SUMI INDO KABEL

(3.6/6 kV ~ 18/30 kV) Cu/XLPE/CTS/PVC (N2XSEY) - 3 CORE

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.

Copper conductor
Conductor screen
XLPE insulation
Insulation screen
Identification of core (Red, Yellow, Blue by colored tape)
Copper tape screen
Filler (Polypropylene yarn or extruded filler upon request)
Binding tape (Manufacturer's option)
PVC sheath (Red or Black color)

3.6/6 (7.2) kV Cu/XLPE/CTS/PVC (N2XSEY) 3 x (25 - 300) mm²

CONSTRUCTION DATA

No. of Core	-	3	3	3	3	3	3	3	3	3	3
Nom. Cross-section Area	mm²	25	35	50	70	95	120	150	185	240	300
No. of Wire	-	7	7	19	19	19	37	37	37	37	61
Diameter of Conductor (approx.) [1]	mm	5.9	7.1	8.1	9.7	11.6	12.9	14.3	16.0	18.3	20.7
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
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
Nom. Thickness of Outer Sheath	mm	2.1	2.2	2.3	2.4	2.5	2.6	2.7	2.8	3.0	3.2
Overall Diameter of Cable	mm	34.5	37.0	39.5	43.0	47.5	50.5	54.0	57.5	63.5	69.5
Weight of Cable (approx.)	kg/km	1580	1955	2375	3090	3985	4780	5700	6840	8735	10695

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
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
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
AC Resistance at 90°C	Ω/km	0.927	0.668	0.494	0.342	0.247	0.196	0.159	0.128	0.0981	0.0792
Insulation Resistance at 20°C	M Ω. km	2500	2000	2000	1500	1500	1500	1500	1500	1000	900
Capacitance	µF/km	0.266	0.300	0.328	0.373	0.427	0.463	0.502	0.550	0.593	0.615
Inductance	mH/km	0.360	0.340	0.326	0.309	0.294	0.285	0.277	0.270	0.263	0.258
Reactance	Ω/km	0.113	0.107	0.102	0.0970	0.0922	0.0895	0.0871	0.0847	0.0825	0.0810
Current Carrying Capacity [2] :											
- Buried direct in ground at 20°C	A	129	153	181	221	262	298	334	377	434	489
- In a Buried duct at 20°C	A	112	133	158	193	231	264	297	336	390	441
- In Air at 30°C	A	142	170	204	253	304	351	398	455	531	606
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

[1] Diameter compacted shape

[2] Thermal Resistivity of soil : 1.5°K.m/W, Depth of laying : 0.8 m
Thermal Resistivity of earthenware ducts : 1.2 K.m/W

6/10 (12) kV Cu/XLPE/CTS/PVC (N2XSEY) 3 x (25 - 300) mm²

CONSTRUCTION DATA

No. of Core	-	3	3	3	3	3	3	3	3	3	3
Nom. Cross-section Area	mm²	25	35	50	70	95	120	150	185	240	300
No. of Wire	-	7	7	19	19	19	37	37	37	37	61
Diameter of Conductor (approx.) [1]	mm	5.9	7.1	8.1	9.7	11.6	12.9	14.3	16.0	18.3	20.7
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
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
Nom. Thickness of Outer Sheath	mm	2.2	2.3	2.4	2.5	2.7	2.8	2.9	3.0	3.1	3.3
Overall Diameter of Cable	mm	38.5	41.5	43.5	47.5	52.0	55.0	58.0	62.0	67.0	72.0
Weight of Cable (approx.)	kg/km	1800	2190	2625	3355	4300	5110	6050	7215	9035	10980

ELECTRICAL DATA

AC Voltage Test for 5 min.	kV	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
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
AC Resistance at 90°C	Ω / km	0.927	0.668	0.494	0.342	0.247	0.196	0.159	0.128	0.0980	0.0791
Insulation Resistance at 20°C	M Ω. km	3000	2500	2500	2000	2000	2000	1500	1500	1500	1500
Capacitance	µF / km	0.211	0.236	0.257	0.291	0.330	0.357	0.386	0.421	0.468	0.518
Inductance	mH / km	0.384	0.362	0.347	0.328	0.311	0.302	0.293	0.284	0.274	0.266
Reactance	Ω / km	0.121	0.114	0.109	0.103	0.0977	0.0947	0.0920	0.0892	0.0862	0.0836
Current Carrying Capacity [2] :											
- Buried direct in ground at 20°C	A	129	153	181	221	262	298	334	377	434	489
- In a Buried duct at 20°C	A	112	133	158	193	231	264	297	336	390	441
- In Air at 30°C	A	142	170	204	253	304	351	398	455	531	606
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

[1] Diameter compacted shape

[2] Thermal Resistivity of soil : 1.5°K.m/W, Depth of laying : 0.8 m
Thermal Resistivity of earthenware ducts : 1.2 K.m/W

8.7/15 (17.5) kV Cu/XLPE/CTS/PVC (N2XSEY) 3 x (25 - 300) mm²

CONSTRUCTION DATA

No. of Core	-	3	3	3	3	3	3	3	3	3	3
Nom. Cross-section Area	mm²	25	35	50	70	95	120	150	185	240	300
No. of Wire	-	7	7	19	19	19	37	37	37	37	61
Diameter of Conductor (approx.) [1]	mm	5.9	7.1	8.1	9.7	11.6	12.9	14.3	16.0	18.3	20.7
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
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
Nom. Thickness of Outer Sheath	mm	2.4	2.5	2.6	2.7	2.8	2.9	3.0	3.1	3.3	3.5
Overall Diameter of Cable	mm	43.5	46.5	49.0	52.5	57.0	60.0	63.0	67.0	72.0	77.5
Weight of Cable (approx.)	kg/km	2115	2525	2975	3735	4685	5510	6475	7660	9545	11525

