

Single-ended I/O Cordsets-M8 (Straight-female)

Description:

Used for sensors, I/O connector connecting. Standard M8(straight-female) threaded connection. 3, 4-core are optional. Customized cable lengths. Degree of protection IP67.

Features:

- PVC and PUR cable are optional
- A-coded interface
- LED indicator

* All technical information about the raw cable for connectors, please refer to the "cable" section (P513).



Type Code

Cable jacket	Description	Type	Pin	Rated current/voltage	Cable length	Wire section
PVC	Female 3-core	CO8.3-2	3	4A/60V	2m	0.25mm ²
	Female 4-core	CO8.4-2	4	4A/30V	2m	0.25mm ²
	Female 3-core PNP	CO8.3-2/L	3	4A/30V	2m	0.25mm ²
	Female 3-core NPN	CO8.3-2/LN	3	4A/30V	2m	0.25mm ²
	Female 4-core PNP	CO8.4-2/L	4	4A/30V	2m	0.25mm ²
	Female 4-core NPN	CO8.4-2/LN	4	4A/30V	2m	0.25mm ²
PUR	Female 3-core	CO8.3-2/P	3	4A/60V	2m	0.25mm ²
	Female 4-core	CO8.4-2/P	4	4A/30V	2m	0.25mm ²
	Female 3-core PNP	CO8.3-2/L/P	3	4A/30V	2m	0.25mm ²
	Female 3-core NPN	CO8.3-2/LN/P	3	4A/30V	2m	0.25mm ²
	Female 4-core PNP	CO8.4-2/L/P	4	4A/30V	2m	0.25mm ²
	Female 4-core NPN	CO8.4-2/LN/P	4	4A/30V	2m	0.25mm ²
PVC Shielded	Female 3-core	CO8.3-2/WS	3	4A/60V	2m	0.25mm ²
	Female 4-core	CO8.4-2/WS	4	4A/30V	2m	0.25mm ²
PUR Shielded	Female 3-core	CO8.3-2/WSP	3	4A/60V	2m	0.25mm ²
	Female 4-core	CO8.4-2/WS/P	4	4A/30V	2m	0.25mm ²

Selection Instructions

CO8.4 - 2 / P

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Attn : ①: Customized cable lengths are available.
 ②: Cable jacket or function can be customized according to the requirements.

Additional Information

Cable Length	Wiring diagram	
	PNP <p>3-core</p>	NPN <p>3-core</p>
	PNP <p>4-core</p>	NPN <p>4-core</p>

Single-ended I/O Cordsets-M8 (Angled-female)

Description:

Used for sensors, I/O connector connecting. Standard M8(angled-female) threaded connection. 3, 4-core are optional. Customized cable lengths. Degree of protection IP67.



Features:

- PVC and PUR cable are optional
- A-coded interface
- LED indicator

* All technical information about the raw cable for connectors, please refer to the "cable" section (P513).

Type Code

Cable jacket	Description	Type	Pin	Rated current/voltage	Cable length	Wire section
PVC	Female 3-core	CBO8.3-2	3	4A/60V	2m	0.25mm ²
	Female 4-core	CBO8.4-2	4	4A/30V	2m	0.25mm ²
	Female 3-core PNP	CBO8.3-2/L	3	4A/30V	2m	0.25mm ²
	Female 3-core NPN	CBO8.3-2/LN	3	4A/30V	2m	0.25mm ²
	Female 4-core PNP	CBO8.4-2/L	4	4A/30V	2m	0.25mm ²
	Female 4-core NPN	CBO8.4-2/LN	4	4A/30V	2m	0.25mm ²
PUR	Female 3-core	CBO8.3-2/P	3	4A/60V	2m	0.25mm ²
	Female 4-core	CBO8.4-2/P	4	4A/30V	2m	0.25mm ²
	Female 3-core PNP	CBO8.3-2/L/P	3	4A/30V	2m	0.25mm ²
	Female 3-core NPN	CBO8.3-2/LN/P	3	4A/30V	2m	0.25mm ²
	Female 4-core PNP	CBO8.4-2/L/P	4	4A/30V	2m	0.25mm ²
	Female 4-core NPN	CBO8.4-2/LN/P	4	4A/30V	2m	0.25mm ²
PVC Shielded	Female 3-core	CBO8.3-2/WS	3	4A/60V	2m	0.25mm ²
	Female 4-core	CBO8.4-2/WS	4	4A/60V	2m	0.25mm ²
PUR Shielded	Female 3-core	CBO8.3-2/WS/P	3	4A/60V	2m	0.25mm ²
	Female 4-core	CBO8.4-2/WS/P	4	4A/60V	2m	0.25mm ²

Selection Instructions

CBO8.3 - 2/P

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Attn : ①: Customized cable lengths are available.

②: Cable jacket or function can be customized according to the requirements.

Additional Information

Cable Length	Wiring diagram	
	PNP <p>3-core</p>	NPN <p>3-core</p>
	PNP <p>4-core</p>	NPN <p>4-core</p>

Double-ended I/O Connector-M8 (female) to M8 (male)

Description:

Used for sensors, I/O connector connecting. Standard M8 threaded connection. Advanced design idea of female-to-male ends connector. Straight series and angled series are available. 3, 4-core are optional. Customized cable lengths. Degree of protection IP67



Features:

- PVC and PUR cable are optional
- A-coded interface

* All technical information about the raw cable for connectors, please refer to the "cable" section (P513).

Type Code

Cable jacket	Description	Type	Pin	Rated current/voltage	Cable length	Wire section
PVC	3-core straight to straight	CO8.3-2-C8.3	3	4A/60V	2m	0.25mm ²
	3-core straight to angled	CO8.3-2-CB8.3	3	4A/60V	2m	0.25mm ²
	4-core straight to straight	CO8.4-2-C8.4	4	4A/30V	2m	0.25mm ²
	4-core straight to angled	CO8.4-2-CB8.4	4	4A/30V	2m	0.25mm ²
PUR	3-core straight to straight	CO8.3-2-C8.3/P	3	4A/60V	2m	0.25mm ²
	3-core straight to angled	CO8.3-2-CB8.3/P	3	4A/60V	2m	0.25mm ²
	4-core straight to straight	CO8.4-2-C8.4/P	4	4A/30V	2m	0.25mm ²
	4-core straight to angled	CO8.4-2-CB8.4/P	4	4A/30V	2m	0.25mm ²

Selection Instructions

CO8.4 - 2 - C8.4 / P

① ②

- Attn : ①: Customized cable lengths are available.
 ②: Cable jacket or function can be customized according to the requirements.

