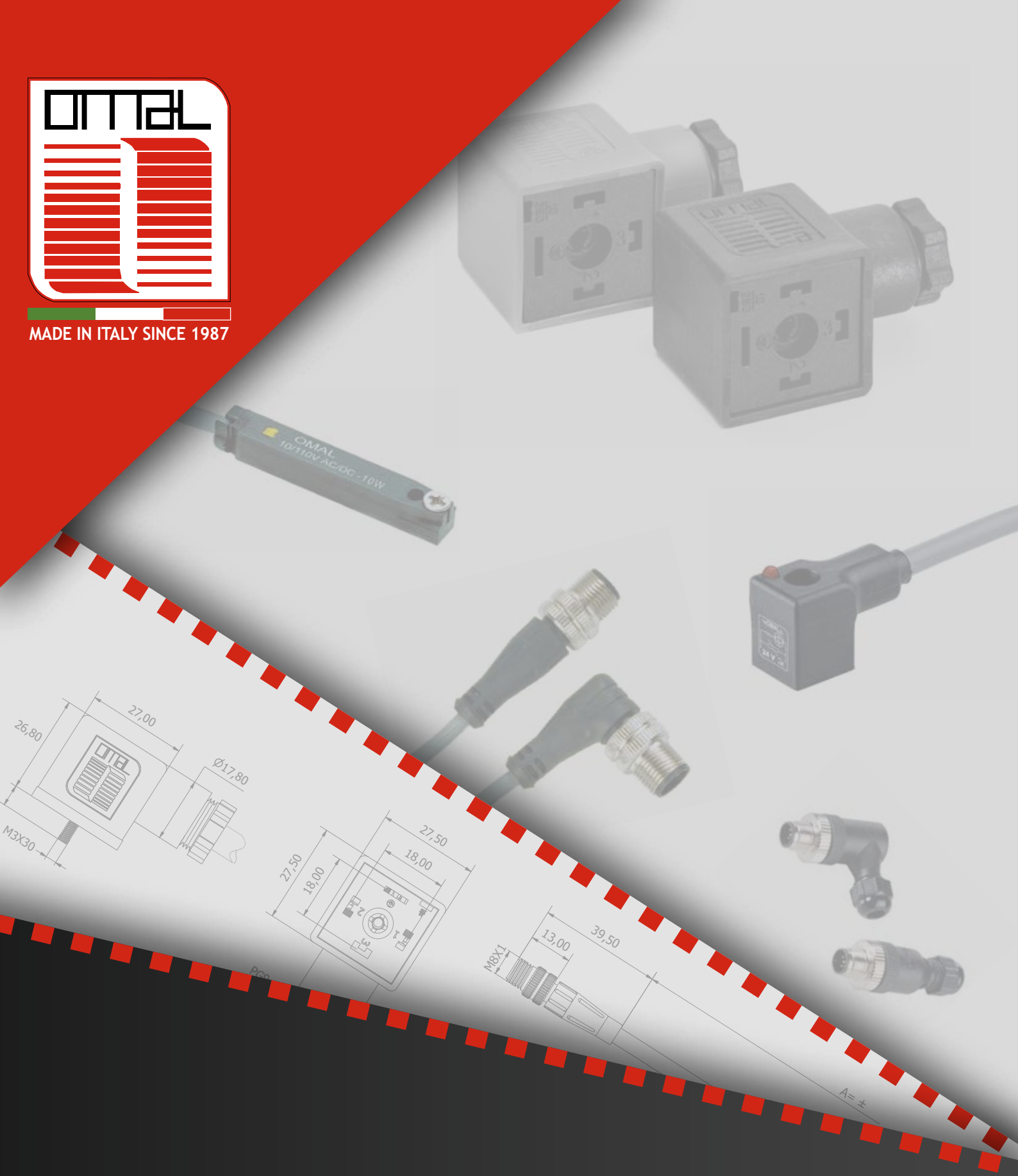
MADE IN ITALY SINCE 1987



Electrical Connectors
Magnetic Sensors

Field-wireable connectors 5/16

Field-wireable connectors accessories 17/18

Moulded connectors 19/29

Moulded connectors A-B-C with M8/M12 31/34

Moulded connectors A-B-C with M8/M12 with cable 35/37

Multiple control connectors 38/39

Male plugs 41/46

Surge suppressors 47/49

Round connectors M8 50/57

Round connectors M12 58/65

M8-M12 Cordset / Y-Couplers 67/68

Connection boxes 69/72

Sensors and accessories 73/77

Splitter/Customized items 78/79

Established in 1987, **OMAL Srl** manufactures connection systems including EN175301-803 (former DIN43650) connectors, M8 and M12 connectors, GMR and Reed sensors and can offer special customized solutions, from the design to the finished product.
The company is located in Bollate, only 10 km far from the centre of Milan, in the north-western area, where it covers a surface of approx. 2000 square meters.

OMAL Srl supplies worldwide well-known Companies in factory automation, pneumatics and hydraulics, as well as machine manufacturers.

