

# Connecting cables, Ethernet

Technical data

FESTO

## Connecting cable NEBC-D12G4

- Connecting cable M12 4-pin
- D-coded
- Cable lengths 0.5 ... 10 m
- Suitable for Ethernet



General technical data					
Cable characteristic	Suitable for use with energy chains			Basic	
Electrical connection	Straight plug connector, 4-pin, M12x1, D-coded	Straight plug connector, RJ45, 8-pin	Open cable end, 4-wire	Straight plug connector, 4-pin, M12x1, D-coded	Straight plug connector, RJ45, 8-pin
Conforms to standard	EN 61076-2-101	IEC 60603-7-3	–	–	
Ethernet cable specification	Type: CAT5			Type: CAT5	
Transmission characteristics	In accordance with category 5, EN 50173, class D			–	
	In accordance with category 5, ISO/IEC 11801, class D			–	
Operating voltage range	[V DC]	0 ... 30	0 ... 30	0 ... 30	0 ... 50
	[V AC]	–	–	0 ... 30	–
Surge resistance	[kV]	0.8	0.8	0.8	0.8
Acceptable current load at 40 °C	[A]	4	1.76	4	1
Cable composition	4 x 0.34 mm <sup>2</sup>			4 x 0.14 mm <sup>2</sup>	
Cable diameter	[mm]	6.7			6.4 ±0.2 mm
Nominal conductor cross section	[mm <sup>2</sup> ]	0.34			0.34
Min. bending radius	[mm]	100			100
Wire ends	–	–	Cut off bluntly, sheath removed	–	
Cable characteristic	Suitable for use with energy chains			Basic	
Cable test conditions	Bending strength: according to Festo standard			Bending strength: according to Festo standard	
	Test conditions on request			–	
	Energy chain: 2 million cycles, bending radius 100 mm			–	
Nominal tightening torque	[Nm]	0.5	–	–	–
Degree of protection to EN 60529	IP65, IP67	IP20	–	IP67	IP20

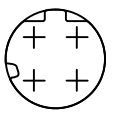
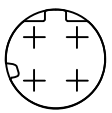
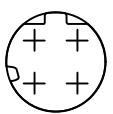
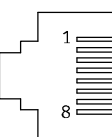
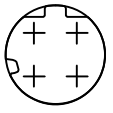
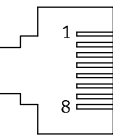
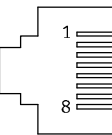
Materials					
Cable characteristic	Suitable for use with energy chains			Basic	
	Plug connector M12x1	RJ45 plug connector	Open cable end	Plug connector M12x1	RJ45 plug connector
Housing	TPE-U (PUR)	PA	PA	–	
	–	Nickel-plated brass	Nickel-plated brass	–	
Housing colour	Black	Black	Black	–	
Threaded sleeve	Die-cast zinc	–	–	–	
Pin contact	Gold-plated brass			Nickel-plated and gold-plated brass	
Cable sheath	TPE-U (PUR) <sup>1)</sup>			TPE-U (PUR)	
Cable sheath colour	Green			Blue	
Insulating sheath	PE			–	
Note on materials	RoHS compliant			RoHS compliant	
	Free of copper and PTFE			–	
Special characteristics	Oil-resistant			–	

1) The cable sheath contains esters of phosphoric acid. Under unfavourable conditions, tubing made from TPE-U (PU), such as PUN tubing, can be damaged in the event of common installation.

