

2xHSYRaY / A2xHSYRaY

Single Core (Cu or Al/XLPE/CTS or CWS/PVC/AWA/PVC)

APPLICATION

The single core cables are designed for distribution of electrical power with nominal voltage U_0/U ranging from 3.6/6 kV and frequency 50Hz. They are suitable for installation mostly in power supply stations, indoors and in cable ducts, outdoors, underground and in water as well as for installation on cable trays for industries, switchboards and power stations.

STANDARD

IEC 60502-2
BDS IEC 60502-2

VOLTAGE GRADE

U_0/U (Um) : 3.6/6 (7.2) kV
Permissible Service Voltage: 3.8/6.5 kV

COLOR

Insulated core : (Natural)
Sheath : (Red or Other Colors available on request)

CONSTRUCTION

- Conductor:** Stranded Circular Compacted, Plain annealed copper or Aluminium, Class-2 to IEC 60228
- Conductor screen:** Semi-conductive XLPE
- Insulation:** XLPE to IEC 60502-2
- Insulation screen:** Semi-conductive XLPE
- Metallic screen:** Copper Tape or Copper wire to IEC 60502-2
- Inner covering:** PVC, ST-2 to IEC 60502-2
- Armour:** Round Aluminium wire to IEC 60502-2
- Sheath:** PVC, ST-2 to IEC 60502-2



PHYSICAL DATA											
Nominal cross sectional area of conductor	Shape of conductor	Conductor diameter		Nominal thickness of insulation	Nominal diameter of Al wire armour	Nominal thickness of sheath	Metallic screen		Approx. overall diameter of cable	Approx. weight of cable	
		Minimum	Maximum				thickness of copper tape	area of copper wire		Cu	Al
Core x mm ²	-	mm	mm	mm	mm	mm	mm	mm ²	mm	kg/km	kg/km
1 x 25	rmc	5.6	6.5	2.5	1.6	1.8	0.06	16	24.6	930	750
1 x 35	rmc	6.6	7.5	2.5	1.6	1.8	0.06	16	25.6	1030	810
1 x 50	rmc	7.7	8.6	2.5	1.6	1.8	0.06	16	26.6	1230	880
1 x 70	rmc	9.3	10.2	2.5	1.6	1.8	0.06	16	28.3	1460	1020
1 x 95	rmc	11.0	12.0	2.5	1.6	1.9	0.06	16	30.4	1780	1180
1 x 120	rmc	12.3	13.5	2.5	1.6	1.9	0.06	16	31.8	2060	1300
1 x 150	rmc	13.7	15.0	2.5	1.6	2.0	0.06	25	33.5	2400	1450
1 x 185	rmc	15.3	16.8	2.5	2.0	2.0	0.06	25	36.0	2880	1680
1 x 240	rmc	17.6	19.2	2.6	2.0	2.1	0.06	25	39.2	3560	1980
1 x 300	rmc	19.7	21.6	2.8	2.0	2.2	0.06	25	42.1	4270	2350
1 x 400	rmc	22.3	24.6	3.0	2.0	2.3	0.06	35	45.6	5370	2740
1 x 500	rmc	25.3	27.6	3.2	2.5	2.5	0.06	35	50.2	6650	3480
1 x 630	rmc	28.7	32.5	3.2	2.5	2.6	0.06	35	54.8	8120	4120
1 x 800	rmc	32.6	36.7	3.2	2.5	2.7	0.06	50	58.8	9960	4950
1 x 1000	rmc	36.3	40.5	3.2	2.5	2.9	0.06	50	64.0	12270	5880

ELECTRICAL DATA																
Nominal cross sectional area	Maximum D.C resistance of conductor at 20 °C		Maximum A.C resistance of conductor at 90 °C		Short circuit rating of conductor in one second		Short circuit rating of metallic screen in one second		Approx. Capacitance of cable	Approx. Inductance of cable	Current rating in ground at 20 °C				Current rating in air at 30 °C	
	Cu	Al	Cu	Al	Cu	Al	Cu tape	Cu wire			Laid direct in flat spaced	Laid in single duct flat touching	Laid direct in flat touching	Cu	Al	
mm ²	W/km	W/km	W/km	W/km	kA	kA	kA	kA	μF/km	mH/km	Amp	Amp	Amp	Amp	Amp	Amp
25	0.727	1.20	0.927	1.53	3.6	2.4	0.39	2.40	0.262	0.486	144	112	133	103	167	130
35	0.524	0.868	0.668	1.11	5.0	3.3	0.39	2.40	0.291	0.463	172	134	159	123	203	157
50	0.387	0.641	0.494	0.822	7.2	4.7	0.39	2.40	0.321	0.432	203	157	188	146	243	189
70	0.268	0.443	0.342	0.568	10.0	6.6	0.39	2.40	0.371	0.408	246	192	229	178	303	236
95	0.193	0.320	0.247	0.411	13.6	8.9	0.39	2.40	0.417	0.388	293	229	274	213	369	287
120	0.153	0.253	0.196	0.325	17.2	11.3	0.39	2.40	0.459	0.371	332	260	311	242	426	332
150	0.124	0.206	0.159	0.265	21.5	14.1	0.39	3.75	0.494	0.361	366	288	347	271	481	376
185	0.0991	0.164	0.127	0.211	26.5	17.4	0.39	3.75	0.543	0.352	410	324	391	307	550	432
240	0.0754	0.125	0.098	0.162	34.3	22.6	0.62	3.75	0.583	0.340	470	373	453	356	647	511
300	0.0601	0.100	0.079	0.130	42.9	28.2	0.62	3.75	0.602	0.330	524	419	510	402	739	586
400	0.0470	0.0778	0.063	0.102	57.2	37.6	0.62	5.25	0.627	0.319	572	466	571	457	837	676
500	0.0366	0.0605	0.050	0.080	71.5	47.0	0.62	5.25	0.654	0.318	672	546	661	537	938	776
630	0.0283	0.0469	0.041	0.064	90.1	59.2	0.62	5.25	0.726	0.307	882	646	771	617	1048	886
800	0.0221	0.0367	0.039	0.051	115.0	75.2	0.62	7.50	0.786	0.298	1002	756	871	717	1148	986
1000	0.0176	0.0291	0.029	0.043	143.0	94.0	0.62	7.50	0.856	0.291	1112	856	971	807	1238	1086

Current ratings are valid for cables laid under defined conditions at page no. 171. For current ratings at deviated conditions, apply correction factor as given on page no.171-173