Our aim is to fulfil customers' requirements thanks to high quality products, competitive prices, prompt and reliable service.

Thanks to the foresight and the skills of our two founding partners, **Antonio Di Francesco** and **Sergio Lombardi**, who have made Omal a benchmark in the world of industrial cabling, we have reached the milestone of our first 35 years and are preparing for the next 35!

Our well-focused industrial and commercial organization, along with high efficiency moulding equipments and high tech assembly lines, grant high production capacity and consistent product quality and service.

Field-wireable connectors
Form A-B-C

Standard series without circuit

Standard series with circuit

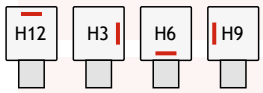
Standard series cable gland PGE IP67

½" NPTF

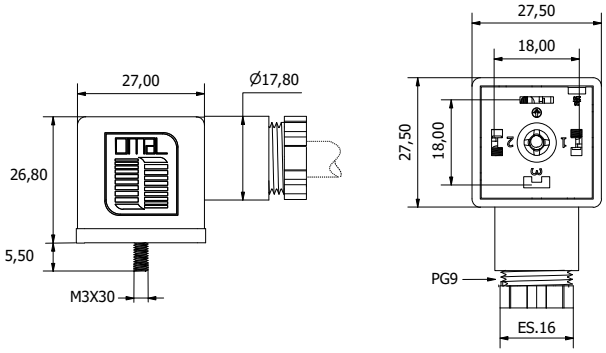
COMPACT series

Housing material	PA 66 + 30% FV - Without circuit Tritan - PETG - With circuit	
Contacts material	CuZn (Ag)	
Voltage (max)	Without circuit:	250 V AC/300 V DC
	With circuit:	according to circuit
Max current	16 A	
Operating current:	10 A	
Spacing	18 mm	
Screw tightening torque	40/50 cN.m	
Cable gland tightening torque	250/370 cN.m	
Wire section	0.25/1.50 mm²	
Protection class	EN 60529 (DIN 40050)	IP65 all versions IP67 external thread version + O-ring under screw head
Working temperature	Without circuit:	-25°C / +125°C
	With circuit:	-25°C / +90°C

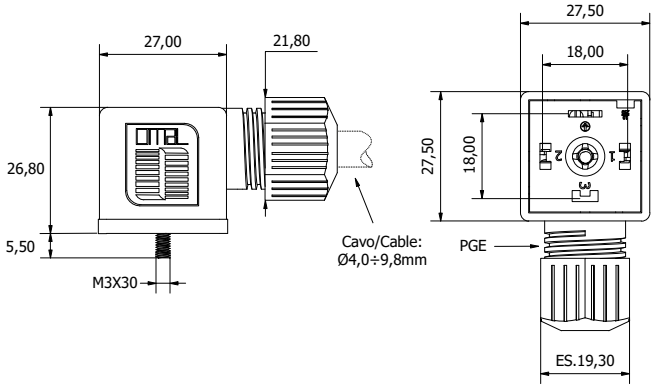
Earth position



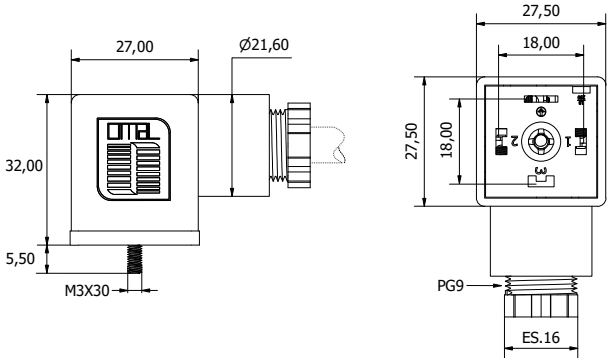
A1 series cable gland size PG9 - PG11



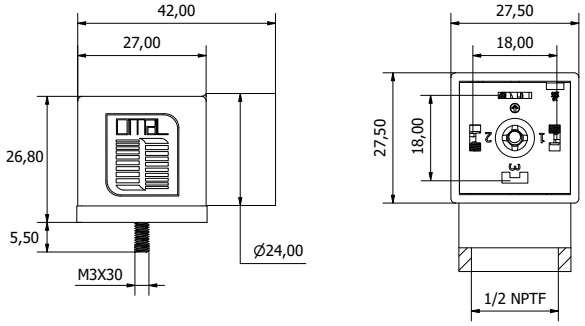
A1 series cable gland size PGE external thread



