

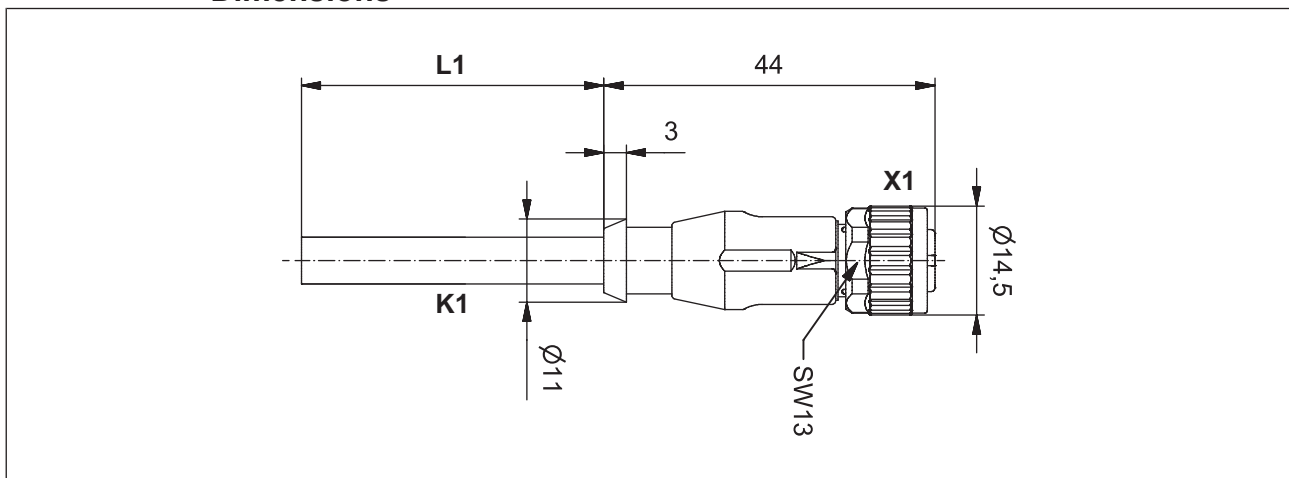
## PSEN op Cable M12 12p

### Connector pin assignment

Plan view plug connector

Colour coding	
1)	brown
2)	blue
3)	white
4)	green
5)	pink
6)	yellow
7)	black
8)	grey
9)	red
10)	purple
11)	grey-pink
12)	red-blue

### Dimensions



### Technical details Order no. 631080 - 631082

General	631080	631081	631082
Approvals	cULus Listed	cULus Listed	cULus Listed
Electrical data	631080	631081	631082
Rated voltage			
Voltage UB	30 V	30 V	30 V
Rated current	1,5 A	1,5 A	1,5 A
Test voltage	3.000 V	3.000 V	3.000 V

## PSEN op Cable M12 12p

<b>Electrical data</b>	<b>631080</b>	<b>631081</b>	<b>631082</b>
Typ. conductor resistance K1	139 Ohm/km	139 Ohm/km	139 Ohm/km
Insulation resistance	100 MOhm	100 MOhm	100 MOhm
Specific volume resistance K1	$\geq 1E+16$ Ohm*cm	$\geq 1E+16$ Ohm*cm	$\geq 1E+16$ Ohm*cm
<b>Environmental data</b>	<b>631080</b>	<b>631081</b>	<b>631082</b>
Ambient temperature			
Temperature range	-30 - 80 °C	-30 - 80 °C	-30 - 80 °C
Airgap creepage			
Pollution degree	3	3	3
Protection type			
X1 when inserted	IP67	IP67	IP67
Housing	IP67	IP67	IP67
<b>Mechanical data</b>	<b>631080</b>	<b>631081</b>	<b>631082</b>
Plug-in connector X1	M12, 12-pin female connector	M12, 12-pin female connector	M12, 12-pin female connector
In accordance with the standard	EN 61076-2-101	EN 61076-2-101	EN 61076-2-101
Form, plug-in connector X1	Straight	Straight	Straight
Material of ring nut X1	GD-Zn, Ni	GD-Zn, Ni	GD-Zn, Ni
Housing material X1	PA	PA	PA
Material of contact surface X1	Ni, Au gal.	Ni, Au gal.	Ni, Au gal.
Material of gasket	FPM	FPM	FPM
Material of socket	CuZn	CuZn	CuZn
Conductor material K1	Cu	Cu	Cu
Insulating cover for conductor K1	PP (9Y)	PP (9Y)	PP (9Y)
Mating cycles X1	100	100	100
Cable type K1	Li9Y11Y	Li9Y11Y	Li9Y11Y
Cable length L1	3 m	5 m	10 m
Colour of external cable insulation K1	Signal yellow, RAL1003	Signal yellow, RAL1003	Signal yellow, RAL1003
Colour of housing	black	black	black
Min. bending radius (fixed permanently) K1	5 x Ø	5 x Ø	5 x Ø

