

CAT 5e UTP	4x2x24 AWG	Part Number : 26005004
CAT 5e P-UTP	4x2x24 AWG	Part Number: 26105004
CAT 5e H-UTP	4x2x24 AWG	Part Number: 26205004



### Application

CAT 5e cables tested according to ISO Class D standards are used in data transmission systems that work up to 155 Mbit/s. These cables are particularly preferred in the offices, management buildings, research and development building where many terminals are found. Maximum run length of the cables is 90 m according to ISO/IEC11801 and EN 20173.

The outer sheath material of CAT 5e UTP cable is PVC for indoor application; CAT 5e P-UTP is black PE for outdoor application and CAT 5e H-UTP is HFFR (LSZH-LSOH) halogen free flame retardant compound which has low smoke density and no toxic/corrosive gases during a fire.

### Construction

Conductor	Ø0.51 mm Electrolytic Annealed Copper Wire (AWG 24)
Insulation	Polyethylene (EN 50290-2, VDE 0207-2Y11)
Lay-up	Two cores twisted in pair and pairs stranded together
Sheath	Ø5.20 mm PVC Grey (EN 50290-2, HD 21.1.S4, VDE 0281 TM1) PE Black (EN 50290 -2 -24) HFFR Grey (EN 50290-2, VDE 0207, HD624.7 S1 Hm2)

Reference Standards	IEC 189, IEC 708, EIA/TIA 568
Flame Test	IEC/EN 60332-1, VDE 0482-265-2-1
Smoke Density (CAT 5e H-UTP)	IEC / EN 61034-2, EN 50268 (HD 606), BS 7622
Corrosive Gas Measurement (CAT 5e H-UTP)	IEC 60754-2, EN 50267 (HD 602)

**Color Code** : According to IEC 189

Pair 1 : Blue / White - Blue
Pair 2 : Orange / White - Orange
Pair 3 : Green / White - Green
Pair 4 : Brown / White - Brown

Copper Weight (Kg/Km)	16
Cable Weight (Kg/Km)	UTP:35 P-UTP:30 H-UTP:37
Standard Packing	305 - 500 - 1000 m.

### Technical and Electrical Properties (20°C)

Impedance	100 ± 15 Ohm
Operating Voltage	250 V
Test Voltage	1200 V
Insulation Resistance	> 5000 M.Ohm x Km
Capacitance	< 52 nF/Km
Temperature Range (Fixed)	-20°C... +70°C
(Flexible)	0°C... +50°C
Minimum Bending Radius	7.5 x Cable Diameter
Loop Resistance	< 178.4 Ohm / Km

Frequency (MHz)	Max. Attenuations (dB/100m)	Min. Return Loss (dB) (SRL)	Min. Near and Crosstalk (dB) (NEXT)
1	1.8	25	73
4	3.7	25	63
8	5.5	25	58
10	6.0	25	56
16	7.5	25	51
20	8.3	25	50
25	9.5	20	49
31.25	10.8	20	48
62.50	15.6	20	43
100	20.6	20	36
155	25.8	18	35

CAT 5e UTP+SWA 4x2x24 AWG Part Number: 26055004

CAT 5e H-UTP+SWA 4x2x24 AWG Part Number: 26255004



### Application

Armoured CAT 5e cables tested according to ISO Class D standards are used in data transmission systems that work up to 155 Mbit/s. These galvanized steel wire armoured cables have good mechanical protection. Maximum run length of the cables is 90 m according to ISO/IEC11801 and EN 20173.

### Construction

Conductor ø0.51 mm Electrolytic Annealed Copper Wire (AWG 24)  
 Insulation Polyethylene (EN 50290-2, VDE 0207-2Y11)  
 Lay-up Two cores twisted in pair and pairs stranded together  
 ø5.20 mm PVC Black (EN 50290-2, HD 21.1.S4, VDE 0281 TM 1)  
 PE Black (EN 50290-2-24)  
 HFFR Black (EN 50290-2, VDE 0207, HD 624.7 S1 HM 2)  
 Armouring Galvanized steel wire ø0.90 mm  
 Sheath ø9.60 mm PVC Black (EN 50290-2, HD 21.1.S4, VDE 0281 TM 1)  
 PE Black (EN 50290-2-24)  
 HFFR Black (EN 50290-2, VDE 0207, HD 624.7 S1 HM 2)

Reference Standards IEC 189, IEC 708, EIA/TIA 568  
 Flame Test IEC/EN 60332-1, VDE 0482-265-2-1  
 Smoke Density (CAT 5e H-UTP+SWA) IEC/EN 61034-2, EN50268 (HD606), BS7622  
 Corrosive Gas Measurement (CAT 5e H-UTP+SWA) IEC 60754-2, EN50267 (HD602)

**Color Code** : According to IEC 189

Pair 1 : Blue / White - Blue  
 Pair 2 : Orange / White - Orange  
 Pair 3 : Green / White - Green  
 Pair 4 : Brown / White - Brown

Copper Weight (Kg/Km) 16  
 Cable Weight (Kg/Km) UTP+SWA :175 H-UTP+SWA:180  
 Standard Packing 500 - 1000 m.

