



SINA CABLE CO.

Client Name: Hamian Sanat Energy CO.

Project: ---

Technical Bid No:

03-77-155

Rev.:

00

**Page
Number:**

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Specification Sheet for Cables

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Issued for Review &
Approval

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Rev.

Date

Status

Prepared
(Sales Engineering)

Checked by
(Engineering Dep.)

Final Approved

Client Name:
Hamian Sanat Energy CO.




Project:

Date: 2024-12-18

SINA CABLE Co.

INDEX

Dsh No.	Product Code	Cable Size (mm ²)	Construction	Colour	Voltage (KV)	length (m)
1	1002207_IC	1x2x1.5 / (1x0.5)	CU2/XLPE/OSCR/LSPVC/SWA/LSPVC	Light Blue	0.3-0.5	1000
2	1015668_IC	1x2x2.5 / (1x0.5)	CU2/XLPE/OSCR/LSPVC/SWA/LSPVC	Grey	0.3-0.5	1000
3	1009786_IC	2x2x1.5 / (3x0.5)	CU2/XLPE/ISCR/OSCR/LSPVC/SWA/LSPVC	Grey	0.3-0.5	1000

Client: CUSTOMER		 SINA CABLE CO.	Project: ---
Tech. No.: 03-77-155	Dsh. No.: 1		Item No.: 1
Date: 2024/12/18	Rev.: 0		
Product Code: 1002207_IC			

Specification Sheet For Instrument Cable

Size (mm ²)	Construction	Voltage (KV)	Standard	Product Type
1x2x1.5 / (1x0.5)	CU2/XLPE/OSCR/LSPVC/SWA/LSPVC	0.3-0.5	BS EN 50288-7	RE-2X(St)YRY
QTY (m)	1000			

General Information

Cable Usage	INSTRUMENT	No. Twist (Pair)	1
Cable Type	Flame Retardant Instrument Cable	No. Core of Twist	2 (Pair)
Cores Identification	Black-White	No. Element	2
Cable Colour	Light Blue	Conductor CSA(mm ²)	1.5
Net Weight (g/m)	286 (Approx.)	Cable Diameter (mm)	12.5 (±7%) (Approx.)
Properties	Low Smoke - UV Resistant		
Marking	SINA CABLE CO. (Year) RE-2X(St)YRY 1x2x1.5 / (1x0.5) mm ² FRT Instrument Cable 0.3-0.5 KV BS EN 50288-7		

Cable Construction

Conductor & Insulation (CU2/XLPE)

Conductor Material	Plain Annealed Copper (CU)	Conductor Dia.	mm 1.55
Conductor Class	Stranded Class 2	MGT Thickness	mm ---
Conductor Shape	Round (RM)	Insulation Material	XLPE
Conductor CSA	mm ² 1.5	Insulation Thickness	mm 0.6 (BS EN 50288-7)
Conductor Detail	No. x mm 7 x 0.52	Over Insulation Dia.	mm 2.8

Twist 'For Each Pair'

No. Core of Twist	No. 2	Over Twist Diameter	mm 5.5
Each Core Diameter	mm 2.8	Lay Length	mm Max 100 (BS EN 50288-7)

Laid Up (CU2/XLPE)


No. Twists/Cores	No. 1 Pair
Each Twist/Core Dia.	mm 5.5
Over Laid Up Dia.	mm 5.5

Overall Screen (OSCR)

Material	PET+DW+ALPET+PET
MGT Thickness	mm ---
PET 1 Thickness	mm 0.035 (1L / 50% OL)
Drain Wire CSA	mm ² 0.5 (TICU - Class2)
Bonded Tape Thick.	mm ALPET 0.035 (1L/25%OL)
PET 2 Thickness	mm 0.035 (1L / 25% OL)
Over OSCR Dia.	mm 6.1

Inner Covering (LSPVC)

