



# PVC INSULATED POWER AND CONTROL CABLES



# SBEE 1.1 KV ROBUST CONTROL CABLE YWY & YFY (ABC)



## TECHNICAL DATA

BIS Certified as per IS 1554 Part-1	Core Colours: As per IS 1554 (Part 1)	Specific Insulation Resistance: As Per IS 5831
Conductor Bunching: Short lay, Class 2 as per IS 8130	Rated Voltage: 1100 volts grade	Test Voltage: 4kV
Protective Conductor: As Per IS 1554 Optional	Minimum Bending Radius: Occasional Flexing 12 x Cable Dia	
Temperature Range: Fixed Installation -30° C to +70° C PVC Type A NON FR & FR, FRLS TYPE A.		
Fixed Installation -30° C TO +85° C PVC TYPE C, FRLS TYPE C, Higher Current Carrying capacity for given crosssection		
Fixed Installation -30° C TO +105° C H.R. P.V.C, Extremely good current carrying capacity for a given crosssection		

APPLICATIONS	PRODUCT MAKEUP	PRODUCT FEATURES
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- |   |  |  |
|---|--|--|
| <ul style="list-style-type: none"> <li>• L.T Power Distribution</li> <li>• Fixed, Rugged Installation</li> <li>• Dry or Damp or Under Ground Application</li> <li>• Power Circuits, Power Stations, Substations.</li> </ul> | <ul style="list-style-type: none"> <li>• Strands of Electrolytic Grade, Oxygen free Bare Copper wire class 2</li> <li>• Different types of PVC Insulation, Innersheath &amp; Outer Sheath</li> <li>• Cores are layed up in sequence and in layers</li> <li>• Outer sheath colour Black to RAL 9005</li> <li>• Rigid Armored using G.I Wires as per IS 1554</li> <li>• GI strip as per IS-1554</li> </ul> | <ul style="list-style-type: none"> <li>• Flame retardent as per IEC 60332-1-2</li> <li>• Flamability test as per IS 10810-53</li> <li>• Resistant to certain Industrial Oils and Mud resistant</li> <li>• Organic &amp; Inorganic Chemical Resistance of Certain type</li> </ul> |
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\* Energy efficient product optional and available on request. \* Anti-rodent & anti-termite properties optional on request. \* In-built UV protection

Article No.	No. of Core X Area Sq. mm	Outer Diameter mm	Copper Weight Kg/Km	Approx.Weight of Cable Kg/Km	Current Carrying Capacity (AMPS)			
					PVC		HR 105°C PVC	
					Ground	Air	Ground	Air
					Amps			
205300120224	2 X 1.5	14.50	26	378	26	24	30	30
205300120234	3 X 1.5	15.00	40	415	24	20	28	25
205300120244	4 X 1.5	16.00	53	471	24	20	28	25
205300120254	5 X 1.5	16.50	66	535	18	17	21	21
205300120264	6 X 1.5	18.00	80	576	17	16	20	20
205300120274	7 X 1.5	18.00	93	587	16	16	18	20
205300120284	8 X 1.5	19.00	106	654	16	14	18	18
205300120294	9 X 1.5	20.00	120	722	15	14	17	18
2053001202104	10 X 1.5	21.50	133	777	15	13	17	16
2053001202124	12 X 1.5	22.50	160	896	14	12	16	15
2053001202144	14 X 1.5	23.50	186	983	13	12	15	15
2053001202164	16 X 1.5	24.00	213	1059	13	11	15	14
2053001202194	19 X 1.5	25.50	253	1164	11	11	13	14
2053001202214	21 X 1.5	26.50	280	1262	11	10	13	13
2053001202244	24 X 1.5	28.50	320	1409	10	10	12	13
2053001202274	27 X 1.5	29.00	360	1498	10	10	12	13
2053001202304	30 X 1.5	30.00	400	1591	10	8	12	10
2053001202334	33 X 1.5	31.00	440	1706	9	8	10	10
2053001202374	37 X 1.5	32.00	493	1818	9	8	10	10
2053001202444	44 X 1.5	35.50	586	2134	8	7	9	9
2053001202524	52 X 1.5	38.00	693	2626	8	7	9	9
2053001202614	61 X 1.5	40.00	813	2903	7	7	9	9
2053001202225	2 X 2.5	15.50	44	447	36	32	41	40
205300120235	3 X 2.5	16.00	66	507	31	29	36	36
205300120245	4 X 2.5	17.50	88	579	31	29	36	36
205300120255	5 X 2.5	18.50	111	655	26	23	30	29
205300120265	6 X 2.5	19.50	133	704	24	22	28	28
205300120275	7 X 2.5	19.50	155	721	23	20	26	25
205300120285	8 X 2.5	21.50	177	835	22	19	25	24
205300120295	9 X 2.5	23.00	200	960	21	18	24	23
2053001202105	10 X 2.5	24.50	222	1030	21	18	24	23
2053001202125	12 X 2.5	25.00	266	1125	19	17	22	21
2053001202145	14 X 2.5	26.00	311	1214	18	17	21	21
2053001202165	16 X 2.5	27.50	355	1328	17	16	20	20

Article No.	No. of Core X Area	Outer Diameter	Copper Weight	Approx.Weight of Cable	Current Carrying Capacity (AMPS)			
					PVC		HR 105°C PVC	
					Ground	Air	Ground	Air
	Sq. mm	mm	Kg/Km	Kg/Km	Amps			
2053001202195	19 X 2.5	28.50	422	1479	16	14	18	18
2053001202215	21 X 2.5	30.00	466	1620	15	13	17	16
2053001202245	24 X 2.5	33.00	533	1828	15	13	17	16
2053001202275	27 X 2.5	33.50	600	1956	14	12	16	15
2053001202305	30 X 2.5	34.50	666	2101	14	12	16	15
2053001202335	33 X 2.5	35.50	733	2251	13	11	15	14
2053001202375	37 X 2.5	37.50	822	2684	13	11	15	14
2053001202445	44 X 2.5	41.50	977	3111	11	11	13	14
2053001202525	52 X 2.5	43.50	1155	3502	11	10	13	12
2053001202615	61 X 2.5	46.00	1355	3929	10	10	12	12

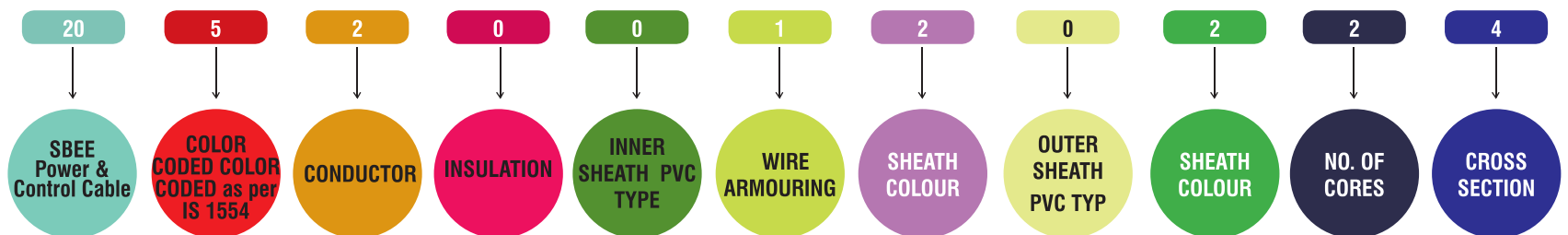
### STRIP ARMoured



2053002202124	12 X 1.5	19.50	160	685	14	12	16	15
2053002202144	14 X 1.5	21.00	186	755	13	12	15	15
2053002202164	16 X 1.5	22.00	213	840	13	11	15	14
2053002202194	19 X 1.5	23.00	253	939	11	11	13	14
2053002202214	21 X 1.5	24.00	280	1004	11	10	13	13
2053002202244	24 X 1.5	27.00	320	1136	10	10	12	13
2053002202274	27 X 1.5	27.50	360	1208	10	10	12	13
2053002202304	30 X 1.5	28.00	400	1311	10	8	12	10
2053002202334	33 X 1.5	28.50	440	1420	9	8	10	10
2053002202374	37 X 1.5	29.50	493	1514	9	8	10	10
2053002202444	44 X 1.5	33.50	586	1783	8	7	9	9
2053002202524	52 X 1.5	34.50	693	2046	8	7	9	9
2053002202614	61 X 1.5	36.50	813	2270	7	7	9	9
2053002202295	9 X 2.5	21.00	200	775	21	18	24	23
2053002202105	10 X 2.5	22.00	222	810	21	18	24	23
2053002202125	12 X 2.5	23.00	266	910	19	17	22	21
2053002202145	14 X 2.5	24.00	311	990	18	17	21	21
2053002202165	16 X 2.5	25.00	355	1102	17	16	20	20
2053002202195	19 X 2.5	26.00	422	1230	16	14	18	18
2053002202215	21 X 2.5	27.00	466	1350	15	13	17	16
2053002202245	24 X 2.5	29.50	533	1500	15	13	17	16
2053002202275	27 X 2.5	30.50	600	1630	14	12	16	15
2053002202305	30 X 2.5	31.50	666	1790	14	12	16	15
2053002202335	33 X 2.5	33.00	733	1920	13	11	15	14
2053002202375	37 X 2.5	34.00	822	2105	13	11	15	14
2053002202445	44 X 2.5	38.00	977	2440	11	11	13	14
2053002202525	52 X 2.5	39.50	1155	2758	11	10	13	12
2053002202615	61 X 2.5	42.00	1355	3140	10	10	12	12

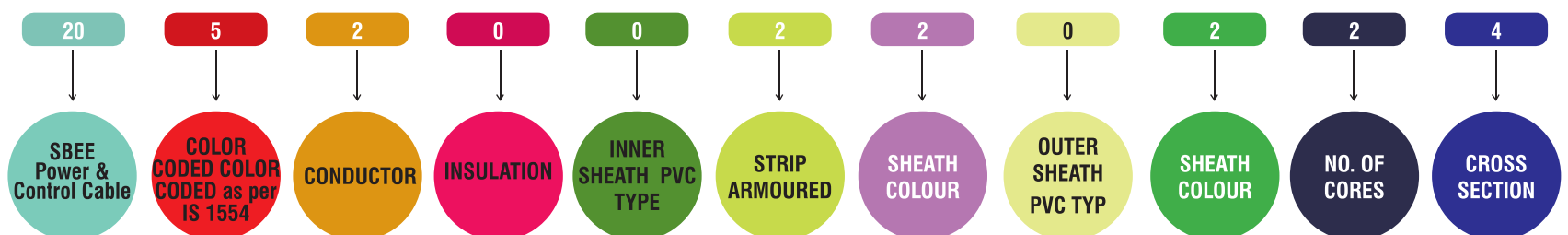
**Example to find out Part Number, Type A & ST1 PVC 2 Core of 1.5mm<sup>2</sup>,CLASS 2,BARE CU**

Wire Armoured



**Example to find out Part Number, Type A & ST1 PVC 2 CORE OF 1.5mm<sup>2</sup>,CLASS 2, BARE CU**

Strip Armoured



Note:

1. Packing of 500 and 1000mtrs in Wooden Drums
2. Packing of 100mtrs in Rings
3. Packing of odd lengths based on cable size

# SBEE 1.1 KV ROBUST CONTROL CABLE UN-ARMoured YY (ABC)



## TECHNICAL DATA

BIS Certified as per IS 1554 Part-1	Core Colours: As per IS 1554 (Part 1)	Specific Insulation Resistance: As Per IS 5831
Conductor Bunching: Short lay, Class 2 as per IS 8130	Rated Voltage: 1100 volts grade	Test Voltage: 4kV
Protective Conductor: As Per IS 1554 Optional	Minimum Bending Radius: Occasional Flexing 12 x Cable Dia	
Temperature Range: Fixed Installation -30° C to +70° C PVC Type A NON FR & FR, FRLS TYPE A.		
Fixed Installation -30° C TO +85° C PVC TYPE C, FRLS TYPE C, Higher Current Carrying capacity for given crosssection		
Fixed Installation -30° C TO +105° C H.R. P.V.C, Extremely good current carrying capacity for a given crosssection		

APPLICATIONS	PRODUCT MAKEUP	PRODUCT FEATURES
<ul style="list-style-type: none"> <li>• L.T Control Application</li> <li>• Fixed, Rugged Installation</li> <li>• Dry or Damp or Under Ground Application</li> <li>• Control Circuits in Power Stations, Substations</li> </ul>	<ul style="list-style-type: none"> <li>• Strands of Electrolytic Grade, Oxygen free, High Conductivity Bare Copper wire class 2</li> <li>• Different classes of PVC Insulation Sheath</li> <li>• Cores are layed up in sequence and in layers</li> <li>• Outer sheath colour Black to RAL 9005 or GREY RAL 7001</li> </ul>	<ul style="list-style-type: none"> <li>• Flame retardent as per IEC 60332-1-2</li> <li>• Flamability test as per IS 10810-53</li> <li>• Resistant to certain Industrial Oils and Mud resistant</li> <li>• Organic &amp; Inorganic Chemical Resistance of Certain type</li> </ul>

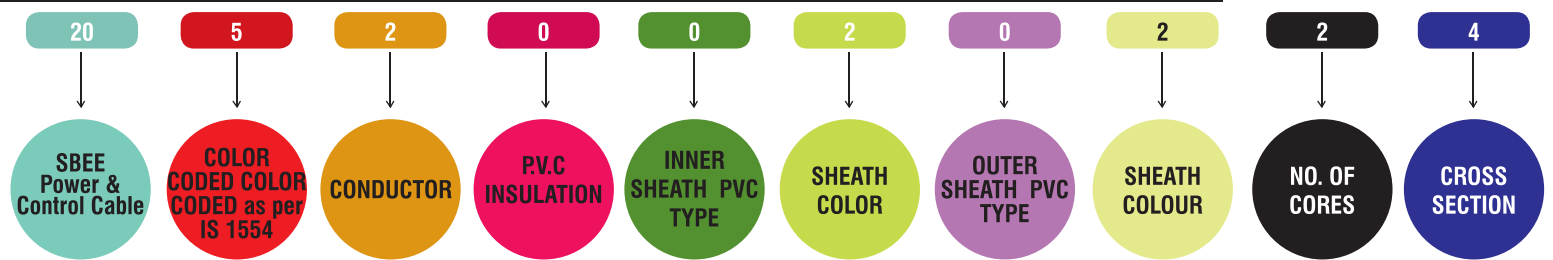
\* Energy efficient product optional and available on request. \* Anti-rodent & anti-termite properties optional on request. \* In-built UV protection

Article No.	No. of Core X Area Sq. mm	Outer Diameter mm	Copper Weight Kg/Km	Approx.Weight of Cable Kg/Km	Current Carrying Capacity (AMPS)			
					PVC		HR 105°C PVC	
					Ground	Air	Ground	Air
					Amps			
20520020224	2 X 1.5	12.00	26	167	26	24	30	30
20520020234	3 X 1.5	12.50	40	180	24	20	28	25
20520020244	4 X 1.5	13.50	53	212	24	20	28	25
20520020254	5 X 1.5	14.50	66	258	18	17	21	21
20520020264	6 X 1.5	15.50	80	265	17	16	20	20
20520020274	7 X 1.5	15.50	93	280	16	16	18	20
20520020284	8 X 1.5	16.50	106	322	16	14	18	18
20520020294	9 X 1.5	17.50	120	363	15	14	17	18
205200202104	10 X 1.5	19.00	133	385	15	13	17	16
205200202124	12 X 1.5	19.50	160	432	14	12	16	15
205200202144	14 X 1.5	20.00	186	486	13	12	15	15
205200202164	16 X 1.5	21.00	213	540	13	11	15	14
205200202194	19 X 1.5	22.50	253	640	11	11	13	14
205200202214	21 X 1.5	23.50	280	712	11	10	13	13
205200202244	24 X 1.5	26.00	320	795	10	10	12	13
205200202274	27 X 1.5	26.50	360	864	10	10	12	13
205200202304	30 X 1.5	27.50	400	945	10	8	12	10
205200202334	33 X 1.5	28.00	440	1025	9	8	10	10
205200202374	37 X 1.5	29.00	493	1125	9	8	10	10
205200202444	44 X 1.5	32.50	586	1320	8	7	9	9
205200202524	52 X 1.5	34.50	693	1558	8	7	9	9
205200202614	61 X 1.5	36.00	813	1770	7	7	9	9
20520020225	2 X 2.5	13.50	44	200	36	32	41	40
20520020235	3 X 2.5	14.00	66	235	31	29	36	36
20520020245	4 X 2.5	15.00	88	285	31	29	36	36
20520020255	5 X 2.5	16.00	111	335	26	23	30	29
20520020265	6 X 2.5	17.50	133	358	24	22	28	28
20520020275	7 X 2.5	17.50	155	380	23	20	26	25
20520020285	8 X 2.5	18.50	177	442	22	19	25	24
20520020295	9 X 2.5	19.50	200	498	21	18	24	23
205200202105	10 X 2.5	21.00	222	520	21	18	24	23
205200202125	12 X 2.5	22.00	266	615	19	17	22	21
205200202145	14 X 2.5	23.00	311	698	18	17	21	21
205200202165	16 X 2.5	23.50	355	785	17	16	20	20