A2 series cable gland size PG9 - PG11 - PGE external thread



A1 series ½" size NPTF

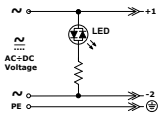
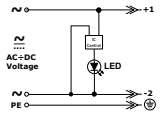
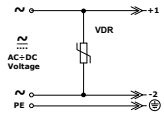
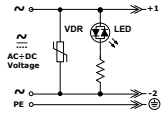
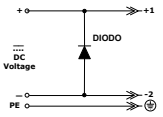
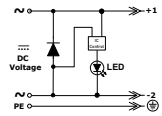
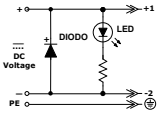
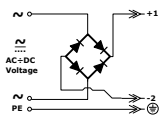
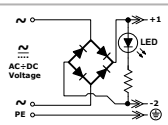
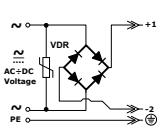
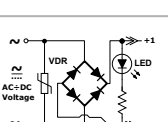


SMD CIRCUITS

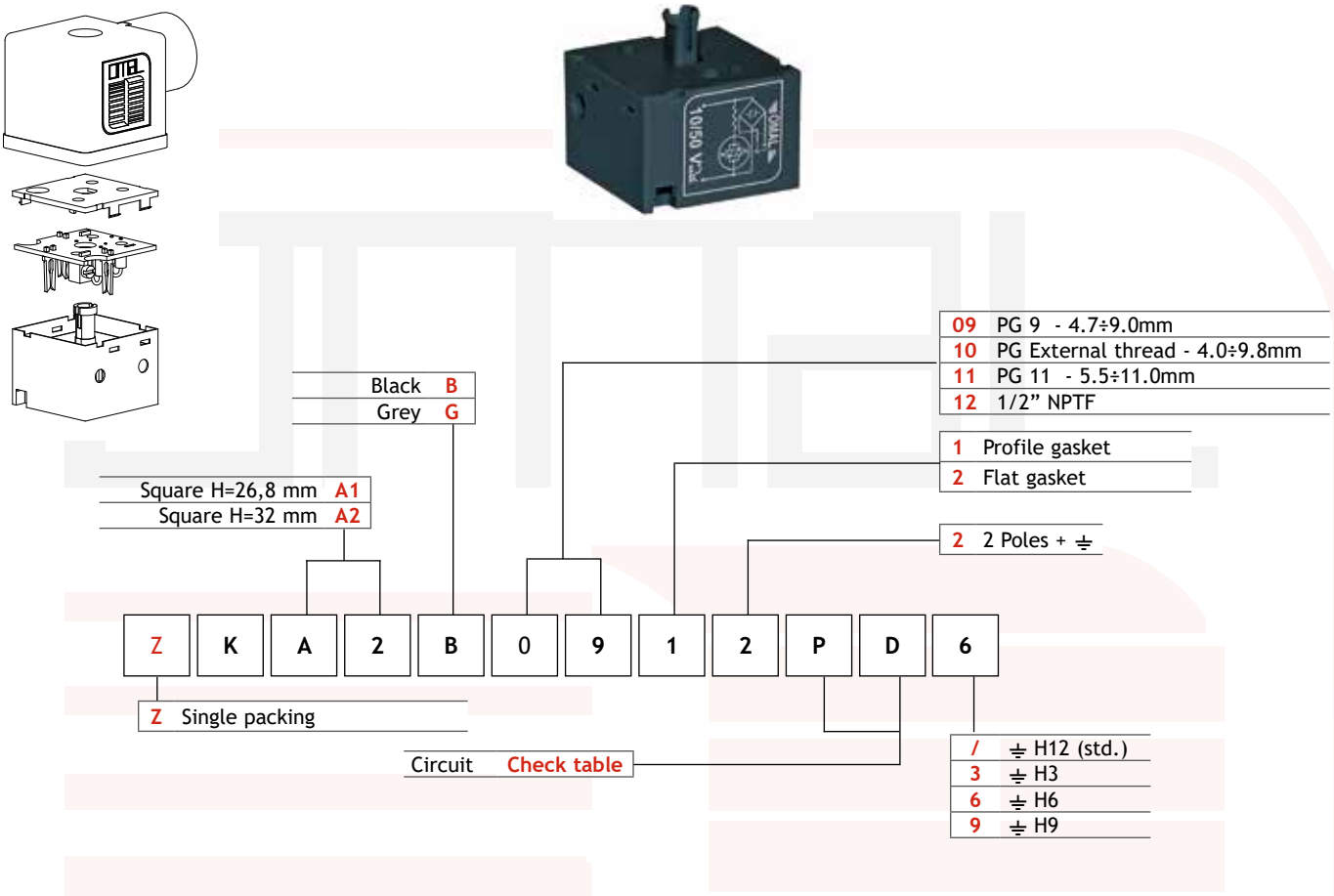
Z	A	2	T	0	9	1	2	P	P	G	R	M	V	-	6	-	SMD

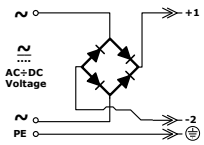
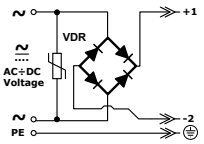
- Square H=26,8 mm A1
- Square H=32 mm A2
- Black B
- Grey G
- Transparent T
- 09 PG 9 - 4.7÷9.0mm
- 10 PG External thread - 4.0÷9.8mm
- 11 PG 11 - 5.5÷11.0mm
- 12 1/2" NPTF
- 16 M16 - 4,7÷9,0mm
- 1 Profile gasket
- 2 Flat gasket
- 2 2 Poles + ⏚
- 3 3 Poles + ⏚
- / ⏚ H12 (std.)
- 3 ⏚ H3
- 6 ⏚ H6
- 9 ⏚ H9
- Z Single packing
- Circuit Check table
- Red LED R
- Yellow LED Y
- Green LED E
- Voltage Check table