Additional Information

Cable Length



Double-ended I/O Connector-M8 (female) to M8 (male)

Description:

Used for sensors, I/O connector connecting. Standard M8 threaded connection. Advanced design idea of female-to-male ends connector. Straight series and angled series are available. 3, 4-core are optional. Customized cable lengths. Degree of protection IP67.

Features:

- PVC and PUR cable are optional
- A-coded interface

* All technical information about the raw cable for connectors, please refer to the "cable" section (P513).



Type Code

Cable jacket	Description	Type	Pin	Rated current/voltage	Cable length	Wire section
PVC	3-core angled to straight	CBO8.3-2-C8.3	3	4A/60V	2m	0.25mm ²
	3-core angled to angled	CBO8.3-2-CB8.3	3	4A/60V	2m	0.25mm ²
	4-core angled to straight	CBO8.4-2-C8.4	4	4A/30V	2m	0.25mm ²
	4-core angled to angled	CBO8.4-2-CB8.4	4	4A/30V	2m	0.25mm ²
PUR	3-core angled to straight	CBO8.3-2-C8.3/P	3	4A/60V	2m	0.25mm ²
	3-core angled to angled	CBO8.3-2-CB8.3/P	3	4A/60V	2m	0.25mm ²
	4-core angled to straight	CBO8.4-2-C8.4/P	4	4A/30V	2m	0.25mm ²
	4-core angled to angled	CBO8.4-2-CB8.4/P	4	4A/30V	2m	0.25mm ²

Selection Instructions

CBO8.4 - 2 - C8.4 / P

- Attn :
- ①: Customized cable lengths are available.
 - ②: Cable jacket or function can be customized according to the requirements.

Additional Information

Cable Length



Double-ended I/O Cordsets-M8 (female) to M8 (male)

Description:

Used for sensors, I/O connector connecting. Standard M8 threaded connection. Advanced design idea of female-to-male ends connector. Straight series and angled series are available. 3, 4-core are optional. Customized cable lengths. Degree of protection IP67.

Features:

- PVC and PUR cable are optional
- A-coded interface
- M8 (female) with LED to M8(male)

* All technical information about the raw cable for connectors, please refer to the "cable" section (P513).



Type Code

Cable jacket	Description	Type	Pin	Rated current/voltage	Cable length	Wire section
PVC	3-core straight to straight LEDPNP	CO8.3-2-C8.3/L	3	4A/30V	2m	0.25mm ²
	3-core straight to angled LEDPNP	CO8.3-2-CB8.3/L	3	4A/30V	2m	0.25mm ²
	4-core straight to straight LEDPNP	CO8.4-2-C8.4/L	4	4A/30V	2m	0.25mm ²
	4-core straight to angled LEDPNP	CO8.4-2-CB8.4/L	4	4A/30V	2m	0.25mm ²
	3-core straight to straight LEDNPN	CO8.3-2-C8.3/LN	3	4A/30V	2m	0.25mm ²
	3-core straight to angled LEDNPN	CO8.3-2-CB8.3/LN	3	4A/30V	2m	0.25mm ²
	4-core straight to straight LEDNPN	CO8.4-2-C8.4/KN	4	4A/30V	2m	0.25mm ²
	4-core straight to angled LEDNPN	CO8.4-2-CB8.4/LN	4	4A/30V	2m	0.25mm ²
PUR	3-core straight to straight LEDPNP	CO8.3-2-C8.3/L/P	3	4A/30V	2m	0.25mm ²
	3-core straight to angled LEDPNP	CO8.3-2-CB8.3/L/P	3	4A/30V	2m	0.25mm ²
	4-core straight to straight LEDPNP	CO8.4-2-C8.4/L/P	4	4A/30V	2m	0.25mm ²
	4-core straight to angled LEDPNP	CO8.4-2-CB8.4/L/P	4	4A/30V	2m	0.25mm ²
	3-core straight to straight LEDNPN	CO8.3-2-C8.3/LN/P	3	4A/30V	2m	0.25mm ²
	3-core straight to angled LEDNPN	CO8.3-2-CB8.3/LN/P	3	4A/30V	2m	0.25mm ²
	4-core straight to straight LEDNPN	CO8.4-2-C8.4/LN/P	4	4A/30V	2m	0.25mm ²
	4-core straight to angled LEDNPN	CO8.4-2-CB8.4/LN/P	4	4A/30V	2m	0.25mm ²

Selection Instructions

CO8.4 - 2 - C8.4 / P

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Attn : ①: Customized cable lengths are available.

②: Cable jacket or function can be customized according to the requirements.

Additional Information

Cable Length	Product with LED	
	PNP 	NPN
	PNP 	NPN

Double-ended I/O Cordsets-M8 (female) to M8 (male)

Description:

Used for sensors, I/O connector connecting. Standard M8 threaded connection. Advanced design idea of female-to-male ends connector. Straight series and angled series are available. 3, 4-core are optional. Customized cable lengths. Degree of protection IP67.



Features:

- PVC and PUR cable are optional
- A-coded interface
- M8 (female) with LED to M8(male)

* All technical information about the raw cable for connectors, please refer to the "cable" section (P513).

Type Code

Cable jacket	Description	Type	Pin	Rated current/voltage	Cable length	Wire section
PVC	3-core angled to straight LEDPNP	CBO8.3-2-C8.3/L	3	4A/30V	2m	0.25mm ²
	3-core angled to angled LEDPNP	CBO8.3-2-CB8.3/L	3	4A/30V	2m	0.25mm ²
	4-core angled to straight LEDPNP	CBO8.4-2-C8.4/L	4	4A/30V	2m	0.25mm ²
	4-core angled to angled LEDPNP	CBO8.4-2-CB8.4/L	4	4A/30V	2m	0.25mm ²
	3-core angled to straight LEDNPN	CBO8.3-2-C8.3/LN	3	4A/30V	2m	0.25mm ²
	3-core angled to angled LEDNPN	CBO8.3-2-CB8.3/LN	3	4A/30V	2m	0.25mm ²
	4-core angled to straight LEDNPN	CBO8.4-2-C8.4/LN	4	4A/30V	2m	0.25mm ²
	4-core angled to angled LEDNPN	CBO8.4-2-CB8.4/LN	4	4A/30V	2m	0.25mm ²
PUR	3-core straight to straight LEDPNP	CBO8.3-2-C8.3/LP	3	4A/30V	2m	0.25mm ²
	3-core straight to angled LEDPNP	CBO8.3-2-CB8.3/L/P	3	4A/30V	2m	0.25mm ²
	4-core straight to straight LEDPNP	CBO8.4-2-C8.4/L/P	4	4A/30V	2m	0.25mm ²
	4-core straight to angled LEDPNP	CBO8.4-2-CB8.4/L/P	4	4A/30V	2m	0.25mm ²
	3-core straight to straight LEDNPN	CBO8.3-2-C8.3/LN/P	3	4A/30V	2m	0.25mm ²
	3-core straight to angled LEDNPN	CBO8.3-2-CB8.3/LN/P	3	4A/30V	2m	0.25mm ²
	4-core straight to straight LEDNPN	CBO8.4-2-C8.4/LN/P	4	4A/30V	2m	0.25mm ²
	4-core straight to angled LEDNPN	CBO8.4-2-CB8.4/LN/P	4	4A/30V	2m	0.25mm ²