### Technical and Electrical Properties (20°C)

		Frequency (MHz)	Max. Attenuations (dB/100m)	Min. Return Loss (dB) (SRL)	Min. Near and Crosstalk (dB) (NEXT)
Impedance	100 ± 15 Ohm	1	2.1	25	73
Operating Voltage	250 V	4	4.3	25	63
Test Voltage	1200 V	8	5.9	25	58
Insulation Resistance	> 5000 M.Ohm x Km	10	6.6	25	56
Capacitance	< 52 nF/Km	16	8.2	25	51
Temperature Range (Fixed)	-20°C... +70°C	20	9.2	25	50
(Flexible)	0°C... +50°C	25	10.5	20	49
Minimum Bending Radius	10 x Cable Diameter	31.25	11.8	20	48
Loop Resistance	< 178.4 Ohm/Km	62.50	17.1	20	43
		100	22.0	20	36
		155	27.0	18	35



LI02Y(St)CY  
LI02Y(St)CH

EIA/TIA 232-422 (RS 232-422) (Foam-Skin PE Insulation-Overall Screen-100 ohm)  
EIA/TIA 232-422 (RS 232-422)



### Application

They are used for transmission of data signal in computer, information and communication system as well as for process control for computer systems and terminals.

### Construction

Conductor	Stranded Tinned Copper Wires 0.22mm <sup>2</sup> (7x0.20 mm AWG 24), 0.34mm <sup>2</sup> (7x0.25mm AWG 22)
Insulation	Foam-Skin Polyethylene (EN 50290-2) Color Code : DIN 47100
Lay-up	Two cores twisted in pair and pairs stranded together
Separator	Polyester tape
Drain Wire	Stranded Tinned Copper Wires
1.Shield	AL-PES foil
2.Shield	Tinned Copper Wire Braiding 65% Coverage
Sheath	LI02Y(St)CY : PVC (EN 50290-2, HD 21.1.S4, VDE 0281 TM1) Sheath Color : RAL 7001 Grey LI02Y(St)CH : HFFR (EN 50290-2, HD 624.7 S1, VDE 0207- HM2) Sheath Color : RAL 7001 Grey

Flame Test	IEC/EN 60332-1, VDE 0482-265-2-1
Smoke Density (LI02Y(St)CH)	IEC/EN 61034-2, EN50268 (HD606), BS7622
Corrosive Gas Measurement (LI02Y(St)CH)	IEC 60754-2, EN50267 (HD602)

### Technical and Electrical Properties (20°C)



Impedance	100 ± 10 Ohm
Operating Voltage	300 V
Test Voltage	1200 V
Velocity of Propagation	78 %
Insulation Resistance	> 5000 M.OhmKm
Capacitance (Core /Core)	41 nF / Km
(Core /Cores + Shield)	73 nF / Km
Loop Resistance	AWG 24 : < 182 Ohm/Km AWG 22 : < 115 Ohm/Km
Minimum Bending Radius	10 x Cable Diameter
Temperature Range	-30 °C... +70 °C

PART NUMBER	NO.OF CORES/ CROSS SECTION (mm <sup>2</sup> )	CABLE DIAMETER (mm)	COPPER WEIGHT (Kg/Km)	CABLE WEIGHT (Kg/Km)
<b>0.22 mm<sup>2</sup></b>				
24X40201	1x2x0.22	4.8	13	30
24X40202	2x2x0.22	6.1	19	43
24X40203	3x2x0.22	6.6	24	51
24X40204	4x2x0.22	7.4	30	62

PART NUMBER	NO.OF CORES/ CROSS SECTION (mm <sup>2</sup> )	CABLE DIAMETER (mm)	COPPER WEIGHT (Kg/Km)	CABLE WEIGHT (Kg/Km)
<b>0.34 mm<sup>2</sup></b>				
24X40401	1x2x0.34	5.6	17	39
24X40402	2x2x0.34	6.9	26	54
24X40403	3x2x0.34	7.6	34	67
24X40404	4x2x0.34	8.5	44	84

X: for LI02Y(St)CY .. 0, for LI02Y(St)CH .. 1

The cable weight can be slightly higher for LI02Y(St)CH cables

LI02Y(St)CY-PiMF EIA/TIA 232-422 (RS 232-422) (Foam-Skin PE Insulation-Individual Screen-100 ohm)    
 LI02Y(St)CH-PiMF EIA/TIA 232-422 (RS 232 - 422)



**Application**

They are used for transmission of data signal in computer , information and communication system as well as for process control for computer systems and terminals.

**Construction**

Conductor Stranded Tinned Copper Wires 0.22mm<sup>2</sup> (7x0.20 mm AWG 24), 0.34mm<sup>2</sup> (7x0.25mm AWG 22)  
 Insulation Foam-Skin Polyethylene (EN 50290-2), (see the following table for color code)  
 PiMF Individual shielding ( Pair in the Metal Foil)  
 Separator :Polyester tape  
 Drain Wire :Stranded Tinned Copper Wires  
 1.Shield :AL-PES foil  
 Lay-up All shielded pairs as layers  
 2.Shield AL-PES foil  
 3.Shield Tinned Copper Wire Braiding 65% Coverage  
 Sheath LI02Y(St)CY-PiMF : PVC (EN 50290-2, HD 21.1.S4, VDE 0281 TM1) Sheath Color : RAL 7001 Grey  
 LI02Y(St)CH-PiMF : HFFR (EN 50290-2, HD 624.7 S1, VDE 0207- HM2) Sheath Color : RAL 7001 Grey

Flame Test IEC/EN 60332-1, VDE 0482-265-2-1  
 Smoke Density (LI02Y(St)CH-PiMF) IEC/EN 61034-2, EN 50268 (HD 606), BS 7622  
 Corrosive Gas Measurement (LI02Y(St)CH-PiMF) IEC 60754-2, EN 50267 (HD 602)