*B=Black - G=Grey - T=Transparent
Black=standard

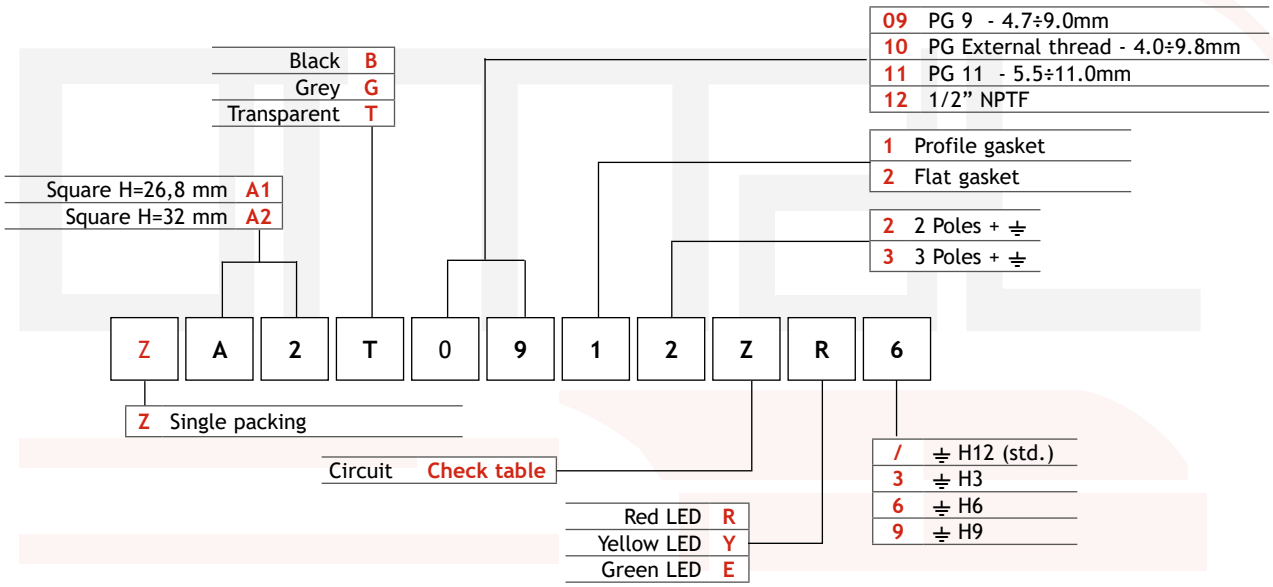
Circuit diagram	Circuit specification	Circuit code	Housing std.	Housing A2	Voltage code (V)	Housing color
	Without circuit	A	●	●	250 (10/250V)	B-G-T*
	LED	B	●	●	MV (10/50V)	Transparent
		B	●	●	110 (110V)	
		B	●	●	250 (250V)	
	LED NEW on demand	B	●	●	MV (10/250V)	Transparent
	Varistor	V	●	●	12 (12V)	Black
		V	●	●	24 (24V)	
		V	●	●	48 (48V)	
		V	●	●	110 (110V)	
		V	●	●	250 (250V)	
	LED + Varistor	G	●	●	12 (12V)	Transparent
		G	●	●	24 (24V)	
		G	●	●	48 (48V)	
		G	●	●	110 (110V)	
		G	●	●	250 (250V)	
	Diode (LL = 2 A Diode)	L	●	●	250 (10/250V)	Black
	LED + Diode NEW on demand	M	●	●	MV (10/250V)	Transparent
	LED + Diode (MM = 2 A Diode)	M	●	●	MV (10/50V)	Transparent
		M	●	●	110 (110V)	
		M	●	●	250 (250V)	
	Bridge rectifier (PP = 2 A Diode)	P		●	250 (10/250V)	Black
	Bridge rectifier + LED (QQ = 2 A Diode)	Q		●	MV (10/50V)	Transparent
		Q		●	110 (110 V)	
		Q		●	250 (250V)	
	Bridge rectifier + Varistor (PP = 2 A Diode)	PV		●	24 (24V)	Black
		PV		●	48 (48V)	
		PV		●	110 (110V)	
		PV		●	250 (250V)	
	Bridge rectifier + LED + Varistor (PP = 2 A Diode)	PG		●	24 (24V)	Transparent
		PG		●	48 (48V)	
		PG		●	110 (110V)	
		PG		●	250 (250V)	