Article No.	No. of Core X Area Sq. mm	Outer Diameter mm	Copper Weight Kg/Km	Approx.Weight of Cable Kg/Km	Current Carrying Capacity (AMPS)			
					PVC		HR 105°C PVC	
					Ground	Air	Ground	Air
205200202195	19 X 2.5	25.00	422	897	16	14	18	18
205200202215	21 X 2.5	26.50	466	990	15	13	17	16
205200202245	24 X 2.5	29.00	533	1095	15	13	17	16
205200202275	27 X 2.5	29.50	600	1210	14	12	16	15
205200202305	30 X 2.5	31.00	666	1315	14	12	16	15
205200202335	33 X 2.5	31.50	733	1450	13	11	15	14
205200202375	37 X 2.5	33.00	822	1645	13	11	15	14
205200202445	44 X 2.5	37.00	977	1925	11	11	13	14
205200202525	52 X 2.5	39.00	1155	2205	11	10	13	12
205200202615	61 X 2.5	41.00	1355	2560	10	10	12	12

**Example to find out Part Number, Type A & ST1 PVC 2 CORE OF 1.5mm<sup>2</sup>,CLASS 2, BARE Copper**

Un Armoured



Note:

1. Packing of 500 and 1000mtrs in Wooden Drums
2. Packing of 100mtrs in Rings
3. Packing of odd lengths based on cable size

# SBEE 1.1 KV ROBUST CONTROL CABLE YWY & YFY (ATC)



## TECHNICAL DATA

BIS Certified as per IS 1554 Part-1	Core Colours: As per IS 1554 (Part 1)	Specific Insulation Resistance: As Per IS 5831
Conductor Bunching: Short lay, Class 2 as per IS 8130	Rated Voltage: 1100 volts grade	Test Voltage: 4kV
Protective Conductor: As Per IS 1554 Optional	Minimum Bending Radius: Occasional Flexing 12 x Cable Dia	
Temperature Range: Fixed Installation -30° C to +70° C PVC Type A NON FR & FR, FRLS TYPE A.		
Fixed Installation -30° C TO +85° C PVC TYPE C, FRLS TYPE C, Higher Current Carrying capacity for given crosssection		
Fixed Installation -30° C TO +105° C H.R. P.V.C, Extremely good current carrying capacity for a given crosssection		

APPLICATIONS	PRODUCT MAKEUP	PRODUCT FEATURES
<ul style="list-style-type: none"> <li>• L.T Control Application</li> <li>• Fixed, Rugged Installation</li> <li>• Dry or Damp or Under Ground Application</li> <li>• Control Circuits in Power Stations, Substations</li> </ul>	<ul style="list-style-type: none"> <li>• Strands of Electrolytic Grade, Oxygen free, High Conductivity Tinned Copper wire class 2</li> <li>• Different types of PVC Insulation Sheath</li> <li>• Cores are layed up in sequence and in layers</li> <li>• Outer sheath colour Black to RAL 9005 or GREY RAL 7001</li> <li>• GI wire/strip for additional mechanical protection</li> </ul>	<ul style="list-style-type: none"> <li>• Flame retardent as per IEC 60332-1-2</li> <li>• Flamability test as per IS 10810-53</li> <li>• Resistant to certain Industrial Oils and Mud resistant</li> <li>• Organic &amp; Inorganic Chemical Resistance of Certain type</li> </ul>

\* Energy efficient product optional and available on request. \* Anti-rodent & anti-termite properties optional on request. \* In-built UV protection

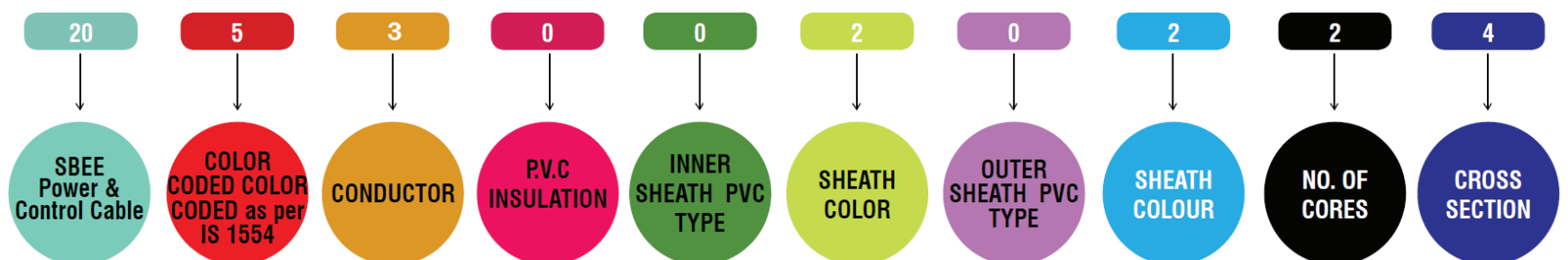
Article No.	No. of Core X Area	Outer Diameter	Copper Weight	Approx.Weight of Cable	Current Carrying Capacity (AMPS)			
					PVC		HR 105°C PVC	
					Ground	Air	Ground	Air
					Amps			
205300120224	2 X 1.5	14.50	26	378	26	24	30	30
205300120234	3 X 1.5	15.00	40	415	24	20	28	25
205300120244	4 X 1.5	16.00	53	471	24	20	28	25
205300120254	5 X 1.5	16.50	66	535	18	17	21	21
205300120264	6 X 1.5	18.00	80	576	17	16	20	20
205300120274	7 X 1.5	18.00	93	587	16	16	18	20
205300120284	8 X 1.5	19.00	106	654	16	14	18	18
205300120294	9 X 1.5	20.00	120	722	15	14	17	18
2053001202104	10 X 1.5	21.50	133	777	15	13	17	16
2053001202124	12 X 1.5	22.50	160	896	14	12	16	15
2053001202144	14 X 1.5	23.50	186	983	13	12	15	15
2053001202164	16 X 1.5	24.00	213	1059	13	11	15	14
2053001202194	19 X 1.5	25.50	253	1164	11	11	13	14
2053001202214	21 X 1.5	26.50	280	1262	11	10	13	13
2053001202244	24 X 1.5	28.50	320	1409	10	10	12	13
2053001202274	27 X 1.5	29.00	360	1498	10	10	12	13
2053001202304	30 X 1.5	30.00	400	1591	10	8	12	10
2053001202334	33 X 1.5	31.00	440	1706	9	8	10	10
2053001202374	37 X 1.5	32.00	493	1818	9	8	10	10
2053001202444	44 X 1.5	35.50	586	2134	8	7	9	9
2053001202524	52 X 1.5	38.00	693	2626	8	7	9	9
2053001202614	61 X 1.5	40.00	813	2903	7	7	9	9
205300120225	2 X 2.5	15.50	44	447	36	32	41	40
205300120235	3 X 2.5	16.00	66	507	31	29	36	36
205300120245	4 X 2.5	17.50	88	579	31	29	36	36
205300120255	5 X 2.5	18.50	111	655	26	23	30	29
205300120265	6 X 2.5	19.50	133	704	24	22	28	28
205300120275	7 X 2.5	19.50	155	721	23	20	26	25
205300120285	8 X 2.5	21.50	177	835	22	19	25	24
205300120295	9 X 2.5	23.00	200	960	21	18	24	23
2053001202105	10 X 2.5	24.50	222	1030	21	18	24	23
2053001202125	12 X 2.5	25.00	266	1125	19	17	22	21

Article No.	No. of Core X Area	Outer Diameter	Copper Weight	Approx.Weight of Cable	Current Carrying Capacity (AMPS)			
					PVC		HR 105°C PVC	
					Ground	Air	Ground	Air
	Sq. mm	mm	Kg/Km	Kg/Km	Amps			
2053001202145	14 X 2.5	26.00	311	1214	18	17	21	21
2053001202165	16 X 2.5	27.50	355	1328	17	16	20	20
2053001202195	19 X 2.5	28.50	422	1479	16	14	18	18
2053001202215	21 X 2.5	30.00	466	1620	15	13	17	16
2053001202245	24 X 2.5	33.00	533	1828	15	13	17	16
2053001202275	27 X 2.5	33.50	600	1956	14	12	16	15
2053001202305	30 X 2.5	34.50	666	2101	14	12	16	15
2053001202335	33 X 2.5	35.50	733	2251	13	11	15	14
2053001202375	37 X 2.5	37.50	822	2684	13	11	15	14
2053001202445	44 X 2.5	41.50	977	3111	11	11	13	14
2053001202525	52 X 2.5	43.50	1155	3502	11	10	13	12
2053001202615	61 X 2.5	46.00	1355	3929	10	10	12	12

### STRIP ARMoured

2053002202124	12 X 1.5	19.50	160	685	14	12	16	15
2053002202144	14 X 1.5	21.00	186	755	13	12	15	15
2053002202164	16 X 1.5	22.00	213	840	13	11	15	14
2053002202194	19 X 1.5	23.00	253	939	11	11	13	14
2053002202214	21 X 1.5	24.00	280	1004	11	10	13	13
2053002202244	24 X 1.5	27.00	320	1136	10	10	12	13
2053002202274	27 X 1.5	27.50	360	1208	10	10	12	13
2053002202304	30 X 1.5	28.00	400	1311	10	8	12	10
2053002202334	33 X 1.5	28.50	440	1420	9	8	10	10
2053002202374	37 X 1.5	29.50	493	1514	9	8	10	10
2053002202444	44 X 1.5	33.50	586	1783	8	7	9	9
2053002202524	52 X 1.5	34.50	693	2046	8	7	9	9
2053002202614	61 X 1.5	36.50	813	2270	7	7	9	9
205300220295	9 X 2.5	21.00	200	775	21	18	24	23
2053002202105	10 X 2.5	22.00	222	810	21	18	24	23
2053002202125	12 X 2.5	23.00	266	910	19	17	22	21
2053002202145	14 X 2.5	24.00	311	990	18	17	21	21
2053002202165	16 X 2.5	25.00	355	1102	17	16	20	20
2053002202195	19 X 2.5	26.00	422	1230	16	14	18	18
2053002202215	21 X 2.5	27.00	466	1350	15	13	17	16
2053002202245	24 X 2.5	29.50	533	1500	15	13	17	16
2053002202275	27 X 2.5	30.50	600	1630	14	12	16	15
2053002202305	30 X 2.5	31.50	666	1790	14	12	16	15
2053002202335	33 X 2.5	33.00	733	1920	13	11	15	14
2053002202375	37 X 2.5	34.00	822	2105	13	11	15	14
2053002202445	44 X 2.5	38.00	977	2440	11	11	13	14
2053002202525	52 X 2.5	39.50	1155	2758	11	10	13	12
2053002202615	61 X 2.5	42.00	1355	3140	10	10	12	12

Example to find out Part Number, Type A & ST1 PVC 2 CORE OF 1.5mm<sup>2</sup>,CLASS 2, Tinned Copper



# SBEE 1.1 KV ROBUST CONTROL CABLE UN-ARMOURED YY-(ATC)



## TECHNICAL DATA

BIS Certified as per IS 1554 Part-1	Core Colours: As per IS 1554 (Part 1)	Specific Insulation Resistance: As Per IS 5831
Conductor Bunching: Short lay, Class 2 as per IS 8130	Rated Voltage: 1100 volts grade	Test Voltage: 4kV
Protective Conductor: As Per IS 1554 Optional	Minimum Bending Radius: Occasional Flexing 12 x Cable Dia	
Temperature Range: Fixed Installation -30° C to +70° C PVC Type A NON FR & FR, FRLS TYPE A.		
Fixed Installation -30° C TO +85° C PVC TYPE C, FRLS TYPE C, Higher Current Carrying capacity for given crosssection		
Fixed Installation -30° C TO +105° C H.R. P.V.C, Extremely good current carrying capacity for a given crosssection		

APPLICATIONS	PRODUCT MAKEUP	PRODUCT FEATURES
<ul style="list-style-type: none"> <li>• L.T Control Application</li> <li>• Fixed, Rugged Installation</li> <li>• Dry or Damp or Under Ground Application</li> <li>• Power Circuits, Power Stations, Substations</li> </ul>	<ul style="list-style-type: none"> <li>• Strands of Electrolytic Grade, Oxygen free, High Conductivity Tinned Copper wire class 2</li> <li>• Different types of PVC Insulation Sheath</li> <li>• Cores are layed up in sequence and in layers</li> <li>• Outer sheath colour Black to RAL 9005 or GREY RAL 7001</li> </ul>	<ul style="list-style-type: none"> <li>• Flame retardent as per IEC 60332-1-2</li> <li>• Flamability test as per IS 10810-53</li> <li>• Resistant to certain Industrial Oils and Mud resistant</li> <li>• Organic &amp; Inorganic Chemical Resistance of Certain type</li> </ul>

\* Energy efficient product optional and available on request. \* Anti-rodent & anti-termite properties optional on request. \* In-built UV protection

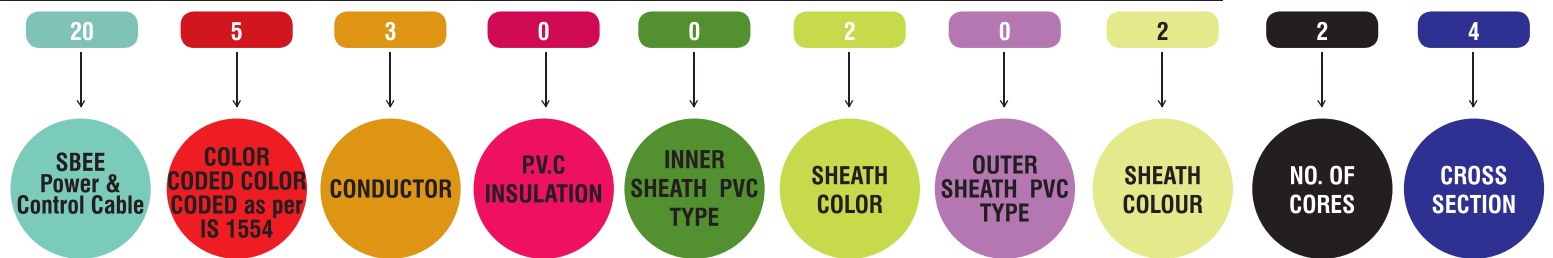
Article No.	No. of Core X Area	Outer Diameter	Copper Weight	Approx.Weight of Cable	Current Carrying Capacity (AMPS)			
					PVC		HR 105°C PVC	
					Ground	Air	Ground	Air
					Amps			
20530020224	2 X 1.5	12.00	26	167	26	24	30	30
20530020234	3 X 1.5	12.50	40	180	24	20	28	25
20530020244	4 X 1.5	13.50	53	212	24	20	28	25
20530020254	5 X 1.5	14.50	66	258	18	17	21	21
20530020264	6 X 1.5	15.50	80	265	17	16	20	20
20530020274	7 X 1.5	15.50	93	280	16	16	18	20
20530020284	8 X 1.5	16.50	106	322	16	14	18	18
20530020294	9 X 1.5	17.50	120	363	15	14	17	18
205300202104	10 X 1.5	19.00	133	385	15	13	17	16
205300202124	12 X 1.5	19.50	160	432	14	12	16	15
205300202144	14 X 1.5	20.00	186	486	13	12	15	15
205300202164	16 X 1.5	21.00	213	540	13	11	15	14
205300202194	19 X 1.5	22.50	253	640	11	11	13	14
205300202214	21 X 1.5	23.50	280	712	11	10	13	13
205300202244	24 X 1.5	26.00	320	795	10	10	12	13
205300202274	27 X 1.5	26.50	360	864	10	10	12	13
205300202304	30 X 1.5	27.50	400	945	10	8	12	10
205300202334	33 X 1.5	28.00	440	1025	9	8	10	10
205300202374	37 X 1.5	29.00	493	1125	9	8	10	10
205300202444	44 X 1.5	32.50	586	1320	8	7	9	9
205300202524	52 X 1.5	34.50	693	1558	8	7	9	9
205300202614	61 X 1.5	36.00	813	1770	7	7	9	9
20530020225	2 X 2.5	13.50	44	200	36	32	41	40
20530020235	3 X 2.5	14.00	66	235	31	29	36	36
20530020245	4 X 2.5	15.00	88	285	31	29	36	36
20530020255	5 X 2.5	16.00	111	335	26	23	30	29
20530020265	6 X 2.5	17.50	133	358	24	22	28	28
20530020275	7 X 2.5	17.50	155	380	23	20	26	25