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Operating and environmental conditions					
Cable characteristic	Suitable for use with energy chains			Basic	
	Plug connector M12x1	RJ45 plug connector	Open cable end	Plug connector M12x1	RJ45 plug connector
Ambient temperature [°C]	-25 ... +80			-	
Ambient temperature with flexible cable installation [°C]	-20 ... +60			-20 ... +80	
Degree of contamination	3			-	
Certification certificate	-			-	

Wiring allocation (plug view)					
	Pin	Wire colour <sup>1)</sup>		Pin	
Electrical connection, plug connector, M12x1, 4-pin – plug connector, M12x1, 4-pin					
	1	YE		1	
	2	WH		2	
	3	OG		3	
	4	BU		4	
Electrical connection, plug connector, M12x1, 4-pin – plug connector, RJ45, 8-pin					
	1	YE		1	
	2	WH		3	
	3	OG		2	
	4	BU		6	
	-	-		4	
	-	-		5	
	-	-		7	
	-	-		8	
Electrical connection, plug connector, M12x1, 4-pin – open cable end					
	1	YE		-	-
	2	WH		-	
	3	OG		-	
	4	BU		-	
Electrical connection, plug connector, RJ45, 8-pin – plug connector, RJ45, 8-pin					
	1	YE		1	
	2	OG		2	
	3	WH		3	
	4	-		4	
	5	-		5	
	6	BU		6	
	7	-		7	
	8	-		8	

1) To IEC 757

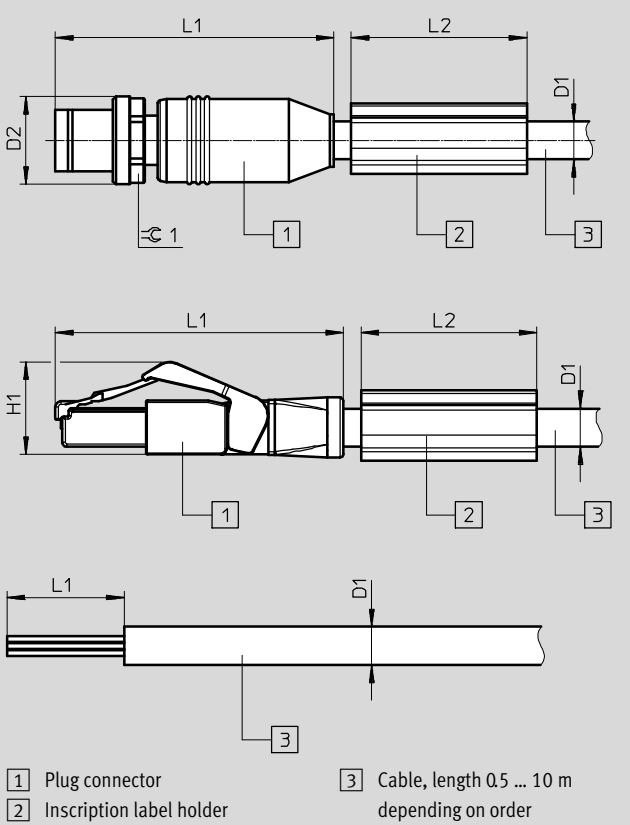
# Connecting cables, Ethernet

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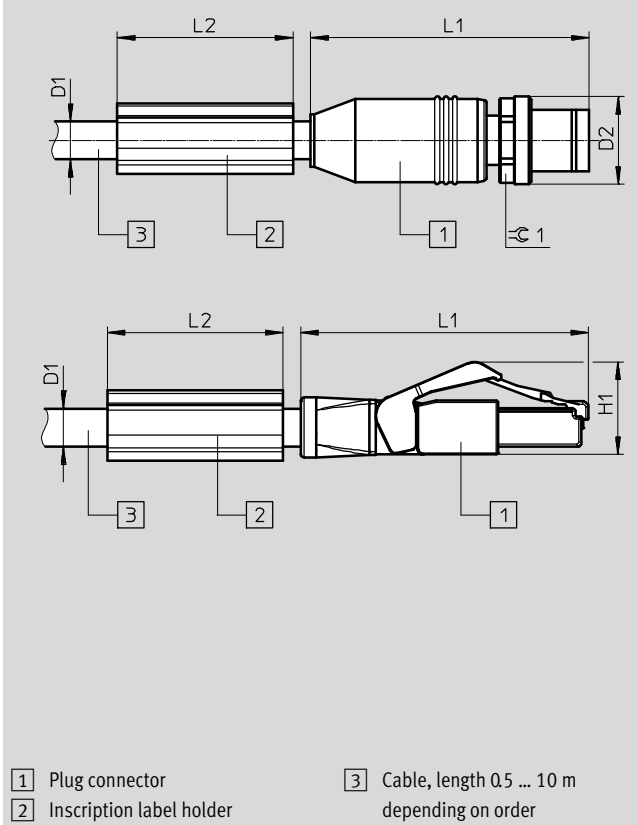
## Dimensions

