

# CON E



## M8 and M12 connector cables



### Description

M8 and M12 connection cables, for 3 wires, 4 wires or 5 wires.  
 Come in straight or angled versions, also with LED and customized cable lengths.  
 UL approved high-quality connection cable either in PVC jacket or in the more durable PUR jacket.

### Main features

- M12 or M8 version and optionally LED indicator
- Straight or right angle cordset connector end
- 3 or 4 wires for M8 version, 3, 4, or 5 wires for M12 version
- Female connector
- PVC or PUR cable jacket
- Push-on for M8 version available
- Operating temperature: -40°C to 105°C (-40°F to 221°F)
- Standard lengths of 2m or 5m (customized cordsets to specific lengths are also available)
- IP 67
- UL approved

## References

### Order code

CONE    N F -

Enter the code option instead of

Code	Option	Description	Note
CONE	-	Family name	
<input type="checkbox"/>	(null)	Threaded connection	
<input type="checkbox"/>	P	Push-on connection	Only for M8 version
<input type="checkbox"/>	1	M12	
<input type="checkbox"/>	5	M8	
<input type="checkbox"/>	3	3 wire (BN, BU, BK)	
<input type="checkbox"/>	4	4 wire (BN, BU, BK, WH)	
<input type="checkbox"/>	5	5 wire (BN, BU, BK, WH, GY)	Only for M12 version
N	-	Not shielded	
F	-	Female	
-	-		
<input type="checkbox"/>	A	Angled	
<input type="checkbox"/>	S	Straight	
<input type="checkbox"/>	(null)	No LED	
<input type="checkbox"/>	NT	NPN LED	Transparent housing
<input type="checkbox"/>	PT	PNP LED	Transparent housing
<input type="checkbox"/>	2	Cable length: 2 m	
<input type="checkbox"/>	5	Cable length: 5 m	
<input type="checkbox"/>	10	Cable length: 10 m	
<input type="checkbox"/>	15	Cable length: 15 m	
<input type="checkbox"/>	(null)	PVC	
<input type="checkbox"/>	P	PUR	



**Type selection**

**M8 - 3 wires**

Plug type	Cable length	LED	Jacket	Code	
Angled	2 m	-	PVC	CONE53NF-A2	
		-	PUR	CONE53NF-A2P*	
		NPN	PVC	CONE53NF-ANT2*	
		PNP		CONE53NF-APT2*	
	5 m	-	PVC	CONE53NF-A5	
		-	PUR	CONE53NF-A5P*	
		NPN	PVC	CONE53NF-ANT5*	
		PNP		CONE53NF-APT5*	
	10 m	-	PVC	CONE53NF-A10*	
		-	PUR	CONE53NF-A10P*	
	15 m	-	PVC	CONE53NF-A15*	
		-	PUR	CONE53NF-A15P*	
	Push-on, angled (not UL approved)	2 m	-	PVC	CONEP53NF-A2*
	Straight	2 m	-	PVC	CONE53NF-S2
-			PUR	CONE53NF-S2P*	
5 m		-	PVC	CONE53NF-S5	
		-	PUR	CONE53NF-S5P*	
10 m		-	PVC	CONE53NF-S10*	
		-	PUR	CONE53NF-S10P*	
15 m		-	PVC	CONE53NF-S15*	
		-	PUR	CONE53NF-S15P*	
Push-on, straight (not UL approved)		2 m	-	PVC	CONEP53NF-S2*

**M8 - 4 wires**

Plug type	Cable length	LED	Jacket	Code
Angled	2 m	-	PVC	CONE54NF-A2
		-	PUR	CONE54NF-A2P*
	5 m	-	PVC	CONE54NF-A5
		-	PUR	CONE54NF-A5P*
	10 m	-	PVC	CONE54NF-A10*
		-	PUR	CONE54NF-A10P*
	15 m	-	PVC	CONE54NF-A15*
		-	PUR	CONE54NF-A15P*
Straight	2 m	-	PVC	CONE54NF-S2
		-	PUR	CONE54NF-S2P*
	5 m	-	PVC	CONE54NF-S5
		-	PUR	CONE54NF-S5P*
	10 m	-	PVC	CONE54NF-S10*
		-	PUR	CONE54NF-S10P*
	15 m	-	PVC	CONE54NF-S15*
		-	PUR	CONE54NF-S15P*