Article No.	No. of Core X Area	Outer Diameter	Copper Weight	Approx.Weight of Cable	Current Carrying Capacity (AMPS)			
					PVC		HR 105°C PVC	
					Ground	Air	Ground	Air
	Sq. mm	mm	Kg/Km	Kg/Km	Amps			
20530020285	8 X 2.5	18.50	177	442	22	19	25	24
20530020295	9 X 2.5	19.50	200	498	21	18	24	23
205300202105	10 X 2.5	21.00	222	520	21	18	24	23
205300202125	12 X 2.5	22.00	266	615	19	17	22	21
205300202145	14 X 2.5	23.00	311	698	18	17	21	21
205300202165	16 X 2.5	23.50	355	785	17	16	20	20
205300202195	19 X 2.5	25.00	422	897	16	14	18	18
205300202215	21 X 2.5	26.50	466	990	15	13	17	16
205300202245	24 X 2.5	29.00	533	1095	15	13	17	16
205300202275	27 X 2.5	29.50	600	1210	14	12	16	15
205300202305	30 X 2.5	31.00	666	1315	14	12	16	15
205300202335	33 X 2.5	31.50	733	1450	13	11	15	14
205300202375	37 X 2.5	33.00	822	1645	13	11	15	14
205300202445	44 X 2.5	37.00	977	1925	11	11	13	14
205300202525	52 X 2.5	39.00	1155	2205	11	10	13	12
205300202615	61 X 2.5	41.00	1355	2560	10	10	12	12

**Example to find out Part Number, Type A & ST1 PVC 2 Core of 1.5mm<sup>2</sup>, CLASS 2, Tinned Copper**

Un Armoured



**Note:**

1. Packing of 500 and 1000mtrs in Wooden Drums
2. Packing of 100mtrs in Rings
3. Packing of odd lengths based on cable size

# SBEE 1.1 KV POWERPLUS SINGLE CORE ALUMINIUM PVC UN-ARMoured (AYY)



## TECHNICAL DATA

- BIS Certified as per IS 1554 Part-1
- Core Colours: As per IS 1554 (Part 1)
- Specific Insulation Resistance: As Per IS 5831
- Conductor Bunching: Short lay, Class 2 as per IS 8130
- Rated Voltage: 1100 volts grade
- Test Voltage: 4kV
- Protective Conductor: As Per IS 1554 Optional
- Minimum Bending Radius: Occasional Flexing 15 x Cable Dia
- Temperature Range: Fixed Installation -30° C to +70° C PVC Type A NON FR & FR, FRLS TYPE A.
- Fixed Installation -30° C TO +85° C PVC TYPE C, FRLS TYPE C, Higher Current Carrying capacity for given crosssection
- Fixed Installation -30° C TO +105° C H.R. P.V.C, Extremely good current carrying capacity for a given crosssection

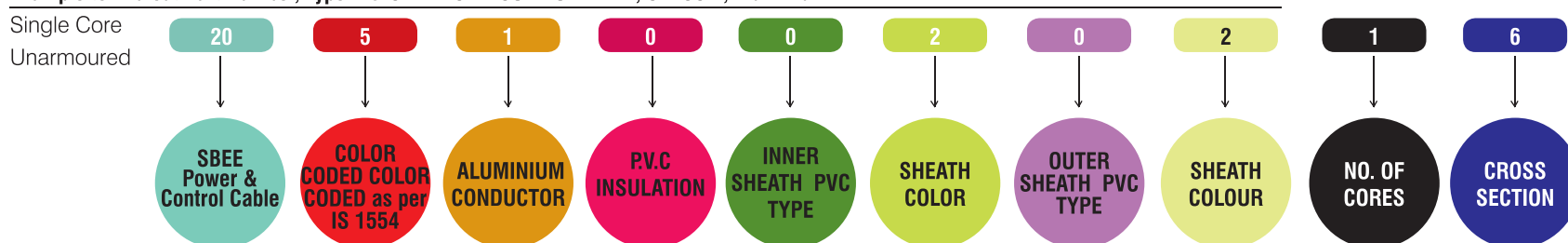
APPLICATIONS	PRODUCT MAKEUP	PRODUCT FEATURES
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- |   |  |  |
|---|--|--|
| <ul style="list-style-type: none"> <li>L.T Power Distribution</li> <li>Fixed, Rugged Installation</li> <li>Dry or Damp or Under Ground Application</li> <li>Power Circuits, Power Stations, Substations.</li> </ul> | <ul style="list-style-type: none"> <li>Strands of Electrolytic Grade, Oxygen free Bare Aluminium wire class 2</li> <li>Different types of PVC Insulation, Inner &amp; Outer Sheath, HFFR optional</li> <li>Cores are paired &amp; layed up in sequence and in layers to achieve attinuation levels</li> <li>Outer sheath colour Black to RAL 9005</li> </ul> | <ul style="list-style-type: none"> <li>Flame retardent as per IEC 60332-1-2</li> <li>Flamability test as per IS 10810-53</li> <li>Resistant to certain Industrial Oils and Mud resistant</li> <li>Organic &amp; Inorganic Chemical Resistance of Certain type</li> </ul> |
|---|--|--|

\* Energy efficient product optional and available on request. \* Anti-rodent & anti-termite properties optional on request. \* In-built UV protection

Article No.	No. of Core X Area Sq. mm	Outer Diameter mm	Aluminium Weight Kg/Km	Approx.Weight of Cable Kg/Km	Current Carrying Capacity (AMPS)			
					PVC		HR 105°C PVC	
					Ground	Air	Ground	Air
Amps								
20510020216	1C X 4.0	9.00	11	82	41	38	44	35
20510020217	1C X 6.0	9.50	16	95	50	49	54	45
20510020218	1 X 10.0	10.50	27	115	67	67	71	62
20510020219	1C X 16.0	11.00	43	138	86	86	93	85
205100202110	1C X 25.0	13.00	67.5	190	111	119	120	113
205100202111	1C X 35.0	13.50	94.5	225	137	144	144	140
205100202112	1C X 50.0	15.50	135	289	165	180	167	168
205100202113	1C X 70.0	17.00	189	365	194	222	205	215
205100202114	1C X 95.0	19.50	257	480	234	258	249	266
205100202115	1C X 120.0	21.00	324.5	579	262	288	282	313
205100202116	1C X 150.0	23.00	405.5	690	302	324	315	359
205100202117	1C X 185.0	25.00	500	840	342	366	358	420
205100202118	1C X 240.0	27.50	648.5	1050	382	420	420	503
205100202119	1C X 300.0	30.00	811	1270	422	474	472	587
205100202120	1C X 400.0	34.00	1081	1610	467	546	534	689
205100202121	1C X 500.0	37.50	1351.5	2025	496	588	610	809
205100202122	1C X 630.0	42.50	1703	2597	553	672	686	949

### Example to find out Part Number, Type A & ST1 PVC 1 CORE OF 4mm<sup>2</sup>, CLASS 2, Aluminium



- Note:
- Packing 500mtrs in wooden Spools, or 100mtr Rings
  - Packing of odd lengths based on cable size

# SBEE 1.1 KV POWERPLUS SINGLE CORE ALUMINIUM PVC ARMoured (AYWaY)



## TECHNICAL DATA

BIS Certified as per IS 1554 Part-1	Core Colours: As per IS 1554 (Part 1)	Specific Insulation Resistance:As Per IS 5831
Conductor Bunching: Short lay, Class 2 as per IS 8130	Rated Voltage: 1100 volts grade	Test Voltage: 4kV
Protective Conductor: As Per IS 1554 Optional	Minimum Bending Radius: Occasional Flexing 15 x Cable Dia	

Temperature Range: Fixed Installation -30° C to +70° C PVC Type A NON FR & FR, FRLS TYPE A.  
 Fixed Installation -30° C TO +85° C PVC TYPE C, FRLS TYPE C , Higher Current Carrying capacity for given crosssection  
 Fixed Installation -30° C TO +105° C H.R. P.V.C , Extremely good current carrying capacity for a given crosssection

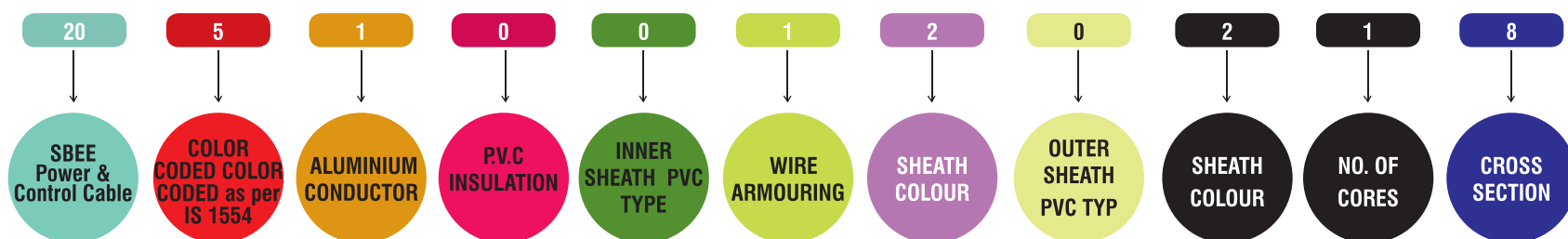
APPLICATIONS	PRODUCT MAKEUP	PRODUCT FEATURES
<ul style="list-style-type: none"> <li>• L.T Power Distribution</li> <li>• Fixed, Rugged Installation</li> <li>• Dry or Damp or Under Ground Application</li> <li>• Power Circuits, Power Stations, Substations.</li> </ul>	<ul style="list-style-type: none"> <li>• Strands of Electrolytic Grade, Oxygen free Bare Aluminium wire class 2</li> <li>• Different types of PVC Insulation, Inner &amp; Outer Sheath, HFFR optional</li> <li>• Cores are paired &amp; layed up in sequence and in layers to achieve attinuation levels</li> <li>• Outer sheath colour Black to RAL 9005 or Grey Ral 7001</li> <li>• Aluminium Wire for additional Mechanical Protection</li> </ul>	<ul style="list-style-type: none"> <li>• Flame retardent as per IEC 60332-1-2</li> <li>• Flamability test as per IS 10810-53</li> <li>• Resistant to certain Industrial Oils and Mud resistant</li> <li>• Organic &amp; Inorganic Chemical Resistance of Certain type</li> </ul>

\* Energy efficient product optional and available on request. \* Anti-rodent & anti-termite properties optional on request. \* In-built UV protection

Article No.	No. of Core X Area Sq. mm	Outer Diameter mm	Aluminium Weight Kg/Km	Approx.Weight of Cable Kg/Km	Current Carrying Capacity (AMPS)			
					PVC		HR 105°C PVC	
					Ground	Air	Ground	Air
					Amps			
205100120218	1 X 10.0	13.00	27	192	67	67	77	83
205100120219	1C X 16.0	13.50	43	225	86	86	99	106
2051001202110	1C X 25.0	15.00	67.5	286	111	119	128	147
2051001202111	1C X 35.0	16.50	94.5	333	137	144	158	178
2051001202112	1C X 50.0	18.00	135	406	165	180	190	223
2051001202113	1C X 70.0	19.50	189	512	194	222	223	275
2051001202114	1C X 95.0	22.50	257	675	234	258	269	319
2051001202115	1C X 120.0	24.00	324.5	766	262	288	301	357
2051001202116	1C X 150.0	25.50	405.5	897	302	324	347	401
2051001202117	1C X 185.0	28.00	500	1065	342	366	393	453
2051001202118	1C X 240.0	31.00	648.5	1321	382	420	439	520
2051001202119	1C X 300.0	33.00	811	1570	422	474	485	587
2051001202120	1C X 400.0	37.50	1081	2020	467	546	537	677
2051001202121	1C X 500.0	42.00	1351.5	2513	496	588	570	729
2051001202122	1C X 630.0	47.00	1703	3160	553	672	636	833

### Example to find out Part Number, Type A & ST1 PVC 1 CORE OF 10mm², CLASS 2,Aluminium

Single Core Wire Armoured



- Note:
1. Packing of 500 and 1000mtrs in Wooden Drums
  2. Packing of 100mtrs in Rings
  3. Packing of odd lengths based on cable size

\* We also manufacture aluminium strip armoured cable against which the weight will vary.

# SBEE 1.1 KV POWERPLUS MULTICORE ALUMINIUM PVC UN-ARMoured (AYY)



## TECHNICAL DATA

BIS Certified as per IS 1554 Part-1	Core Colours: As per IS 1554 (Part 1)	Specific Insulation Resistance: As Per IS 5831
Conductor Bunching: Short lay, Class 2 as per IS 8130	Rated Voltage: 1100 volts grade	Test Voltage: 4kV
Protective Conductor: As Per IS 1554 Optional	Minimum Bending Radius: Occasional Flexing 12 x Cable Dia	
Temperature Range: Fixed Installation -30° C to +70° C PVC Type A NON FR & FR, FRLS TYPE A.		
Fixed Installation -30° C TO +85° C PVC TYPE C, FRLS TYPE C, Higher Current Carrying capacity for given crosssection		
Fixed Installation -30° C TO +105° C H.R. P.V.C, Extremely good current carrying capacity for a given crosssection		

APPLICATIONS	PRODUCT MAKEUP	PRODUCT FEATURES
<ul style="list-style-type: none"> <li>• L.T Power Distribution</li> <li>• Fixed, Rugged Installation</li> <li>• Dry or Damp or Under Ground Application</li> <li>• Power Circuits, Power Stations, Substations.</li> </ul>	<ul style="list-style-type: none"> <li>• Strands of Electrolytic Grade, Oxygen free Bare Aluminium wire class 2</li> <li>• Different types of PVC Insulation, Inner &amp; Outer Sheath, HFFR optional</li> <li>• Cores are paired &amp; layed up in sequence and in layers to achieve attinuation levels</li> <li>• Outer sheath colour Black to RAL 9005 or Grey Ral 7001</li> </ul>	<ul style="list-style-type: none"> <li>• Flame retardent as per IEC 60332-1-2</li> <li>• Flamability test as per IS 10810-53</li> <li>• Resistant to certain Industrial Oils and Mud resistant</li> <li>• Organic &amp; Inorganic Chemical Resistance of Certain type</li> </ul>

