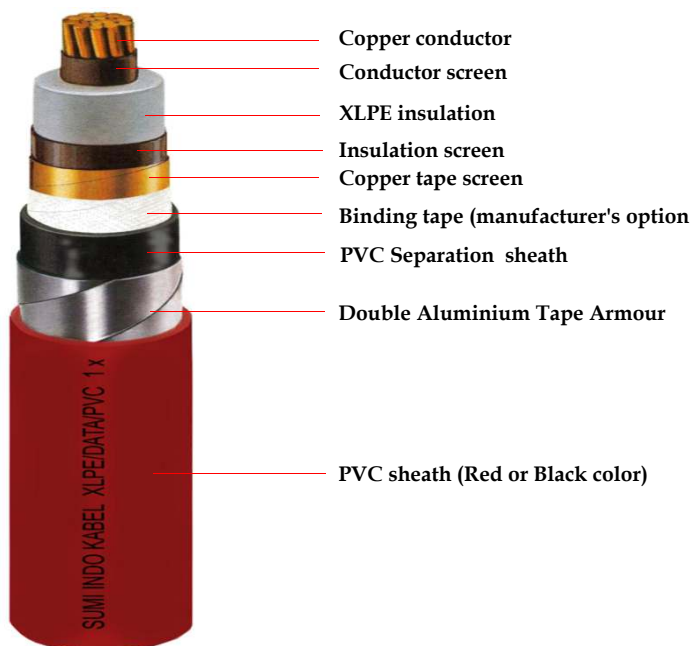


SUMI INDO KABEL

(3.6/6 kV ~ 18/30 kV) Cu/XLPE/CTS/DATA/PVC (N2XSYB(AI)Y)

SNI IEC 60502-2 / IEC 60502-2



Special application upon request :

- * Available product in accordance to SPLN, JIS, BS, ICEA/NEMA, AS standard or other requirement.
- * Flame retardant test acc. to IEC 60332-3 Cat. A, B or C.
- * Longitudinally Water Blocking characteristic.
- * Anti termite and anti rodent performance.
- * Tin coated Copper conductor.
- * Copper wire screen.
- * Polyethylene/Low Smoke Free Halogen sheath.



3.6/6 (7.2) kV Cu / XLPE / CTS / DATA / PVC (N2XSYB(AI)Y) 1 x (25 - 800) mm²

CONSTRUCTION DATA

No. of Core	-	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Nom. Cross-section area	mm ²	25	35	50	70	95	120	150	185	240	300	400	500	630	800
No. of Wire	-	7	7	19	19	19	37	37	37	37	61	61	61	91	91
Diameter of Conductor, approx. **)	mm	5.9	7.1	8.1	9.7	11.6	12.9	14.3	16.0	18.3	20.7	23.4	26.5	30.3	34.3
Nom. Thickness of Insulation	mm	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.6	2.8	3.0	3.2	3.2	3.2
Nom. Thickness of Copper tape	mm	0.085	0.085	0.085	0.085	0.085	0.085	0.085	0.085	0.085	0.085	0.085	0.085	0.085	0.085
Nom. Thickness of Separation Sheath	mm	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.3	1.4	1.4
Nom. Thickness of aluminium tape	mm	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
Nom. Thickness of Outer sheath	mm	1.8	1.8	1.8	1.8	1.8	1.9	1.9	2.0	2.1	2.2	2.3	2.4	2.5	2.6
Overall Diameter of cable	mm	21.5	22.5	23.5	25.0	27.0	28.5	30.0	31.5	34.5	37.5	40.5	44.5	48.5	53.0
Weight of cable, approximate	kg/km	705	830	970	1205	1500	1755	2055	2440	3045	3710	4580	5705	7165	8915