**Technical and Electrical Properties (20°C)**

Impedance 100 ± 10 Ohm  
 Operating Voltage 300 V  
 Test Voltage 1200 V  
 Velocity of Propagation 78 %  
 Insulation Resistance > 5000 M.Ohm/Km  
 Capacitance (Core/Core) 41 nF/Km  
 (Core/Cores+Shield) 73 nF/Km  
 Loop Resistance AWG 24 : <182 Ohm/Km AWG 22 : <115 Ohm/Km  
 Minimum Bending Radius 10 x Cable Diameter  
 Temperature Range -30 °C... +70 °C

**COLOR CODE**



Pair No	A Core	B Core
1	Black	Red
2	Black	White
3	Black	Green
4	Black	Blue

PART NUMBER	NO.OF CORES/ CROSS SECTION (mm <sup>2</sup> )	CABLE DIAMETER (mm)	COPPER WEIGHT (Kg/Km)	CABLE WEIGHT (Kg/Km)
<b>0.22 mm<sup>2</sup></b>				
24X70202	2x2x0.22	6.5	25	64
24X70203	3x2x0.22	7.2	32	78
24X70204	4x2x0.22	8.1	40	95

PART NUMBER	NO.OF CORES/ CROSS SECTION (mm <sup>2</sup> )	CABLE DIAMETER (mm)	COPPER WEIGHT (Kg/Km)	CABLE WEIGHT (Kg/Km)
<b>0.34 mm<sup>2</sup></b>				
24X70402	2x2x0.34	7.2	34	78
24X70403	3x2x0.34	8.0	45	98
24X70404	4x2x0.34	8.8	56	118

X: for LI02Y(St)CY-PiMF .. 0, for LI02Y(St)CH-PiMF .. 1 The cable weight can be slightly higher for LI02Y(St)CH-PiMF cables

Please contact our sales department for different cross section and number of pairs and also PE sheathed versions.

LI02Y(St)Y-PiMF EIA/TIA 232-422 (RS 232-422) (Foam-Skin PE Insulation-Individual Screen-100 ohm)    
 LI02Y(St)H-PiMF EIA/TIA 232-422 (RS 232-422)



**Application**

They are used for transmission of data signal in computer , information and communication system as well as for process control for computer systems and terminals.

**Construction**

Conductor Stranded Tinned Copper Wires 0.22mm<sup>2</sup> (7x0.20 mm AWG 24), 0.34mm<sup>2</sup> (7x0.25mm AWG 22)  
 Insulation Foam-Skin Polyethylene (EN 50290-2), (see the following table for color code)  
 PiMF Individual shielding ( Pair in the Metal Foil)  
 Separator :Polyester tape  
 Drain Wire :Stranded Tinned Copper Wires  
 1.Shield :AL-PES foil  
 Lay-up All shielded pairs as layers  
 Separator PES Tape  
 Drain Wire Stranded Tinned Copper Wires  
 2.Shield AL-PES foil  
 Sheath LI02Y(St)Y-PiMF : PVC (EN 50290-2, HD 21.1.S4, VDE 0281 TM1) Sheath Color : RAL 7001 Grey  
 LI02Y(St)H-PiMF : HFFR (EN 50290-2, HD 624.7 S1, VDE 0207- HM2) Sheath Color : RAL 7001 Grey

Flame Test IEC/EN 60332-1, VDE 0482-265-2-1  
 Smoke Density (LI02Y(St)H-PiMF) IEC/ EN 61034-2, EN50268 (HD606), BS7622  
 Corrosive Gas Measurement (LI02Y(St)H-PiMF) IEC 60754-2, EN50267 (HD602)

**Technical and Electrical Properties (20°C)**

Impedance 100 ± 10 Ohm  
 Operating Voltage 300 V  
 Test Voltage 1200 V  
 Velocity of Propagation 78 %  
 Insulation Resistance > 5000 M.Ohm/Km  
 Capacitance (Core/Core) 41 nF/Km.  
 (Core/Cores + Shield) 76 nF/Km  
 Loop Resistance AWG 24 : <182 Ohm/Km AWG 22 : <115 Ohm/Km  
 Minimum Bending Radius 10 x Cable Diameter  
 Temperature Range -30 °C... +70 °C

**COLOR CODE**

Pair No	A Core	B Core
1	Black	Red
2	Black	White
3	Black	Green
4	Black	Blue

PART NUMBER	NO.OF CORES/ CROSS SECTION (mm <sup>2</sup> )	CABLE DIAMETER (mm)	COPPER WEIGHT (Kg/Km)	CABLE WEIGHT (Kg/Km)
<b>0.22 mm<sup>2</sup></b>				
24X80202	2x2x0.22	6.2	15	42
24X80203	3x2x0.22	7.0	21	55
24X80204	4x2x0.22	7.9	27	69

PART NUMBER	NO.OF CORES/ CROSS SECTION (mm <sup>2</sup> )	CABLE DIAMETER (mm)	COPPER WEIGHT (Kg/Km)	CABLE WEIGHT (Kg/Km)
<b>0.34 mm<sup>2</sup></b>				
24X80402	2x2x0.34	7.0	22	56
24X80403	3x2x0.34	7.9	32	73
24X80404	4x2x0.34	8.6	41	89

X: for LI02Y(St)Y-PiMF .. 0, for LI02Y(St)H-PiMF .. 1

The cable weight can be slightly higher for LI02Y(St)H-PiMF cables

Please contact our sales department for different cross section and number of pairs and also PE sheathed versions.

LI2Y(St)Y-PiMF EIA/TIA 232-422 (RS 232 - 422) (PE Insulation - Individual Screen - 100 ohm)



LI2Y(St)H-PiMF EIA/TIA 232-422 (RS 232 - 422)



### Application

They are used for transmission of data signal in computer, information and communication system as well as for process control for computer systems and terminals.