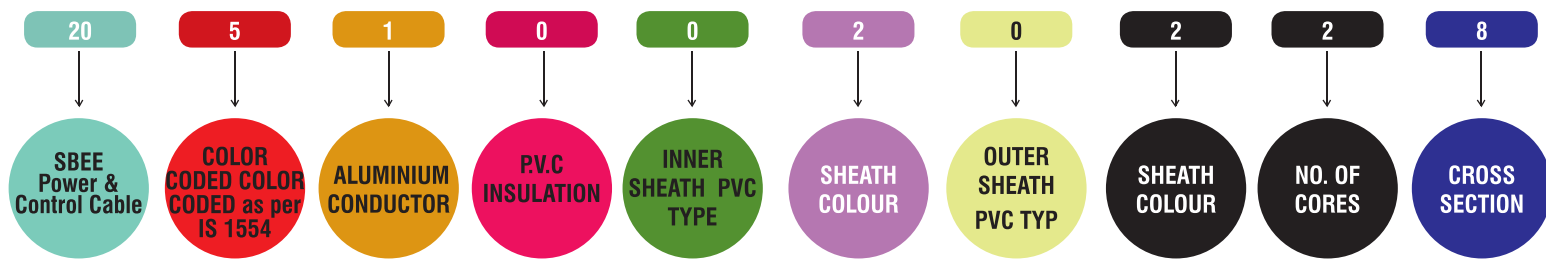
\* Energy efficient product optional and available on request. \* Anti-rodent & anti-termite properties optional on request. \* In-built UV protection

Article No.	No. of Core X Area	Outer Diameter	Aluminium Weight	Approx.Weight of Cable	Current Carrying Capacity (AMPS)			
					PVC		HR 105°C PVC	
					Ground	Air	Ground	Air
	Sq. mm	mm	Kg/Km	Kg/Km	Amps			
20510020226	2C X 4.0	14.50	22	241	36	32	41	39
20510020227	2C X 6.0	15.50	32	274	46	42	53	52
20510020228	2C X 10.0	18.00	54	338	63	56	72	69
20510020229	2C X 16.0	19.00	86	413	80	71	92	88
205100202210	2C X 25.0	20.00	135	435	103	94	118	116
205100202211	2C X 35.0	21.50	189	506	125	119	143	147
205100202212	2C X 50.0	24.00	270	654	154	141	177	173
205100202213	2C X 70.0	26.50	378	811	182	180	209	223
205100202214	2C X 95.0	31.00	514	1156	217	222	249	275
205100202215	2C X 120.0	32.50	649	1329	239	252	274	312
205100202216	2C X 150.0	36.50	811	1638	274	288	315	357
205100202217	2C X 185.0	40.00	1000	2016	314	330	361	409
205100202218	2C X 240.0	44.50	1297	2540	365	390	419	483
205100202219	2C X 300.0	49.50	1622	3090	405	438	465	543
205100202220	2C X 400.0	56.50	2162	3973	439	504	504	625
205100202221	2C X 500.0	64.00	2703	4989	473	546	544	677
205100202222	2C X 630.0	73.00	3406	6355	524	624	602	773
20510020236	3C X 4.0	15.50	33	268	32	28	36	34
20510020237	3C X 6.0	16.50	50	310	40	36	46	44
20510020238	3C X 10.0	18.00	83	383	52	48	59	59
20510020239	3C X 16.0	18.00	133	385	68	61	78	75
205100202310	3C X 25.0	21.00	208	548	87	84	100	104
205100202311	3C X 35.0	23.00	289	665	105	103	120	127
205100202312	3C X 50.0	26.00	415	850	125	126	143	156
205100202313	3C X 70.0	30.00	576	1122	154	156	177	193
205100202314	3C X 95.0	34.00	784	1473	188	186	216	230
205100202315	3C X 120.0	37.00	989	1720	211	216	242	267
205100202316	3C X 150.0	41.00	1241	2130	239	246	274	305
205100202317	3C X 185.0	45.00	1527	2640	268	288	308	357
205100202318	3C X 240.0	51.00	1981	3360	314	336	361	416
205100202319	3C X 300.0	56.00	2462	4130	348	378	400	468
205100202320	3C X 400.0	63.50	3311	5285	382	450	439	558
205100202321	3C X 500.0	71.50	4122	6553	422	510	485	632
205100202322	3C X 630.0	82.00	5496	8537	462	576	531	714
205100202010	3.5C X 25.0	24.00	246	639	87	84	100	104
205100202011	3.5C X 35.0	25.50	757	757	105	103	120	127
205100202012	3.5C X 50.0	29.00	986	986	125	126	143	156

Article No.	No. of Core X Area Sq. mm	Outer Diameter mm	Copper Weight Kg/Km	Approx.Weight of Cable Kg/Km	Current Carrying Capacity (AMPS)			
					PVC		HR 105°C PVC	
					Ground	Air	Ground	Air
205100202013	3.5C X 70.0	33.50	1305	1305	154	156	177	193
205100202014	3.5C X 95.0	36.50	1695	1695	188	186	216	230
205100202015	3.5C X 120.0	40.00	2079	2079	211	216	242	267
205100202016	3.5C X 150.0	44.00	2455	2455	239	246	274	305
205100202017	3.5C X 185.0	48.00	3026	3026	268	288	308	357
205100202018	3.5C X 240.0	55.00	3916	3916	314	336	361	416
205100202019	3.5C X 300.0	61.00	4805	4805	348	378	400	468
205100202020	3.5C X 400.0	68.00	5998	5998	382	450	439	558
205100202021	3.5C X 500.0	79.00	7748	7748	422	510	485	632
205100202022	3.5C X 630.0	89.00	9797	9797	462	576	531	714
20510020246	4C X 4.0	17.00	43	316	32	28	36	34
20510020247	4C X 6.0	18.00	65	367	40	36	46	44
20510020248	4C X 10.0	20.00	108	456	52	48	60	59
20510020249	4C X 16.0	21.00	173	504	68	61	78	75
205100202410	4C X 25.0	24.50	270	688	87	84	100	104
205100202411	4C X 35.0	26.50	378	831	105	103	120	127
205100202412	4C X 50.0	30.50	541	1121	125	126	143	156
205100202413	4C X 70.0	34.00	757	1437	154	156	177	193
205100202414	4C X 95.0	39.00	1027	1912	188	186	216	230
205100202415	4C X 120.0	42.00	1297	2285	211	216	242	267
205100202416	4C X 150.0	47.00	1622	2793	239	246	274	305
205100202417	4C X 185.0	53.00	2000	3475	268	288	308	357
205100202418	4C X 240.0	58.00	2595	4397	314	336	361	416
205100202419	4C X 300.0	65.50	3244	5498	348	378	400	468
205100202420	4C X 400.0	72.50	4325	6834	382	450	439	558
205100202421	4C X 500.0	84.00	5406	8784	422	510	485	632
205100202422	4C X 630.0	94.00	6812	11092	462	576	531	714

**Example to find out Part Number, Type A & ST1 PVC 2 CORE OF 10mm², CLASS 2, Aluminium**

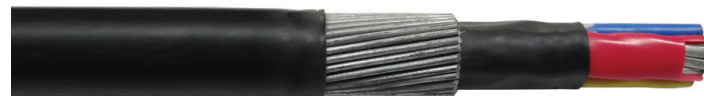
Un-armoured



Note:

1. Packing of 500 and 1000mtrs in Wooden Drums
2. Packing of 100mtrs in Rings
3. Packing of odd lengths based on cable size

# SBEE 1.1 KV POWERPLUS ALUMINIUM PVC MULTICORE WIRE ARMoured (AYWY)



## TECHNICAL DATA

BIS Certified as per IS 1554 Part-1	Core Colours: As per IS 1554 (Part 1)	Specific Insulation Resistance: As Per IS 5831
Conductor Bunching: Short lay, Class 2 as per IS 8130	Rated Voltage: 1100 volts grade	Test Voltage: 4kV
Protective Conductor: As Per IS 1554 Optional	Minimum Bending Radius: Occasional Flexing 12 x Cable Dia	
Temperature Range: Fixed Installation -30° C to +70° C PVC Type A NON FR & FR, FRLS TYPE A.		
Fixed Installation -30° C TO +85° C PVC TYPE C, FRLS TYPE C, Higher Current Carrying capacity for given crossection		
Fixed Installation -30° C TO +105° C H.R. P.V.C, Extremely good current carrying capacity for a given crossection		

APPLICATIONS	PRODUCT MAKEUP	PRODUCT FEATURES
<ul style="list-style-type: none"> <li>• L.T Power Distribution</li> <li>• Fixed, Rugged Installation</li> <li>• Dry or Damp or Under Ground Application</li> <li>• Power Circuits, Power Stations, Substations.</li> </ul>	<ul style="list-style-type: none"> <li>• Strands of Electrolytic Grade, Oxygen free Bare Aluminium wire class 2</li> <li>• Different classes of PVC Insulation, Inner &amp; Outer Sheath, HFFR optional</li> <li>• Cores are layed up in sequence and in layers</li> <li>• Outer sheath colour Black to RAL 9005</li> <li>• G.I.Wire for additional Mechanical Protection</li> </ul>	<ul style="list-style-type: none"> <li>• Flame retardent as per IEC 60332-1-2</li> <li>• Flamability test as per IS 10810-53</li> <li>• Resistant to certain Industrial Oils and Mud resistant</li> <li>• Organic &amp; Inorganic Chemical Resistance of Certain type</li> </ul>

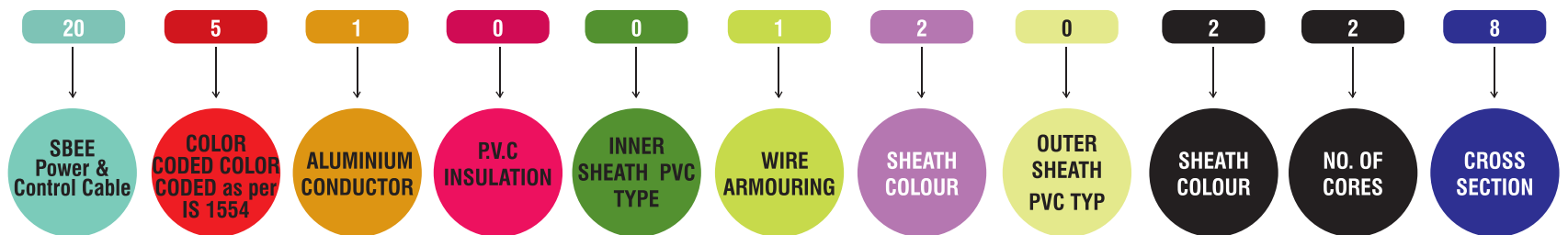
\* Energy efficient product optional and available on request. \* Anti-rodent & anti-termite properties optional on request. \* In-built UV protection

Article No.	No. of Core X Area	Outer Diameter	Aluminium Weight	Approx.Weight of Cable	Current Carrying Capacity (AMPS)			
					PVC		HR 105°C PVC	
					Ground	Air	Ground	Air
					Amps			
205100120226	2C X 4.0	14.5	22	241	36	32	41	39
205100120227	2C X 6.0	15.5	32	274	46	42	53	52
205100120228	2C X 10.0	18	54	338	63	56	73	70
205100120229	2C X 16.0	19	86	413	80	71	92	88
2051001202210	2C X 25.0	20	135	435	103	94	119	117
2051001202211	2C X 35.0	21.5	189	506	125	119	144	148
2051001202212	2C X 50.0	24	270	654	154	150	177	186
2051001202213	2C X 70.0	26.5	378	811	182	180	209	223
2051001202214	2C X 95.0	31	514	1156	217	222	250	275
2051001202215	2C X 120.0	32.5	649	1329	239	252	275	313
2051001202216	2C X 150.0	36.5	811	1638	274	288	315	357
2051001202217	2C X 185.0	40	1000	2016	314	330	361	409
2051001202218	2C X 240.0	44.5	1297	2540	365	390	420	484
2051001202219	2C X 300.0	49.5	1622	3090	405	438	466	543
2051001202220	2C X 400.0	56.5	2162	3973	439	504	505	625
2051001202221	2C X 500.0	64	2703	4989	473	546	544	677
2051001202222	2C X 630.0	73	3406	6355	524	624	603	774
205100120236	3C X 4.0	17.5	33	580	32	28	37	35
2051001220237	3C X 6.0	18.5	50	640	40	36	46	45
2051001220238	3C X 10.0	20.5	83	760	52	48	60	60
2051001220239	3C X 16.0	21	133	838	68	61	78	76
20510012202310	3C X 25.0	24	208	1060	87	84	100	104
20510012202311	3C X 35.0	26	289	1226	105	103	121	128
20510012202312	3C X 50.0	29.5	415	1511	125	126	144	156
20510012202313	3C X 70.0	33	576	2056	154	156	177	193
20510012202314	3C X 95.0	37.5	784	2570	188	186	216	231
20510012202315	3C X 120.0	40	989	2907	211	216	243	268
20510012202316	3C X 150.0	44	1241	3439	239	246	275	305
20510012202317	3C X 185.0	49.5	1527	4441	268	288	308	357
20510012202318	3C X 240.0	54	1981	5403	314	336	361	417
20510012202319	3C X 300.0	60	2462	6348	348	378	400	469
20510012202320	3C X 400.0	68	3311	8485	382	450	439	558
20510012202321	3C X 500.0	78	4122	10388	422	510	485	632
20510012202322	3C X 630.0	88	5496	13806	462	576	531	714
2051001202010	3.5C X 25.0	26	246	1200	87	84	100	104
2051001202011	3.5C X 35.0	28	327	1364	105	103	121	127
2051001202012	3.5C X 50.0	32	473	1711	125	126	144	156

Article No.	No. of Core X Area	Outer Diameter	Aluminium Weight	Approx.Weight of Cable	Current Carrying Capacity (AMPS)			
					PVC		HR 105°C PVC	
					Ground	Air	Ground	Air
	Sq. mm	mm	Kg/Km	Kg/Km	Amps			
2051001202013	3.5C X 70.0	36	662	2335	154	156	177	193
2051001202014	3.5C X 95.0	40.5	818	2881	188	186	216	231
2051001202015	3.5C X 120.0	43.5	1162	3364	211	216	243	268
2051001202016	3.5C X 150.0	48	1406	3890	239	246	275	305
2051001202017	3.5C X 185.0	52.5	1757	4997	268	288	308	357
2051001202018	3.5C X 240.0	59.5	2271	6159	314	336	361	417
2051001202019	3.5C X 300.0	67	2838	8003	348	378	400	469
2051001202020	3.5C X 400.0	73.5	3744	9562	382	450	439	558
2051001202021	3.5C X 500.0	88	4703	12990	422	510	485	632
2051001202022	3.5C X 630.0	95.5	5920	15665	462	576	531	714
205100120246	4C X 4.0	19	43	660	32	28	37	35
205100120247	4C X 6.0	20.5	65	735	40	36	46	45
205100120248	4C X 10.0	23	108	940	52	48	60	60
205100120249	4C X 16.0	23.8	173	1005	68	61	78	76
2051001202410	4C X 25.0	27	270	1275	87	84	100	104
2051001202411	4C X 35.0	29	378	1493	105	103	121	128
2051001202412	4C X 50.0	34	541	2079	125	126	144	156
2051001202413	4C X 70.0	37.5	757	2508	154	156	177	193
2051001202414	4C X 95.0	42	1027	3139	188	186	216	231
2051001202415	4C X 120.0	45.5	1297	3645	211	216	243	268
2051001202416	4C X 150.0	51	1622	4725	239	246	275	305
2051001202417	4C X 185.0	57	2000	5603	268	288	308	357
2051001202418	4C X 240.0	62.5	2595	6758	314	336	361	417
2051001202419	4C X 300.0	70.5	3244	8874	348	378	400	469
2051001202420	4C X 400.0	78	4325	10576	382	450	439	558
2051001202421	4C X 500.0	89.5	5406	14152	422	510	485	632
2051001202422	4C X 630.0	100.5	6812	17258	462	576	531	714

**Example to find out Part Number, Type A & ST1 PVC 2 CORE OF 10mm², CLASS 2, ALUMINIUM**

Wire Armoured



Note:

1. Packing of 500 and 1000mtrs in Wooden Drums
2. Packing of 100mtrs in Rings
3. Packing of odd lengths based on cable size

# SBEE 1.1 KV POWERPLUS ALUMINIUM PVC MULTICORE STRIP ARMoured (AYFY)



## TECHNICAL DATA

BIS Certified as per IS 1554 Part-1	Core Colours: As per IS 1554 (Part 1)	Specific Insulation Resistance: As Per IS 5831
Conductor Bunching: Short lay, Class 2 as per IS 8130	Rated Voltage: 1100 volts grade	Test Voltage: 4kV
Protective Conductor: As Per IS 1554 Optional	Minimum Bending Radius: Occasional Flexing 12 x Cable Dia	

Temperature Range: Fixed Installation -30° C to +70° C PVC Type A NON FR & FR, FRLS TYPE A.  
 Fixed Installation -30° C TO +85° C PVC TYPE C, FRLS TYPE C, Higher Current Carrying capacity for given cross section  
 Fixed Installation -30° C TO +105° C H.R. P.V.C, Extremely good current carrying capacity for a given cross section

### APPLICATIONS

- L.T Power Distribution
- Fixed, Rugged Installation
- Dry or Damp or Under Ground Application
- Power Circuits, Power Stations, Substations.

