do not take into account the overcurrent protection limitations in NEC 240.4(D) 20 Amps for 12 AWG CU, and 30 Amps for 10 AWG CU (independent of the conductor temperature rating and stranding). Also, see NEC sections 310.15 and 110.14(C) for additional requirements. Ampacities for non-standard sizes were extrapolated

* Inductive Reactance is based on non-ferrous conduit with one diameter spacing center-to-center.

* #12 and #10 AWG are not approved for CSA RW90





Other Insulation Colors

Cond. Size	Black	Red	Brown	Orange	Yellow	Green	Gray
AWG/kcmil							
12	571253	665446	665465	665466	665467	665468	
10	560057	665469	665470	665471	665472	665473	
8	TBA	167014	665474	665475	665476	665477	
6	167015	665478	665479	665480	665481	665482	
4	167017	167017	665483	665484	665485	653627	
2	167019	167019	138238	138239	138240	138241	
1	167020	138282	138283	138287	138288	138289	
1/0	167021	138242	138243	138244	138245	138246	
2/0	167022	167022	138247	138248	138249	138251	
3/0	167023	138252	138253	138254	138255	138256	
4/0	167024	167024	138257	138258	138259	138260	
262.6	167026	641176	665452	665453	665454	665455	
313.3	167027	665456	665457	665458	665459	665460	
373.7	167029	655203	678900	576729	678901	678902	
444.4	167030	678975	665461	665462	665463	665464	
535.3	167031	167031	138211	138212	138213	677552	
646.4	167032	138229	138215	138216	138217	138218	
777.7	167033	167033	640980	640981	640982	138219	640983
1111	167035	138220	138221	138222	138223	138224	