Selection Instructions

CBO8.4 - 2 - C8.4 / P

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Attn : ①: Customized cable lengths are available.
 ②: Cable jacket or function can be customized according to the requirements.

Additional Information

Cable Length	Product with LED	
	PNP 	NPN
	PNP 	NPN

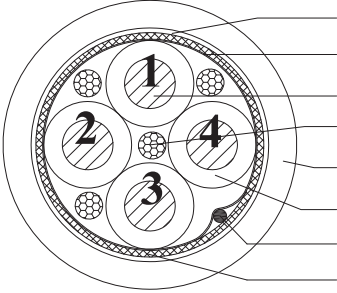




I/O Cable - PUR

	Color code	Color	Core
	BN		1
	BU		3
	BK		4

Type List	L1/E344	L200/E344	L300/E344	L500/E344
Specification	1m (optional cable length)	200m/reel	300m/reel	500m/reel

Technical parameters			
Structure	3×0.25mm ² +WDBP	Electrical characteristic	
Conductor		Rated voltage	300V
Material	Bare copper stranded	Rated temperature	-40 ~ 80 °C
Size	44/0.08±0.008mm	Max. DC conductor resistance(at 20 °C)	87.6Ω/km
O.D. (Ref)	0.61mm	Voltage withstand test	1.5kV/1min
Insulation		Min.bending radius	Flexing 15×OD
Material	PP		Fixed 7.5×OD
Min.average thickness	0.23mm	Oil Resistant Condition(IRM 902)	100 °C ×24hrs
Min.thickness at any point	0.18mm	Tensile strength	≥60% of original
O.D.	1.15±0.10mm	Elongation(%)	≥60% of original
Cabling		Physical properties	
Filler	Cotton	Tensile strength	≥10.3MPa
Drain	Non-woven	Elongation	≥100%
Material	Tinned copper stranded 32/0.10±0.008mm	Aged condition	113±1 °C ×168h
Braid		Percent of original tensile strength	≥70%
Material	Tinned copper	Percent of original elongation	≥65%
Size	0.10mm(Min. ≥80%)	Flame test	FT1, IEC 60332-1
Jacket		Chain test	20times/minute, distance: 1.0m,
Material	Paper	Bending radius	100mm ≥5 million times
Material	PUR		Halogen free
Min.average thickness	0.76mm	Color code	
Min.thickness at any point	0.61mm	Insulation	1.brown 2.blue 3.black
O.D.	5.20±0.20mm	Jacket	Gray

I/O Cable - PUR

	Color code	Color	Core
	BN		1
	WH		2
	BU		3
	BK		4

Type List	L1/E345	L200/E345	L300/E345	L500/E345
Specification	1m (optional cable length)	200m/reel	300m/reel	500m/reel

Technical parameters			
Structure	4×0.25mm ² +WDBP	Electrical characteristic	
Conductor		Rated voltage	300V
Material	Bare copper stranded	Rated temperature	-40 ~ 80 °C
Size	44/0.08±0.008mm	Max. DC conductor resistance(at 20 °C)	87.6Ω/km
O.D. (Ref)	0.61mm	Voltage withstand test	1.5kV/1min
Insulation		Min.bending radius	Flexing 15×OD
Material	PP		Fixed 7.5×OD
Min.average thickness	0.23mm	Oil Resistant Condition(IRM 902)	100 °C ×24hrs
Min.thickness at any point	0.18mm	Tensile strength	≥60% of original
O.D.	1.15±0.10mm	Elongation(%)	≥60% of original
Cabling		Physical properties	
Filler	Cotton	Tensile strength	≥10.3MPa
Drain	Non-woven	Elongation	≥100%
Material	Tinned copper stranded 32/0.10±0.008mm	Aged condition	113±1 °C ×168h
Braid		Percent of original tensile strength	≥70%
Material	Tinned copper	Percent of original elongation	≥65%
Size	0.10mm(Min. ≥80%)	Flame test	FT1, IEC 60332-1
Jacket		Chain test	20times/minute, distance: 1.0m,
Material	Paper	Bending radius	100mm ≥5 million times
Material	PUR		Halogen free
Min.average thickness	0.76mm	Color code	
Min.thickness at any point	0.61mm	Insulation	1.brown 2.blue 3.white 4.black
O.D.	5.20±0.20mm	Jacket	Gray

Single-ended I/O Cordsets- M12 (Straight-female)

Description:

Used for sensors, I/O connector connecting. Standard M12(straight-female) threaded connection. 2, 3, 4, 5, 8-core are optional. Customized cable lengths. Degree of protection IP67.

Features:

- PVC, PUR cable are optional
- A-coded interface
- LED indicator

* All technical information about the raw cable for connectors, please refer to the "cable" section (P513).