ELECTRICAL DATA

AC Voltage test for 5 min.	kV	12.5	12.5	12.5	12.5	12.5	12.5	12.5	12.5	12.5	12.5	12.5	12.5	12.5	12.5
Partial Discharge test at max. 10pC	kV	6.23	6.23	6.23	6.23	6.23	6.23	6.23	6.23	6.23	6.23	6.23	6.23	6.23	6.23
DC Resistance at 20°C	Ω / km	0.727	0.524	0.387	0.268	0.193	0.153	0.124	0.0991	0.0754	0.0601	0.0470	0.0366	0.0283	0.0221
AC Resistance at 90°C	Ω / km	0.927	0.668	0.494	0.342	0.247	0.196	0.159	0.127	0.0976	0.0785	0.0623	0.0498	0.0401	0.0332
Insulation Resistance at 20°C	M Ω. km	2500	2000	2000	1500	1500	1500	1500	1500	1000	900	900	900	800	700
Capacitance	μF / km	0.266	0.300	0.328	0.373	0.427	0.463	0.502	0.550	0.593	0.615	0.641	0.673	0.755	0.842
Inductance (Trefoil)	mH / km	0.447	0.419	0.402	0.378	0.358	0.347	0.337	0.324	0.315	0.307	0.298	0.292	0.283	0.276
Reactance (Trefoil)	Ω / km	0.140	0.132	0.126	0.119	0.112	0.109	0.106	0.102	0.0990	0.0965	0.0937	0.0918	0.0888	0.0866
Current Carrying Capacity :															
- Buried direct in ground at 20°C ***) (Trefoil)	A	140	166	196	239	285	323	361	406	469	526	590	* 655	* 740	* 840
(Flat spaced)	A	144	172	203	246	293	332	366	410	470	524	572	* 650	* 730	* 820
- In Air at 30°C (Trefoil)	A	163	198	238	296	361	417	473	543	641	735	845	* 940	* 1080	* 1250
(Flat spaced)	A	196	238	286	356	434	500	559	637	745	846	938	* 1075	* 1235	* 1420
(Flat touching)	A	167	203	243	303	369	426	481	550	647	739	837	* 945	* 1080	* 1250
Short circuit current rating at 1 sec. (approx.)	kA	3.58	5.01	7.15	10.01	13.59	17.16	21.45	26.46	34.32	42.90	57.20	71.50	90.09	114.40

*) typical data

**) Diameter compacted shape

***) Thermal Resistivity of soil : 1.5°K.m/W, Depth of laying : 0.8 m

6/10 (12) kV Cu / XLPE / CTS / DATA / PVC (N2XSYB(AI)Y) 1 x (25 - 800) mm²

CONSTRUCTION DATA

No. of Core	-	1	1	1	1	1	1	1	1	1	1	1	1	1	
Nom. Cross-section area	mm²	25	35	50	70	95	120	150	185	240	300	400	500	630	800
No. of Wire	-	7	7	19	19	19	37	37	37	37	61	61	61	91	91
Diameter of Conductor, approx. **)	mm	5.9	7.1	8.1	9.7	11.6	12.9	14.3	16.0	18.3	20.7	23.4	26.5	30.3	34.3
Nom. Thickness of Insulation	mm	3.4	3.4	3.4	3.4	3.4	3.4	3.4	3.4	3.4	3.4	3.4	3.4	3.4	3.4
Nom. Thickness of Copper tape	mm	0.085	0.085	0.085	0.085	0.085	0.085	0.085	0.085	0.085	0.085	0.085	0.085	0.085	0.085
Nom. Thickness of Separation Sheath	mm	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.3	1.3	1.4	1.4
Nom. Thickness of aluminium tape	mm	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
Nom. Thickness of Outer sheath	mm	1.8	1.8	1.8	1.8	1.9	1.9	2.0	2.1	2.1	2.2	2.3	2.4	2.5	2.6
Overall Diameter of cable	mm	23.0	24.5	25.5	27.0	29.0	30.0	32.0	33.5	36.0	38.5	41.5	45.0	49.0	53.0
Weight of cable, approximate	kg/km	785	910	1055	1295	1595	1855	2170	2560	3145	3790	4655	5735	7200	8950

