



Detail Description or Construction

Type PAWC is an insulated flexible conductor composed by bunch-stranded bare annealed copper conductors, this conductor has a thermoplastic insulation of PVC (Polyvinyl Chloride)/NBR which has similar properties than rubber. Designed to operate at not more than 600V, PAWC is manufactured in gauges from 6 AWG up to 350 MCM. Due to its special cabling this conductor is very flexible, it can operate at 90°C of temperature inside the conductor in dry and wet conditions. Its NBR/PVC isolation provides flexibility as well as resistance to humidity, chemical agents and sparks. Besides that, PAWC possess a great resistance to flame, abrasion and friction. Its black pigmentation resist the ultraviolet rays due to sun light exposure, thereby, these might be installed at outside applications. This product meet the vertical flame test and it allowed to direct buried.

Application

PAWC conductor has been specially designed to operate as conduction elements at arc welding machines mainly in industry AC or DC applications. Basically, it was designed to hold up higher currents in a short time period, in other words, the welding machine work. These conductors might be used in other industrial applications especially in continuous load conditions like mobile motors and machinery, equipment and electric substations grounding among others, but, making a good selection of the terminals. PAWC shall no be used to substitute industrial permanent installations as stated at Art. 400-8 of the NEC.

Standards / Testing Specifications

PAWC conductors have been designed according to ASTM B3, B172, B174, and ICEA S-19-81 specifications and requirements of the latest version of the National Electrical Code (NEC).

Marking

PHELPS DODGE PAWC (GAUGE)
AWG ((GAUGE) mm²).

Installation

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PAWC

600 V Flexible Copper Conductor. Thermoplastic Insulation of NBR / PVC

TECHNICAL INFORMATION

Gauge	Nominal Area		Number of Strands	Nominal Isolation Thickness		Aproximate Total External Diameter		Aproximate Total Weight	Max. DC Resistance @ 30°C	Max. Current Capacity		Standard Packaging
	AWG / MCM	C.M.		mm ²	#	in	mm			in	mm	
6	26240	13.30	168	0.090	2.29	0.368	9.36	187	1.43	75	80	WR 100, C 100
4	41740	21.15	266	0.090	2.29	0.417	10.60	269	0.899	100	105	WR 100, C 100
3	52620	26.66	342	0.090	2.29	0.449	11.40	331	0.720	150	120	WR 100, C 100
2	66360	33.63	418	0.100	2.54	0.497	12.63	406	0.571	200	140	WR 100, C 100
1	83690	42.41	532	0.100	2.54	0.536	13.60	499	0.456	250	165	WR 100, C 100
1/0	105600	53.51	666	0.100	2.54	0.575	14.62	607	0.358	300	195	WR 100, C 100
2/0	133100	67.44	851	0.100	2.54	0.624	15.86	756	0.285	375	225	WR 100, C 100
3/0	167800	85.03	1,073	0.110	2.79	0.697	17.69	948	0.226	450	260	WR 100, C 100
4/0	211600	107.22	1,332	0.130	3.30	0.791	20.09	1,192	0.179	550	300	WR 100, C 100
250	250000	126.68	1,596	0.130	3.30	0.860	21.84	1,400	0.148	614	290	WR 100, C 100
300	300000	152.01	1,995	0.130	3.30	0.920	23.37	1,700	0.123	681	320	WR 100, C 100
350	350000	177.35	2,261	0.130	3.30	0.960	24.38	1,900	0.105	769	350	WR 100, C 100

Values based on table 400-5(b) of NEC 2002

¹⁾ Current capacity of current b is for a cable composed by three individual conductors installed outside @ 30°C of ambient temperature. In addition, the conductor operation temperature is 60°C for gauges up to 1AWG and it is 75°C for 1/0AWG gauges and larger.
 1. Current capacity of current a is for used at an arc welding machine at non continuous load conditions and current capacity of current b is for continuous load conditions