Type Code

Cable jacket	Description	Type	Pin	Rated current/voltage	Cable length	Wire section
PVC	Female DC 2-core	CO12.2-2	2	4A/250V	2m	0.34mm ²
	Female AC/DC 2-core	CO12.21-2	2	4A/250V	2m	0.34mm ²
	Female AC 2-core	CO12.22-2	2	4A/250V	2m	0.34mm ²
	Female 3-core NO	CO12.3-2	3	4A/250V	2m	0.34mm ²
	Female 3-core NO with LEDPNP	CO12.3-2/L	3	4A/30V	2m	0.34mm ²
	Female 3-core NO with LEDNPN	CO12.3-2/LN	3	4A/30V	2m	0.34mm ²
	Female 4-core NO/NC	CO12.4-2	4	4A/250V	2m	0.34mm ²
	Female 4-core NO/NC with LEDPNP	CO12.4-2/L	4	4A/30V	2m	0.34mm ²
	Female 4-core NO/NC with LEDNPN	CO12.4-2/LN	4	4A/30V	2m	0.34mm ²
	Female 5-core NO/NC	CO12.5-2	5	4A/60V	2m	0.34mm ²
	Female 8-core	CO12.8-2	8	2A/30V	2m	0.25mm ²
PUR	Female DC 2-core	CO12.2-2/P	2	4A/250V	2m	0.34mm ²
	Female AC/DC 2-core	CO12.21-2/P	2	4A/250V	2m	0.34mm ²
	Female AC 2-core	CO12.22-2/P	2	4A/250V	2m	0.34mm ²
	Female 3-core NO	CO12.3-2/P	3	4A/250V	2m	0.34mm ²
	Female 3-core NO with LEDPNP	CO12.3-2/L/P	3	4A/30V	2m	0.34mm ²
	Female 3-core NO with LEDNPN	CO12.3-2/LN/P	3	4A/30V	2m	0.34mm ²
	Female 4-core NO/NC	CO12.4-2/P	4	4A/250V	2m	0.34mm ²
	Female 4-core NO/NC with LEDPNP	CO12.4-2/L/P	4	4A/30V	2m <td 0.34mm ²	
	Female 4-core NO/NC with LEDNPN	CO12.4-2/LN/P	4	4A/30V	2m	0.34mm ²
	Female 5-core NO/NC	CO12.5-2/P	5	4A/60V	2m	0.34mm ²
	Female 8-core	CO12.8-2/P	8	2A/30V	2m	0.25mm ²

Selection Instructions

CO12.4- 2 / P

① ②

Attn : ①: Customized cable lengths are available.
②: Cable jacket or function can be customized according to the requirements.

Additional Information

Cable Length	Product with LED	
	PNP <p>3-core</p>	NPN <p>3-core</p>
	PNP <p>4-core</p>	NPN <p>4-core</p>

Single-ended I/O Cordsets-M12 (Straight-female)

Description:

Used for sensors, I/O connector connecting. Standard M12(straight-female) threaded connection.
2, 3, 4, 5, 8-core are optional. Customized cable lengths. Degree of protection IP67.

Features:

- NE, shielded cable, welding spark resistance EWSR, and high flexibility cable STPE are optional
- A-coded interface
- Optional LED indicator (except NAMUR and 8-core cable)

* All technical information about the raw cable for connectors, please refer to the "cable" section (P513).



Type Code

Cable jacket	Description	Type	Pin	Rated current/voltage	Cable length	Wire section
Welding spark resistance	Female 3-core	CO12.3-2/EWSR	3	4A/250V	2m	0.34mm ²
	Female 4-core	CO12.4-2/EWSR	4	4A/250V	2m	0.34mm ²
	Female 5-core	CO12.5-2/EWSR	5	4A/60V	2m	0.34mm ²
PVC Shielded	Female 3-core	CO12.3-2/WS	3	4A/250V	2m	0.34mm ²
	Female 4-core	CO12.4-2/WS	4	4A/250V	2m	0.34mm ²
	Female 5-core	CO12.5-2/WS	5	4A/60V	2m	0.34mm ²
	Female 8-core	CO12.8-2/WS	8	2A/30V	2m	0.25mm ²
PUR Shielded	Female 3-core	CO12.3-2/WS/P	3	4A/250V	2m	0.34mm ²
	Female 4-core	CO12.4-2/WS/P	4	4A/250V	2m	0.34mm ²
	Female 5-core	CO12.5-2/WS/P	5	4A/60V	2m	0.34mm ²
	Female 8-core	CO12.8-2/WS/P	8	2A/30V	2m	0.25mm ²

Selection Instructions

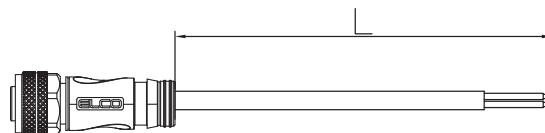
CO12.4 - 2 / WS

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- Attn :
- ①: Customized cable lengths are available.
 - ②: Cable jacket or function can be customized according to the requirements.

Additional Information

Cable Length



Single-ended I/O Cordsets-M12 (Angled-female)

Description:

Used for sensors, I/O connector connecting. Standard M12(angled-female) threaded connection.
2, 3, 4, 5, 8-core are optional. Customized cable lengths. Degree of protection IP67.

Features:

- PVC, PUR cable are optional
- A-coded interface
- LED indicator

* All technical information about the raw cable for connectors, please refer to the "cable" section (P513).



Type Code

Cable jacket	Description	Type	Pin	Rated current/voltage	Cable length	Wire section
PVC	Female DC 2-core	CBO12.2-2	2	4A/250V	2m	0.34mm ²
	Female AC/DC 2-core	CBO12.21-2	2	4A/250V	2m	0.34mm ²
	Female AC 2-core	CBO12.22-2	2	4A/250V	2m	0.34mm ²
	Female 3-core NO	CBO12.3-2	3	4A/250V	2m	0.34mm ²
	Female 3-core NO with LEDPNP	CBO12.3-2/L	3	4A/30V	2m	0.34mm ²
	Female 3-core NO with LEDNPN	CBO12.3-2/LN	3	4A/30V	2m	0.34mm ²
	Female 4-core NO/NC	CBO12.4-2	4	4A/250V	2m	0.34mm ²
	Female 4-core NO/NC with LEDPNP	CBO12.4-2/L	4	4A/30V	2m	0.34mm ²
	Female 4-core NO/NC with LEDNPN	CBO12.4-2/LN	4	4A/30V	2m	0.34mm ²
	Female 5-core NO/NC	CBO12.5-2	5	4A/60V	2m	0.34mm ²
	Female 8-core	CBO12.8-2	8	2A/30V	2m	0.25mm ²
PUR	Female DC 2-core	CBO12.2-2/P	2	4A/250V	2m	0.34mm ²
	Female AC/DC 2-core	CBO12.21-2/P	2	4A/250V	2m	0.34mm ²
	Female AC 2-core	CBO12.22-2/P	2	4A/250V	2m	0.34mm ²
	Female 3-core NO	CBO12.3-2/P	3	4A/250V	2m	0.34mm ²
	Female 3-core NO with LEDPNP	CBO12.3-2/L/P	3	4A/30V	2m	0.34mm ²
	Female 3-core NO with LEDNPN	CBO12.3-2/LN/P	3	4A/30V	2m	0.34mm ²
	Female 4-core NO/NC	CBO12.4-2/P	4	4A/250V	2m	0.34mm ²
	Female 4-core NO/NC with LEDPNP	CBO12.4-2/L/P	4	4A/30V	2m	0.34mm ²
	Female 4-core NO/NC with LEDNPN	CBO12.4-2/LN/P	4	4A/30V	2m	0.34mm ²
	Female 5-core NO/NC	CBO12.5-2/P	5	4A/60V	2m	0.34mm ²
	Female 8-core	CBO12.8-2/P	8	2A/30V	2m	0.25mm ²

Selection Instructions

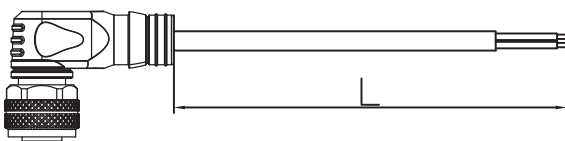
CBO12.4 - 2 / P

① ②

Attn : ①: Customized cable lengths are available.
②: Cable jacket or function can be customized according to the requirements.