ELECTRICAL DATA

AC Voltage test for 5 min.	kV	21	21	21	21	21	21	21	21	21	21	21	21	21	21
Partial Discharge test at max. 10pC	kV	10.38	10.38	10.38	10.38	10.38	10.38	10.38	10.38	10.38	10.38	10.38	10.38	10.38	10.38
DC Resistance at 20°C	Ω / km	0.727	0.524	0.387	0.268	0.193	0.153	0.124	0.0991	0.0754	0.0601	0.0470	0.0366	0.0283	0.0221
AC Resistance at 90°C	Ω / km	0.927	0.668	0.494	0.342	0.247	0.196	0.159	0.127	0.0975	0.0784	0.0623	0.0497	0.0401	0.0332
Insulation Resistance at 20°C	M Ω. km	3000	2500	2500	2000	2000	2000	1500	1500	1500	1500	1000	900	800	700
Capacitance	μF / km	0.211	0.236	0.257	0.291	0.330	0.357	0.386	0.421	0.468	0.518	0.573	0.637	0.715	0.797
Inductance (Trefoil)	mH / km	0.461	0.436	0.418	0.393	0.372	0.357	0.350	0.336	0.324	0.313	0.303	0.295	0.285	0.276
Reactance (Trefoil)	Ω / km	0.145	0.137	0.131	0.124	0.117	0.112	0.110	0.106	0.102	0.0982	0.0952	0.0925	0.0894	0.0866
Current Carrying Capacity :															
- Buried direct in ground at 20°C ***) (Trefoil)	A	140	166	196	239	285	323	361	406	469	526	590	* 655	* 740	* 840
(Flat spaced)	A	144	172	203	246	293	332	366	410	470	524	572	* 650	* 730	* 820
- In Air at 30°C (Trefoil)	A	163	198	238	296	361	417	473	543	641	735	845	* 940	* 1080	* 1250
(Flat spaced)	A	196	238	286	356	434	500	559	637	745	846	938	* 1075	* 1235	* 1420
(Flat touching)	A	167	203	243	303	369	426	481	550	647	739	837	* 945	* 1080	* 1250
Short circuit current rating at 1 sec. (approx.)	kA	3.58	5.01	7.15	10.01	13.59	17.16	21.45	26.46	34.32	42.90	57.20	71.50	90.09	114.40

*) typical data

**) Diameter compacted shape

***) Thermal Resistivity of soil : 1.5°K.m/W, Depth of laying : 0.8 m

8.7/15 (17.5) kV Cu / XLPE / CTS / DATA / PVC (N2XSYB(AI)Y) 1 x (25 - 630) mm²

CONSTRUCTION DATA

No. of Core	-	1	1	1	1	1	1	1	1	1	1	1	1	1
Nom. Cross-section area	mm ²	25	35	50	70	95	120	150	185	240	300	400	500	630
No. of Wire	-	7	7	19	19	19	37	37	37	37	61	61	61	91
Diameter of Conductor, approx. **)	mm	5.9	7.1	8.1	9.7	11.6	12.9	14.3	16.0	18.3	20.7	23.4	26.5	30.3
Nom. Thickness of Insulation	mm	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Nom. Thickness of Copper tape	mm	0.085	0.085	0.085	0.085	0.085	0.085	0.085	0.085	0.085	0.085	0.085	0.085	0.085
Nom. Thickness of Separation Sheath	mm	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.3	1.4	1.4
Nom. Thickness of aluminium tape	mm	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
Nom. Thickness of Outer sheath	mm	1.8	1.8	1.9	1.9	2.0	2.0	2.1	2.1	2.2	2.3	2.4	2.5	2.6
Overall Diameter of cable	mm	25.5	26.5	27.5	29.0	31.5	32.5	34.0	36.0	38.5	41.0	44.0	47.5	51.5
Weight of cable, approximate	kg/km	885	1015	1160	1405	1725	1990	2315	2695	3305	3955	4820	5950	7405