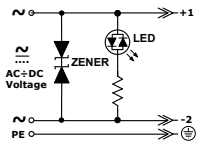
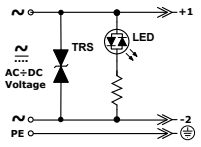
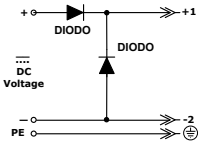
COMPACT CIRCUITS



Circuit diagram	Circuit specification	Circuit code	Voltage (V)	Housing color
	Bridge rectifier (PP = 2 A Diode)	P	10/250	Black
	Bridge rectifier + Varistor (PP = 2 A Diode)	PD	24	Black
		PE	48	
		PF	110	
		PV	250	

THT CIRCUITS



Circuit diagram	Circuit specification	Circuit code	Housing std.	Housing A2	Voltage (V)	Housing color
	Double Zener + LED	Z	●	●	24	Transparent
	Transil + LED	S	●	●	24	Transparent
		T	●	●	110	
	Half-wave rectifier	W		●	24	Black

CONNECTOR WITH FASTON

Black B

09 PG 9 - 4.7÷9.0mm
11 PG 11 - 5.5÷11.0mm

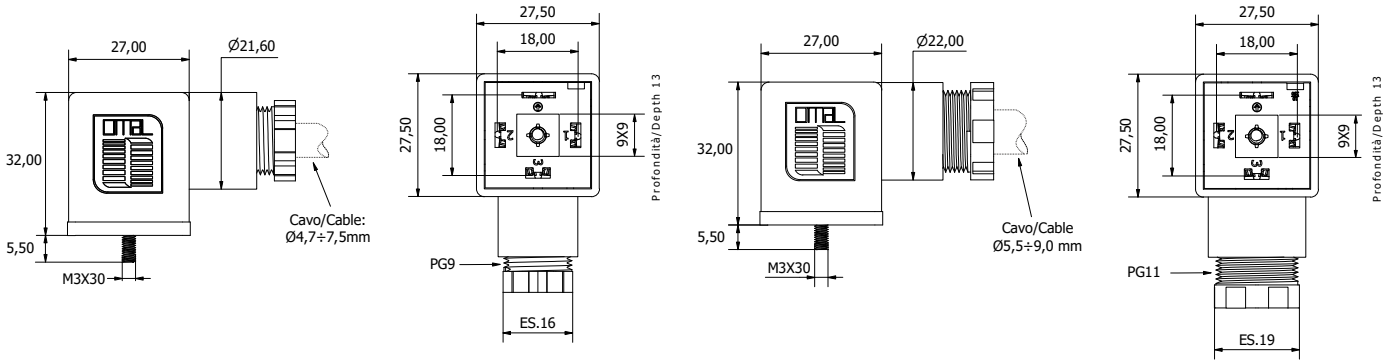
1 Profile gasket
2 Flat gasket

8 2 Poles + ⏚
9 3 Poles + ⏚

Square H=32 mm A2

Z	A	2	B	0	9	1	8	A

Standard Single packing



CONNECTOR FOR PRESSURE SWITCHES WITH DOUBLE LED INDICATOR

Connectors for pressure switches with double LED indicator

1 Profile gasket
2 Flat gasket

3 3 Poles + ⏚

PG 9 - 4.7÷9.0mm 09
PG 11 - 5.5÷11.0mm 11

Transparent T

Square H=32 mm A2

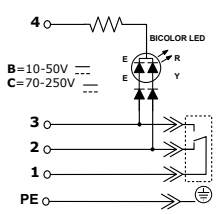
ER Green-red LED
RE Red-green LED
YE Yellow-green LED
EY Green-yellow LED

Z	A	2	T	0	9	1	3	B	R	E	P	R	6

/ ⏚ H12 (std.)
3 ⏚ H3
6 ⏚ H6
9 ⏚ H9

Z Single packing

Circuit Check table

Circuit diagram	Circuit specification	Circuit code	Housing A2	Voltage (V)	Housing color
	Bicolored LED	B	●	10/50	Transparent
		C	●	70/250	

Standard series without circuit

Standard series with circuit

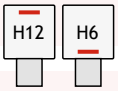
Standard series external thread PGE IP67