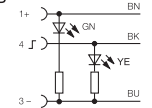
Additional Information

Cable Length



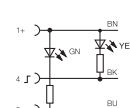
Product with LED

PNP



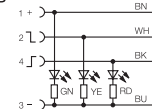
3芯

NPN



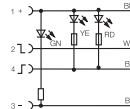
3芯

PNP



4芯

NPN



4芯

Single-ended I/O Cordsets-M12 (Angled-female)

Description:

Used for sensors, I/O connector connecting. Standard M12(angled-female) threaded connection.
2, 3, 4, 5, 8-core are optional. Customized cable lengths. Degree of protection IP67.

Features:

- NE, shielded cable, welding spark resistance EWSR, and high flexibility cable STPE are optional
- A-coded interface
- Optional LED indicator (except NAMUR and 8-core cable)

* All technical information about the raw cable for connectors, please refer to the "cable" section (P513).



Type Code

Cable jacket	Description	Type	Pin	Rated current/voltage	Cable length	Wire section
Welding spark resistance	Female 3-core	CBO12.3-2/EWSR	3	4A/250V	2m	0.34mm ²
	Female 4-core	CBO12.4-2/EWSR	4	4A/250V	2m	0.34mm ²
	Female 5-core	CBO12.5-2/EWSR	5	4A/60V	2m	0.34mm ²
PVC Shielded	Female 3-core	CBO12.3-2/WS	3	4A/250V	2m	0.34mm ²
	Female 4-core	CBO12.4-2/WS	4	4A/250V	2m	0.34mm ²
	Female 5-core	CBO12.5-2/WS	5	4A/60V	2m	0.34mm ²
	Female 8-core	CBO12.8-2/WS	8	2A/30V	2m	0.25mm ²
PUR Shielded	Female 3-core	CBO12.3-2/WS/P	3	4A/250V	2m	0.34mm ²
	Female 4-core	CBO12.4-2/WS/P	4	4A/250V	2m	0.34mm ²
	Female 5-core	CBO12.5-2/WS/P	5	4A/60V	2m	0.34mm ²
	Female 8-core	CBO12.8-2/WS/P	8	2A/30V	2m	0.25mm ²

Selection Instructions

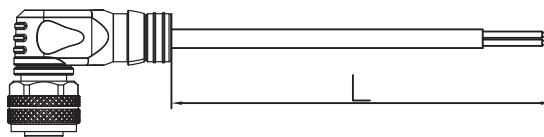
CBO12.4 - 2 / WS

① ②

- Attn : ①: Customized cable lengths are available.
②: Cable jacket or function can be customized according to the requirements.

Additional Information

Cable Length



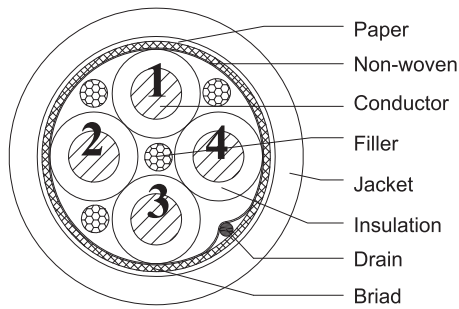
I/O Cable - PUR





	Color code	Color	Core
	BN		1
	BU		3
	BK		4

Type List	L1/E346	L200/E346	L300/E346	L500/E346
Specification	1m (optional cable length)	200m/reel	300m/reel	500m/reel

Technical parameters			
Structure	3×0.34mm ² +WDBP	Electrical characteristic	
Conductor		Rated voltage	300V
Material	Bare copper stranded	Rated temperature	-40 ~ 80 °C
Size	65/0.08±0.008mm	Max. DC conductor resistance(at 20 °C)	55.4Ω/km
O.D. (Ref)	0.74mm	Voltage withstand test	1.5kV/1min
Insulation		Min.bending radius	Flexing 15×OD Fixed 7.5×OD
Material	PP		
Min.average thickness	0.23mm	Oil Resistant Condition(IRM 902)	100 °C ×24hrs
Min.thickness at any point	0.18mm	Tensile strength	≥60% of original
O.D.	1.15±0.10mm	Elongation(%)	≥60% of original
Cabling		Physical properties	
Filler	Cotton	Tensile strength	≥10.3MPa
Drain	Non-woven	Elongation	≥100%
Material	Tinned copper stranded 43/0.10±0.008mm	Aged condition	113±1 °C ×168h
Braid		Percent of original tensile strength	≥70%
Material	Tinned copper	Percent of original elongation	≥65%
Size	0.10mm(Min. ≥80%)	Flame test	FT1, IEC 60332-1
Jacket		Chain test	20times/minute, distance: 1.0m,
Material	Paper	Bending radius	100mm ≥5 million times
Material	PUR		Halogen free
Min.average thickness	0.76mm	Color code	
Min.thickness at any point	0.61mm	Insulation	1.brown 2.blue 3.black
O.D.	5.20±0.20mm	Jacket	Gray

I/O Cable - PUR



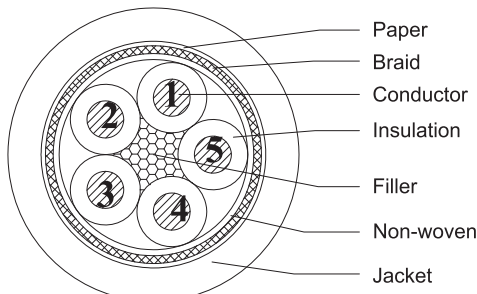





Color code	Color	Core
BN		1
WH		2
BU		3
BK		4

Type List	L1/E347	L200/E347	L300/E347	L500/E347
Specification	1m (optional cable length)	200m/reel	300m/reel	500m/reel