ELECTRICAL DATA

AC Voltage test for 5 min.	kV	30.5	30.5	30.5	30.5	30.5	30.5	30.5	30.5	30.5	30.5	30.5	30.5	30.5	30.5
Partial Discharge test at max. 10pC	kV	15.05	15.05	15.05	15.05	15.05	15.05	15.05	15.05	15.05	15.05	15.05	15.05	15.05	15.05
DC Resistance at 20°C	Ω / km	0.727	0.524	0.387	0.268	0.193	0.153	0.124	0.0991	0.0754	0.0601	0.0470	0.0366	0.0283	0.0221
AC Resistance at 90°C	Ω / km	0.927	0.668	0.494	0.342	0.247	0.196	0.159	0.127	0.0975	0.0784	0.0622	0.0496	0.0399	0.0332
Insulation Resistance at 20°C	M Ω. km	3500	3000	3000	2500	2500	2000	2000	2000	1500	1500	1500	1500	1000	700
Capacitance	μF / km	0.173	0.192	0.208	0.234	0.264	0.284	0.307	0.333	0.369	0.407	0.449	0.497	0.556	0.637
Inductance (Trefoil)	mH / km	0.481	0.452	0.433	0.408	0.388	0.373	0.362	0.351	0.337	0.325	0.315	0.305	0.295	0.285
Reactance (Trefoil)	Ω / km	0.151	0.142	0.136	0.128	0.122	0.117	0.114	0.110	0.106	0.102	0.0989	0.0959	0.0925	0.0894
Current Carrying Capacity :															
- Buried direct in ground at 20°C ***) (Trefoil)	A	140	166	196	239	285	323	361	406	469	526	590	* 655	* 740	* 840
(Flat spaced)	A	144	172	203	246	293	332	366	410	470	524	572	* 650	* 730	* 820
- In Air at 30°C (Trefoil)	A	163	198	238	296	361	417	473	543	641	735	845	* 940	* 1080	* 1250
(Flat spaced)	A	196	238	286	356	434	500	559	637	745	846	938	* 1075	* 1235	* 1420
(Flat touching)	A	167	203	243	303	369	426	481	550	647	739	837	* 945	* 1080	* 1250
Short circuit current rating at 1 sec. (approx.)	kA	3.58	5.01	7.15	10.01	13.59	17.16	21.45	26.46	34.32	42.90	57.20	71.50	90.09	114.40

*) typical data

**) Diameter compacted shape

***) Thermal Resistivity of soil : 1.5°K.m/W, Depth of laying : 0.8 m

12/20 (24) kV Cu / XLPE / CTS / DATA / PVC (N2XSYB(AI)Y) 1 x (35 - 630) mm²

CONSTRUCTION DATA

No. of Core	-	1	1	1	1	1	1	1	1	1	1	1	1
Nom. Cross-section area	mm ²	35	50	70	95	120	150	185	240	300	400	500	630
No. of Wire	-	7	19	19	19	37	37	37	37	61	61	61	91
Diameter of Conductor, approx. **)	mm	7.1	8.1	9.7	11.6	12.9	14.3	16.0	18.3	20.7	23.4	26.5	30.3
Nom. Thickness of Insulation	mm	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5
Nom. Thickness of Copper tape	mm	0.085	0.085	0.085	0.085	0.085	0.085	0.085	0.085	0.085	0.085	0.085	0.085
Nom. Thickness of Separation Sheath	mm	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.3	1.3	1.4	1.5
Nom. Thickness of aluminium tape	mm	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
Nom. Thickness of Outer sheath	mm	1.9	1.9	2.0	2.0	2.1	2.1	2.2	2.3	2.4	2.5	2.6	2.7
Overall Diameter of cable	mm	29.0	30.0	31.5	33.5	35.0	36.5	38.5	41.0	43.5	46.5	50.0	54.0
Weight of cable, approximate	kg/km	1130	1275	1540	1855	2140	2450	2855	3475	4135	5010	6155	7650

ELECTRICAL DATA

AC Voltage test for 5 min.	kV	42	42	42	42	42	42	42	42	42	42	42	42
Partial Discharge test at max. 10pC	kV	20.76	20.76	20.76	20.76	20.76	20.76	20.76	20.76	20.76	20.76	20.76	20.76
DC Resistance at 20°C	Ω / km	0.524	0.387	0.268	0.193	0.153	0.124	0.0991	0.0754	0.0601	0.0470	0.0366	0.0283
AC Resistance at 90°C	Ω / km	0.668	0.494	0.342	0.247	0.196	0.159	0.127	0.0974	0.0783	0.0621	0.0495	0.0398
Insulation Resistance at 20°C	M Ω. km	3500	3500	3000	2500	2500	2500	2000	2000	2000	1500	1500	1500
Capacitance	μF / km	0.165	0.178	0.199	0.224	0.240	0.258	0.279	0.309	0.339	0.373	0.412	0.459
Inductance (Trefoil)	mH / km	0.470	0.450	0.424	0.401	0.388	0.376	0.364	0.350	0.337	0.326	0.316	0.304
Reactance (Trefoil)	Ω / km	0.148	0.142	0.133	0.126	0.122	0.118	0.114	0.110	0.106	0.102	0.0991	0.0955
Current Carrying Capacity :													
- Buried direct in ground at 20°C ***) (Trefoil)	A	166	196	239	285	323	361	406	469	526	590	* 655	* 740
(Flat spaced)	A	172	203	246	293	332	366	410	470	524	572	* 650	* 730
- In Air at 30°C (Trefoil)	A	198	238	296	361	417	473	543	641	735	845	* 940	* 1080
(Flat spaced)	A	238	286	356	434	500	559	637	745	846	938	* 1075	* 1235
(Flat touching)	A	203	243	303	369	426	481	550	647	739	837	* 945	* 1080
Short circuit current rating at 1 sec. (approx.)	kA	5.01	7.15	10.01	13.59	17.16	21.45	26.46	34.32	42.90	57.20	71.50	90.09