Download CAD data → [www.festo.com](http://www.festo.com)

### Connection technology, left-hand end



### Connection technology, right-hand end



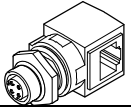
Connection technology, left-hand end	D1 Ø	D2 Ø	L1	L2	H1	≙1
Cable characteristics: Suitable for use with energy chains						
Plug connector M12x1	6.7	15	47.5	30	–	13
RJ45 plug connector	6.7	–	49	30	15.8	–
Open end	6.7	–	20	–	–	–
Cable property: Basic						
Plug connector M12x1	6.4	14.8	47.3	–	–	–

Connection technology, right-hand end	D1 Ø	D2 Ø	L1	L2	H1	≙1
Cable characteristics: Suitable for use with energy chains						
Plug connector M12x1	6.7	15	47.5	30	–	13
RJ45 plug connector	6.7	–	49	30	15.8	–
Cable property: Basic						
RJ45 plug connector	6.4	–	44.7	–	15.8	–

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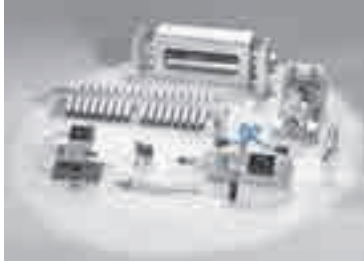
Ordering data					
Electrical connection 1	Electrical connection 2	Weight [g]	Cable length [m]	Part No.	Type
Cable characteristics: Suitable for use with energy chains					
Straight plug connector, M12x1, 4-pin, D-coded	Straight plug connector, M12x1, 4-pin, D-coded	57	0.5	<b>8040446</b>	<b>NEBC-D12G4-ES-0.5-S-D12G4-ET</b>
		93	1	<b>8040447</b>	<b>NEBC-D12G4-ES-1-S-D12G4-ET</b>
		223	3	<b>8040448</b>	<b>NEBC-D12G4-ES-3-S-D12G4-ET</b>
		350	5	<b>8040449</b>	<b>NEBC-D12G4-ES-5-S-D12G4-ET</b>
		679	10	<b>8040450</b>	<b>NEBC-D12G4-ES-10-S-D12G4-ET</b>
	Straight plug connector, RJ45, 8-pin	89	1	<b>8040451</b>	<b>NEBC-D12G4-ES-1-S-R3G4-ET</b>
		219	3	<b>8040452</b>	<b>NEBC-D12G4-ES-3-S-R3G4-ET</b>
		347	5	<b>8040453</b>	<b>NEBC-D12G4-ES-5-S-R3G4-ET</b>
		674	10	<b>8040454</b>	<b>NEBC-D12G4-ES-10-S-R3G4-ET</b>
	Open end, 4-wire	341	5	<b>8040456</b>	<b>NEBC-LE4-ES-5-D12G4-ET</b>
Straight plug connector, RJ45, 8-pin	Straight plug connector, RJ45, 8-pin	87	1	<b>8040455</b>	<b>NEBC-R3G4-ES-1-S-R3G4-ET</b>
Cable property: Basic					
Straight plug connector, M12x1, 4-pin, D-coded	Straight plug connector, RJ45, 8-pin	157	3	<b>8031121</b>	<b>NEBC-D12G4-KS-3-R3G4</b>
		455	10	<b>8031122</b>	<b>NEBC-D12G4-KS-10-R3G4</b>