### Construction

Conductor	Stranded Tinned Copper Wires 0.22mm <sup>2</sup> (7x0.20 mm AWG 24), 0.34mm <sup>2</sup> (7x0.25mm AWG 22)
Insulation	Polyethylene (EN 50290-2, VDE 0207-2Y11), (see the following table for color code)
PiMF	Individual shielding (Pair in the Metal Foil)
	Separator : Polyester tape
	Drain Wire : Stranded Tinned Copper Wires
	1.Shield : AL-PES foil
Lay-up	All shielded pairs as layers
Separator	PES Tape
Drain Wire	Stranded Tinned Copper Wires
2.Shield	Al-Pes Foil
Sheath	LI2Y(St)Y-PiMF : PVC (EN 50290-2, HD 21.1.S4, VDE 0281 TM1) Sheath Color : RAL 7001 Grey LI2Y(St)H-PiMF : HFFR (EN 50290-2, HD 624.7 S1, VDE 0207-HM2) Sheath Color : RAL 7001 Grey

Flame Test	IEC / EN 60332-1, VDE 0482-265-2-1
Smoke Density (LI2Y(St)H-PiMF)	IEC / EN 61034-2, EN50268 (HD606), BS7622
Corrosive Gas Measurement (LI2Y(St)H-PiMF)	IEC 60754-2, EN50267 (HD602)

### Technical and Electrical Properties (20°C)

Impedance	100 ± 10 Ohm
Operating Voltage	300 V
Test Voltage	1200 V
Velocity of Propagation	66 %
Insulation Resistance	> 5000 M.Ohm/Km
Capacitance (Core/Core)	52 nF / Km.
(Core/Cores + Shield)	95 nF / Km
Loop Resistance	AWG 24 : < 182 Ohm/Km    AWG 22 : < 115 Ohm/Km
Minimum Bending Radius	10 x Cable Diameter
Temperature Range	-30 °C... +70 °C

### COLOR CODE

Pair No	A Core	B Core
1	Black	Red
2	Black	White
3	Black	Green
4	Black	Blue

PART NUMBER	NO.OF CORES/ CROSS SECTION (mm <sup>2</sup> )	CABLE DIAMETER (mm)	COPPER WEIGHT (Kg/Km)	CABLE WEIGHT (Kg/Km)
<b>0.22 mm<sup>2</sup></b>				
25X80202	2x2x0.22	6.9	15	48
25X80203	3x2x0.22	7.7	21	62
25X80204	4x2x0.22	8.6	27	78

PART NUMBER	NO.OF CORES/ CROSS SECTION (mm <sup>2</sup> )	CABLE DIAMETER (mm)	COPPER WEIGHT (Kg/Km)	CABLE WEIGHT (Kg/Km)
<b>0.34 mm<sup>2</sup></b>				
25X80302	2x2x0.34	7.7	22	62
25X80303	3x2x0.34	8.5	32	81
25X80304	4x2x0.34	9.5	41	101

X: for LI2Y(St)Y-PiMF ..0, for LI2Y(St)H-PiMF .. 1      The cable weight can be slightly higher for LI2Y(St)H-PiMF cables

Please contact our sales department for different cross section and number of pairs and also PE sheathed versions.

LI2Y(St)YSWAY-PiMF EIA/TIA - 422 (RS - 422) (PE Insulation - Individual Screen - Armoured - 100 ohm )



**Application**

These cables which are produced with armour are designed for high mechanical protection and are used for data transmission in the computer networks and electronic control systems.

**Construction**

Conductor	Stranded Tinned Copper Wires (IEC 228, HD 383, BS 6360, VDE 0295 Class 2 )
Insulation	Polyethylene (EN 50290-2, VDE 0207-2Y11), Color Code : DIN 47100
PiMF	Individual shielding ( Pair in the Metal Foil)
	Separator :Polyester tape
	Drain Wire :Stranded Tinned Copper Wires
	1.Shield :AL-PES foil
Lay-up	All shielded pairs as layers
Separator	PES Tape
Drain Wire	Stranded Tinned Copper Wires
2.Shield	AL-PES foil
Inner Sheath	PVC (EN 50290-2, HD 21.1.S4, VDE 0281 TM1) Sheath Color : RAL 7001 Grey
Armouring	Round Galvanized Steel Wire
Sheath	UV resistant, Flame retardant PVC Black ( EN 50290-2, VDE 0207 YM1, HD 21.1.S4 TM1)
Flame Test	IEC/EN 60332-1, IEC 60332-3-22 (GATA), VDE 0482-265-2-1

**Technical and Electrical Properties (20°C)**

Impedance	100 ± 10 Ohm
Operating Voltage	300 V
Test Voltage	1200 V
Velocity of Propagation	66 %
Insulation Resistance	> 5000 M.OhmXKm
Capacitance (Core/Core)	52 nF / Km
(Core/Cores + Shield)	95 nF / Km
Minimum Bending Radius	10 x Cable Diameter
Temperature Range	-30 °C... +70 °C

PART NUMBER	NO.OF CORES/ CROSS SECTION (mm <sup>2</sup> )	CABLE DIAMETER (mm)	COPPER WEIGHT (Kg/Km)	CABLE WEIGHT (Kg/Km)
25600502	2x2x0.50	12.5	35	325
25600802	2x2x0.75	15.0	45	420



LI2Y(St)CY EIA/TIA 232-422 (RS 232 - 422) (PE Insulation - Overall Screen - 100 ohm)  
 LI2Y(St)CH EIA/TIA 232-422 (RS 232 - 422)



### Application

They are used for transmission of data signal in computer, information and communication system as well as for process control for computer systems and terminals.