*) typical data

**) Diameter compacted shape

***) Thermal Resistivity of soil : 1.5°K.m/W, Depth of laying : 0.8 m

18/30 (36) kV Cu / XLPE / CTS / DATA / PVC (N2XSYB(AI)Y) 1 x (50 - 630) mm²

CONSTRUCTION DATA

No. of Core	-	1	1	1	1	1	1	1	1	1	1	1	1
Nom. Cross-section area	mm ²	50	70	95	120	150	185	240	300	400	500	630	
No. of Wire	-	19	19	19	37	37	37	37	61	61	61	91	
Diameter of Conductor, approx. **)	mm	8.1	9.7	11.6	12.9	14.3	16.0	18.3	20.7	23.4	26.5	30.3	
Nom. Thickness of Insulation	mm	8.0	8.0	8.0	8.0	8.0	8.0	8.0	8.0	8.0	8.0	8.0	
Nom. Thickness of Copper tape	mm	0.085	0.085	0.085	0.085	0.085	0.085	0.085	0.085	0.085	0.085	0.085	
Nom. Thickness of Separation Sheath	mm	1.2	1.2	1.2	1.2	1.3	1.3	1.3	1.4	1.4	1.5	1.6	
Nom. Thickness of aluminium tape	mm	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	
Nom. Thickness of Outer sheath	mm	2.1	2.2	2.2	2.3	2.3	2.4	2.5	2.5	2.6	2.7	2.9	
Overall Diameter of cable	mm	35.5	37.0	39.0	40.5	42.0	44.0	46.5	49.0	52.0	55.5	60.0	
Weight of cable, approximate	kg/km	1610	1890	2215	2515	2850	3260	3905	4590	5485	6665	8225	

ELECTRICAL DATA

AC Voltage test for 5 min.	kV	63	63	63	63	63	63	63	63	63	63	63	63
Partial Discharge test at max. 10pC	kV	31.14	31.14	31.14	31.14	31.14	31.14	31.14	31.14	31.14	31.14	31.14	31.14
DC Resistance at 20°C	Ω / km	0.387	0.268	0.193	0.153	0.124	0.0991	0.0754	0.0601	0.0470	0.0366	0.0283	
AC Resistance at 90°C	Ω / km	0.494	0.342	0.247	0.196	0.159	0.127	0.0973	0.0782	0.0619	0.0493	0.0395	
Insulation Resistance at 20°C	M Ω. km	4000	4000	3500	3000	3000	3000	2500	2500	2000	2000	2000	
Capacitance	μF / km	0.138	0.153	0.170	0.182	0.194	0.209	0.229	0.250	0.274	0.300	0.333	
Inductance (Trefoil)	mH / km	0.484	0.456	0.431	0.417	0.404	0.391	0.375	0.361	0.348	0.336	0.325	
Reactance (Trefoil)	Ω / km	0.152	0.143	0.135	0.131	0.127	0.123	0.118	0.113	0.109	0.106	0.102	
Current Carrying Capacity :													
- Buried direct in ground at 20°C ***) (Trefoil)	A	196	239	285	323	361	406	469	526	590	* 655	* 740	
(Flat spaced)	A	203	246	293	332	366	410	470	524	572	* 650	* 730	
- In Air at 30°C (Trefoil)	A	238	296	361	417	473	543	641	735	845	* 940	* 1080	
(Flat spaced)	A	286	356	434	500	559	637	745	846	938	* 1075	* 1235	
(Flat touching)	A	243	303	369	426	481	550	647	739	837	* 945	* 1080	
Short circuit current rating at 1 sec. (approx.)	kA	7.15	10.01	13.59	17.16	21.45	26.46	34.32	42.90	57.20	71.50	90.09	

*) typical data

**) Diameter compacted shape

***) Thermal Resistivity of soil : 1.5°K.m/W, Depth of laying : 0.8 m