\* Available on request



## M12 - 3 wires

Plug type	Cable length	LED	Jacket	Code
Angled	2 m	-	PVC	<b>CONE13NF-A2</b>
		-	PUR	<b>CONE13NF-A2P*</b>
		NPN	PVC	<b>CONE13NF-ANT2*</b>
		PNP		<b>CONE13NF-APT2*</b>
	5 m	-	PVC	<b>CONE13NF-A5</b>
		-	PUR	<b>CONE13NF-A5P*</b>
		NPN	PVC	<b>CONE13NF-ANT5*</b>
		PNP		<b>CONE13NF-APT5*</b>
		PNP	PUR	<b>CONE13NF-APT5P*</b>
	10 m	-	PVC	<b>CONE13NF-A10*</b>
		-	PUR	<b>CONE13NF-A10P*</b>
	15 m	-	PVC	<b>CONE13NF-A15*</b>
		-	PUR	<b>CONE13NF-A15P*</b>
	Straight	2 m	-	PVC
-			PUR	<b>CONE13NF-S2P*</b>
5 m		-	PVC	<b>CONE13NF-S5</b>
		-	PUR	<b>CONE13NF-S5P*</b>
10 m		-	PVC	<b>CONE13NF-S10*</b>
		-	PUR	<b>CONE13NF-S10P*</b>
15 m		-	PVC	<b>CONE13NF-S15*</b>
		-	PUR	<b>CONE13NF-S15P*</b>

\* Available on request



## M12 - 4 wires

Plug type	Cable length	LED	Jacket	Code
Angled	2 m	-	PVC	CONE14NF-A2
		-	PUR	CONE14NF-A2P*
		NPN	PVC	CONE14NF-ANT2*
		PNP		CONE14NF-APT2*
	5 m	-	PVC	CONE14NF-A5
		-	PUR	CONE14NF-A5P*
		NPN	PVC	CONE14NF-ANT5*
		PNP		CONE14NF-APT5*
	10 m	-	PVC	CONE14NF-A10*
		-	PUR	CONE14NF-A10P*
	15 m	-	PVC	CONE14NF-A15*
		-	PUR	CONE14NF-A15P*
Straight	2 m	-	PVC	CONE14NF-S2
		-	PUR	CONE14NF-S2P*
		NPN	PVC	CONE14NF-SNT2*
		PNP		CONE14NF-SPT2*
	5 m	-	PVC	CONE14NF-S5
		-	PUR	CONE14NF-S5P*
		NPN	PVC	CONE14NF-SNT5*
		PNP		CONE14NF-SPT5*
	10 m	-	PVC	CONE14NF-S10*
		-	PUR	CONE14NF-S10P*
	15 m	-	PVC	CONE14NF-S15*
		-	PUR	CONE14NF-S15P*



## M12 - 5 wires

Plug type	Cable length	LED	Jacket	Code
Angled	2 m	-	PVC	CONE15NF-A2*
		-	PUR	CONE15NF-A2P*
	5 m	-	PVC	CONE15NF-A5*
		-	PUR	CONE15NF-A5P*
	10 m	-	PVC	CONE15NF-A10*
		-	PUR	CONE15NF-A10P*
	15 m	-	PVC	CONE15NF-A15*
		-	PUR	CONE15NF-A15P*
Straight	2 m	-	PVC	CONE15NF-S2
		-	PUR	CONE15NF-S2P*
	5 m	-	PVC	CONE15NF-S5
		-	PUR	CONE15NF-S5P*
	10 m	-	PVC	CONE15NF-S10*
		-	PUR	CONE15NF-S10P*
	15 m	-	PVC	CONE15NF-S15*
		-	PUR	CONE15NF-S15P*

\* Available on request



**Accessories**

	Description	Code
	M12 connector plug terminal - 4 wires, angled (not UL approved)	<b>CONE14NF-A</b>
	M12 connector plug terminal - 4 wires, straight (not UL approved)	<b>CONE14NF-S</b>