Material (Extruded)	LSPVC 90 (ST2)
Nominal Thickness	mm 0.9 (BS EN 50288-7)
Over Bedding Dia.	mm 7.9

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Product Code: 1002207_IC			

Specification Sheet For Instrument Cable

Size (mm ²)	Construction	Voltage (KV)	Standard	Product Type
1x2x1.5 / (1x0.5)	CU2/XLPE/OSCR/LSPVC/SWA/LSPVC	0.3-0.5	BS EN 50288-7	RE-2X(St)YRY
QTY (m)	1000			

Wire Armour (SWA)

Material	Single Gal. Steel Wire
Wire Diameter	mm 0.9 (BS EN 50288-7)
Over Armour Dia.	mm 9.7

Counter Polypropylene Tape

Material	Polypropylene Tape
PP Tape Thickness	mm 0.1 (1L / 25% OL)
Over Counter Tape Dia.	mm 9.9

Outer Sheath (LSPVC)

Material (Extruded)	LSPVC 90 (ST2)
Outer Sheath Colour	Light Blue
Nominal Thickness	mm 1.3 (BS EN 50288-7)
Over Outer Sheath Dia.	mm 12.5

Electrical Parameters


DC Resistance 20°C (Max.)	Ω/Km 12.1	Rated Voltage U	V 300-500
Insulation Resistance	MΩ.Km 1000	L/R Ratio	μH/Ω 40
Mutual Capacitance 0.1 KHz	nF/Km 150	Operating Temp. (Max.) (Normal / Short Circuit)	°C 90 / 250
Capacitance Unbalance	pF/250m 250	Test Voltage for 1 min	KV 2 AC / 3 DC

Installation Notes

Ambient Temp. Installing	°C -5 To +60	Bending Radius (Min.)	mm 150 (12 x OD)
Ambient Temp. Operating	°C -30 To +90	Pulling Force (Max.)	N 1406

Applicable Standards

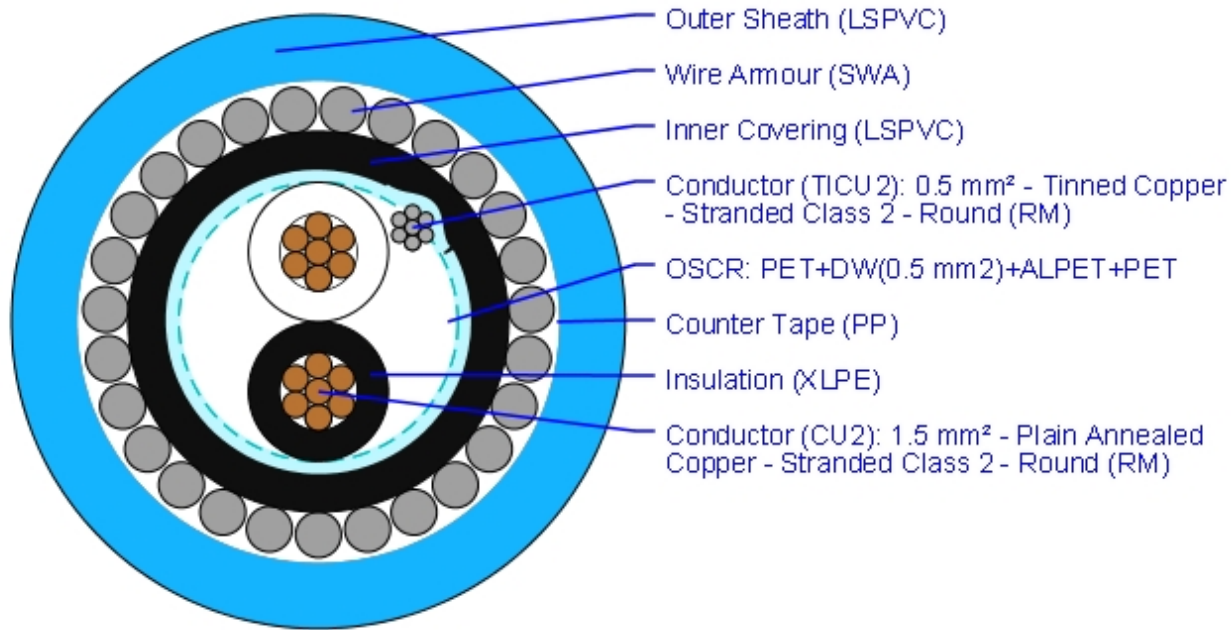
Design	BS EN 50288-7	Oxygen Index	ASTM D2863 (Min.32%)
Conductor	IEC 60228	Halogen Acid Gas	IEC 60754-1 (Max.17%)
Insulation/Jacket Tests	IEC 60811	Smoke Density	IEC 61034-2 (L.T. 30 %) (Approx.)
Flame Retardant (FRT)	IEC 60332-3 Cat. C		