### Construction

Conductor	Stranded Electrolytic Tinned Copper Wires 0.22mm <sup>2</sup> (7x0.20 mm AWG 24), 0.34mm <sup>2</sup> (7x0.25mm AWG 22)
Insulation	Polyethylene (EN 50290-2, VDE 0207-2Y11), Color Code : DIN 47100
Lay-up	Two cores twisted in pair and pairs stranded together
Separator	Polyester tape
Drain Wire	Stranded Electrolytic Tinned Copper Wires
1.Shield	Al-Pes Foil
2.Shield	Tinned Copper Wire Braiding 65% Coverage
Sheath	LI2Y(St)CY : PVC (EN 50290-2, HD 21.1.S4, VDE 0281 TM1) Sheath Color : RAL 7001 Grey LI2Y(St)CH : HFFR (EN 50290-2, HD 624.7 S1, VDE 0207- HM2) Sheath Color : RAL 7001 Grey

Flame Test	IEC / EN 60332-1, VDE 0482-265-2-1
Smoke Density (LI2Y(St)CH)	IEC / EN 61034-2, EN 50268 (HD 606), BS7622
Corrosive Gas Measurement (LI2Y(St)CH)	IEC 60754-2, EN 50267 (HD 602)

### Technical and Electrical Properties (20°C)

Impedance	100 ± 10 Ohm
Operating Voltage	300 V
Test Voltage	1200 V
Velocity of Propagation	66 %
Insulation Resistance	> 5000 M.OhmXKm
Capacitance (Core/Core)	52 nF/Km
(Core/Cores + Shield)	90 nF/Km
Loop Resistance	AWG 24 : <182 Ohm/Km    AWG 22 : <115 Ohm/Km
Minimum Bending Radius	10 x Cable Diameter
Temperature Range	-30°C... +70 °C

PART NUMBER	NO.OF CORES/ CROSS SECTION (mm <sup>2</sup> )	CABLE DIAMETER (mm)	COPPER WEIGHT (Kg/Km)	CABLE WEIGHT (Kg/Km)
<b>0.22 mm<sup>2</sup></b>				
25X40201	1x2x0.22	5.3	14	34
25X40202	2x2x0.22	6.7	20	49
25X40203	3x2x0.22	7.4	25	61
25X40204	4x2x0.22	8.4	33	77

PART NUMBER	NO.OF CORES/ CROSS SECTION (mm <sup>2</sup> )	CABLE DIAMETER (mm)	COPPER WEIGHT (Kg/Km)	CABLE WEIGHT (Kg/Km)
<b>0.34 mm<sup>2</sup></b>				
25X40401	1x2x0.34	6.0	17	42
25X40402	2x2x0.34	7.6	27	62
25X40403	3x2x0.34	8.3	37	80
25X40404	4x2x0.34	9.4	45	98

X: for LI2Y(St)CY..0, for LI2Y(St)CH .. 1

The cable weight can be slightly higher for LI2Y(St)CH cables





LI2Y(St)CY EIA/TIA 232-422 (RS 232 - 422) (PE Insulation - Overall Screen - 100 ohm)  
 LI2Y(St)CH EIA/TIA 232-422 (RS 232 - 422)



### Application

They are used for transmission of data signal in computer, information and communication system as well as for process control for computer systems and terminals.

### Construction

Conductor	Stranded Electrolytic Tinned Copper Wires 0.22mm <sup>2</sup> (7x0.20 mm AWG 24), 0.34mm <sup>2</sup> (7x0.25mm AWG 22)
Insulation	Polyethylene (EN 50290-2, VDE 0207-2Y11), Color Code : DIN 47100
Lay-up	Two cores twisted in pair and pairs stranded together
Separator	Polyester tape
Drain Wire	Stranded Electrolytic Tinned Copper Wires
1.Shield	Al-Pes Foil
2.Shield	Tinned Copper Wire Braiding 65% Coverage
Sheath	LI2Y(St)CY : PVC (EN 50290-2, HD 21.1.S4, VDE 0281 TM1) Sheath Color : RAL 7001 Grey LI2Y(St)CH : HFFR (EN 50290-2, HD 624.7 S1, VDE 0207- HM2) Sheath Color : RAL 7001 Grey

Flame Test	IEC / EN 60332-1, VDE 0482-265-2-1
Smoke Density (LI2Y(St)CH)	IEC / EN 61034-2, EN 50268 (HD 606), BS7622
Corrosive Gas Measurement (LI2Y(St)CH)	IEC 60754-2, EN 50267 (HD 602)

### Technical and Electrical Properties (20°C)

Impedance	100 ± 10 Ohm
Operating Voltage	300 V
Test Voltage	1200 V
Velocity of Propagation	66 %
Insulation Resistance	> 5000 M.OhmxKm
Capacitance (Core/Core)	52 nF/Km
(Core/Cores + Shield)	90 nF/Km
Loop Resistance	AWG 24 : <182 Ohm/Km    AWG 22 : <115 Ohm/Km
Minimum Bending Radius	10 x Cable Diameter
Temperature Range	-30°C... +70 °C

PART NUMBER	NO.OF CORES/ CROSS SECTION (mm <sup>2</sup> )	CABLE DIAMETER (mm)	COPPER WEIGHT (Kg/Km)	CABLE WEIGHT (Kg/Km)
<b>0.22 mm<sup>2</sup></b>				
25X40201	1x2x0.22	5.3	14	34
25X40202	2x2x0.22	6.7	20	49
25X40203	3x2x0.22	7.4	25	61
25X40204	4x2x0.22	8.4	33	77