½" NPTF

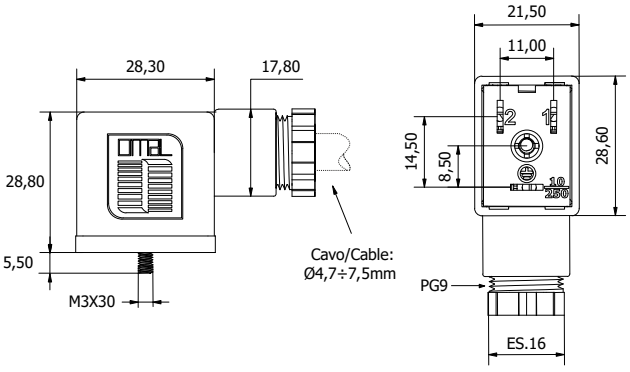
COMPACT series

Housing material	PA 66 + 30% FV versioni Without circuit Tritan - PETG - Versioni With circuit	
Contacts material	CuZn (Ag)	
Voltage (max)	Without circuit:	250 V AC/300 V DC
	With circuit:	according to circuit
Max current	16 A	
Operating current:	10 A	
Spacing	10 mm EN 175301-803	
	11 mm Industrial standard	
Screw tightening torque	40/50 cN.m	
Cable gland tightening torque	250/370 cN.m	
Wire section	0.25/1.50 mm²	
Protection class	EN 60529 (DIN 40050)	IP65 all versions IP67 external thread version + O-ring under screw head
Working temperature	Without circuit:	-25°C / +125°C
	With circuit:	-25°C / +90°C

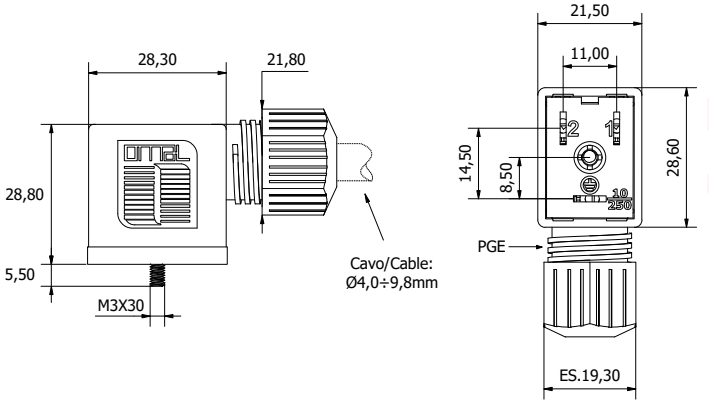
Earth position



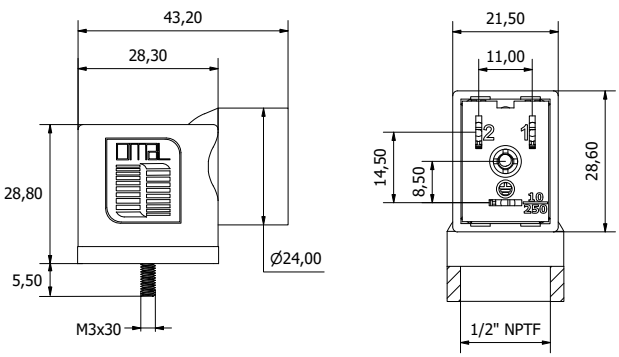
Series B1 cable gland size PG9



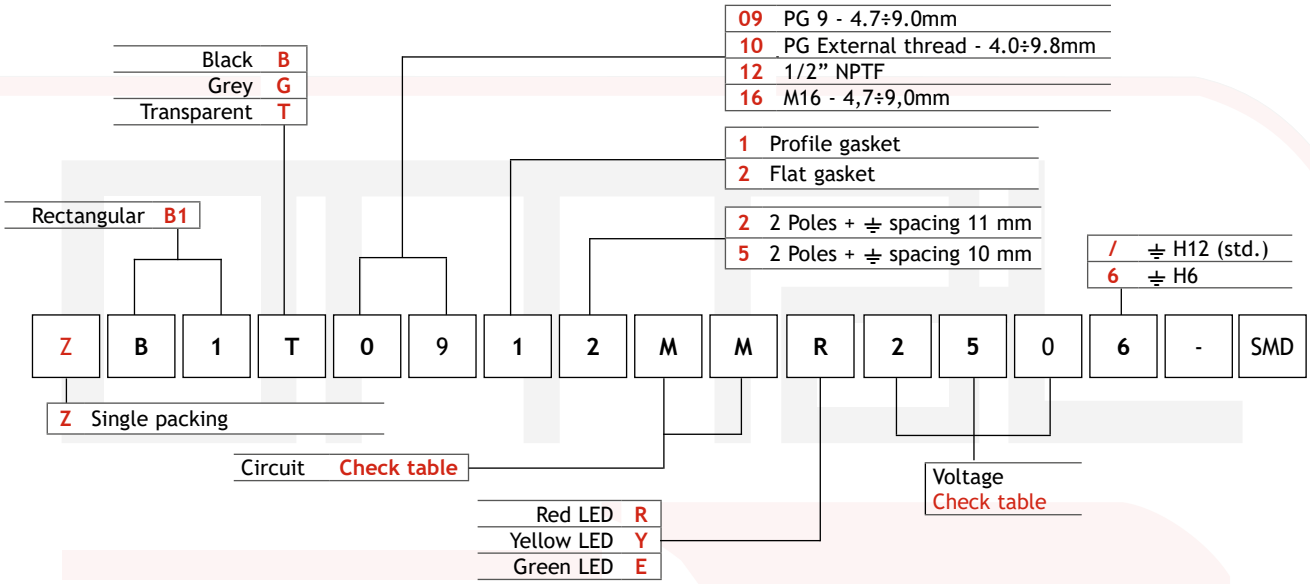
Series B1 cable gland PGE External thread