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
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
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
AC Resistance at 90°C	Ω / km	0.927	0.668	0.494	0.342	0.247	0.196	0.159	0.128	0.0979	0.0789
Insulation Resistance at 20°C	M Ω. km	3500	3000	3000	2500	2500	2000	2000	2000	1500	1500
Capacitance	µF / km	0.173	0.192	0.208	0.234	0.264	0.284	0.307	0.333	0.369	0.407
Inductance	mH / km	0.411	0.387	0.370	0.350	0.331	0.320	0.310	0.301	0.289	0.280
Reactance	Ω / km	0.129	0.121	0.116	0.110	0.104	0.101	0.0975	0.0944	0.0909	0.0879
Current Carrying Capacity [2] :											
- Buried direct in ground at 20°C	A	129	153	181	221	262	298	334	377	434	489
- In a Buried duct at 20°C	A	112	133	158	193	231	264	297	336	390	441
- In Air at 30°C	A	142	170	204	253	304	351	398	455	531	606
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

[1] Diameter compacted shape

[2] Thermal Resistivity of soil : 1.5°K.m/W, Depth of laying : 0.8 m
Thermal Resistivity of earthenware ducts : 1.2 K.m/W

12/20 (24) kV Cu/XLPE/CTS/PVC (N2XSEY) 3 x (35 - 300) mm²

CONSTRUCTION DATA

No. of Core	-	3	3	3	3	3	3	3	3	3
Nom. Cross-section Area	mm²	35	50	70	95	120	150	185	240	300
No. of Wire	-	7	19	19	19	37	37	37	37	61
Diameter of Conductor (approx.) [1]	mm	7.1	8.1	9.7	11.6	12.9	14.3	16.0	18.3	20.7
Nom. Thickness of Insulation	mm	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
Nom. Thickness of Outer Sheath	mm	2.6	2.7	2.8	3.0	3.1	3.2	3.3	3.5	3.6
Overall Diameter of Cable	mm	51.5	54.0	57.5	62.0	65.0	68.0	72.0	77.5	82.5
Weight of Cable (approx.)	kg/km	2870	3340	4120	5125	5975	6960	8170	10095	12075

ELECTRICAL DATA

AC Voltage Test for 5 min.	kV	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
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
AC Resistance at 90°C	Ω / km	0.668	0.494	0.342	0.247	0.196	0.159	0.128	0.0978	0.0788
Insulation Resistance at 20°C	M Ω. km	3500	3500	3000	2500	2500	2500	2000	2000	2000
Capacitance	µF / km	0.165	0.178	0.199	0.224	0.240	0.258	0.279	0.309	0.339
Inductance	mH / km	0.408	0.391	0.369	0.349	0.337	0.327	0.316	0.303	0.293
Reactance	Ω / km	0.128	0.123	0.116	0.109	0.106	0.103	0.0991	0.0953	0.0920
Current Carrying Capacity [2] :										
- Buried direct in ground at 20°C	A	153	181	221	262	298	334	377	434	489
- In a Buried duct at 20°C	A	133	158	193	231	264	297	336	390	441
- In Air at 30°C	A	170	204	253	304	351	398	455	531	606
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

[1] Diameter compacted shape

[2] Thermal Resistivity of soil : 1.5°K.m/W, Depth of laying : 0.8 m
Thermal Resistivity of earthenware ducts : 1.2 K.m/W

18/30 (36) kV Cu/XLPE/CTS/PVC (N2XSEY) 3 x (50 - 300) mm²

CONSTRUCTION DATA

No. of Core	-	3	3	3	3	3	3	3	3
Nom. Cross-section Area	mm²	50	70	95	120	150	185	240	300
No. of Wire	-	19	19	19	37	37	37	37	61
Diameter of Conductor (approx.) [1]	mm	8.1	9.7	11.6	12.9	14.3	16.0	18.3	20.7
Nom. Thickness of Insulation	mm	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
Nom. Thickness of Outer Sheath	mm	3.1	3.2	3.3	3.4	3.6	3.7	3.8	4.0
Overall Diameter of Cable	mm	66.0	69.5	73.5	76.5	80.0	84.0	89.0	94.5
Weight of Cable (approx.)	kg/km	4370	5205	6250	7150	8220	9495	11465	13560

ELECTRICAL DATA

AC Voltage Test for 5 min.	kV	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
DC Resistance at 20°C	Ω / km	0.387	0.268	0.193	0.153	0.124	0.0991	0.0754	0.0601
AC Resistance at 90°C	Ω / km	0.494	0.342	0.247	0.196	0.159	0.127	0.0976	0.0785
Insulation Resistance at 20°C	M Ω. km	4000	4000	3500	3500	3000	3000	2500	2500
Capacitance	µF / km	0.138	0.153	0.170	0.182	0.194	0.209	0.229	0.250
Inductance	mH / km	0.433	0.408	0.385	0.372	0.360	0.347	0.333	0.318
Reactance	Ω / km	0.136	0.128	0.121	0.117	0.113	0.109	0.105	0.100
Current Carrying Capacity [2] :									
- Buried direct in ground at 20°C	A	181	221	262	298	334	377	434	489
- In a Buried duct at 20°C	A	158	193	231	264	297	336	390	441
- In Air at 30°C	A	204	253	304	351	398	455	531	606
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

[1] Diameter compacted shape

[2] Thermal Resistivity of soil : 1.5°K.m/W, Depth of laying : 0.8 m
Thermal Resistivity of earthenware ducts : 1.2 K.m/W