PART NUMBER	NO.OF CORES/ CROSS SECTION (mm <sup>2</sup> )	CABLE DIAMETER (mm)	COPPER WEIGHT (Kg/Km)	CABLE WEIGHT (Kg/Km)
<b>0.34 mm<sup>2</sup></b>				
25X40401	1x2x0.34	6.0	17	42
25X40402	2x2x0.34	7.6	27	62
25X40403	3x2x0.34	8.3	37	80
25X40404	4x2x0.34	9.4	45	98

X: for LI2Y(St)CY..0, for LI2Y(St)CH .. 1

The cable weight can be slightly higher for LI2Y(St)CH cables



LI2Y(St)CY-PiMF EIA/TIA 232-422 (RS 232-422) (PE Insulation-Individual Screen-Braiding-100 ohm)  
 LI2Y(St)CH-PiMF EIA/TIA 232-422 (RS 232-422)



### Application

They are used for transmission of data signal in computer, information and communication system as well as for process control for computer systems and terminals.

### Construction

Conductor	Stranded Tinned Copper Wires 0.22mm <sup>2</sup> (7x0.20 mm AWG 24), 0.50mm <sup>2</sup> (7 x 0.30 mm)
Insulation	Polyethylene (EN 50290-2, VDE 0207-2Y11), (see the following table for color code)
PiMF	Individual shielding (Pair in the Metal Foil)
	Separator : Polyester tape
	Drain Wire : Stranded Tinned Copper Wires
	1.Shield : AL-PES foil
Lay-up	All shielded pairs as layers
2.Shield	Al-Pes Foil
3.Shield	Tinned Copper Wire Braiding 65% Coverage
Sheath	LI2Y(St)CY-PiMF : PVC (EN 50290-2, HD 21.1.S4, VDE 0281 TM1) Sheath Color: RAL 7001 Grey LI2Y(St)CH-PiMF : HFFR (EN 50290-2, HD 624.7 S1, VDE 0207- HM2) Sheath Color : RAL 7001 Grey

Flame Test	IEC/EN 60332-1, VDE 0482-265-2-1
Smoke Density (LI2Y(St)CH-PiMF)	IEC/EN 61034-2, EN50268 (HD606), BS7622
Corrosive Gas Measurement (LI2Y(St)CH-PiMF)	IEC 60754-2, EN50267 (HD602)

### Technical and Electrical Properties (20°C)

		COLOR CODE		
Property	Value	Pair No	A Core	B Core
Impedance	100 ± 10 Ohm	1	Black	Red
Operating Voltage	300 V	2	Black	White
Test Voltage	1200 V	3	Black	Green
Velocity of Propagation	66 %	4	Black	Blue
Insulation Resistance	> 5000 M.OhmXKm			
Capacitance (Core/Core)	52 nF/Km.			
(Core / Cores + Shield)	90 nF / Km			
Loop Resistance	AWG 24 : < 182 Ohm/Km    AWG 20 : < 72 Ohm/Km			
Minimum Bending Radius	10 x Cable Diameter    Temperature Range -30 °C... +70 °C			

PART NUMBER	NO.OF CORES/ CROSS SECTION (mm <sup>2</sup> )	CABLE DIAMETER (mm)	COPPER WEIGHT (Kg/Km)	CABLE WEIGHT (Kg/Km)
<b>0.22 mm<sup>2</sup></b>				
25X70202	2x2x0.22	7.2	24	59
25X70203	3x2x0.22	8.0	32	75
25X70204	4x2x0.22	8.7	40	91

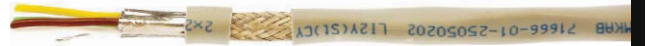
PART NUMBER	NO.OF CORES/ CROSS SECTION (mm <sup>2</sup> )	CABLE DIAMETER (mm)	COPPER WEIGHT (Kg/Km)	CABLE WEIGHT (Kg/Km)
<b>0.50 mm<sup>2</sup></b>				
25X60502	2x2x0.50	8.7	46	92
25X60503	3x2x0.50	9.6	64	124
25X60504	4x2x0.50	11.2	81	159

X: for LI2Y(St)CY-PiMF ..0, for LI2Y(St)CH-PiMF .. 3

The cable weight can be slightly higher for LI2Y(St)CH-PiMF cables



LI2Y(St)CY EIA/TIA-485 (RS - 485) (PE Insulation - Overall Screen - 120 ohm)  
 LI2Y(St)CH EIA/TIA-485 (RS - 485)



### Application

They are used in the industrial automation systems for computer networks and electronic control systems for data transmission. They can be used in longer ranges compared to RS 232-422's.

### Construction

Conductor	Stranded Tinned Copper Wires 0.22mm <sup>2</sup> (7x0.20 mm AWG 24), 0.34mm <sup>2</sup> (7x0.25mm AWG 22) 0.50mm <sup>2</sup> (7 x 0.30 mm)
Insulation	Polyethylene (EN 50290-2, VDE 0207-2Y11), Color Code : DIN 47100
Lay-up	Two cores twisted in pair and pairs stranded together
Separator	Polyester tape
Drain Wire	Stranded Tinned Copper Wires
1.Shield	AL-PES foil
2.Shield	Tinned Copper Wire Braiding 90% Coverage
Sheath	LI2Y(St)CY : PVC (EN 50290-2, HD 21.1.S4, VDE 0281 TM1) Sheath Color : RAL 7001 Grey LI2Y(St)CH : HFFR (EN 50290-2, HD 624.7 S1, VDE 0207- HM2) Sheath Color: RAL 7001 Grey

