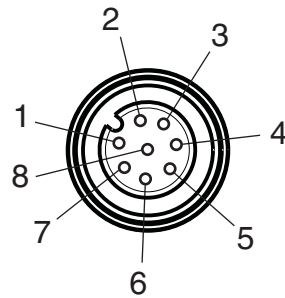


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Connector pin assignment

Colour coding

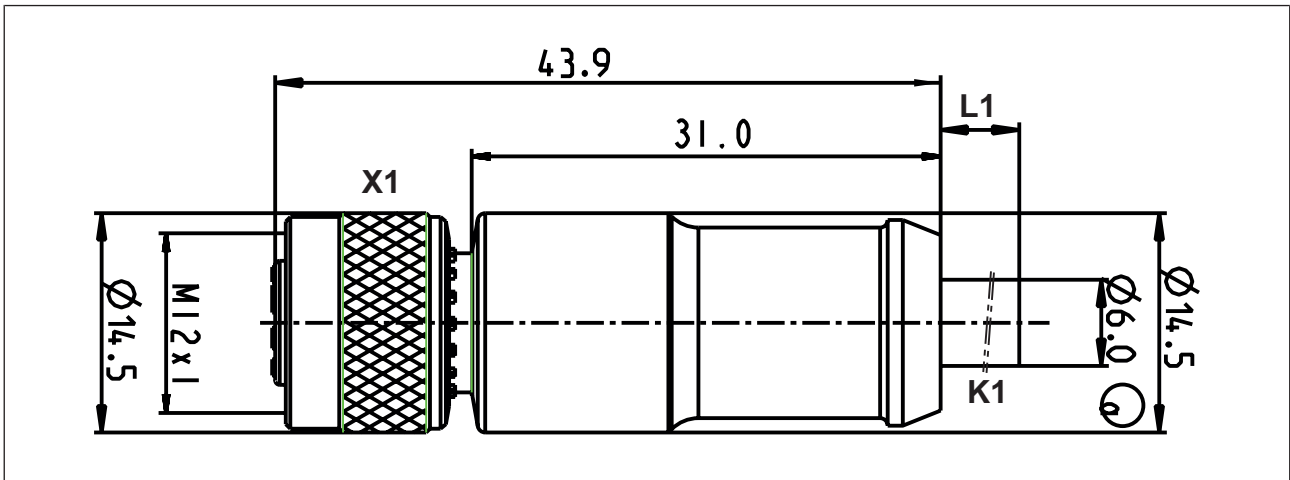
1	white
2	brown
3	green
4	yellow
5	grey
6	pink
7	blue
8	red