### PRODUCT MAKEUP

- Strands of Electrolytic Grade, Oxygen free Bare Aluminium wire class 2
- Different types of PVC Insulation, Inner & Outer Sheath, HFFR optional
- Cores are layed up in sequence and in layers
- Outer sheath colour Black to RAL 9005
- GI Strip for additional Mechanical protection

### PRODUCT FEATURES

- Flame retardent as per IEC 60332-1-2
- Flamability test as per IS 10810-53
- Resistant to certain Industrial Oils and Mud resistant
- Organic & Inorganic Chemical Resistance of Certain type

\* Energy efficient product optional and available on request. \* Anti-rodent & anti-termite properties optional on request. \* In-built UV protection

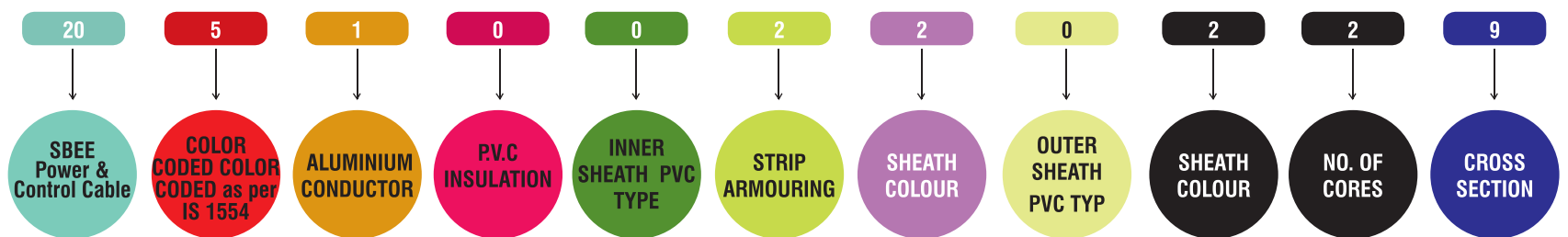
Article No.	No. of Core X Area Sq. mm	Outer Diameter mm	Aluminium Weight Kg/Km	Approx.Weight of Cable Kg/Km	Current Carrying Capacity (AMPS)			
					PVC		HR 105°C PVC	
					Ground	Air	Ground	Air
					Amps			
205100220229	2C X 16.0	20.50	86	670	80	71	92	88
2051002202210	2C X 25.0	21.00	135	700	103	94	119	117
2051002202211	2C X 35.0	22.00	189	770	125	119	144	148
2051002202212	2C X 50.0	25.00	270	965	154	150	177	186
2051002202213	2C X 70.0	27.50	378	1190	182	180	209	223
2051002202214	2C X 95.0	32.00	514	1585	217	222	250	275
2051002202215	2C X 120.0	33.00	649	1780	239	252	275	313
2051002202216	2C X 150.0	37.00	811	2105	274	288	315	357
2051002202217	2C X 185.0	41.50	1000	2585	314	330	361	409
2051002202218	2C X 240.0	46.00	1297	3185	365	390	420	484
2051002202219	2C X 300.0	49.50	1622	3775	405	438	466	543
2051002202220	2C X 400.0	57.00	2162	4725	439	504	505	625
2051002202221	2C X 500.0	64.00	2703	5872	473	546	544	677
2051002202222	2C X 630.0	72.50	3406	7275	524	624	603	774
205100220239	3C X 16.0	19.50	133	645	68	61	78	76
2051002202310	3C X 25.0	22.50	208	830	87	84	100	104
2051002202311	3C X 35.0	24.50	289	975	105	103	121	128
2051002202312	3C X 50.0	27.50	415	1230	125	126	144	156
2051002202313	3C X 70.0	30.50	576	1520	154	156	177	193
2051002202314	3C X 95.0	35.00	784	1945	188	186	216	231
2051002202315	3C X 120.0	37.50	989	2245	211	216	243	268
2051002202316	3C X 150.0	41.50	1241	2700	239	246	275	305
2051002202317	3C X 185.0	45.50	1527	3235	268	288	308	357
2051002202318	3C X 240.0	51.50	1981	4060	314	336	361	417
2051002202319	3C X 300.0	56.50	2462	4883	348	378	400	469
2051002202320	3C X 400.0	63.50	3311	6070	382	450	439	558
2051002202321	3C X 500.0	72.00	4122	7640	422	510	485	632
2051002202322	3C X 630.0	81.00	5496	9580	462	576	531	714
2051002202010	3.5C X 25.0	24.00	246	950	87	84	100	104
2051002202011	3.5C X 35.0	26.00	327	1085	105	103	121	128
2051002202012	3.5C X 50.0	30.00	473	1410	125	126	144	156
2051002202013	3.5C X 70.0	34.00	662	1750	154	156	177	193
2051002202014	3.5C X 95.0	37.00	818	2190	188	186	216	231
2051002202015	3.5C X 120.0	41.50	1162	2620	211	216	243	268
2051002202016	3.5C X 150.0	45.00	1406	3100	239	246	275	305
2051002202017	3.5C X 185.0	49.00	1757	3745	268	288	308	357
2051002202018	3.5C X 240.0	56.50	2271	4650	314	336	361	417



Article No.	No. of Core X Area	Outer Diameter	Aluminium Weight	Approx.Weight of Cable	Current Carrying Capacity (AMPS)			
					PVC		HR 105°C PVC	
					Ground	Air	Ground	Air
	Sq. mm	mm	Kg/Km	Kg/Km	Amps			
2051002202019	3.5C X 300.0	62.50	2838	5625	348	378	400	469
2051002202020	3.5C X 400.0	69.00	3744	6955	382	450	439	558
2051002202021	3.5C X 500.0	79.00	4703	8790	422	510	485	632
2051002202022	3.5C X 630.0	89.00	5920	10950	462	576	531	714
205100220248	4C X 10.0	21.50	108	740	52	48	60	59
205100220249	4C X 16.0	22.00	173	765	68	61	78	76
2051002202410	4C X 25.0	25.00	270	1020	87	84	100	104
2051002202411	4C X 35.0	27.00	378	1190	105	103	121	128
2051002202412	4C X 50.0	31.50	541	1550	125	126	144	156
2051002202413	4C X 70.0	35.00	757	1910	154	156	177	193
2051002202414	4C X 95.0	39.50	1027	2428	188	186	216	231
2051002202415	4C X 120.0	43.00	1297	2880	211	216	243	268
2051002202416	4C X 150.0	47.50	1622	3420	239	246	275	305
2051002202417	4C X 185.0	53.50	2000	4165	268	288	308	357
2051002202418	4C X 240.0	59.00	2595	5220	314	336	361	417
2051002202419	4C X 300.0	66.00	3244	6350	348	378	400	469
2051002202420	4C X 400.0	73.00	4325	7845	382	450	439	558
2051002202421	4C X 500.0	83.00	5406	9850	422	510	485	632
2051002202422	4C X 630.0	93.50	6812	12305	462	576	531	714

**Example to find out Part Number, Type A & ST1 PVC 2 CORE OF 16mm², CLASS 2, ALUMINIUM**

Strip Armoured



Note:

1. Packing of 500 and 1000mtrs in Wooden Drums
2. Packing of 100mtrs in Rings
3. Packing of odd lengths based on cable size

# SBEE 1.1 KV POWERPLUS COPPER PVC SINGLE CORE UN-ARMoured (YY)



## TECHNICAL DATA

BIS Certified as per IS 1554 Part-1	Core Colours: As per IS 1554 (Part 1)	Specific Insulation Resistance: As Per IS 5831
Conductor Bunching: Short lay, Class 2 as per IS 8130	Rated Voltage: 1100 volts grade	Test Voltage: 4kV
Protective Conductor: As Per IS 1554 Optional	Minimum Bending Radius: Occasional Flexing 15 x Cable Dia	
Temperature Range: Fixed Installation -30° C to +70° C PVC Type A NON FR & FR, FRLS TYPE A.		
Fixed Installation -30° C TO +85° C PVC TYPE C, FRLS TYPE C, Higher Current Carrying capacity for given crosssection		
Fixed Installation -30° C TO +105° C H.R. P.V.C, Extremely good current carrying capacity for a given crosssection		

APPLICATIONS	PRODUCT MAKEUP	PRODUCT FEATURES
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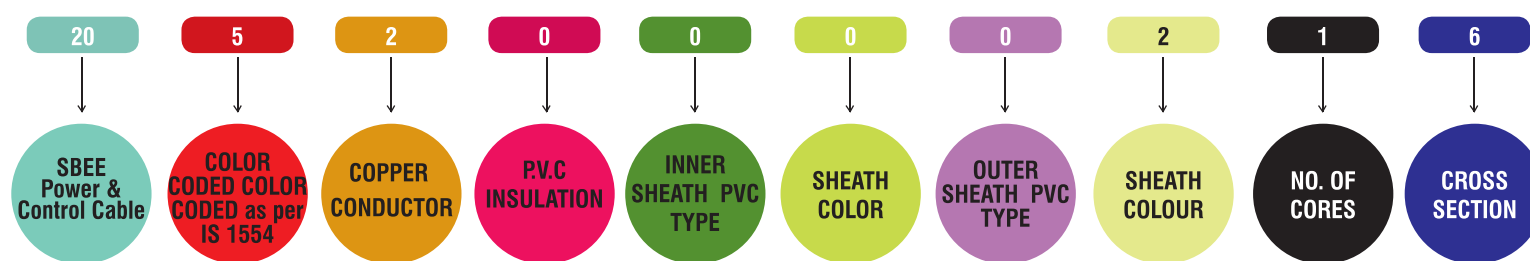
- |   |  |  |
|---|--|--|
| <ul style="list-style-type: none"> <li>• L.T Power Distribution</li> <li>• Fixed, Rugged Installation</li> <li>• Dry or Damp or Under Ground Application</li> <li>• Power Circuits, Power Stations, Substations.</li> </ul> | <ul style="list-style-type: none"> <li>• Strands of Electrolytic Grade, Oxygen free, High Conductivity Bare Copper wire class 2</li> <li>• Different types of PVC Insulation Sheath</li> <li>• Cores are layed up in sequence and in layers</li> <li>• Outer sheath colour Black to RAL 9005 or GREY RAL 7001</li> </ul> | <ul style="list-style-type: none"> <li>• Flame retardent as per IEC 60332-1-2</li> <li>• Flamability test as per IS 10810-53</li> <li>• Resistant to certain Industrial Oils and Mud resistant</li> <li>• Organic &amp; Inorganic Chemical Resistance of Certain type</li> </ul> |
|---|--|--|

\* Energy efficient product optional and available on request. \* Anti-rodent & anti-termite properties optional on request. \* In-built UV protection

Article No.	No. of Core X Area Sq. mm	Outer Diameter mm	Copper Weight Kg/Km	Approx.Weight of Cable Kg/Km	Current Carrying Capacity (AMPS)			
					PVC		HR 105°C PVC	
					Ground	Air	Ground	Air
					Amps			
20520000216	1C X 4.0	9.00	36	107	52	52	60	64
20520000217	1C X 6.0	9.50	53	131	65	65	75	81
20520000218	1 X 10.0	10.50	89	175	86	86	99	107
20520000219	1C X 16.0	11.00	142	236	107	110	123	136
205200002110	1C X 25.0	13.00	222	341	143	150	164	186
205200002111	1C X 35.0	13.50	311	443	171	186	197	231
205200002112	1C X 50.0	15.50	445	595	205	228	236	283
205200002113	1C X 70.0	17.00	622	797	251	282	289	350
205200002114	1C X 95.0	19.50	845	1065	302	330	347	409
205200002115	1C X 120.0	21.00	1067	1319	342	372	393	461
205200002116	1C X 150.0	23.00	1334	1619	388	414	446	513
205200002117	1C X 185.0	25.00	1645	1984	433	468	498	580
205200002118	1C X 240.0	27.50	2134	2535	479	534	551	662
205200002119	1C X 300.0	30.00	2667	3125	530	600	610	744
205200002120	1C X 400.0	34.00	3556	4085	570	684	656	855
205200002121	1C X 500.0	37.50	4445	5121	616	732	708	915
205200002122	1C X 630.0	42.50	5601	6496	673	816	774	1020

### Example to find out Part Number, Type A & ST1 PVC 1 Core of 4mm², CLASS 2, Bare CU

Un Armoured



Note:

1. Packing of 500 and 1000mtrs in Wooden Drums
2. Packing of 100mtrs in Rings
3. Packing of odd lengths based on cable size

# SBEE 1.1 KV POWERPLUS COPPER PVC SINGLE CORE ARMoured (YW<sub>a</sub>Y)



## TECHNICAL DATA

BIS Certified as per IS 1554 Part-1	Core Colours: As per IS 1554 (Part 1)	Specific Insulation Resistance: As Per IS 5831
Conductor Bunching: Short lay, Class 2 as per IS 8130	Rated Voltage: 1100 volts grade	Test Voltage: 4kV
Protective Conductor: As Per IS 1554 Optional	Minimum Bending Radius: Occasional Flexing 15 x Cable Dia	

Temperature Range: Fixed Installation -30° C to +70° C PVC Type A NON FR & FR, FRLS TYPE A.  
 Fixed Installation -30° C TO +85° C PVC TYPE C, FRLS TYPE C, Higher Current Carrying capacity for given crosssection  
 Fixed Installation -30° C TO +105° C H.R. P.V.C, Extremely good current carrying capacity for a given crosssection

### APPLICATIONS

- L.T Power Distribution
- Fixed, Rugged Installation
- Dry or Damp or Under Ground Application
- Power Circuits, Power Stations, Substations.