Flame Test	IEC / EN 60332-1, VDE 0482-265-2-1
Smoke Density (LI2Y(St)CH)	IEC / EN 61034-2, EN 50268 (HD 606), BS 7622
Corrosive Gas Measurement (LI2Y(St)CH)	IEC 60754-2, EN 50267 (HD 602)

### Technical and Electrical Properties (20°C)

Impedance	120 ± 10 Ohm		
Operating Voltage	300 V		
Test Voltage	1200 V		
Velocity of Propagation	66 %		
Insulation Resistance	> 5000 M.OhmXKm		
Capacitance (Core/Core)	45 nF / Km		
(Core/Cores + Shield)	80 nF / Km		
Loop Resistance	AWG 24 : <182 Ohm/Km	AWG 22 : <115 Ohm/Km	AWG 20 : <72 Ohm/Km
Minimum Bending Radius	10 x Cable Diameter		Temperature Range -30 °C... +70 °C

PART NUMBER	NO.OF CORES/ CROSS SECTION (mm <sup>2</sup> )	CABLE DIAMETER (mm)	COPPER WEIGHT (Kg/Km)	CABLE WEIGHT (Kg/Km)
<b>0.22 mm<sup>2</sup></b>				
25X50201	1x2x0.22	6.3	23	50
25X50202	2x2x0.22	8.1	33	74
25X50203	3x2x0.22	8.8	40	89
25X50204	4x2x0.22	10.0	55	114

PART NUMBER	NO.OF CORES/ CROSS SECTION (mm <sup>2</sup> )	CABLE DIAMETER (mm)	COPPER WEIGHT (Kg/Km)	CABLE WEIGHT (Kg/Km)
<b>0.34 mm<sup>2</sup></b>				
25X50401	1x2x0.34	6.7	28	58
25X50402	2x2x0.34	8.7	40	85
25X50403	3x2x0.34	9.6	50	106
25X50404	4x2x0.34	11.0	69	139

<b>0.50 mm<sup>2</sup></b>				
25X50502	2x2x0.50	9.7	61	113

X: for LI2Y(St)CY .. 0, for LI2Y(St)CH .. 1

The cable weight can be slightly higher for LI2Y(St)CH cables



LI2Y(St)CY-PiMF EIA/TIA-485 (RS - 485) (PE Insulation - Individual Screen - 120 ohm)  
 LI2Y(St)CH -PiMF EIA/TIA-485 (RS - 485)



### Application

They are used in the industrial automation systems for computer networks and electronic control systems for data transmission. They can be used in longer ranges compared to RS 232-422's.

### Construction

Conductor Stranded Tinned Copper Wires | 0.22mm<sup>2</sup> (7x0.20 mm AWG 24), 0.34mm<sup>2</sup> (7x0.25mm AWG 22)  
 0.50mm<sup>2</sup> (7 x 0.30mm)  
 Insulation Polyethylene (EN 50290-2, VDE 0207-2Y11), Color Code : DIN 47100  
 PiMF Individual shielding ( Pair in the Metal Foil)  
 Separator : Polyester tape  
 Drain Wire : Stranded Tinned Copper Wires  
 1.Shield : AL-PES foil  
 Lay-up All shielded pairs as layers  
 2.Shield Al-Pes foil  
 3.Shield Tinned Copper Wire Braiding 90% Coverage  
 Sheath LI2Y(St)CY-PiMF : PVC (EN 50290-2, HD 21.1.S4, VDE 0281 TM1) Sheath Color : RAL 7001 Grey  
 LI2Y(St)CH-PiMF : HFFR (EN 50290-2, HD 624.7 S1, VDE 0207- HM2) Sheath Color : RAL 7001 Grey

Flame Test IEC / EN 60332-1, VDE 0482-265-2-1  
 Smoke Density (LI2Y(St)CH-PiMF) IEC / EN 61034-2, EN 50268 (HD 606), BS 7622  
 Corrosive Gas Measurement (LI2Y(St)CH-PiMF) IEC 60754-2, EN 50267 (HD 602)

### Technical and Electrical Properties (20°C)

Impedance 120 ± 10 Ohm  
 Operating Voltage 300 V  
 Test Voltage 1200 V  
 Velocity of Propagation 66 %  
 Insulation Resistance > 5000 M.Ohm/Km  
 Capacitance (Core/Core) 45 nF/Km  
 (Core/Cores+Shield) 85 nF/Km  
 Loop Resistance AWG 24 : <182 Ohm/Km AWG 22 : <115 Ohm/Km AWG 20 : <72 Ohm/Km  
 Minimum Bending Radius 10 x Cable Diameter Temperature Range -30 °C... +70 °C

PART NUMBER	NO.OF CORES/ CROSS SECTION (mm <sup>2</sup> )	CABLE DIAMETER (mm)	COPPER WEIGHT (Kg/Km)	CABLE WEIGHT (Kg/Km)
<b>0.22 mm<sup>2</sup></b>				
24X00202	2x2x0.22	8.4	36	82
24X00203	3x2x0.22	9.3	45	103
24X00204	4x2x0.22	10.8	65	138

PART NUMBER	NO.OF CORES/ CROSS SECTION (mm <sup>2</sup> )	CABLE DIAMETER (mm)	COPPER WEIGHT (Kg/Km)	CABLE WEIGHT (Kg/Km)
<b>0.34 mm<sup>2</sup></b>				
24X00402	2x2x0.34	8.8	44	93
24X00403	3x2x0.34	9.8	64	126
24X00404	4x2x0.34	11.3	79	161

PART NUMBER	NO.OF CORES/ CROSS SECTION (mm <sup>2</sup> )	CABLE DIAMETER (mm)	COPPER WEIGHT (Kg/Km)	CABLE WEIGHT (Kg/Km)
<b>0.50 mm<sup>2</sup></b>				
24X00502	2x2x0.50	9.8	66	120

X: for LI2Y(St)CY-PiMF .. 8, for LI2Y(St)CH-PiMF .. 9

The cable weight can be slightly higher for LI2Y(St)CH-PiMF cables.