Client: CUSTOMER		 SINA CABLE CO.	Project: ---
Tech. No.: 03-77-155	Dsh. No.: 1		Item No.: 1
Date: 2024/12/18	Rev.: 0		
Product Code: 1002207_IC			


Specification Sheet For Instrument Cable

Size (mm ²)	Construction	Voltage (KV)	Standard	Product Type
1x2x1.5 / (1x0.5)	CU2/XLPE/OSCR/LSPVC/SWA/LSPVC	0.3-0.5	BS EN 50288-7	RE-2X(St)YRY
QTY (m)	1000			

Cross Section Drawing



*Note: All diameters in this Specification Sheet are approximate.

Client: CUSTOMER		 SINA CABLE CO.	Project: ---	
Tech. No.: 03-77-155	Dsh. No.: 2		Item No.: 2	
Date: 2024/12/18	Rev.: 0			
Product Code: 1015668_IC				

Specification Sheet For Instrument Cable

Size (mm ²)	Construction	Voltage (KV)	Standard	Product Type
1x2x2.5 / (1x0.5)	CU2/XLPE/OSCR/LSPVC/SWA/LSPVC	0.3-0.5	BS EN 50288-7	RE-2X(St)YRY
QTY (m)	1000			

General Information

Cable Usage	INSTRUMENT	No. Twist (Pair)	1
Cable Type	Flame Retardant Instrument Cable	No. Core of Twist	2 (Pair)
Cores Identification	Black-White	No. Element	2
Cable Colour	Grey	Conductor CSA(mm ²)	2.5
Net Weight (g/m)	349 (Approx.)	Cable Diameter (mm)	13.98 (±7%) (Approx.)
Properties	Low Smoke - UV Resistant		
Marking	SINA CABLE CO. (Year) RE-2X(St)YRY 1x2x2.5 / (1x0.5) mm ² FRT Instrument Cable 0.3-0.5 KV BS EN 50288-7		

Cable Construction

Conductor & Insulation (CU2/XLPE)

Conductor Material	Plain Annealed Copper (CU)	Conductor Dia.	mm	1.99
Conductor Class	Stranded Class 2	MGT Thickness	mm	---
Conductor Shape	Round (RM)	Insulation Material		XLPE
Conductor CSA	mm ² 2.5	Insulation Thickness	mm	0.7 (BS EN 50288-7)
Conductor Detail	No. x mm 7 x 0.66	Over Insulation Dia.	mm	3.4

Twist ' For Each Pair '

No. Core of Twist	No.	2	Over Twist Diameter	mm	6.8
Each Core Diameter	mm	3.4	Lay Length	mm	Max 150 (BS EN 50288-7)

Laid Up (CU2/XLPE)


No. Twists/Cores	No.	1 Pair
Each Twist/Core Dia.	mm	6.8
Over Laid Up Dia.	mm	6.8

Overall Screen (OSCR)