Plan view plug-in connector X1

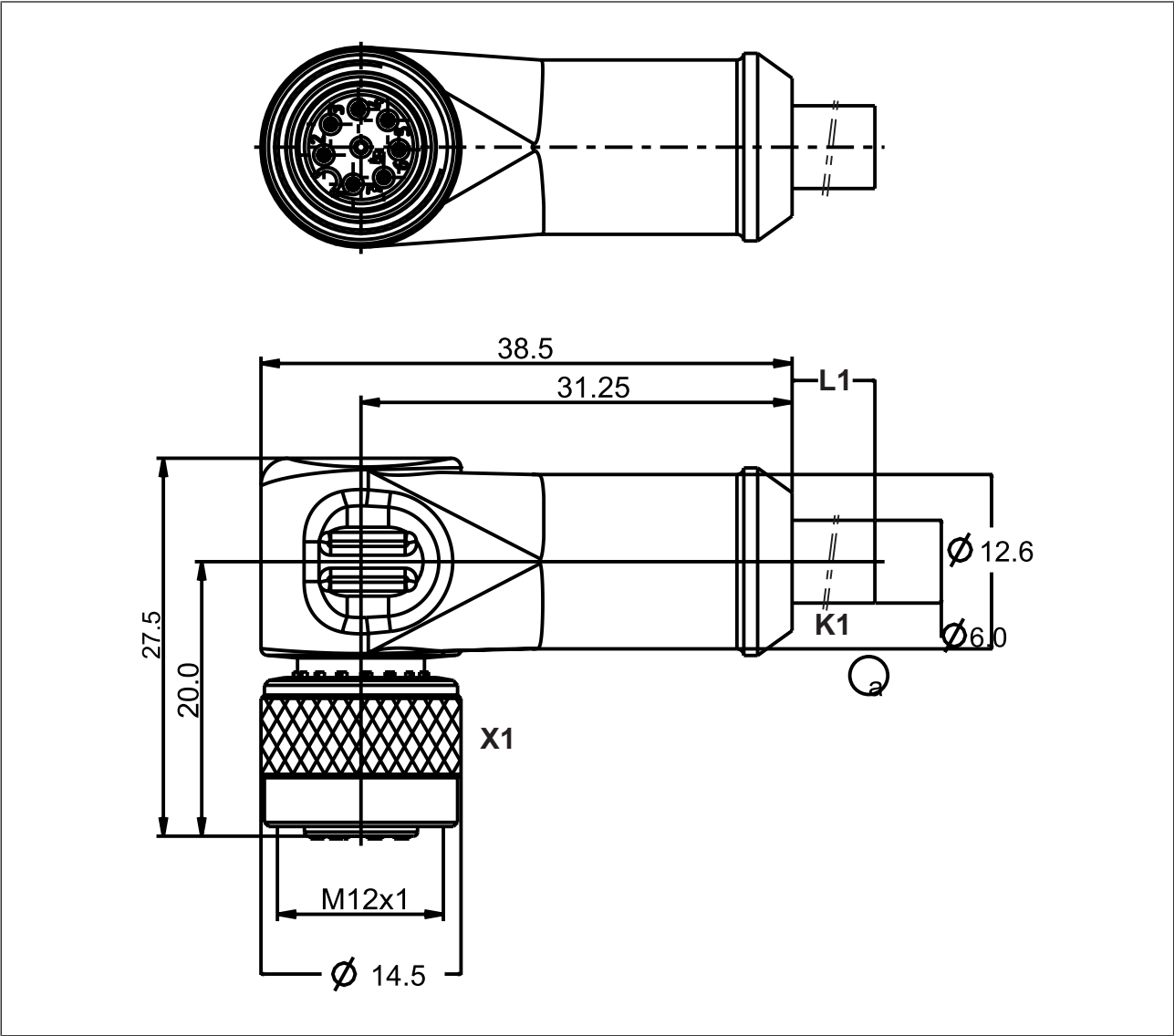
Dimensions

- ▶ M12 female connector, straight:



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▶ M12 female connector, angled:



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Technical details Order no. 540319 - 540321

General	540319	540320	540321
Approvals	cULus Listed	cULus Listed	cULus Listed
Electrical data	540319	540320	540321
Rated voltage			
Voltage UB	30 V	30 V	30 V
Rated current	2 A	2 A	2 A
Test voltage	3.000 V	3.000 V	3.000 V
Typ. conductor resistance K1	79 Ohm/km	79 Ohm/km	79 Ohm/km
Insulation resistance	100 MOhm	100 MOhm	100 MOhm
Volume resistance	3 mOhm	3 mOhm	3 mOhm
Specific volume resistance K1	$\geq 7E+15$ Ohm*cm	$\geq 7E+15$ Ohm*cm	$\geq 7E+15$ Ohm*cm
Specific cable capacitance K1	64,6pF/m	64,6pF/m	64,6pF/m
Environmental data	540319	540320	540321
Ambient temperature			
Temperature range	-25 - 80 °C	-25 - 80 °C	-25 - 80 °C
Airgap creepage			
Overvoltage category	II	II	II
Pollution degree	3	3	3
Protection type			
X1 when inserted	IP68	IP68	IP68
Housing	IP68	IP68	IP68
Mechanical data	540319	540320	540321
Plug-in connector X1	M12, 8-pin female connector	M12, 8-pin female connector	M12, 8-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	CuZn nickel-plated	CuZn nickel-plated	CuZn nickel-plated
Housing material X1	PUR	PUR	PUR
Material of contact surface X1	Au	Au	Au
Material of socket	CuSn	CuSn	CuSn
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	LiF9Y11Y	LiF9Y11Y	LiF9Y11Y

