

Engineering Information

Current Rating of Commonly Used "VIR" Cables

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CURRENT RATING OF COMMONLY USED "VIR" CABLES					
S.W.G.	Size	Nominal Cross Sectional Area	Amperes		
			Two Single Core Cable	Two twin Core Cable	Three twin Core Cable
1/18	1/.044	0.0015	5	5	5
3/22	3/.029	0.002	5	5	5
3/20	3/.036	0.003	10	10	8
7/22	7/.029	0.0045	15	15	12
7/20	7/.036	0.007	24	19	17
7/18	7/.044	0.01	31	25	22
7/16	7/.052	0.0145	37	30	26
7/14	7/.064	0.0225	46	37	32

ELECTRIC WELDING					
Electrode Size No.	Dia in	Wt. in lb per 100 ft. approx.	Amps	Voltage	
				Striking	Minimum
14	0.080	1.7	45		
12	0.109	3.0	90		
10	0.137	5.0	110	80 to 100	20 to 35
8	0.166	7.2	160	Volts	Volts
6	0.208	11.5	210		
4	0.239	15.0	3.00		

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CABLES Current Rating of Trading Cables I.S. : 1026 - 1986				
Nominal Cross Sectional Area	No./Diameter of Wires.	Current Rating Continuous (Maximum Ambient Temperature 30°C)		Maximum Resistance per Km. at 20 C
		3-Core	4 Core	
(1)	(2)	(3)	(4)	(5)
mm ²	mm.	A	A	ohms
2.5*	80/.20	18	12	8.053
4*	128/.20	24	19	5.033
6*	85/.30	29	24	3.244
10*	62/.45	37	31	1.976
16	101/.45	48	43	1.213
25	157/.45	60	55	0.7806
35	220/.45	77	69	0.5570
50	113/.75	98	88	0.3803
70	158/.75	128	112	0.2739
95	215/.75	154	133	0.2002
120	272/.75	180	157	0.1596

*These sizes are only intended for 650 V cables.

Cables for Coal Mines - Specifications for cables meant for use in coal mines are covered by I.S. : 691 - 1966.

The different types of cables are as below :

(i) Type FT. The wirearmour in this type is replaced by tinned-copper braiding for the sake of extra flexibility. This type is meant for use with coal cutters. The cable has three power cores, one earth core (green) and one pilot core (black) and a protective screen of tinned-copper braiding under the outer sheath. The conductance of this screen must not be less than one-half of the main conductors subject to a minimum cross-section of 16 mm².

(ii) Type FTD is used with electric drills. There is no protective armours or screen in this cable.

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