Technical parameters

Structure	4×0.34mm ² +WDBP	Electrical characteristic	
Conductor		Rated voltage	300V
Material	Bare copper stranded	Rated temperature	-40 ~ 80 °C
Size	65/0.08±0.008mm	Max. DC conductor resistance(at 20 °C)	55.4Ω/km
O.D. (Ref)	0.74mm	Voltage withstand test	1.5kV/1min
Insulation		Min.bending radius	Flexing 15×OD Fixed 7.5×OD
Material	PP		
Min.average thickness	0.23mm	Oil Resistant Condition(IRM 902)	100 °C ×24hrs
Min.thickness at any point	0.18mm	Tensile strength	≥60% of original
O.D.	1.15±0.10mm	Elongation(%)	≥60% of original
Cabling		Physical properties	
Filler	Cotton	Tensile strength	≥10.3MPa
Material	Non-woven	Elongation	≥100%
Drain	Tinned copper stranded 43/0.10±0.008mm	Aged condition	113±1 °C ×168h
Braid		Percent of original tensile strength	≥70%
Material	Tinned copper	Percent of original elongation	≥65%
Size	0.10mm(Min. ≥80%)	Flame test	FT1, IEC 60332-1
Jacket		Chain test	20times/minute, distance: 1.0m,
Material	Paper	Bending radius	100mm ≥5 million times
Material	PUR		Halogen free
Min.average thickness	0.76mm	Color code	
Min.thickness at any point	0.61mm	Insulation	1.brown 2.blue 3.white 4.black
O.D.	5.60±0.20mm	Jacket	Gray

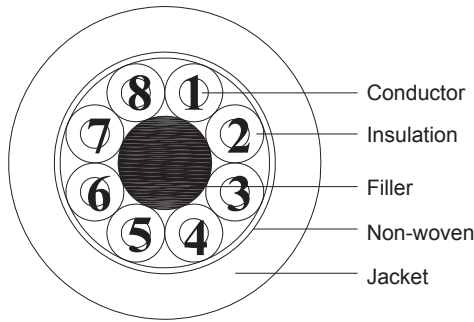
I/O Cable - PUR

	Color code	Color	Core
	BN		1
	WH		2
	BU		3
	BK		4
	GY		5

Type List	L1/E348	L200/E348	L300/E348	L500/E348
Specification	1m (optional cable length)	200m/reel	300m/reel	500m/reel

Technical parameters			
Structure	5C×0.34mm ² (65/0.08B)+W	Electrical characteristic	
Conductor		Rated voltage	300V
Material	Bare copper stranded	Rated temperature	-40 ~ 80 °C
Size	65/0.08±0.008mm	Max. DC conductor resistance(at 20 °C)	55.4Ω/km
O.D. (Ref)	0.74mm	Voltage withstand test	AC 2.0kV/1min
Insulation		Min.bending radius	Flexing 10×OD
Material	PP		Flxed 5×OD
Min.average thickness	0.23mm	Oil Resistant Condition(IRM 902)	100 °C×24hrs
Min.thickness at any point	0.18mm	Tensile strength	≥60% of original
O.D.	1.15±0.10mm	Elongation(%)	≥60% of original
Cabling		Physical properties	
Filler	Cotton	Tensile strength	≥10.3MPa
Material	Non-woven	Elongation	≥100%
Braid		Aged condition	113±1 °C×168h
Material	Tinned copper	Percent of original tensile strength	≥70%
Size	0.10mm(80% min.)	Percent of original elongation	≥65%
Jacket		Flame test	FT1, IEC 60332-1
Material	Paper	Chain test	20times/minute, distance: 1.0m,
Material	PUR	Bending radius	100mm ≥5 million times
Min.average thickness	0.76mm		Halogen free
Min.thickness at any point	0.61mm	Color code	
O.D.	6.00±0.20mm	Insulation	1.brown 2.blue 3.gray 4.white 5.black
		Jacket	Gray

I/O Cable - 8-core PUR Unshielded



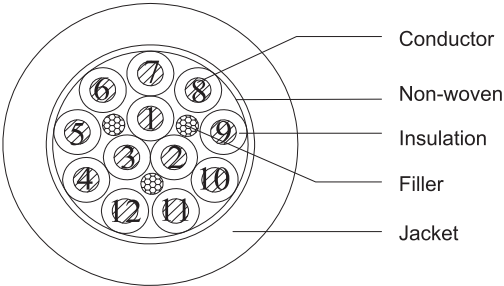












Color code	Color	Core
WH		1
BN		2
GN		3
YE		4
GY		5
PK		6
BU		7
RD		8

Type List	L1/E390	L200/E390	L300/E390	L500/E390
Specification	1m (optional cable length)	200m/reel	300m/reel	500m/reel

Technical parameters			
Structure	8Cx0.25mm2(32/0.10B)+W	Electrical characteristic	
Conductor	8-core	Rated voltage	300V
Material	Bared Copper Stranded	Rated temperature	-40 ~ 80 C
Size	32/0.10±0.008mm	Max. DC conductor resistance(at 20 C)	87.6Ω/km
O.D. (Ref)	0.65mm	Voltage withstand test	AC 2.0kV/1min
Insulation		Min.bending radius	Flexing 10×OD
Material	PP		Fixed 5×OD
Min.average thickness	0.23mm	Oil Resistant Condition(IRM 902)	100 C ×24hrs
Min.thickness at any point	0.18mm	Tensile strength	≥60% of original
O.D.	1.15±0.10mm	Elongation(%)	≥60% of original
Cabling		Physical properties	
Filler	Optional	Tensile strength	≥10.3MPa
Material	Non-woven	Elongation	≥100%
Jacket		Aged condition	113±1 C ×168h
Material	PUR	Percent of original tensile strength	≥70%
Min.average thickness	0.76mm	Percent of original elongation	≥65%
Min.thickness at any point	0.61mm	Flame test	FT1, IEC 60332-1
O.D.	6.00±0.25mm	Chain test	20times/minute, distance: 1.0m,
		Bending radius	100mm ≥5 million times
			Halogen free
		Color code	
		Insulation	1.white 2.brown 3.green 4.yellow
			5.gray 6.pink 7.blue 8.red
		Jacket	Gray

