

12/20KV Power Cables Three Cores Cables to IEC 60502

Three Core 12/20KV (Um=24KV) Dimensional Data

Nom. Cross-Section Area	Nom. Insulation Thickness	Copper Tape Thickness	Copper Wire Screen Area*	Unarmoured Cables				Steel Round-Wire Armoured Cables					
				Nom. Sheath Thickness	Approx. Overall Diameter	Approx. Weight		Nom. Bedding Thickness	Armour Wire Size	Nom. Sheath Thickness	Approx. Overall Diameter	Approx. Weight	
						CU	AL					CU	AL
mm ²	mm	mm	mm ²	mm	mm	kg/km		mm	mm	mm	mm	kg/km	
35	5.5	0.1	16	2.7	51	2850	2180	1.5	2.5	2.9	60	5700	5010
50	5.5	0.1	16	2.8	54	3340	2450	1.6	2.5	3.0	62	6370	5480
70	5.5	0.1	16	2.9	58	4150	2850	1.6	2.5	3.1	66	7370	6070
95	5.5	0.1	16	3.0	62	5110	3310	1.7	3.15	3.3	72	9400	7600
120	5.5	0.1	16	3.1	65	5990	3730	1.8	3.15	3.4	75	10530	8270
150	5.5	0.1	25	3.2	68	6980	4180	1.8	3.15	3.5	80	11800	8940
185	5.5	0.1	25	3.3	72	8240	4740	1.9	3.15	3.7	83	13350	9850
240	5.5	0.1	25	3.6	79	10310	5700	2.0	3.5	3.8	90	16430	11820
300	5.5	0.1	25	3.7	84	12360	6570	2.1	3.5	4.0	95	18870	13080
400	5.5	0.1	35	3.9	91	15220	7830	2.2	4.0	4.3	103	23260	15930
500	5.5	0.1	35	4.1	97	19105	10325	2.3	4.2	4.5	110	27800	19170

*Optional wire screen can be provided in combination of copper tapes. Nominal screen area, as stated in the table, can be supplied as standard.

Nom. Cross-Section Area	Steel Flat Wire Armoured Cables						Double Steel Tape Armoured Cables					
	Nom. Bedding Thickness	Armour Wire Size	Nom. Sheath Thickness	Approx. Overall Diameter	Approx. Weight		Nom. Bedding Thickness	No of Steel tapes x nom tape thickness	Nom. Sheath Thickness	Approx. Overall Diameter	Approx. Weight	
					CU	AL					CU	AL
mm ²	mm	mm	mm	mm	kg/km		mm	mm	mm	mm	kg/km	
35	1.5	0.8	2.7	55.7	5150	4530	1.5	2x0.5	2.8	56.5	4975	4355
50	1.6	0.8	2.8	58.2	5675	4935	1.6	2x0.5	2.9	59.0	5495	4750
70	1.6	0.8	2.9	61.9	6685	5570	1.6	2x0.5	3.0	62.7	6490	5375
95	1.7	0.8	3.0	66.4	7945	6390	1.7	2x0.5	3.1	67.2	7735	6180
120	1.8	0.8	3.1	70.0	9110	7103	1.8	2x0.5	3.2	70.8	8890	6880
150	1.8	0.8	3.2	73.2	10240	7770	1.8	2x0.5	3.3	74.0	10010	7535
185	1.9	0.8	3.3	77.7	11840	8750	1.9	2x0.5	3.4	78.5	11600	8500
240	2.0	0.8	3.5	83.2	14270	10070	2.0	2x0.8	3.6	85.5	14870	10680
300	2.1	0.8	3.6	88.6	16730	11440	2.1	2x0.8	3.8	91.1	17400	12130
400	2.2	0.8	3.9	95.6	20130	13350	2.2	2x0.8	4.0	97.9	20820	14050
500	2.3	0.8	4.1	103.3	24310	15600	2.3	2x0.8	4.2	105.6	25050	16350

Electrical Data

Nom. Cross-Section Area	D C Resistance CU / AL	A C Resistance CU / AL	Short Circuit Rating of Conductor CU / AL 1 sec	Capacitance	Charging Current	Short Circuit Rating of Copper Wire Screen Per Core 1 sec	Short Circuit Rating of Copper Tape Screen Per Core 1 sec	Reactance	Inductance
mm ²	μΩ/m	μΩ/m	kA	pF/m	mA/m	kA	kA	μΩ/m	nH/m
35	524/868	668/1113	5.0/3.2	168	0.67	2.6	0.7	129	410
50	387/641	494/822	6.8/4.4	183	0.73	2.6	0.8	122	390
70	268/443	343/568	9.8/6.3	207	0.83	2.6	0.8	115	370
95	193/320	248/410	13.3/8.5	229	0.92	2.6	0.9	110	350
120	153/253	196/325	17.2/11.0	249	1.00	2.6	0.9	106	340
150	124/206	159/265	21.2/13.5	266	1.06	4.3	1.0	103	330
185	99.1/164	128/211	26.6/17.0	289	1.16	4.3	1.0	100	320
240	75.4/125	98/161	34.9/22.3	318	1.27	4.3	1.1	95	300
300	60.1/100	80/130	43.8/28.0	348	1.39	4.3	1.2	93	290
400	47.0/77.8	64/102	57.3/36.6	388	1.53	5.8	1.3	87	280
500	36.6/60.5	51/81	72.3/46.2	422	1.67	5.8	1.4	78	250