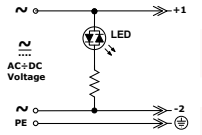
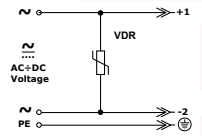
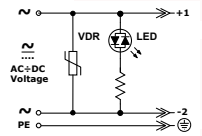
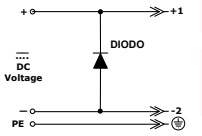
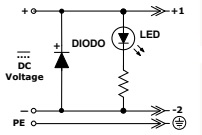


Series B1 ½" size NPTF

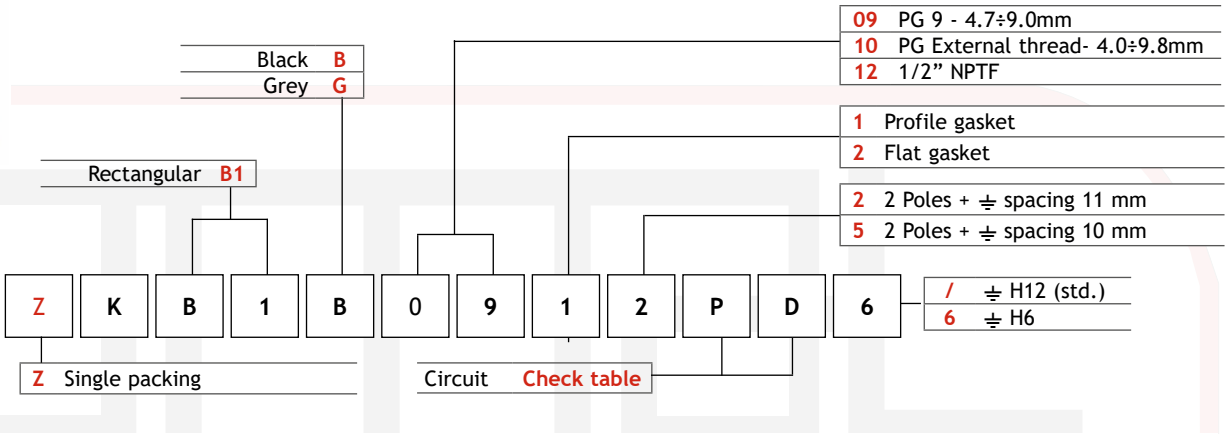


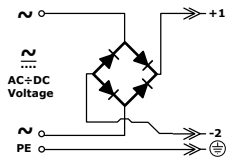
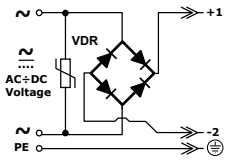
SMD CIRCUITS



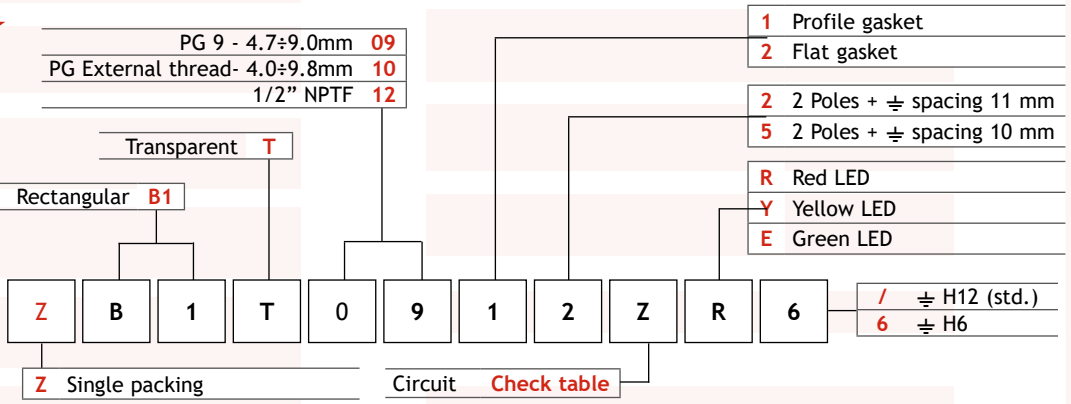
Circuit diagram	Circuit specification	Circuit code	Voltage code (V)	Housing color
	Without circuit	A	250 (10/250V)	Black - Grey - Transparent Black=standard
	LED	B	MV (10/50V)	Transparent
		B	110 (110V)	
		B	250 (250V)	
	Varistor	V	12 (12V)	Black
		V	24 (24V)	
		V	48 (48V)	
		V	110 (110V)	
		V	250 (250V)	
	LED + Varistor	G	12 (12V)	Transparent
		G	24 (24V)	
		G	48 (48V)	
		G	110 (110V)	
		G	250 (250V)	
	Diode (LL = 2 A Diode)	L	250 (10/250V)	Black
	LED + Diode (MM = 2 A Diode)	M	MV (10/50V)	Transparent
		M	110 (110V)	
		M	250 (250V)	