Ordering data – Accessories					
	Electrical connection 1	Electrical connection 2	Part No.	Type	
Control cabinet through-hole					
	Straight socket, 4-pin, M12x1, D-coded	Straight socket, 4-pin, M12x1, D-coded	<b>8040459</b>	<b>NEFU-D12G4-D12DG4</b>	
		Angled socket, 8-pin, RJ45	<b>8040457</b>	<b>NEFU-D12G4-R3DW4</b>	

## Product Range and Company Overview

### A Complete Suite and Company Overview

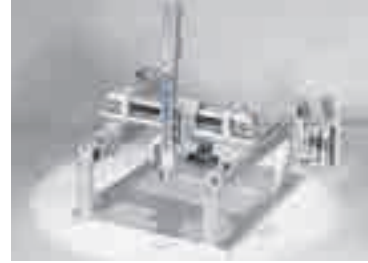
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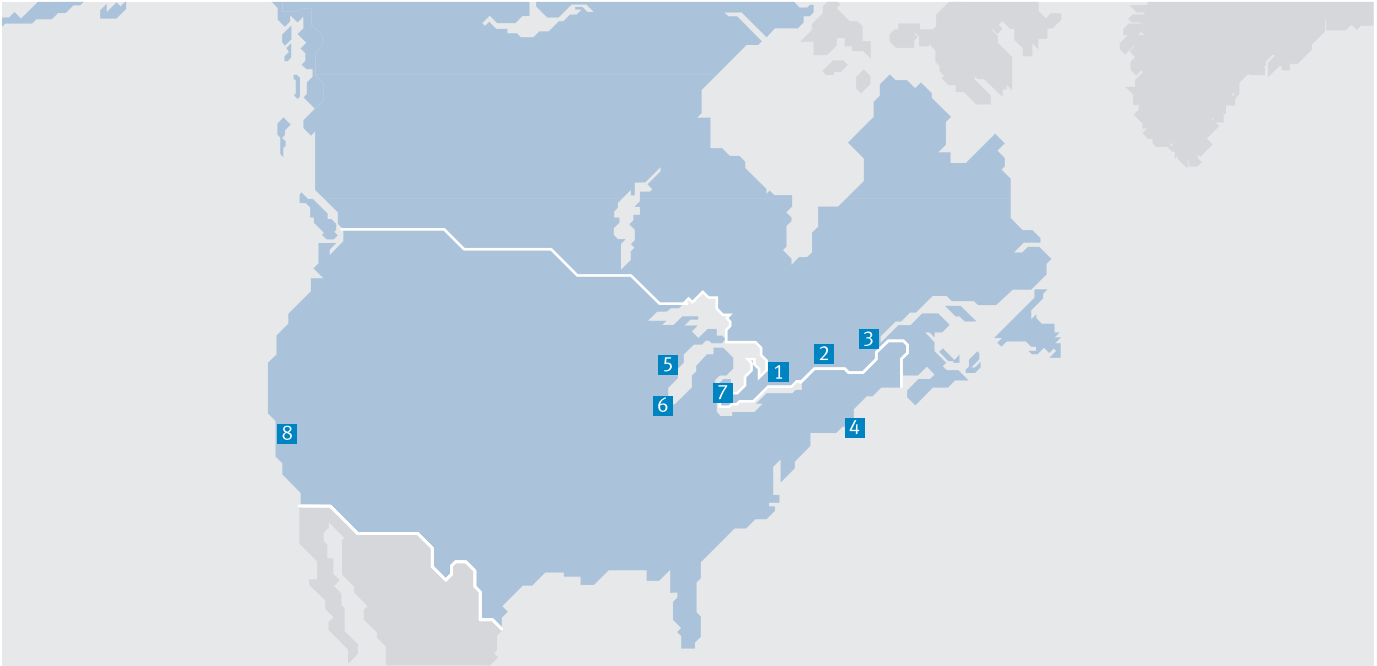


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