Material	PET+DW+ALPET+PET
MGT Thickness	mm ---
PET 1 Thickness	mm 0.035 (1L / 50% OL)
Drain Wire CSA	mm ² 0.5 (TICU - Class2)
Bonded Tape Thick.	mm ALPET 0.035 (1L/25%OL)
PET 2 Thickness	mm 0.035 (1L / 25% OL)
Over OSCR Dia.	mm 7.4

Inner Covering (LSPVC)

Material (Extruded)	LSPVC 90 (ST2)
Nominal Thickness	mm 0.9 (BS EN 50288-7)
Over Bedding Dia.	mm 9.2

Client: CUSTOMER		 SINA CABLE CO.	Project: ---
Tech. No.: 03-77-155	Dsh. No.: 2		Item No.: 2
Date: 2024/12/18	Rev.: 0		
Product Code: 1015668_IC			

Specification Sheet For Instrument Cable

Size (mm ²)	Construction	Voltage (KV)	Standard	Product Type
1x2x2.5 / (1x0.5)	CU2/XLPE/OSCR/LSPVC/SWA/LSPVC	0.3-0.5	BS EN 50288-7	RE-2X(St)YRY
QTY (m)	1000			

Wire Armour (SWA)

Material	Single Gal. Steel Wire
Wire Diameter	mm 0.9 (BS EN 50288-7)
Over Armour Dia.	mm 11

Counter Polypropylene Tape

Material	Polypropylene Tape
PP Tape Thickness	mm 0.1 (1L / 25% OL)
Over Counter Tape Dia.	mm 11.2

Outer Sheath (LSPVC)

Material (Extruded)	LSPVC 90 (ST2)
Outer Sheath Colour	Grey
Nominal Thickness	mm 1.4 (BS EN 50288-7)
Over Outer Sheath Dia.	mm 14

Electrical Parameters


DC Resistance 20°C (Max.)	Ω/Km	7.41	Rated Voltage U	V	300-500
Insulation Resistance	MΩ.Km	1000	L/R Ratio	μH/Ω	60
Mutual Capacitance 0.1 KHz	nF/Km	150	Operating Temp. (Max.) (Normal / Short Circuit)	°C	90 / 250
Capacitance Unbalance	pF/250m	250	Test Voltage for 1 min	KV	2 AC / 3 DC

Installation Notes

Ambient Temp. Installing	°C	-5 To +60	Bending Radius (Min.)	mm	168 (12 x OD)
Ambient Temp. Operating	°C	-30 To +90	Pulling Force (Max.)	N	1759