PSEN Cable M12 8p

Mechanical data	540319	540320	540321
Cable length L1	3 m	5 m	10 m
Colour of external cable insulation K1	Yellow, similar to RAL1003	Yellow, similar to RAL1003	Yellow, similar to 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	PUR, TPU / TPE-U	PUR, TPU / TPE-U	PUR, TPU / TPE-U
Drag chain suitable K1	yes	yes	yes
Cable diameter K1	6 mm	6 mm	6 mm
Max. cable diameter K1	6,1 mm	6,1 mm	6,1 mm
Conductor cross section K1	0,25 mm²	0,25 mm²	0,25 mm²
Conductor cross section AWG K1	24	24	24
Wire colour K1	White, brown, green, yellow, grey, pink, blue, red	White, brown, green, yellow, grey, pink, blue, red	White, brown, green, yellow, grey, pink, blue, red
Stranding K1	8 cores around plastic filler	8 cores around plastic filler	8 cores around plastic filler
Shielding K1	No	No	No
Wire layer separation K1	No	No	No
No. of wires K1	8	8	8
Approval cable K1	UL AWM-Style 20233, UL/CSA	UL AWM-Style 20233, UL/CSA	UL AWM-Style 20233, UL/CSA
Approval of plug-in connector X1	UL94 V-0	UL94 V-0	UL94 V-0
Halogen-free	yes	yes	yes
Silicone-free	yes	yes	yes
Oil resistance	Resistant	Resistant	Resistant
Non-flammability	UL VW1, FT1	UL VW1, FT1	UL VW1, FT1
Material			
Housing	PUR	PUR	PUR
Weight	153 g	250 g	490 g

PSEN Cable M12 8p

Technical details Order no. 540322 - 540324

General	540322	540323	540324
Approvals	cULus Listed	cULus Listed	cULus Listed
Electrical data	540322	540323	540324
Rated voltage			
Voltage UB	30 V	30 V	30 V
Rated current	2 A	2 A	2 A
Test voltage	3.000 V	3.000 V	3.000 V
Typ. conductor resistance K1	79 Ohm/km	79 Ohm/km	79 Ohm/km
Insulation resistance	100 MOhm	100 MOhm	100 MOhm
Volume resistance	3 mOhm	3 mOhm	3 mOhm
Specific volume resistance K1	$\geq 7E+15$ Ohm*cm	$\geq 7E+15$ Ohm*cm	$\geq 7E+15$ Ohm*cm
Specific cable capacitance K1	64,6pF/m	64,6pF/m	64,6pF/m
Environmental data	540322	540323	540324
Ambient temperature			
Temperature range	-25 - 80 °C	-25 - 80 °C	-25 - 80 °C
Airgap creepage			
Overvoltage category	II	II	II
Pollution degree	3	3	3
Protection type			
X1 when inserted	IP68	IP68	IP68
Housing	IP68	IP68	IP68
Mechanical data	540322	540323	540324
Plug-in connector X1	M12, 8-pin female connector	M12, 8-pin female connector	M12, 8-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	Angled	Angled	Angled
Material of ring nut X1	CuZn nickel-plated	CuZn nickel-plated	CuZn nickel-plated
Housing material X1	PUR	PUR	PUR
Material of contact surface X1	Au	Au	Au
Material of socket	CuSn	CuSn	CuSn
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	LiF9Y11Y	LiF9Y11Y	LiF9Y11Y

PSEN Cable M12 8p

Mechanical data	540322	540323	540324
Cable length L1	3 m	5 m	10 m
Colour of external cable insulation K1	Yellow, similar to RAL1003	Yellow, similar to RAL1003	Yellow, similar to 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	PUR, TPU / TPE-U	PUR, TPU / TPE-U	PUR, TPU / TPE-U
Drag chain suitable K1	yes	yes	yes
Cable diameter K1	6 mm	6 mm	6 mm
Max. cable diameter K1	6,1 mm	6,1 mm	6,1 mm
Conductor cross section K1	0,25 mm²	0,25 mm²	0,25 mm²
Conductor cross section AWG K1	24	24	24
Wire colour K1	White, brown, green, yellow, grey, pink, blue, red	White, brown, green, yellow, grey, pink, blue, red	White, brown, green, yellow, grey, pink, blue, red
Stranding K1	8 cores around plastic filler	8 cores around plastic filler	8 cores around plastic filler
Shielding K1	No	No	No
Wire layer separation K1	No	No	No
No. of wires K1	8	8	8
Approval cable K1	UL AWM-Style 20233, UL/CSA	UL AWM-Style 20233, UL/CSA	UL AWM-Style 20233, UL/CSA
Approval of plug-in connector X1	UL94 V-0	UL94 V-0	UL94 V-0
Halogen-free	yes	yes	yes
Silicone-free	yes	yes	yes
Oil resistance	Resistant	Resistant	Resistant
Non-flammability	UL VW1, FT1	UL VW1, FT1	UL VW1, FT1
Material			
Housing	PUR	PUR	PUR
Weight	152 g	251 g	491 g