## PSEN op Cable M12 12p

Mechanical data	631080	631081	631082
Min. bending radius (moving) K1	10 x Ø	10 x Ø	10 x Ø
Cable insulation material K1	TPU/TPE-U	TPU/TPE-U	TPU/TPE-U
Drag chain suitable K1	yes	yes	yes
Cable diameter K1	6,1 mm	6,1 mm	6,1 mm
Max. cable diameter K1	6,3 mm	6,3 mm	6,3 mm
Conductor cross section K1	0,14 mm <sup>2</sup>	0,14 mm <sup>2</sup>	0,14 mm <sup>2</sup>
Conductor cross section AWG K1	26	26	26
Wire colour K1	Brown, blue, white, green, pink, yellow, black, grey, red, violet, grey-pink, red-blue	Brown, blue, white, green, pink, yellow, black, grey, red, violet, grey-pink, red-blue	Brown, blue, white, green, pink, yellow, black, grey, red, violet, grey-pink, red-blue
Stranding K1	12 cores	12 cores	12 cores
Shielding K1	No	No	No
No. of wires K1	12	12	12
Approval cable K1	UL AWM-Style 20549	UL AWM-Style 20549	UL AWM-Style 20549
Approval of plug-in connector X1	UL 94	UL 94	UL 94
Halogen-free	yes	yes	yes
Silicone-free	yes	yes	yes
Oil resistance	Resistant	Resistant	Resistant
Non-flammability	cULus 20549	cULus 20549	cULus 20549
Material			
Housing	TPU, UL94	TPU, UL94	TPU, UL94
Weight	150 g	245 g	460 g

## PSEN op Cable M12 12p

## Technical details Order no. 631083 - 631085

General	631083	631084	631085
Approvals	cULus Listed	cULus Listed	cULus Listed
Electrical data	631083	631084	631085
Rated voltage			
Voltage UB	30 V	30 V	30 V
Rated current	1,5 A	1,5 A	1,5 A
Test voltage	3.000 V	3.000 V	3.000 V
Typ. conductor resistance K1	139 Ohm/km	139 Ohm/km	139 Ohm/km
Insulation resistance	100 MOhm	100 MOhm	100 MOhm
Specific volume resistance K1	$\geq 1E+16$ Ohm*cm	$\geq 1E+16$ Ohm*cm	$\geq 1E+16$ Ohm*cm
Environmental data	631083	631084	631085
Ambient temperature			
Temperature range	-30 - 80 °C	-30 - 80 °C	-30 - 80 °C
Airgap creepage			
Pollution degree	3	3	3
Protection type			
X1 when inserted	IP67	IP67	IP67
Housing	IP67	IP67	IP67
Mechanical data	631083	631084	631085
Plug-in connector X1	M12, 12-pin female connector	M12, 12-pin female connector	M12, 12-pin female connector
In accordance with the standard	EN 61076-2-101	EN 61076-2-101	EN 61076-2-101
Form, plug-in connector X1	Straight	Straight	Straight
Material of ring nut X1	GD-Zn, Ni	GD-Zn, Ni	GD-Zn, Ni
Housing material X1	PA	PA	PA
Material of contact surface X1	Ni, Au gal.	Ni, Au gal.	Ni, Au gal.
Material of gasket	FPM	FPM	FPM
Material of socket	CuZn	CuZn	CuZn
Conductor material K1	Cu	Cu	Cu

## PSEN op Cable M12 12p

Mechanical data	631083	631084	631085
Insulating cover for conductor K1	PP (9Y)	PP (9Y)	PP (9Y)
Mating cycles X1	100	100	100
Cable type K1	Li9Y11Y	Li9Y11Y	Li9Y11Y
Cable length L1	20 m	30 m	50 m
Colour of external cable insulation K1	Signal yellow, RAL1003	Signal yellow, RAL1003	Signal yellow, RAL1003
Colour of housing	black	black	black
Min. bending radius (fixed permanently) K1	5 x Ø	5 x Ø	5 x Ø
Min. bending radius (moving) K1	10 x Ø	10 x Ø	10 x Ø
Cable insulation material K1	TPU/TPE-U	TPU/TPE-U	TPU/TPE-U
Drag chain suitable K1	yes	yes	yes
Cable diameter K1	6,1 mm	6,1 mm	6,1 mm
Max. cable diameter K1	6,3 mm	6,3 mm	6,3 mm
Conductor cross section K1	0,14 mm <sup>2</sup>	0,14 mm <sup>2</sup>	0,14 mm <sup>2</sup>
Conductor cross section AWG K1	26	26	26
Wire colour K1	Brown, blue, white, green, pink, yellow, black, grey, red, violet, grey-pink, red-blue	Brown, blue, white, green, pink, yellow, black, grey, red, violet, grey-pink, red-blue	Brown, blue, white, green, pink, yellow, black, grey, red, violet, grey-pink, red-blue
Stranding K1	12 cores	12 cores	12 cores
Shielding K1	No	No	No
No. of wires K1	12	12	12
Approval cable K1	UL AWM-Style 20549	UL AWM-Style 20549	UL AWM-Style 20549
Approval of plug-in connector X1	UL 94	UL 94	UL 94
Halogen-free	yes	yes	yes
Silicone-free	yes	yes	yes
Oil resistance	Resistant	Resistant	Resistant
Non-flammability	cULus 20549	cULus 20549	cULus 20549
Material			
Housing	TPU, UL94	TPU, UL94	TPU, UL94

## PSEN op Cable M12 12p

Mechanical data	631083	631084	631085
Weight	940 g	1.400 g	2.350 g

### Order reference

Product type	Features	Connector X1	Connector X2	Order no.
PSEN op cable axial M12 12-pole 3m	3 m	M12 female connector, straight		631 080
PSEN op cable axial M12 12-pole 5m	5 m	M12 female connector, straight		631 081
PSEN op cable axial M12 12-pole 10m	10 m	M12 female connector, straight		631 082
PSEN op cable axial M12 12-pole 20m	20 m	M12 female connector, straight		631 083
PSEN op cable axial M12 12-pole 30m	30 m	M12 female connector, straight		631 084
PSEN op cable axial M12 12-pole 50m	50 m	M12 female connector, straight		631 085