### PRODUCT MAKEUP

- Strands of Electrolytic Grade, Oxygen free, High Conductivity Bare Copper wire class 2
- Different types of PVC Insulation Sheath
- Cores are layed up in sequence and in layers
- Outer sheath colour Black to RAL 9005 or GREY RAL 7001
- Aluminium wire for additional mechanical protection

### PRODUCT FEATURES

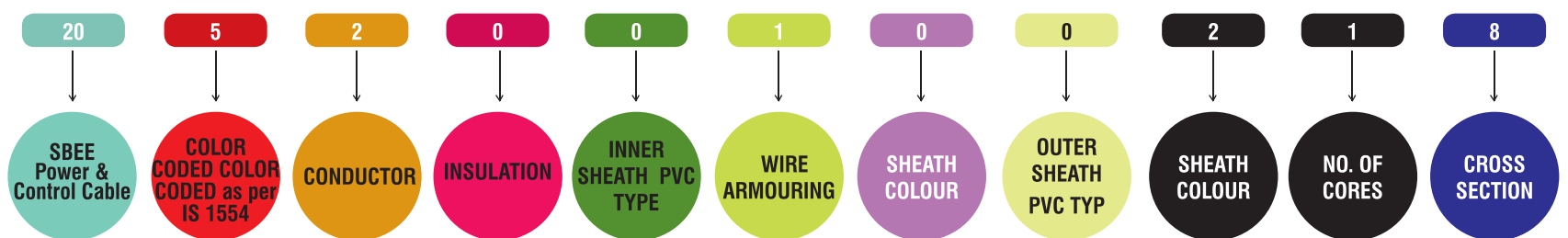
- Flame retardent as per IEC 60332-1-2
- Flamability test as per IS 10810-53
- Resistant to certain Industrial Oils and Mud resistant
- Organic & Inorganic Chemical Resistance of Certain type

\* Energy efficient product optional and available on request. \* Anti-rodent & anti-termite properties optional on request. \* In-built UV protection

Article No.	No. of Core X Area	Outer Diameter	Copper Weight	Approx.Weight of Cable	Current Carrying Capacity (AMPS)			
					PVC		HR 105°C PVC	
					Ground	Air	Ground	Air
	<b>Sq. mm</b>	<b>mm</b>	<b>Kg/Km</b>	<b>Kg/Km</b>	<b>Amps</b>			
205200100218	1 X 10.0	13.00	89	254	86	86	99	107
205200100219	1C X 16.0	13.50	142	324	107	110	123	136
2052001002110	1C X 25.0	15.00	222	441	143	150	164	186
2052001002111	1C X 35.0	16.50	311	550	171	186	197	231
2052001002112	1C X 50.0	18.00	445	715	205	228	236	283
2052001002113	1C X 70.0	19.50	622	945	251	282	289	350
2052001002114	1C X 95.0	22.50	845	1259	302	330	347	409
2052001002115	1C X 120.0	24.00	1067	1508	342	372	393	461
2052001002116	1C X 150.0	25.50	1334	1825	388	414	446	513
2052001002117	1C X 185.0	28.00	1645	2209	433	468	498	580
2052001002118	1C X 240.0	31.00	2134	2805	479	534	551	662
2052001002119	1C X 300.0	33.00	2667	3426	530	600	610	744
2052001002120	1C X 400.0	37.50	3556	4494	570	684	656	855
2052001002121	1C X 500.0	42.00	4445	5606	616	732	708	915
2052001002122	1C X 630.0	47.00	5601	7057	673	816	774	1020

### Example to find out Part Number, Type A & ST1 PVC 1 Core of 10mm<sup>2</sup>, CLASS 2, Bare Copper

Wire Armoured



Note:

1. Packing of 500 and 1000mtrs in Wooden Drums
2. Packing of 100mtrs in Rings
3. Packing of odd lengths based on cable size

\* = We can Also manufacture strip armoured so that the weight of strip armored cable will varies

# SBEE 1.1 KV POWERPLUS COPPER PVC MULTICORE UNARMoured (YY)



## TECHNICAL DATA

BIS Certified as per IS 1554 Part-1	Core Colours: As per IS 1554 (Part 1)	Specific Insulation Resistance: As Per IS 5831
Conductor Bunching: Short lay, Class 2 as per IS 8130	Rated Voltage: 1100 volts grade	Test Voltage: 4kV
Protective Conductor: As Per IS 1554 Optional	Minimum Bending Radius: Occasional Flexing 12 x Cable Dia	
Temperature Range: Fixed Installation -30° C to +70° C PVC Type A NON FR & FR, FRLS TYPE A.		
Fixed Installation -30° C TO +85° C PVC TYPE C, FRLS TYPE C, Higher Current Carrying capacity for given crosssection		
Fixed Installation -30° C TO +105° C H.R. P.V.C, Extremely good current carrying capacity for a given crosssection		

APPLICATIONS	PRODUCT MAKEUP	PRODUCT FEATURES
--------------	----------------	------------------

- |   |  |  |
|---|--|--|
| <ul style="list-style-type: none"> <li>L.T Power Distribution</li> <li>Fixed, Rugged Installation</li> <li>Dry or Damp or Under Ground Application</li> <li>Power Circuits, Power Stations, Substations.</li> </ul> | <ul style="list-style-type: none"> <li>Strands of Electrolytic Grade, Oxygen free, High Conductivity Bare Copper wire class 2</li> <li>Different types of PVC Insulation Sheath</li> <li>Cores are layed up in sequence and in layers</li> <li>Outer sheath colour Black to RAL 9005 or GREY RAL 7001</li> </ul> | <ul style="list-style-type: none"> <li>Flame retardent as per IEC 60332-1-2</li> <li>Flamability test as per IS 10810-53</li> <li>Resistant to certain Industrial Oils and Mud resistant</li> <li>Organic &amp; Inorganic Chemical Resistance of Certain type</li> </ul> |
|---|--|--|

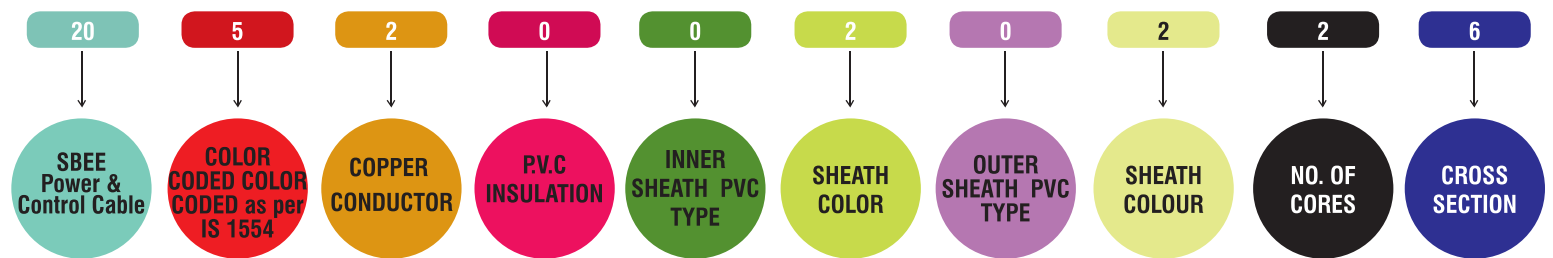
\* Energy efficient product optional and available on request. \* Anti-rodent & anti-termite properties optional on request. \* In-built UV protection

Article No.	No. of Core X Area	Outer Diameter	Copper Weight	Approx.Weight of Cable	Current Carrying Capacity (AMPS)			
					PVC		HR 105°C PVC	
					Ground	Air	Ground	Air
					Amps			
20520020226	2C X 4.0	14.50	71	290	40	42	46	55
20520020227	2C X 6.0	15.50	107	348	50	54	58	70
20520020228	2C X 10.0	18.00	178	462	66	72	76	94
20520020229	2C X 16.0	19.00	284	611	86	94	99	122
205200202210	2C X 25.0	20.00	445	744	111	126	128	164
205200202211	2C X 35.0	21.50	622	939	137	150	158	195
205200202212	2C X 50.0	24.00	889	1273	165	186	190	242
205200202213	2C X 70.0	26.50	1245	1677	205	234	236	304
205200202214	2C X 95.0	31.00	1689	2332	245	276	282	359
205200202215	2C X 120.0	32.50	2134	2814	268	318	308	413
205200202216	2C X 150.0	36.50	2667	3494	308	366	354	476
205200202217	2C X 185.0	40.00	3289	4305	342	420	393	546
205200202218	2C X 240.0	44.50	4267	5516	393	492	452	640
205200202219	2C X 300.0	49.50	5334	6802	439	558	505	725
205200202220	2C X 400.0	56.50	7112	8923	485	636	558	827
205200202221	2C X 500.0	64.00	8890	11176	524	690	603	897
205200202222	2C X 630.0	73.00	11201	14151	581	786	668	1022
20520020236	3C X 4.0	15.50	107	342	41	36	47	45
20520020237	3C X 6.0	16.50	160	421	51	47	59	59
20520020238	3C X 10.0	18.00	267	569	68	62	78	78
20520020239	3C X 16.0	18.00	427	682	88	79	101	99
205200202310	3C X 25.0	21.00	667	1012	113	108	130	135
205200202311	3C X 35.0	23.00	933	1315	137	132	158	165
205200202312	3C X 50.0	26.00	1334	1778	165	162	190	203
205200202313	3C X 70.0	30.00	1867	2421	200	198	230	248
205200202314	3C X 95.0	34.00	2534	323	239	240	275	300
205200202315	3C X 120.0	37.00	3200	3948	274	276	315	345
205200202316	3C X 150.0	41.00	4001	4912	308	318	354	398
205200202317	3C X 185.0	45.00	4934	6062	342	366	393	458
205200202318	3C X 240.0	51.00	6401	7808	393	426	452	533
205200202319	3C X 300.0	56.00	8001	9674	439	480	505	600
205200202320	3C X 400.0	63.50	10668	12657	485	546	558	683

Article No.	No. of Core X Area	Outer Diameter	Copper Weight	Approx.Weight of Cable	Current Carrying Capacity (AMPS)			
					PVC		HR 105°C PVC	
					Ground	Air	Ground	Air
	Sq. mm	mm	Kg/Km	Kg/Km	Amps			
205200202321	3C X 500.0	71.50	13335	15934	536	648	616	810
205200202322	3C X 630.0	82.00	16802	20230	587	752	675	940
205200202010	3.5C X 25.0	24.00	809	1202	113	108	130	135
205200202011	3.5C X 35.0	25.50	1076	1506	137	132	158	165
205200202012	3.5C X 50.0	29.00	1556	2069	165	162	190	203
205200202013	3.5C X 70.0	33.50	2178	2821	200	198	230	248
205200202014	3.5C X 95.0	36.50	2978	3768	239	240	275	300
205200202015	3.5C X 120.0	40.00	3823	4739	274	276	315	345
205200202016	3.5C X 150.0	44.00	4623	5672	308	318	354	398
205200202017	3.5C X 185.0	48.00	5779	7048	342	366	393	458
205200202018	3.5C X 240.0	55.00	7468	9113	393	426	452	533
205200202019	3.5C X 300.0	61.00	9335	11301	439	480	505	600
205200202020	3.5C X 400.0	68.00	12313	14567	485	546	558	683
205200202021	3.5C X 500.0	79.00	15469	18513	536	648	616	810
205200202022	3.5C X 630.0	89.00	19469	23347	587	752	675	940
20520020246	4C X 4.0	17.00	142	415	41	36	47	45
20520020247	4C X 6.0	18.00	213	515	51	47	59	59
20520020248	4C X 10.0	20.00	356	703	68	62	78	78
20520020249	4C X 16.0	21.00	569	900	88	79	101	99
205200202410	4C X 25.0	24.50	889	1307	113	108	130	135
205200202411	4C X 35.0	26.50	1245	1697	137	132	158	165
205200202412	4C X 50.0	30.50	1778	2358	165	162	190	203
205200202413	4C X 70.0	34.00	2489	3169	200	198	230	248
205200202414	4C X 95.0	39.00	3378	4263	239	240	275	300
205200202415	4C X 120.0	42.00	4267	5255	274	276	315	345
205200202416	4C X 150.0	47.00	5334	6505	308	318	354	398
205200202417	4C X 185.0	53.00	6579	8053	342	366	393	458
205200202418	4C X 240.0	58.00	8534	10337	393	426	452	533
205200202419	4C X 300.0	65.50	10668	12922	439	480	505	600
205200202420	4C X 400.0	72.50	14224	167333	485	546	558	683
205200202421	4C X 500.0	84.00	17780	21158	536	648	616	810
205200202422	4C X 630.0	94.00	22403	26683	587	752	675	940

**Example to find out Part Number, Type A & ST1 PVC 2 Core of 4mm², CLASS 2, Bare Cu**

Un Armoured



Note:

1. Packing of 500 and 1000mtrs in Wooden Drums
2. Packing of 100mtrs in Rings
3. Packing of odd lengths based on cable size

# SBEE 1.1 KV POWERPLUS COPPER PVC MULTICORE WIRE ARMoured (YVY)



## TECHNICAL DATA

BIS Certified as per IS 1554 Part-1	Core Colours: As per IS 1554 (Part 1)	Specific Insulation Resistance: As Per IS 5831
Conductor Bunching: Short lay, Class 2 as per IS 8130	Rated Voltage: 1100 volts grade	Test Voltage: 4kV
Protective Conductor: As Per IS 1554 Optional	Minimum Bending Radius: Occasional Flexing 12 x Cable Dia	

Temperature Range: Fixed Installation -30° C to +70° C PVC Type A NON FR & FR, FRLS TYPE A.  
 Fixed Installation -30° C TO +85° C PVC TYPE C, FRLS TYPE C, Higher Current Carrying capacity for given crossection  
 Fixed Installation -30° C TO +105° C H.R. P.V.C, Extremely good current carrying capacity for a given crossection

APPLICATIONS	PRODUCT MAKEUP	PRODUCT FEATURES
<ul style="list-style-type: none"> <li>• L.T Power Distribution</li> <li>• Fixed, Rugged Installation</li> <li>• Dry or Damp or Under Ground Application</li> <li>• Power Circuits, Power Stations, Substations.</li> </ul>	<ul style="list-style-type: none"> <li>• Strands of Electrolytic Grade, Oxygen free, High Conductivity Bare Copper wire class 2</li> <li>• Different classes of PVC Insulation Sheath</li> <li>• Cores are layed up in sequence and in layers</li> <li>• Outer sheath colour Black to RAL 9005 or GREY RAL 7001</li> <li>• G.I.Wire for additional Mechanical Protection</li> </ul>	<ul style="list-style-type: none"> <li>• Flame retardent as per IEC 60332-1-2</li> <li>• Flamability test as per IS 10810-53</li> <li>• Resistant to certain Industrial Oils and Mud resistant</li> <li>• Organic &amp; Inorganic Chemical Resistance of Certain type</li> </ul>

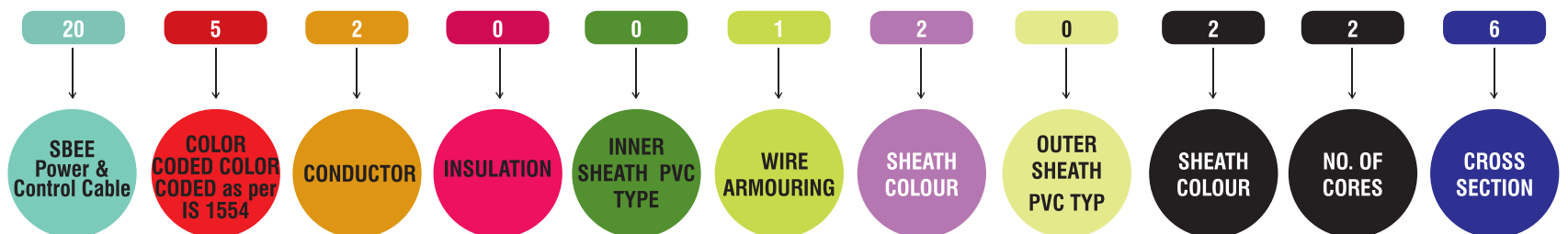
\* Energy efficient product optional and available on request. \* Anti-rodent & anti-termite properties optional on request. \* In-built UV protection

Article No.	No. of Core X Area	Outer Diameter	Copper Weight	Approx.Weight of Cable	Current Carrying Capacity (AMPS)			
					PVC		HR 105°C PVC	
					Ground	Air	Ground	Air
					Amps			
205200120226	2C X 4.0	16.00	71	586	40	42	46	55
205200120227	2C X 6.0	17.00	107	657	50	54	58	70
205200120228	2C X 10.0	17.50	178	804	66	72	76	94
205200120229	2C X 16.0	21.00	284	1079	86	94	99	122
2052001202210	2C X 25.0	22.50	445	1212	111	126	128	164
2052001202211	2C X 35.0	23.60	622	1438	137	150	158	195
2052001202212	2C X 50.0	26.50	889	1869	165	186	190	242
2052001202213	2C X 70.0	29.00	1245	2339	205	234	236	304
2052001202214	2C X 95.0	33.50	1689	3288	245	276	282	359
2052001202215	2C X 120.0	36.00	2134	3848	268	318	308	413
2052001202216	2C X 150.0	39.00	2667	4622	308	366	354	476
2052001202217	2C X 185.0	43.00	3289	5615	342	420	393	546
2052001202218	2C X 240.0	48.50	4267	7329	393	492	452	640
2052001202219	2C X 300.0	53.00	5334	8772	439	558	505	725
2052001202220	2C X 400.0	62.00	7112	11870	485	636	558	827
2052001202221	2C X 500.0	69.50	8890	14478	524	690	603	897
2052001202222	2C X 630.0	79.50	11201	18888	581	786	668	1022
205200120236	3C X 4.0	17.50	107	650	41	36	47	45
205200120237	3C X 6.0	18.50	160	753	51	47	59	59
205200120238	3C X 10.0	20.50	267	952	68	62	78	78
205200120239	3C X 16.0	21.00	427	1134	88	79	101	99
2052001202310	3C X 25.0	24.00	667	1527	113	108	130	135
2052001202311	3C X 35.0	26.00	933	1875	137	132	158	165
2052001202312	3C X 50.0	29.50	1334	2439	165	162	190	203
2052001202313	3C X 70.0	33.00	1867	3355	200	198	230	248
2052001202314	3C X 95.0	37.50	2534	4346	239	240	275	300
2052001202315	3C X 120.0	40.00	3200	5134	274	276	315	345
2052001202316	3C X 150.0	44.00	4001	6223	308	318	354	398
2052001202317	3C X 185.0	49.50	4934	7874	342	366	393	458
2052001202318	3C X 240.0	54.00	6401	9857	393	426	452	533
2052001202319	3C X 300.0	60.00	8001	11916	439	480	505	600
2052001202320	3C X 400.0	68.00	10668	15909	485	546	558	683
2052001202321	3C X 500.0	78.00	13335	19668	536	648	616	810
2052001202322	3C X 630.0	88.00	16802	25499	587	752	675	940
2052001202010	3.5C X 25.0	26.00	809	1853	113	108	130	135
2052001202011	3.5C X 35.0	27.00	1076	2178	137	132	158	165