PSEN Cable M12 8p

Technical details Order no. 540325 - 540333

General	540325	540326	540333
Approvals	cULus Listed	cULus Listed	cULus Listed
Electrical data	540325	540326	540333
Rated voltage			
Voltage UB	30 V	30 V	30 V
Rated current	2 A	2 A	2 A
Test voltage	3.000 V	3.000 V	3.000 V
Typ. conductor resistance K1	79 Ohm/km	79 Ohm/km	79 Ohm/km
Insulation resistance	100 MOhm	100 MOhm	100 MOhm
Volume resistance	3 mOhm	3 mOhm	3 mOhm
Specific volume resistance K1	$\geq 7E+15$ Ohm*cm	$\geq 7E+15$ Ohm*cm	$\geq 7E+15$ Ohm*cm
Specific cable capacitance K1	64,6pF/m	64,6pF/m	64,6pF/m
Environmental data	540325	540326	540333
Ambient temperature			
Temperature range	-25 - 80 °C	-25 - 80 °C	-25 - 80 °C
Airgap creepage			
Overvoltage category	II	II	II
Pollution degree	3	3	3
Protection type			
X1 when inserted	IP68	IP68	IP68
Housing	IP68	IP68	IP68
Mechanical data	540325	540326	540333
Plug-in connector X1	M12, 8-pin female connector	M12, 8-pin female connector	M12, 8-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	Angled	Straight	Straight
Material of ring nut X1	CuZn nickel-plated	CuZn nickel-plated	CuZn nickel-plated
Housing material X1	PUR	PUR	PUR
Material of contact surface X1	Au	Au	Au
Material of socket	CuSn	CuSn	CuSn
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	LiF9Y11Y	LiF9Y11Y	LiF9Y11Y

PSEN Cable M12 8p

Mechanical data	540325	540326	540333
Cable length L1	30 m	30 m	20 m
Colour of external cable insulation K1	Yellow, similar to RAL1003	Yellow, similar to RAL1003	Yellow, similar to 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	PUR, TPU / TPE-U	PUR, TPU / TPE-U	PUR, TPU / TPE-U
Drag chain suitable K1	yes	yes	yes
Cable diameter K1	6 mm	6 mm	6 mm
Max. cable diameter K1	6,1 mm	6,1 mm	6,1 mm
Conductor cross section K1	0,25 mm ²	0,25 mm ²	0,25 mm ²
Conductor cross section AWG K1	24	24	24
Wire colour K1	White, brown, green, yellow, grey, pink, blue, red	White, brown, green, yellow, grey, pink, blue, red	White, brown, green, yellow, grey, pink, blue, red
Stranding K1	8 cores around plastic filler	8 cores around plastic filler	8 cores around plastic filler
Shielding K1	No	No	No
Wire layer separation K1	No	No	No
No. of wires K1	8	8	8
Approval cable K1	UL AWM-Style 20233, UL/CSA	UL AWM-Style 20233, UL/CSA	UL AWM-Style 20233, UL/CSA
Approval of plug-in connector X1	UL94 V-0	UL94 V-0	UL94 V-0
Halogen-free	yes	yes	yes
Silicone-free	yes	yes	yes
Oil resistance	Resistant	Resistant	Resistant
Non-flammability	UL VW1, FT1	UL VW1, FT1	UL VW1, FT1
Material			
Housing	PUR	PUR	PUR
Weight	1.340 g	1.350 g	850 g

PSEN Cable M12 8p

Order reference

Product type	Features	Connector X1	Connector X2	Order no.
PSEN cable axial M12 8-pole 3m	3 m	M12 female connector, straight		540 319
PSEN cable axial M12 8-pole 5m	5 m	M12 female connector, straight		540 320
PSEN cable axial M12 8-pole 10m	10 m	M12 female connector, straight		540 321
PSEN cable angle M12 8-pole 3m	3 m	M12 female connector, angled		540 322
PSEN cable angle M12 8-pole 5m	5 m	M12 female connector, angled		540 323
PSEN cable angle M12 8-pole 10m	10 m	M12 female connector, angled		540 324
PSEN cable angle M12 8-pole 30m	30 m	M12 female connector, angled		540 325
PSEN cable axial M12 8-pole 30m	30 m	M12 female connector, straight		540 326
PSEN cable M12-8sf, 20m	20 m	M12 female connector, straight		540 333