## Features

### M8 - Electrical data

	3 wires version	4 wires version	LED version
Rated operating voltage (U <sub>B</sub> )	60V AC/DC	30V AC/DC	30V AC/DC
Rated current	≤ 4A	≤ 4A	≤ 4A
Contact resistance	≤ 5mΩ	≤ 5mΩ	≤ 5mΩ
Rated impulse voltage	1.5KV	1.5KV	1.5KV
Insulation resistance	10°Ω	10°Ω	10°Ω
LED colour	-	-	Power: green Output: yellow

### M12 - Electrical data

	3 or 4 wires version	5 wires version	LED version
Rated operating voltage (U <sub>B</sub> )	250V AC/DC	60V AC/DC	30V AC/DC
Rated current	≤ 4A	≤ 4A	≤ 4A
Contact resistance	≤ 5mΩ	≤ 5mΩ	≤ 5mΩ
Rated impulse voltage	2KV	1.5KV	2KV / 1.5KV / 0.8KV
Insulation resistance	10°Ω	10°Ω	10°Ω
LED colour	-	-	Power: green Output 3-wire: yellow Output 4, 5-wire: yellow / red

### Mechanical data

	M8	M12
Cable outer diameter	PUR 4.4mm ±0.15mm PVC 4.4mm ±0.15mm	PUR 5.2mm ±0.15mm PVC 5.2mm ±0.15mm
Wire cross section	0.25mm <sup>2</sup>	0.34mm <sup>2</sup>
Cable PVC or PUR	Gray	Gray
Contact material	CuSn	CuSn
Contact plating	Pre-nickelled and gold plated	Pre-nickelled and gold plated
Contact bearer material	PA black	PA black
Moulded body material	TPU	TPU
O-ring sealing	FKM	FKM
Coupling screw	Zinc alloy die casting, nickel plated	Zinc alloy die casting, nickel plated
Tightening torque	0.4 Nm	0.6 Nm
Weight*	2m version approx 100g 5m version approx 200g 10m version approx 300g 15m version approx 500g	2m version approx 100g 5m version approx 200g 10m version approx 300g 15m version approx 500g






\*varies depending on model



**Environmental**

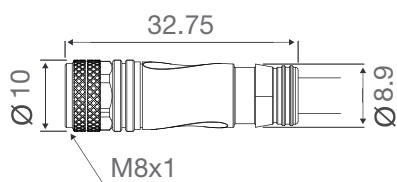
Degree of protection	IP67
Pollution degree	3
Pin IEC standard	IEC61076-2-104
Temperature	PVC: -40°C to 105°C (-40°F to 221°F). UL: -20°C to +80°C (-4°F to 176°F) PUR: -40°C to 80°C (-40°F to 176°F). UL: -40°C to +80°C (-40°F to 176°F)

**Compatibility and conformity**

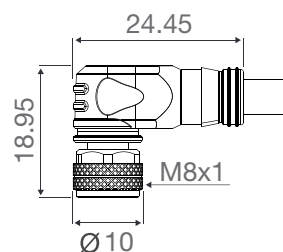
Approvals	  
CONEP53NF-A2; CONEP53NF-S2 CONE14NF-A; CONE14NF-S	 