Applicable Standards

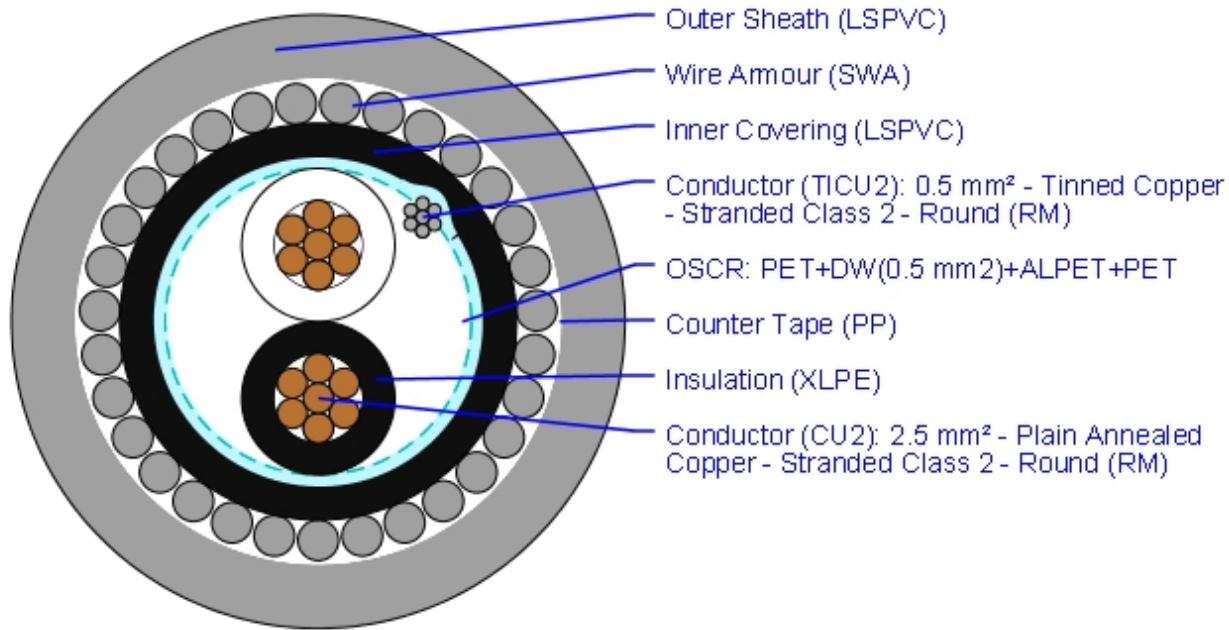
Design	BS EN 50288-7	Oxygen Index	ASTM D2863 (Min.32%)
Conductor	IEC 60228	Halogen Acid Gas	IEC 60754-1 (Max.17%)
Insulation/Jacket Tests	IEC 60811	Smoke Density	IEC 61034-2 (L.T. 30 %) (Approx.)
Flame Retardant (FRT)	IEC 60332-3 Cat. C		

Client: CUSTOMER		 SINA CABLE CO.	Project: ---
Tech. No.: 03-77-155	Dsh. No.: 2		Item No.: 2
Date: 2024/12/18	Rev.: 0		
Product Code: 1015668_IC			


Specification Sheet For Instrument Cable

Size (mm ²)	Construction	Voltage (KV)	Standard	Product Type
1x2x2.5 / (1x0.5)	CU2/XLPE/OSCR/LSPVC/SWA/LSPVC	0.3-0.5	BS EN 50288-7	RE-2X(St)YRY
QTY (m)	1000			

Cross Section Drawing



*Note: All diameters in this Specification Sheet are approximate.

Client: CUSTOMER		 SINA CABLE CO.	Project: ---
Tech. No.: 03-77-155	Dsh. No.: 3		Item No.: 3
Date: 2024/12/18	Rev.: 0		
Product Code: 1009786_IC			

Specification Sheet For Instrument Cable

Size (mm ²)	Construction	Voltage (KV)	Standard	Product Type
2x2x1.5 / (3x0.5)	CU2/XLPE/ISCR/OSCR/LSPVC/SWA/LSPVC	0.3-0.5	BS EN 50288-7	RE-2X(St)YRY-PIMF
QTY (m)	1000			

General Information

Cable Usage	INSTRUMENT	No. Twist (Pair)	2
Cable Type	Flame Retardant Instrument Cable	No. Core of Twist	2 (Pair)
Cores Identification	Black-White (Numbered Core)	No. Element	4
Cable Colour	Grey	Conductor CSA(mm ²)	1.5
Net Weight (g/m)	517 (Approx.)	Cable Diameter (mm)	17.81 (±7%) (Approx.)
Properties	Low Smoke - UV Resistant		
Marking	SINA CABLE CO. (Year) RE-2X(St)YRY-PIMF 2x2x1.5 / (3x0.5) mm2 FRT Instrument Cable 0.3-0.5 KV BS EN 50288-7		

Cable Construction

Conductor & Insulation (CU2/XLPE)