Connectivity

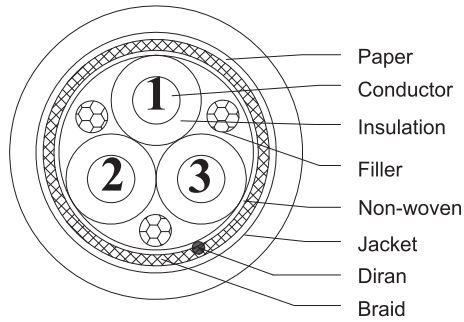
I/O Cable - PUR

		Color code	Color	Core	Color code	Color	Core
			BN		1	RD	
BU			2	VI		10	
WH			3	GY/PK		11	
GN			4	RD/BU		12	
PK			5				
YE			6				
BK			7				
GY			8				

Type List	L1/E363	L200/E363	L300/E363	L500/E363
Specification	1m (optional cable length)	200m/reel	300m/reel	500m/reel

Technical parameters			
Structure	12C×0.25mm ² (44/0.08B)+W	Electrical characteristic	
Conductor		Rated voltage	300V
Material	Bare copper stranded	Rated temperature	-40~80℃
Size	44/0.08±0.008mm	Max. DC conductor resistance(at 20℃)	87.6Ω/km
O.D. (Ref)	0.61mm	Voltage withstand test	AC 2.0kV/1min
Insulation		Min.bending radius	Flexing 10×OD
Material	PP		Fixed 5×OD
Min.average thickness	0.23mm	Oil Resistant Condition(IRM 902)	100℃×24hrs
Min.thickness at any point	0.18mm	Tensile strength	≥60% of original
O.D.	1.15±0.10mm	Elongation(%)	≥60% of original
Cabling		Physical properties	
Filler	Cotton	Tensile strength	≥10.3MPa
Material	Non-woven	Elongation	≥100%
Jacket		Aged condition	113±1℃×168h
Material	PUR	Percent of original tensile strength	≥70%
Min.average thickness	0.76mm	Percent of original elongation	≥65%
Min.thickness at any point	0.61mm	Flame test	FT1, IEC 60332-1
O.D.	5.60±0.20mm	Chain test	20times/minute, distance: 1.0m,
		Bending radius	100mm ≥5 million times
			Halogen free
		Color code	
		Insulation	1.white 2.brown 3.green 4.yellow 5.gray 6.pink 7.blue8.red 9.black 10.purple 11.gray/pink 12.red/blue
		Jacket	Gray

I/O Cable - PUR Shielded



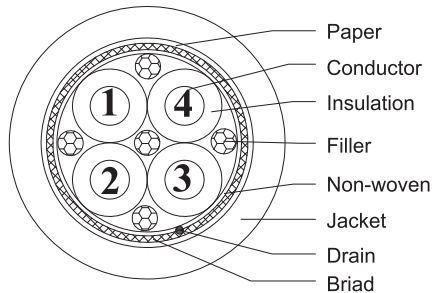
Color code	Color	Core
BN		1
BU		3
BK		4





Type List	L1/E368	L200/E368	L300/E368	L500/E368
Specification	1m (optional cable length)	200m/reel	300m/reel	500m/reel

Technical parameters

Structure	3C×0.34mm ² (65/0.08B)+WB	Electrical characteristic	
Conductor		Rated voltage	300V
Material	Bare copper stranded	Rated temperature	-40 ~ 80 °C
Size	65/0.08±0.008mm	Max. DC conductor resistance(at 20 °C)	55.4Ω/km
O.D. (Ref)	0.74mm	Voltage withstand test	AC 2.0kV/1min
Insulation		Min.bending radius	Flexing 10×OD
Material	PP		Fixed 5×OD
Min.average thickness	0.23mm	Oil Resistant Condition(IRM 902)	100 °C ×24hrs
Min.thickness at any point	0.18mm	Tensile strength	≥60% of original
O.D.	1.15±0.10mm	Elongation(%)	≥60% of original
Cabling		Physical properties	
Filler	Cotton	Tensile strength	≥10.3MPa
Material	Non-woven	Elongation	≥100%
Drain	Tinned copper , 43/0.10±0.008mm	Aged condition	113±1 °C ×168h
Braid		Percent of original tensile strength	≥70%
Material	Tinned copper stranded	Percent of original elongation	≥65%
Size	0.10mm , 80% min.	Flame test	FT1, IEC 60332-1
Jacket		Chain test	20times/minute, distance: 1.0m,
Material	Paper	Bending radius	100mm ≥5 million times
Material	PUR		Halogen free
Min.average thickness	0.76mm	Color code	
Min.thickness at any point	0.61mm	Insulation	1.brown 2.blue 3.black
O.D.	5.20±0.20mm	Jacket	Gray

I/O Cable - PUR Shielded



Color code	Color	Core
BN		1
WH		2
BU		3
BK		4

Type List	L1/E369	L200/E369	L300/E369	L500/E369
Specification	1m (optional cable length)	200m/reel	300m/reel	500m/reel

Technical parameters			
Structure	4C×0.34mm ² (65/0.08B)+WB	Electrical characteristic	
Conductor		Rated voltage	300V
Material	Bare copper stranded	Rated temperature	-40 ~ 80 °C
Size	65/0.08±0.008mm	Max. DC conductor resistance(at 20 °C)	55.4Ω/km
O.D. (Ref)	0.74mm	Voltage withstand test	AC 2.0kV/1min
Insulation		Min.bending radius	Flexing 10×OD
Material	PP		Fixed 5×OD
Min.average thickness	0.23mm	Oil Resistant Condition(IRM 902)	100 °C ×24hrs
Min.thickness at any point	0.18mm	Tensile strength	≥60% of original
O.D.	1.25±0.10mm	Elongation(%)	≥60% of original
Cabling		Physical properties	
Filler	Cotton	Tensile strength	≥10.3MPa
Material	Non-woven	Elongation	≥100%
Drain	Tinned copper , 43/0.10±0.008mm	Aged condition	113±1 °C ×168h
Braid		Percent of original tensile strength	≥70%
Material	Tinned copper stranded	Percent of original elongation	≥65%
Size	0.10mm , 80% min.	Flame test	FT1, IEC 60332-1
Jacket		Chain test	20times/minute, distance: 1.0m,
Material	Paper	Bending radius	100mm ≥5 million times
Material	PUR		Halogen free
Min.average thickness	0.76mm	Color code	
Min.thickness at any point	0.61mm	Insulation	1.brown 2.blue 3.black 4.white
O.D.	5.60±0.25mm	Jacket	Gray