# Dimensions [mm]

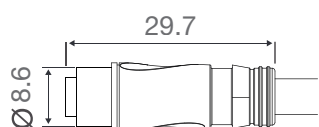
## M8



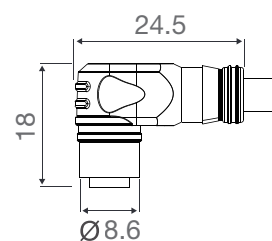
**Fig. 1 Straight**



**Fig. 2 Angled**

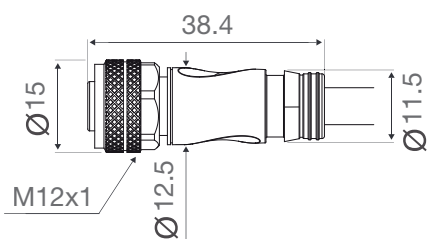


**Fig. 3 Push-on, straight**

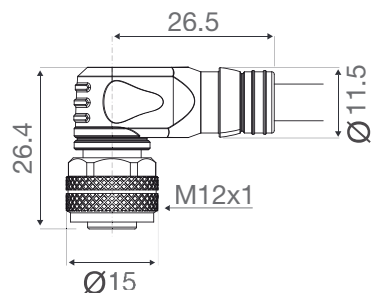


**Fig. 4 Push-on, angled**

## M12



**Fig. 5 Straight**

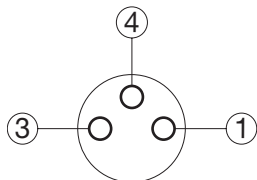


**Fig. 6 Angled**

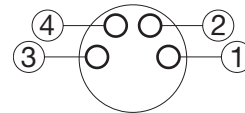


# Contact layout

## M8

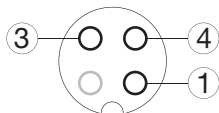


**Fig. 7 3-wire**

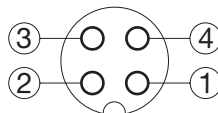


**Fig. 8 4-wire**

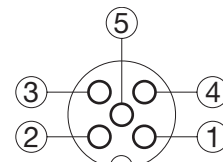
## M12



**Fig. 9 3-wire**



**Fig. 10 4-wire**

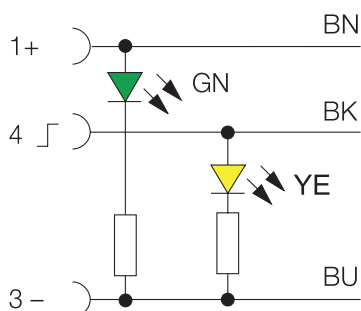


**Fig. 11 5-wire**

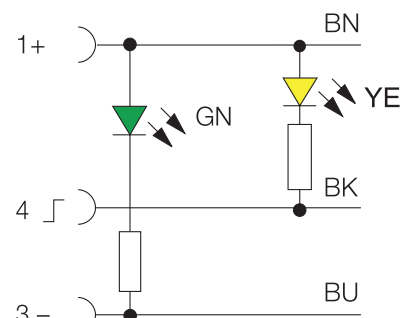
## Colour code

1	2	3	4	5
<b>BN:</b> brown	<b>WH:</b> white	<b>BU:</b> blue	<b>BK:</b> black	<b>GY:</b> grey