Conductor Material	Plain Annealed Copper (CU)	Conductor Dia.	mm 1.55
Conductor Class	Stranded Class 2	MGT Thickness	mm ---
Conductor Shape	Round (RM)	Insulation Material	XLPE
Conductor CSA	mm ² 1.5	Insulation Thickness	mm 0.6 (BS EN 50288-7)
Conductor Detail	No. x mm 7 x 0.52	Over Insulation Dia.	mm 2.8

Twist ' For Each Pair '

No. Core of Twist	No.	2	Over Twist Diameter	mm 5.5
Each Core Diameter	mm	2.8	Lay Length	mm Max 100 (BS EN 50288-7)

Individual Screen (ISCR) ' For Each Pair '


Material	PET+DW+ALPET+PET	Bonded Tape Thick.	mm ALPET 0.035 (1L/25%OL)
MGT Thickness	mm ---	PET 2 Thickness	mm 0.035 (1L / 50% OL)
PET 1 Thickness	mm 0.035 (1L / 25% OL)	Over ISCR Dia.	mm 5.8
Drain Wire CSA	mm ² 0.5 (TICU - Class 2)		

Laid Up (CU2/XLPE/ISCR)

No. Twists/Cores	No.	2 Pair	
Each Twist/Core Dia.	mm	5.8	
Over Laid Up Dia.	mm	10.3	

Overall Screen (OSCR)

Material	PET+DW+ALPET+PET		
MGT Thickness	mm ---		
PET 1 Thickness	mm 0.035 (1L / 50% OL)		
Drain Wire CSA	mm ² 0.5 (TICU - Class2)		
Bonded Tape Thick.	mm ALPET 0.035 (1L/25%OL)		
PET 2 Thickness	mm 0.035 (1L / 25% OL)		

Client: CUSTOMER		 SINA CABLE CO.	Project: ---
Tech. No.: 03-77-155	Dsh. No.: 3		Item No.: 3
Date: 2024/12/18	Rev.: 0		
Product Code: 1009786_IC			

Specification Sheet For Instrument Cable

Size (mm ²)	Construction	Voltage (KV)	Standard	Product Type
2x2x1.5 / (3x0.5)	CU2/XLPE/ISCR/OSCR/LSPVC/SWA/LSPVC	0.3-0.5	BS EN 50288-7	RE-2X(St)YRY-PIMF
QTY (m)	1000			

Over OSCR Dia. mm 10.6

Inner Covering (LSPVC)

Material (Extruded) LSPVC 90 (ST2)

Nominal Thickness mm 1.1 (BS EN 50288-7)

Over Bedding Dia. mm 12.8

Wire Armour (SWA)

Material Single Gal. Steel Wire

Wire Diameter mm 0.9 (BS EN 50288-7)

Over Armour Dia. mm 14.6

Counter Polypropylene Tape

Material Polypropylene Tape

PP Tape Thickness mm 0.1 (1L / 25% OL)

Over Counter Tape Dia. mm 14.8

Outer Sheath (LSPVC)

Material (Extruded) LSPVC 90 (ST2)

Outer Sheath Colour Grey

Nominal Thickness mm 1.5 (BS EN 50288-7)

Over Outer Sheath Dia. mm 17.8

Electrical Parameters


DC Resistance 20°C (Max.)	Ω/Km	12.34	Rated Voltage U	V	300-500
Insulation Resistance	MΩ.Km	1000	L/R Ratio	μH/Ω	40
Mutual Capacitance 0.1 KHz	nF/Km	150	Operating Temp. (Max.) (Normal / Short Circuit)	°C	90 / 250
Capacitance Unbalance	pF/250m	250	Test Voltage for 1 min	KV	2 AC / 3 DC

Installation Notes

Ambient Temp. Installing	°C	-5 To +60	Bending Radius (Min.)	mm	214 (12 x OD)
Ambient Temp. Operating	°C	-30 To +90	Pulling Force (Max.)	N	2855