Connectivity

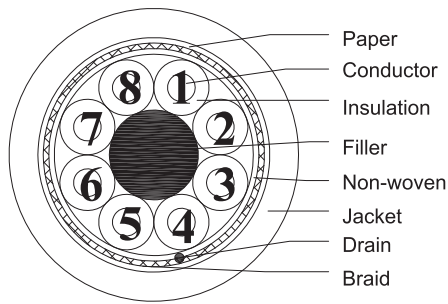
I/O Cable - PUR Shielded

	Color code	Color	Core
	BN		1
	WH		2
	BU		3
	BK		4
	GY		5

Type List	L1/E370	L200/E370	L300/E370	L500/E370
Specification	1m (optional cable length)	200m/reel	300m/reel	500m/reel

Technical parameters			
Structure	5C×0.34mm ² (65/0.08B)+WB	Electrical characteristic	
Conductor		Rated voltage	300V
Material	Bare copper stranded	Rated temperature	-40 ~ 80 °C
Size	65/0.08±0.008mm	Max. DC conductor resistance(at 20 °C)	55.4Ω/km
O.D. (Ref)	0.74mm	Voltage withstand test	AC 2.0kV/1min
Insulation		Min.bending radius	Flexing 10×OD
Material	PP		Fixed 5×OD
Min.average thickness	0.23mm	Oil Resistant Condition(IRM 902)	100 °C ×24hrs
Min.thickness at any point	0.18mm	Tensile strength	≥60% of original
O.D.	1.25±0.10mm	Elongation(%)	≥60% of original
Cabling		Physical properties	
Filler	Cotton	Tensile strength	≥10.3MPa
Material	Non-woven	Elongation	≥100%
Drain	Tinned copper , 43/0.10±0.008mm	Aged condition	113±1 °C ×168h
Braid		Percent of original tensile strength	≥70%
Material	Tinned copper stranded	Percent of original elongation	≥65%
Size	0.10mm , 80% min.	Flame test	FT1, IEC 60332-1
Jacket		Chain test	20times/minute, distance: 1.0m,
Material	Paper	Bending radius	100mm ≥5 million times
Material	PUR		Halogen free
Min.average thickness	0.76mm	Color code	
Min.thickness at any point	0.61mm	Insulation	1.brown 2.blue 3.black 4.white 5.gray
O.D.	5.60±0.25mm	Jacket	Gray

I/O Cable - PUR Shielded

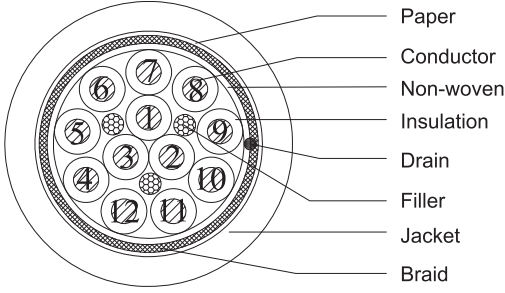














Color code	Color	Core
WH		1
BU		2
GN		3
YE		4
GY		5
PK		6
BN		7
RD		8

Type List	L1/E371	L200/E371	L300/E371	L500/E371
Specification	1m (optional cable length)	200m/reel	300m/reel	500m/reel

Technical parameters			
Structure	8C×0.25mm ² (44/0.08B)	Electrical characteristic	
Conductor		Rated voltage	300V
Material	Bare copper stranded	Rated temperature	-40 ~ 80 °C
Size	44/0.08±0.008mm	Max. DC conductor resistance(at 20 °C)	87.6Ω/km
O.D. (Ref)	0.61mm	Voltage withstand test	AC 2.0kV/1min
Insulation		Min.bending radius	Flexing 10×OD
Material	PP		Fixed 5×OD
Min.average thickness	0.23mm	Oil Resistant Condition(IRM 902)	100 °C ×24hrs
Min.thickness at any point	0.18mm	Tensile strength	≥60% of original
O.D.	1.15±0.10mm	Elongation(%)	≥60% of original
Cabling		Physical properties	
Filler	Cotton	Tensile strength	≥10.3MPa
Material	Non-woven	Elongation	≥100%
Drain	Tinned copper, 32/0.10±0.008mm	Aged condition	113±1 °C ×168h
Braid		Percent of original tensile strength	≥70%
Material	Tinned copper stranded	Percent of original elongation	≥65%
Size	0.10mm , 80% min.	Flame test	FT1, IEC 60332-1
Jacket		Chain test	20times/minute, distance: 1.0m,
Material	Paper	Bending radius	100mm ≥5 million times
Material	PUR		Halogen free
Min.average thickness	0.76mm	Color code	
Min.thickness at any point	0.61mm	Insulation	1.white 2.brown 3.green 4.yellow
O.D.	6.80±0.25mm		5.gray 6.pink 7.blue 8.red
		Jacket	Gray

I/O Cable - PUR Shielded

		Color code	Color	Core	Color code	Color	Core
		BN		1	RD		9
BU		2	VI		10		
WH		3	GY/PK		11		
GN		4	RD/BU		12		
PK		5					
YE		6					
BK		7					
GY		8					

Type List	L1/E389	L200/E389	L300/E389	L500/E389
Specification	1m (optional cable length)	200m/reel	300m/reel	500m/reel

Technical parameters			
Structure	12C×0.25mm2(32/0.10B)+WDBP	Electrical characteristic	
Conductor		Rated voltage	300V
Material	Bare copper stranded	Rated temperature	-40~80℃
Size	32/0.10±0.008mm	Max. DC conductor resistance(at 20℃)	87.6Ω/km
O.D. (Ref)	0.65mm	Voltage withstand test	AC 2.0kV/1min
Insulation		Min.bending radius	Flexing 15×OD
Material	PP		Fixed 7.5×OD
Min.average thickness	0.23mm	Physical properties	
Min.thickness at any point	0.18mm	Tensile strength	≥10.3MPa
O.D.	1.25±0.10mm	Elongation	≥100%
Cabling		Aged condition	113±1℃×168h
Filler	Cotton	Percent of original tensile strength	≥70%
Material	Non-woven	Percent of original elongation	≥65%
Drain	Tinned copper stranded, 32/0.10±0.008mm	Flame test	FT1, IEC 60332-1
Braid		Chain test	20times/minute, distance: 1.0m,
Material	Tinned copper	Bending radius	100mm ≥5 million times
Size	0.10mm, 80% min.		Halogen free
Jacket		Color code	
Material	Paper	Insulation	1.white 2.brown 3.green 4.yellow
Material	PUR		5.gray 6.pink 7.blue8.red 9.black
Min.average thickness	0.76mm		10.purple 11.gray/pink 12.red/blue
Min.thickness at any point	0.61mm	Jacket	Gray
O.D.	8.00±0.40mm		