## LED connection



**Fig. 12 3-wire, PNP**



**Fig. 13 3-wire, NPN**

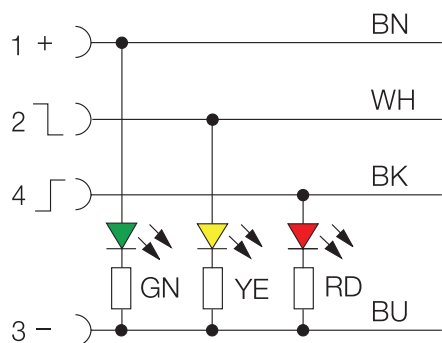


Fig. 14 4-wire, PNP

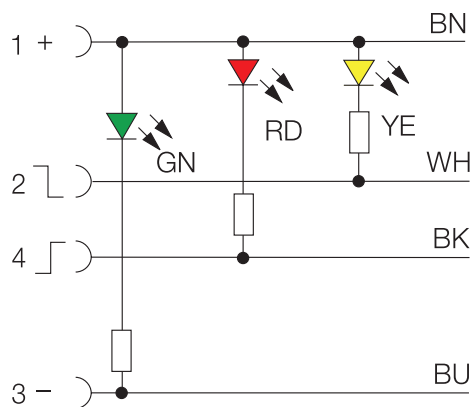


Fig. 15 4-wire, NPN

## Derating curve (DIN EN 60512-5-2)

### M8

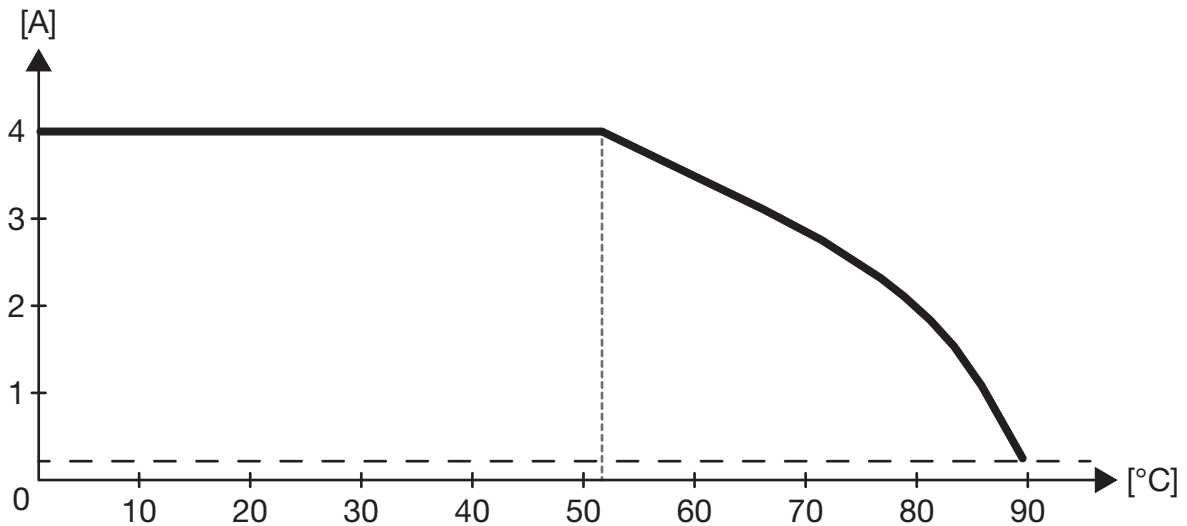


Fig. 16 X: ambient temperature [°C]; Y: current [A]

### M12

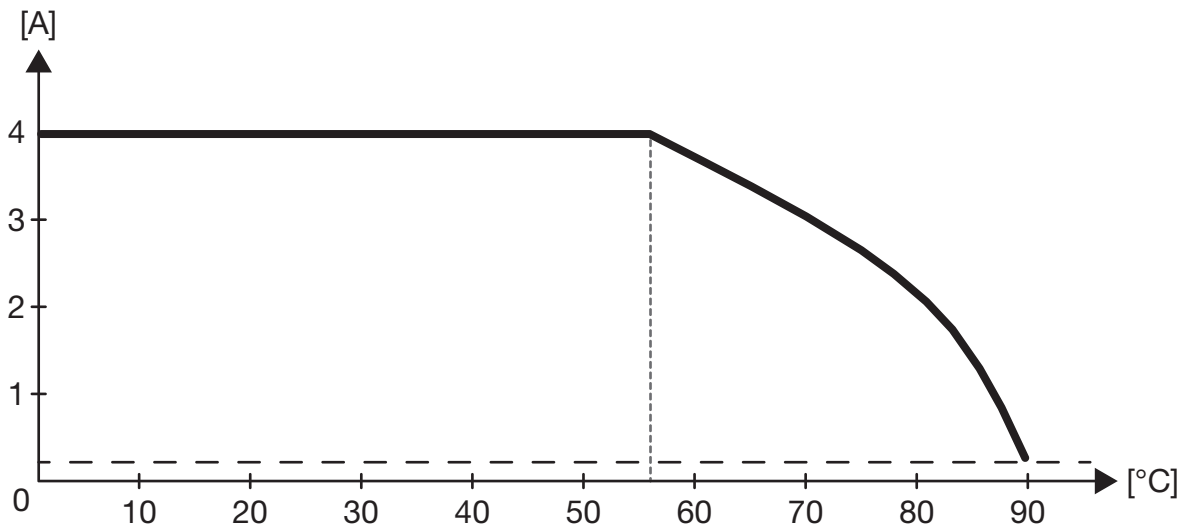


Fig. 17 X: ambient temperature [°C]; Y: current [A]



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