Applicable Standards

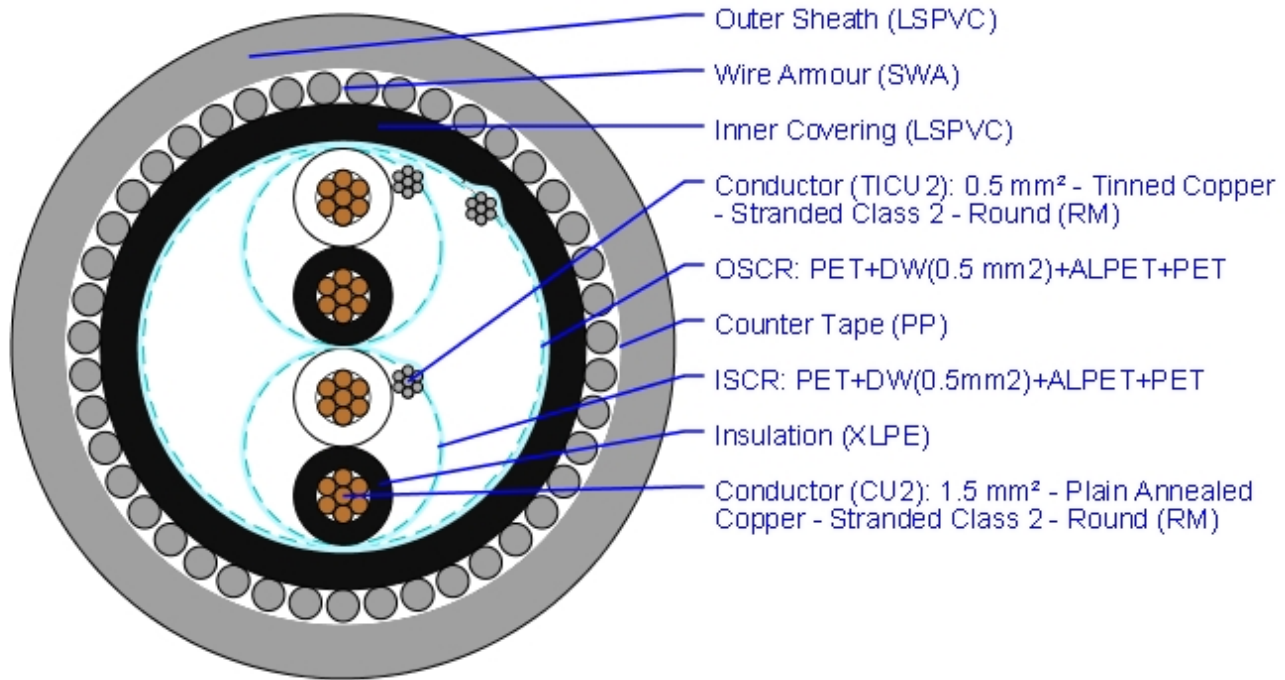
Design	BS EN 50288-7	Oxygen Index	ASTM D2863 (Min.32%)
Conductor	IEC 60228	Halogen Acid Gas	IEC 60754-1 (Max.17%)
Insulation/Jacket Tests	IEC 60811	Smoke Density	IEC 61034-2 (L.T. 30 %) (Approx.)
Flame Retardant (FRT)	IEC 60332-3 Cat. C		

Client: CUSTOMER		 SINA CABLE CO.	Project: ---
Tech. No.: 03-77-155	Dsh. No.: 3		Item No.: 3
Date: 2024/12/18	Rev.: 0		
Product Code: 1009786_IC			

Specification Sheet For Instrument Cable

Size (mm ²)	Construction	Voltage (KV)	Standard	Product Type
2x2x1.5 / (3x0.5)	CU2/XLPE/ISCR/OSCR/LSPVC/SWA/LSPVC	0.3-0.5	BS EN 50288-7	RE-2X(St)YRY-PIMF
QTY (m)	1000			

Cross Section Drawing



*Note: All diameters in this Specification Sheet are approximate.