Article No.	No. of Core X Area	Outer Diameter	Copper Weight	Approx.Weight of Cable	Current Carrying Capacity (AMPS)			
					PVC		HR 105°C PVC	
					Ground	Air	Ground	Air
	Sq. mm	mm	Kg/Km	Kg/Km	Amps			
2052001202012	3.5C X 50.0	31.00	1556	2803	165	162	190	203
2052001202013	3.5C X 70.0	35.00	2178	3934	200	198	230	248
2052001202014	3.5C X 95.0	39.00	2978	5053	239	240	275	300
2052001202015	3.5C X 120.0	42.50	3823	6148	274	276	315	345
2052001202016	3.5C X 150.0	47.00	4623	7207	308	318	354	398
2052001202017	3.5C X 185.0	52.50	5779	9252	342	366	393	458
2052001202018	3.5C X 240.0	59.00	7468	11709	393	426	452	533
2052001202019	3.5C X 300.0	66.00	9335	14868	439	480	505	600
2052001202020	3.5C X 400.0	73.50	12313	18380	485	546	558	683
2052001202021	3.5C X 500.0	87.00	15469	23755	536	648	616	810
2052001202022	3.5C X 630.0	95.00	19469	29214	587	752	675	940
205200120246	4C X 4.0	19.00	142	757	41	36	47	45
205200120247	4C X 6.0	20.50	213	883	51	47	59	59
205200120248	4C X 10.0	23.00	356	1205	68	62	78	78
205200120249	4C X 16.0	23.80	569	1397	88	79	101	99
2052001202410	4C X 25.0	27.00	889	1898	113	108	130	135
2052001202411	4C X 35.0	29.00	1245	2359	137	132	158	165
2052001202412	4C X 50.0	34.00	1778	3316	165	162	190	203
2052001202413	4C X 70.0	37.50	2489	4249	200	198	230	248
2052001202414	4C X 95.0	42.00	3378	5490	239	240	275	300
2052001202415	4C X 120.0	45.50	4267	6614	274	276	315	345
2052001202416	4C X 150.0	51.00	5334	8437	308	318	354	398
2052001202417	4C X 185.0	57.00	6579	10181	342	366	393	458
2052001202418	4C X 240.0	62.50	8534	12697	393	426	452	533
2052001202419	4C X 300.0	70.50	10668	16298	439	480	505	600
2052001202420	4C X 400.0	78.00	14224	20475	485	546	558	683
2052001202421	4C X 500.0	89.50	17780	26526	536	648	616	810
2052001202422	4C X 630.0	100.50	22403	32849	587	752	675	940

**Example to find out Part Number, Type A & ST1 PVC 2 Core of 4mm², CLASS 2, BARE CU**

Wire Armoured












Note:

1. Packing of 500 and 1000mtrs in Wooden Drums
2. Packing of 100mtrs in Rings
3. Packing of odd lengths based on cable size

# SBEE 1.1 KV POWERPLUS COPPER PVC MULTICORE STRIP ARMoured (YFY)



## TECHNICAL DATA

 BIS Certified as per IS 1554 Part-1	 Core Colours: As per IS 1554 (Part 1)	 Specific Insulation Resistance: As Per IS 5831
 Conductor Bunching: Short lay, Class 2 as per IS 8130	 Rated Voltage: 1100 volts grade	 Test Voltage: 4kV
 Protective Conductor: As Per IS 1554 Optional	 Minimum Bending Radius: Occasional Flexing 12 x Cable Dia	
Temperature Range: Fixed Installation -30° C to +70° C PVC Type A NON FR & FR, FRLS TYPE A.		
 Fixed Installation -30° C TO +85° C PVC TYPE C, FRLS TYPE C, Higher Current Carrying capacity for given crossection		
Fixed Installation -30° C TO +105° C H.R. P.V.C, Extremely good current carrying capacity for a given crossection		

### APPLICATIONS

- L.T Power Distribution
- Fixed, Rugged Installation
- Dry or Damp or Under Ground Application
- Power Circuits, Power Stations, Substations.

### PRODUCT MAKEUP

- Strands of Electrolytic Grade, Oxygen free, High Conductivity Bare Copper wire class 2
- Different classes of PVC Insulation Sheath
- Cores are layed up in sequence and in layers
- Outer sheath colour Black to RAL 9005 or GREY RAL 7001
- GI Strip for additional Mechanical protection

### PRODUCT FEATURES

- Flame retardent as per IEC 60332-1-2
- Flamability test as per IS 10810-53
- Resistant to certain Industrial Oils and Mud resistant
- Organic & Inorganic Chemical Resistance of Certain type

\* Energy efficient product optional and available on request. \* Anti-rodent & anti-termite properties optional on request. \* In-built UV protection

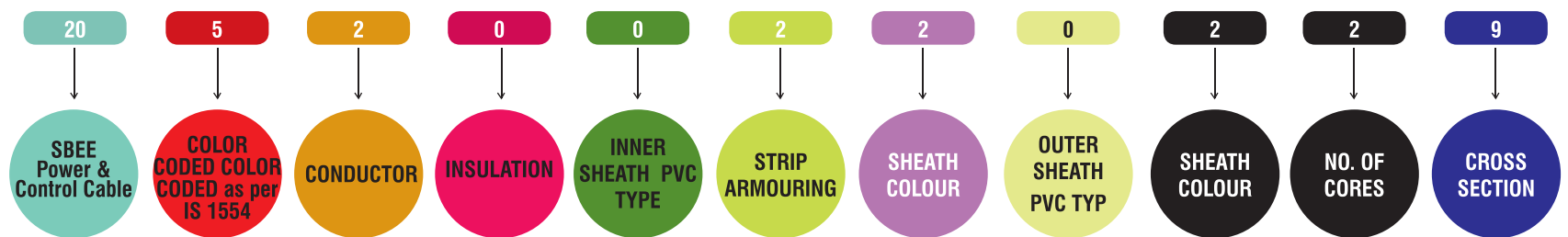
Article No.	No. of Core X Area	Outer Diameter	Copper Weight	Approx.Weight of Cable	Current Carrying Capacity (AMPS)			
					PVC		HR 105°C PVC	
					Ground	Air	Ground	Air
					Amps			
205200220229	2C X 16.0	20.50	284	923	86	94	99	122
2052002202210	2C X 25.0	21.00	445	1075	111	126	128	164
2052002202211	2C X 35.0	22.00	622	1270	137	150	158	195
2052002202212	2C X 50.0	25.00	889	1610	165	186	190	242
2052002202213	2C X 70.0	27.50	1245	1825	205	234	236	304
2052002202214	2C X 95.0	32.00	1689	2736	245	276	282	359
2052002202215	2C X 120.0	33.00	2134	3290	268	318	308	413
2052002202216	2C X 150.0	37.00	2667	3890	308	366	354	476
2052002202217	2C X 185.0	41.50	3289	4727	342	420	393	546
2052002202218	2C X 240.0	46.00	4267	6375	393	492	452	640
2052002202219	2C X 300.0	49.50	5334	7654	439	558	505	725
2052002202220	2C X 400.0	57.00	7112	9765	485	636	558	827
2052002202221	2C X 500.0	64.00	8890	12017	524	690	603	897
2052002202222	2C X 630.0	72.50	11201	16650	581	786	668	1022
205200220239	3C X 16.0	19.50	427	969	88	79	101	99
2052002202310	3C X 25.0	22.50	667	1342	113	108	130	135
2052002202311	3C X 35.0	24.50	933	1678	137	132	158	165
2052002202312	3C X 50.0	27.50	1334	2189	165	162	190	203
2052002202313	3C X 70.0	30.50	1867	2866	200	198	230	248
2052002202314	3C X 95.0	35.00	2534	3787	239	240	275	300
2052002202315	3C X 120.0	37.50	3200	4625	274	276	315	345
2052002202316	3C X 150.0	41.50	4001	5507	308	318	354	398
2052002202317	3C X 185.0	45.50	4934	6833	342	366	393	458
2052002202318	3C X 240.0	51.50	6401	8846	393	426	452	533
2052002202319	3C X 300.0	56.50	8001	10831	439	480	505	600
2052002202320	3C X 400.0	63.50	10668	13688	485	546	558	683
2052002202321	3C X 500.0	72.00	13335	17250	536	648	616	810
2052002202322	3C X 630.0	81.00	16802	23190	587	752	675	940
2052002202010	3.5C X 25.0	24.00	809	1588	113	108	130	135
2052002202011	3.5C X 35.0	26.00	1076	1899	137	132	158	165
2052002202012	3.5C X 50.0	30.00	1556	2503	165	162	190	203
2052002202013	3.5C X 70.0	34.00	2178	3338	200	198	230	248
2052002202014	3.5C X 95.0	37.00	2978	4361	239	240	275	300
2052002202015	3.5C X 120.0	41.50	3823	5364	274	276	315	345



Article No.	No. of Core X Area	Outer Diameter	Copper Weight	Approx.Weight of Cable	Current Carrying Capacity (AMPS)			
					PVC		HR 105°C PVC	
					Ground	Air	Ground	Air
	Sq. mm	mm	Kg/Km	Kg/Km	Amps			
2052002202016	3.5C X 150.0	45.00	4623	6426	308	318	354	398
2052002202017	3.5C X 185.0	49.00	5779	7941	342	366	393	458
2052002202018	3.5C X 240.0	56.50	7468	10177	393	426	452	533
2052002202019	3.5C X 300.0	62.50	9335	12468	439	480	505	600
2052002202020	3.5C X 400.0	69.00	12313	15717	485	546	558	683
2052002202021	3.5C X 500.0	79.00	15469	21320	536	648	616	810
2052002202022	3.5C X 630.0	89.00	19469	26850	587	752	675	940
205200220248	4C X 10.0	21.50	356	1080	68	62	78	78
205200220249	4C X 16.0	22.00	569	1244	88	79	101	99
2052002202410	4C X 25.0	25.00	889	1679	113	108	130	135
2052002202411	4C X 35.0	27.00	1245	2121	137	132	158	165
2052002202412	4C X 50.0	31.50	1778	2793	165	162	190	203
2052002202413	4C X 70.0	35.00	2489	3683	200	198	230	248
2052002202414	4C X 95.0	39.50	3378	4907	239	240	275	300
2052002202415	4C X 120.0	43.00	4267	5998	274	276	315	345
2052002202416	4C X 150.0	47.50	5334	7191	308	318	354	398
2052002202417	4C X 185.0	53.50	6579	8954	342	366	393	458
2052002202418	4C X 240.0	59.00	8534	11523	393	426	452	533
2052002202419	4C X 300.0	66.00	10668	14195	439	480	505	600
2052002202420	4C X 400.0	73.00	14224	17830	485	546	558	683
2052002202421	4C X 500.0	83.00	17780	23840	536	648	616	810
2052002202422	4C X 630.0	93.50	22403	30200	587	752	675	940

**Example to find out Part Number, Type A & ST1 PVC 2 Core of 16mm², CLASS 2, BARE CU**

Strip Armoured



Note:

1. Packing of 500 and 1000mtrs in Wooden Drums
2. Packing of 100mtrs in Rings
3. Packing of odd lengths based on cable size

# TECHNICAL DETAILS OF PVC ARMoured & UN-ARMoured CABLE AS PER IS 1554 PART-1

Table 1: IS-1554 Part-1-1988 CONDUCTOR DATA, COPPER & ALUMINIUM CONDUCTOR FOR SINGLE CORE & MULTICORE CABLES CONFIRMING TO IS: 8130 (1984)

NOMINAL CROSS SECTIONAL AREA	MINIMUM NUMBER OF WIRES IN THE STRANDED CONDUCTOR (CLASS - 2)				MAXIMUM DC RESISTANCE AT 20 deg C	
	CIRCULAR CONDUCTOR (NON COMPACTED)		CIRCULAR COMPACTED OR SHAPED CONDUCTOR		PLAIN COPPER CONDUCTOR	ALUMINIUM CONDUCTOR
	Sq.mm	COPPER	ALUMINIUM	COPPER	ALUMINIUM	Ohm/km
1.5	3	3	-	-	12.1	18.1
2.5	3	3	-	-	7.41	12.1
4	7	3	-	-	4.61	7.41
6	7	3	-	-	3.08	4.61
10	7	7	6	-	1.83	3.08
16	7	7	6	6	1.15	1.91
25	7	7	6	6	0.727	1.2
35	7	7	6	6	0.524	0.868
50	19	19	6	6	0.387	0.641
70	19	19	12	12	0.268	0.443
95	19	19	15	15	0.193	0.32
120	37	37	18	15	0.153	0.253
150	37	37	18	15	0.124	0.206
185	37	37	30	30	0.0991	0.164
240	61	37	34	30	0.0754	0.125
300	61	61	34	30	0.0601	0.100
400	61	61	53	53	0.0470	0.0778
500	61	61	53	53	0.0366	0.0605
630	91	91	53	53	0.0283	0.0469
800	91	91	53	53	0.0221	0.0367
1000	91	91	53	53	0.0176	0.0291

Table 2: IS-1554 Part-1-1988 REACTANCE AT 50Hz (Ohm/km) AND CAPACITANCE (micro farads/km) 1.1KV PVC AND HR PVC CABLES

Nominal Area of Conductor	REACTANCE			Nominal Area of Conductor	CAPACITANCE			THREE, THREE & HALF AND FOUR CORE
	PVC AND HR PVC CABLES SINGLE CORE		MULTICORE		PVC AND HR PVC CABLES SINGLE CORE		TWO CORE	
	Unarmoured	Armoured			Unarmoured	Armoured		
Sqmm				Sqmm				
1.5	0.157	-	0.11	1.5	0.43	-	0.12	0.35
2.5	0.145	-	0.106	2.5	0.52	-	0.13	0.41
4	0.136	-	0.102	4	0.57	-	0.14	0.46
6	0.128	-	0.0962	6	0.67	-	0.16	0.52
10	0.118	0.137	0.0908	10	0.83	0.67	0.18	0.63
16	0.110	0.128	0.0859	16	0.97	0.80	0.19	0.82
25	0.107	0.122	0.0849	25	1.0	0.83	0.22	0.86
35	0.106	0.116	0.0823	35	1.15	0.95	0.24	0.98
50	0.0973	0.110	0.0765	50	1.26	0.95	0.24	1.00
70	0.0924	0.107	0.0769	70	1.32	1.12	0.26	1.16
95	0.090	0.103	0.0766	95	1.36	1.17	0.26	1.18
120	0.088	0.0989	0.0741	120	1.49	1.28	0.28	1.31
150	0.0862	0.0960	0.0743	150	1.52	1.32	0.28	1.28
185	0.0857	0.0950	0.0742	185	1.47	1.30	0.28	1.30
240	0.0837	0.0929	0.0737	240	1.54	1.37	0.28	1.34
300	0.0828	0.0922	0.0733	300	1.60	1.40	0.29	1.37
400	0.0810	0.0893	0.0729	400	1.70	1.50	0.29	1.43
500	0.0807	0.0890	0.0732	500	1.63	1.46	0.29	1.41
630	0.0803	0.0876	0.0731	630	1.64	1.45	0.29	1.42
800	0.0782	0.0862	-	800	1.87	1.65	-	-
1000	0.0772	0.0849	-	1000	2.05	1.76	-	-

**TABLE 3: IS-1554 PART-1-1988 CALCULATED VALUE OF A.C.RESISTANCE OF CONDUCTOR (OHM/KM) AT MAXIMUM OPERATING CONDUCTOR TEMPERATURE**

Nominal Cross Sectional Area	PVC Cables (70 degC)		HR PVC Cables (85 degC)	
	Sqmm	ALUMINIUM	COPPER	ALUMINIUM
1.5	21.72	14.52	22.81	15.25
2.5	14.52	8.892	15.25	9.34
4	8.892	5.532	9.34	5.81
6	5.530	3.696	5.81	3.88
10	3.696	2.196	3.88	2.31
16	2.292	1.380	2.41	1.45
25	1.440	0.873	1.51	0.916
35	1.042	0.629	1.09	0.661
50	0.769	0.465	0.808	0.488
70	0.532	0.322	0.559	0.338
95	0.384	0.232	0.404	0.244
120	0.304	0.184	0.318	0.193
150	0.248	0.150	0.259	0.156
185	0.197	0.119	0.209	0.129
240	0.152	0.0904	0.159	0.095
300	0.122	0.0721	0.126	0.076
400	0.0934	0.0664	0.098	0.059
500	0.0726	0.0439	0.076	0.046
630	0.0563	0.0339	0.059	0.0356

**BASIC ASSUMPTIONS OF CURRENT RATINGS**

Continuous current ratings given are based on the following Assumptions:

- 1) Max. Conductor Temperature for continuous operation
  - PVC : 70°C
  - HR PVC : 85°C
- II) Thermal Resistivity Of Soi : 150°C cm/watt
- III) Thermal Resistivity Of PVC : 650°C cm/watt
- iv) Depth of Laying ( to the highest point of the table laid direct in the ground or to the top surface of the duct : 75 Cm
- v) Method of Installation :
  - A) Single Core Cables: a) Two Cables in horizontal Touching
  - B) Three cables in trefoil touching formation
  - B) Multi core cables - Installed Singly
- vi) In case of control cables all cores are assumed to be carrying full load current.