LI02Y(St)CY EIA/TIA-485 (RS - 485) (Foam-Skin PE Insulation - Overall Screen - 120 ohm)

LI02Y(St)CH EIA/TIA-485 (RS - 485)



**Application**

They are used in the industrial automation systems for computer networks and electronic control systems for data transmission. They can be used in longer ranges compared to RS 232-422's.

**Construction**

Conductor Stranded Tinned Copper Wires 0.22mm<sup>2</sup> (7x0.20 mm AWG 24), 0.34mm<sup>2</sup> (7x0.25mm AWG 22)  
0.50mm<sup>2</sup> (7 x 0.30mm)

Insulation Foam-Skin Polyethylene (EN 50290-2), Color Code : DIN 47100

Lay-up Two cores twisted in pair and pairs stranded together

Separator Polyester tape

Drain Wire Stranded Tinned Copper Wires

1.Shield AL-PES foil

2.Shield Tinned Copper Wire Braiding 90% Coverage

Sheath LI02Y(St)CY : PVC (EN 50290-2, HD 21.1.S4, VDE 0281 TM1) Sheath Color : RAL 7001 Grey  
LI02Y(St)CH : HFFR (EN 50290-2, HD 624.7 S1, VDE 0207- HM2) Sheath Color: RAL 7001 Grey

Flame Test IEC/EN 60332-1, VDE 0482-265-2-1

Smoke Density (LI02Y(St)CH) IEC / EN 61034-2, EN 50268 (HD 606), BS7622

Corrosive Gas Measurement (LI02Y(St)CH) IEC 60754-2, EN 50267 (HD 602)

**Technical and Electrical Properties (20°C)**

Impedance 120 ± 10 Ohm

Operating Voltage 300 V

Test Voltage 1200 V

Velocity of Propagation 78 %

Insulation Resistance > 5000 M.OhmXKm

Capacitance (Core/Core) 40 nF/Km  
(Core/Cores + Shield) 70 nF/Km

Loop Resistance AWG 24 : <182 Ohm/Km AWG 22 : <115 Ohm/Km AWG 20 : <72 Ohm/Km

Minimum Bending Radius 10 x Cable Diameter Temperature Range -30 °C... +70 °C

PART NUMBER	NO.OF CORES/ CROSS SECTION (mm <sup>2</sup> )	CABLE DIAMETER (mm)	COPPER WEIGHT (Kg/Km)	CABLE WEIGHT (Kg/Km)
<b>0.22 mm<sup>2</sup></b>				
24X50201	1x2x0.22	5.5	19	40
24X50202	2x2x0.22	6.8	27	54
24X50203	3x2x0.22	7.5	34	66
24X50204	4x2x0.22	8.4	40	79

PART NUMBER	NO.OF CORES/ CROSS SECTION (mm <sup>2</sup> )	CABLE DIAMETER (mm)	COPPER WEIGHT (Kg/Km)	CABLE WEIGHT (Kg/Km)
<b>0.34 mm<sup>2</sup></b>				
24X50401	1x2x0.34	6.0	22	46
24X50402	2x2x0.34	7.6	35	68
24X50403	3x2x0.34	8.3	42	81
24X50404	4x2x0.34	9.4	53	101

PART NUMBER	NO.OF CORES/ CROSS SECTION (mm <sup>2</sup> )	CABLE DIAMETER (mm)	COPPER WEIGHT (Kg/Km)	CABLE WEIGHT (Kg/Km)
<b>0.50 mm<sup>2</sup></b>				
24X50502	2x2x0.50	8.7	52	92

X: for LI02Y(St)CY .. 0, for LI02Y(St)CH .. 1

The cable weight can be slightly higher for LI02Y(St)CH cables

Please contact our sales department for different cross section and number of pairs and also PE sheathed versions.



### Application

They are used in the electronic systems and electronic weighing systems in the industrial applications. PUR outer sheath must be used for high mechanical resistance and resistance to weather conditions, solvent, grease and oil.

### Construction

Conductor	Stranded Tinned Copper Wires (IEC 228, HD 383, BS 6360, VDE 0295 Class 5)
Insulation	PVC (EN 50290-2, HD 21.1.S4, VDE 0281-TI2)
Lay-up	All cores as layers
1.Shield	Al-Pes Foil
2.Shield	Tinned Copper Wire Braiding 80 % Coverage
Sheath	PVC (EN 50290-2, VDE 0207 YM1, HD 21.1.S4 TM1) Blue, Grey or Black
Cable Diameter	4x0.34 mm <sup>2</sup> : 6.00 mm 6x0.34 mm <sup>2</sup> : 7.50 mm
Flame Test	IEC/EN 60332-1, VDE 0482-265-2-1

### Technical and Electrical Properties (20°C)

Operating Voltage	300 V
Test Voltage	1200 V
Insulation Resistance	> 200 M.ΩmxKm
Capacitance (Core/ Core)	100 nF/Km
(Core/ Cores + Shield)	190 nF/Km
Minimum Bending Radius	(Fixed) 7.5 x Cable Diameter (Flexible) 10 x Cable Diameter
Temperature Range	(Fixed) -30 °C... +70 °C (Flexible) -5 °C... +70 °C