

RESISTANCE AND EARTH FAULT LOOP IMPEDANCE FOR SINGLE-CORE CABLES

The cable sheaths are assumed to be connected together at both ends.

Values of R1 should be multiplied by 1.21 to establish the live conductor resistance under operating conditions (70 °C)

CABLE SIZE REFERENCE	PHASE CONDUCTOR		1 CABLE ISOLATED		TWO CABLES SINGLE-PHASE		THREE CABLES THREE-PHASE		FOUR CABLES THREE-PHASE	
BARE CABLE CC LSF COVERED CCM	CSA	RESISTANCE @ 20°C (R1) (MAX)	EFFECTIVE SHEATH AREA	SHEATH RESISTANCE AT 20°C (R2) (MAX)	EFFECTIVE SHEATH AREA	EARTH-FAULT LOOP IMPEDANCE AT 70°C (R1+R2)	EFFECTIVE SHEATH AREA	EARTH-FAULT LOOP IMPEDANCE AT 70°C (R1+R2)	EFFECTIVE SHEATH AREA	EARTH-FAULT LOOP IMPEDANCE AT 70°C (R1+R2)
FOLLOWED BY	mm ²	/km	mm ²	/km	mm ²	/km	mm ²	/km	mm ²	/km
CABLE EXPOSED TO TOUCH OR PLASTIC										
1H 10	10	1.83	9	2.23	19	3.475	28	3.053	38	2.843
1H 16	16	1.16	12	1.81	23	2.415	35	2.073	46	1.903
1H 25	25	0.727	15	1.40	30	1.673	45	1.408	60	1.276
1H 35	35	0.524	18	1.17	36	1.298	53	1.076	71	0.966
1H 50	50	0.387	22	0.959	44	1.013	66	0.831	88	0.741
1H 70	70	0.268	27	0.767	54	0.758	81	0.614	109	0.541
1H 95	95	0.193	32	0.646	65	0.599	97	0.477	130	0.416
1H 120	120	0.153	37	0.556	75	0.500	112	0.395	150	0.343
1H 150	150	0.124	44	0.479	87	0.421	131	0.331	175	0.286
1H 185	185	0.101	54	0.412	108	0.355	161	0.278	215	0.239
1H 240	240	0.0775	70	0.341	141	0.287	211	0.222	281	0.190
1H 300	300	0.0620	87	0.280	174	0.233	261	0.181	348	0.154
1H 400	400	0.0465	117	0.223	234	0.183	351	0.141	468	0.120