**TABLE 4: IS-1554 PART-1-1988 SHORT CIRCUIT RATING OF CONDUCTORS FOR ONE SECOND DURATION (KILO AMPS)**

Nominal Area of Conductor	PVC Cables		HR PVC Cables	
	Sqmm	ALUMINIUM	COPPER	ALUMINIUM
1.5	0.17	0.11	0.16	0.10
2.5	0.29	0.19	0.26	0.17
4	0.46	0.30	0.42	0.28
6	0.69	0.46	0.63	0.41
10	1.20	0.76	1.00	0.69
16	1.80	1.20	1.70	1.10
25	2.90	1.90	2.60	1.70
35	4.00	2.70	3.70	2.40
50	5.80	3.80	5.20	3.50
70	8.10	5.30	7.30	4.80
95	10.90	7.20	9.90	6.60
120	13.80	9.10	12.50	8.30
150	17.20	11.40	15.60	10.40
185	21.30	14.00	19.30	12.80
240	27.60	18.20	25.00	16.60
300	34.50	22.70	31.30	20.70
400	46.00	30.30	41.70	27.60
500	57.50	37.90	52.10	34.50
630	72.40	47.70	65.60	43.50
800	92.00	60.60	83.30	55.20
1000	114.90	75.80	104.20	69.00

**SHORT CIRCUIT RATINGS CALCULATIONS**

- 1) Max. Conductor Temperature Prior to short circuit for normal PVC: 70°C  
for HRPVC : 85°C

- 2) Max. Conductor Temperature at the termination of short circuit: 160°C

Formula for calculating the short circuit rating for other duration

$$I_k = \frac{I_1}{\sqrt{k}} \quad \text{where } I_1 = \text{Short circuit rating for one second}$$

$$\sqrt{k} I_k = \text{Short circuit rating for 'k' second}$$

$$k = \text{Duration in seconds}$$

The above formula is valid for 'k' from 0.2 to 5 seconds

**RATING FACTORS**

**Table 5: IS-1554 Part-1-1988. A. RATING FACTOR FOR VARIATION IN AMBIENT AIR TEMPERATURE**

AMBIENT TEMP deg C	25.0	30.0	35.0	40.0	45.0	50.0
Rating Factor for PVC	1.25	1.16	1.09	1.00	0.90	0.81
Rating Factor for HRPVC	1.15	1.11	1.05	1.00	0.94	0.88

**B. Rating Factor for variation in ground Temperature**

GROUND TEMP deg C	15	20	25.0	30.0	35.0	40.0
Rating Factors	1.17	1.12	1.06	1.00	0.94	0.87
RATING Factor for HRPVC	1.12	1.08	1.04	1.00	0.95	0.90

**Table 6: IS-1554 Part-1-1988 RATING FACTORS, FOR DEPTH OF LAYING (CABLES LAID DIRECT IN THE GROUND)**

Depth of Laying cm	SIZE Upto & Including 1.1 kV		
	Upto 25 Sq.mm	Above 25 Sq.mm Upto 300 Sq.mm	Above 300 Sq.mm
75	1.00	1.00	1.00
90	0.99	0.98	0.97
105	0.98	0.97	0.96
120	0.97	0.96	0.95
150	0.96	0.94	0.92
180 or more	0.95	0.93	0.91

**Table 7:** IS-1554 Part-1-1988 RATING FACTORS FOR VARIATIONS IN THERMAL RESISTIVITY OF SOIL (Twin & Multi CORE CABLES LAID DIRECT IN GROUND)

Nominal Area of Conductor Sqmm	FOR VALUE OF THERMAL RESISTIVITY OF SOIL IN DEG C CM/W					
	100	120	150	200	250	300
1.5	1.10	1.05	1.00	0.92	0.86	0.81
2.5	1.10	1.05	1.00	0.92	0.86	0.81
4	1.10	1.05	1.00	0.92	0.86	0.81
6	1.10	1.05	1.00	0.92	0.86	0.81
10	1.10	1.06	1.00	0.92	0.85	0.80
16	1.12	1.06	1.00	0.91	0.84	0.79
25	1.14	1.08	1.00	0.91	0.84	0.78
35	1.15	1.08	1.00	0.91	0.84	0.77
50	1.15	1.08	1.00	0.91	0.84	0.77
70	1.15	1.08	1.00	0.90	0.83	0.76
95	1.15	1.08	1.00	0.90	0.83	0.76
120	1.17	1.09	1.00	0.90	0.82	0.76
150	1.17	1.09	1.00	0.90	0.82	0.76
185	1.18	1.09	1.00	0.89	0.81	0.75
240	1.18	1.09	1.00	0.89	0.81	0.75
300	1.18	1.09	1.00	0.89	0.81	0.75
400	1.19	1.10	1.00	0.89	0.81	0.75
500	1.19	1.10	1.00	0.89	0.81	0.75
630	1.19	1.10	1.00	0.89	0.81	0.75

**Table 8:** IS-1554 Part-1-1988 RATING FACTORS FOR VARIATIONS IN THERMAL RESISTIVITY OF SOIL (TWO & THREE SINGLE CORE CABLES LAID DIRECT IN GROUND)

Sq.mm	TWO CABLES TOUCHING, FOR VALUES OF THERMAL RESISTIVITY OF SOIL IN degC cm/w						THREE CABLES TREFOIL TOUCHING, FOR VALUES THERMAL RESISTIVITY OF SOIL IN degC cm/w					
	100	120	150	200	250	300	100	120	150	200	250	300
1.5	1.15	1.08	1.00	0.91	0.84	0.78	1.18	1.09	1.00	0.9	0.82	0.76
2.5	1.15	1.08	1.00	0.91	0.84	0.78	1.18	1.09	1.00	0.9	0.82	0.76
4	1.15	1.08	1.00	0.91	0.84	0.78	1.18	1.09	1.00	0.9	0.82	0.76
6	1.15	1.08	1.00	0.91	0.84	0.78	1.18	1.09	1.00	0.9	0.82	0.76
10	1.15	1.08	1.00	0.90	0.83	0.77	1.18	1.09	1.00	0.89	0.81	0.74
16	1.17	1.09	1.00	0.90	0.83	0.77	1.19	1.09	1.00	0.89	0.81	0.74
25	1.18	1.09	1.00	0.90	0.82	0.76	1.19	1.09	1.00	0.88	0.80	0.74
35	1.18	1.09	1.00	0.90	0.82	0.75	1.20	1.09	1.00	0.88	0.80	0.74
50	1.18	1.09	1.00	0.90	0.82	0.75	1.20	1.09	1.00	0.88	0.80	0.74
70	1.19	1.09	1.00	0.89	0.81	0.74	1.21	1.10	1.00	0.88	0.80	0.74
95	1.19	1.09	1.00	0.89	0.81	0.74	1.22	1.10	1.00	0.88	0.80	0.74
120	1.21	1.10	1.00	0.89	0.80	0.74	1.22	1.10	1.00	0.88	0.79	0.74
150	1.21	1.10	1.00	0.89	0.80	0.74	1.22	1.10	1.00	0.88	0.79	0.73
185	1.21	1.10	1.00	0.89	0.80	0.74	1.22	1.10	1.00	0.88	0.79	0.73
240	1.21	1.10	1.00	0.89	0.80	0.74	1.22	1.10	1.00	0.88	0.79	0.73
300	1.21	1.10	1.00	0.89	0.80	0.74	1.22	1.10	1.00	0.88	0.79	0.72
400	1.21	1.10	1.00	0.88	0.80	0.74	1.24	1.11	1.00	0.88	0.79	0.72
500	1.21	1.10	1.00	0.88	0.80	0.74	1.24	1.11	1.00	0.88	0.79	0.72
630	1.22	1.10	1.00	0.88	0.80	0.74	1.24	1.11	1.00	0.88	0.79	0.72

## GROUP RATING FACTORS

Table 9: IS-1554 Part-1-1988 A) FOR SINGLECORE CABLE LAID IN TREFOIL FORMATION

NO OF TREFOIL in Groups	SPACING BETWEEN TREFOILS			
	TOUCHING	15 cms	30 cms	45 cms
2	0.78	0.81	0.85	0.88
3	0.68	0.71	0.77	0.81
4	0.61	0.65	0.72	0.76
5	0.56	0.61	0.68	0.73

B) CABLES LAID IN TREFOIL DUCT IN HORIZONTAL FORMATION

NO OF TREFOIL in Groups	SPACING BETWEEN TREFOILS		
	TOUCHING	15 cms	30 cms
2	0.87	0.90	0.91
3	0.79	0.83	0.86
4	0.74	0.79	0.82
5	0.71	0.76	0.80

C) CABLE LAID IN racks/trays in covered trench with removable covers where in air circulation is restricted, trefoils are separated by two cable dia horizontally and the trays are in tiers with 30cm gap between them

NO OF RACK / TRAYS IN TIERS	NO OF TREFOIL IN HORIZONTAL FORMATION		
	1	2	3
1	0.95	0.90	0.88
2	0.90	0.85	0.83
3	0.88	0.83	0.81
6	0.86	0.81	0.79

CABLES LAID AS IN 'C' BUT IN OPEN AIR			
1	1.00	0.98	0.96
2	1.00	0.95	0.93
3	1.00	0.94	0.92
6	1.00	0.93	0.90

**Table 10:** IS-1554 Part-1-1988 GROUP RATING FACTORS FOR MULTICORE CABLES  
A) CABLE LAID INSIDE CONCRETE TRENCH WITH REMOVABLE COVERS, ON CABLE TRAYS WHERE AIR CIRCULATION IS RESTRICTED THE CABLES SPACED BY ONE CABLE DIAMETER AND TRAY IN TIERS BY 300 MM. THE CLEARANCE OF THE CABLE FROM THE WALL IS 25MM

No. of Cable Traces in Tier	No. of Cable				
	1	2	3	6	9
1	0.95	0.90	0.88	0.85	0.84
2	0.90	0.85	0.83	0.81	0.80
3	0.88	0.83	0.81	0.79	0.78
6	0.86	0.81	0.79	0.77	0.76

b) CABLE LAID on cable tray exposed to air. The cable spaced by one diameter and trays in tier by 300 mm the clearance between the wall & the cable is 25mm

No. of Cable Traces in Tier	No. of Cable				
	1	2	3	6	9
1	1.0	0.98	0.96	0.93	0.92
2	1.0	0.95	0.93	0.90	0.89
3	1.0	0.94	0.92	0.89	0.88
6	1.0	0.93	0.90	0.87	0.86

c) CABLE LAID on cable tray exposed to air. The cable spaced by one diameter and trays in tier by 300 mm the clearance between the wall & the cable is 25mm

No. of Cable Traces in Tier	No. of Cable per Tray				
	1	2	3	6	9
1	1.0	0.84	0.80	0.75	0.73
2	1.0	0.80	0.76	0.71	0.69
3	1.0	0.78	0.74	0.70	0.68
6	1.0	0.76	0.72	0.68	0.66

D) CABLES LAID DIRECT IN GROUND IN HORIZONTAL FORMATION

No. of Trefoil in Groups	SPACING BETWEEN TREFOILS			
	TOUCHING	15 cms	30 cms	45 cms
2	0.79	0.82	0.87	0.90
3	0.69	0.75	0.79	0.83
4	0.62	0.69	0.74	0.79
5	0.58	0.65	0.72	0.76
6	0.54	0.61	0.69	0.75

E) CABLES LAID IN SINGLE WAY DUCT/PIPES IN HORIZONTAL FORMATION

No. of Trefoil in Groups	SPACING BETWEEN TREFOILS			
	TOUCHING	30 cms	45 cms	60 cms
2	0.88	0.90	0.92	0.94
3	0.82	0.84	0.87	0.89
4	0.77	0.80	0.84	0.87
5	0.74	0.78	0.82	0.85
6	0.71	0.76	0.81	0.84

GUIDE LINES FOR LAYING OF SBEE CABLES

- 1) Recommended minimum bending radius of 1.1kV Grade Cable for Fixed Installation.  
Single Core - 15 D  
Multi Core – 12 D  
Where 'D' is overall Diameter of cable.
- 2) Maximum Permissible Tensile strength for cable

ARMOURED CABLES  $P = 9 D^2$

UNARMOURED CABLES  $P = 5 D^2$

Where P = pulling force in Newtons  
D = outer Diameter of cable.

b) For Cables pulled by pulling eye: - If the cables are pulled by gripping the conductor directly with pulling eye, the Maximum permissible Tensile stress depends on the Material of the Conductor and their cross section as given below: -

For Aluminium Conductors = 30 N /mm<sup>2</sup>  
For Copper Conductors = 50 N /mm<sup>2</sup>

**GUIDE LINES FOR LAYING OF SBEE CABLES**

- a) The cable drums or coils must not be dropped or thrown from railway wagons or trucks during unloading operation. A RAMP or Crane may be used for unloading cable drums. If neither of them is available, a temporary ramps with inclination 1: 3 to 1: 4 approximately should be constructed, the cable drum should then be rolled over the ramp by means of ropes and winches. Additionally a sand bed at the root of the ramp may be made to break the rolling back of cable drums.
- b) The arrows painted on the flange of the drum indicate the direction in which the drum should be rolled. The cable will unwind and become loose if the drum is rolled in the opposite direction.
- c) The site chosen for storage of cable drums should be well drained and should preferably have a concrete surface / firm surface which will not cause the drums to sink and thus lead to flange rot and extremely difficult in moving the drums & inturn avoiding damage to the cable.
- d) All drums should be stored in such a manner as to leave sufficient space between them for air circulation. It is desirable for the drums to stand on battens placed directly under the flanges. During storage the drum should be rolled to an angle of 90° once every three months.
- e) In no case should the drums be stored on the flat i.e., with flange horizontally placed.
- f) Overhead covering is not essential unless the storage is for a long period. The cable should however, be protected from direct rays of the sun by leaving the outer battens on or by providing some form of Sun shielding.
- g) Do not rewind cable to another drum. Whose barrel diameter is less than the existing drum diameter.

**NOTE: All data given in this catalogue is approximate and are subject to manufacturing tolerance  
Delivery length tolerance  $\pm 5\%$  length more than normal as per customer request.  
All figures given in various tables are indicative only.**