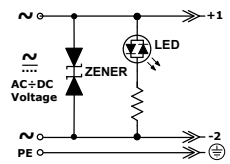
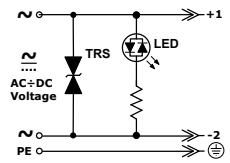
COMPACT CIRCUITS



Circuit diagram	Circuit specification	Circuit code	Voltage (V)	Housing color
	Bridge rectifier (PP = 2 A Diode)	P	10/250 V	Black
	Bridge rectifier + Varistor (PP = 2 A Diode)	PD	24V	Black
		PE	48V	
		PF	110V	
		PV	250V	

THT CIRCUITS

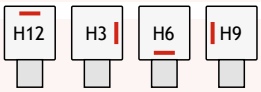


Circuit diagram	Circuit specification	Circuit code	Voltage (V)	Housing color
	Double Zener + LED	Z	24V	Transparent
	Transil + LED	S	24V	Transparent
		T	110V	

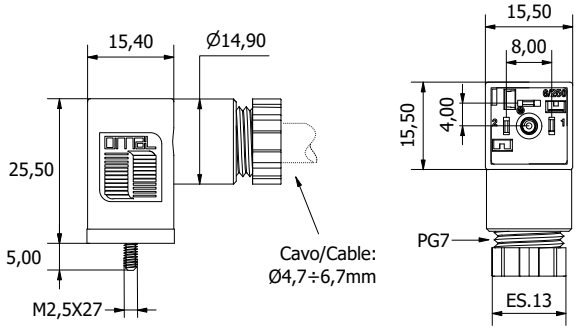
Standard series without circuit

Standard series with circuit

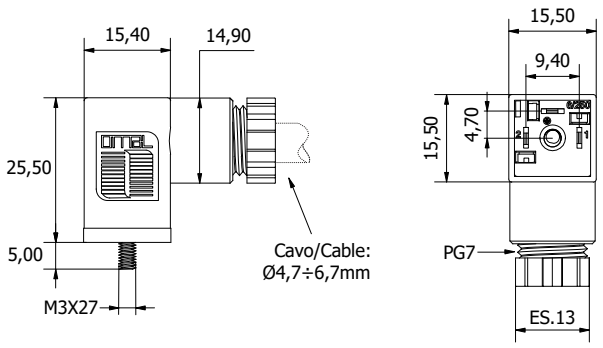
Standard series cable gland PGE IP67

Housing material	PA 66 + 30% FV Without circuit Tritan - PETG - With circuit	
Contacts material	CuZn (Ag)	
Voltage (max)	Without circuit:	250 V AC/300 V DC
	With circuit:	according to circuit
Max current	10 A	
Operating current:	6 A	
Spacing	8 mm EN 175301-803	
	9,4 mm Industrial standard	
Screw tightening torque	30/40 cN.m	
Cable gland tightening torque	250/370 cN.m	
Wire section	0.25/0.75 mm²	
Protection class	EN 60529 (DIN 40050)	IP65 all versions IP67 external thread version
Working temperature	Without circuit:	-25°C / +125°C
	With circuit:	-25°C / +90°C
Earth position		

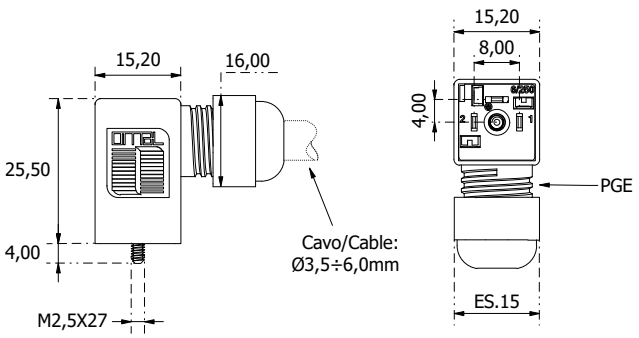
C1 series cable gland size PG7
Spacing 8 mm



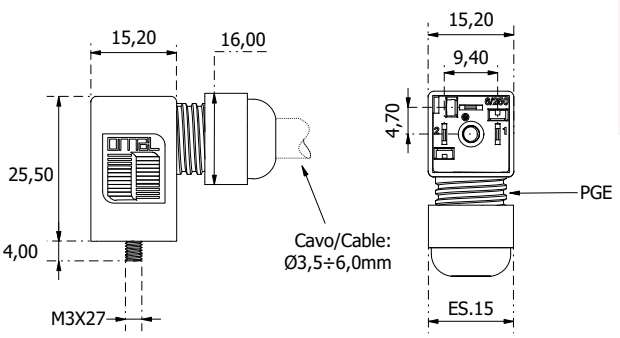
C1 series cable gland size PG7
Spacing 9,4 mm



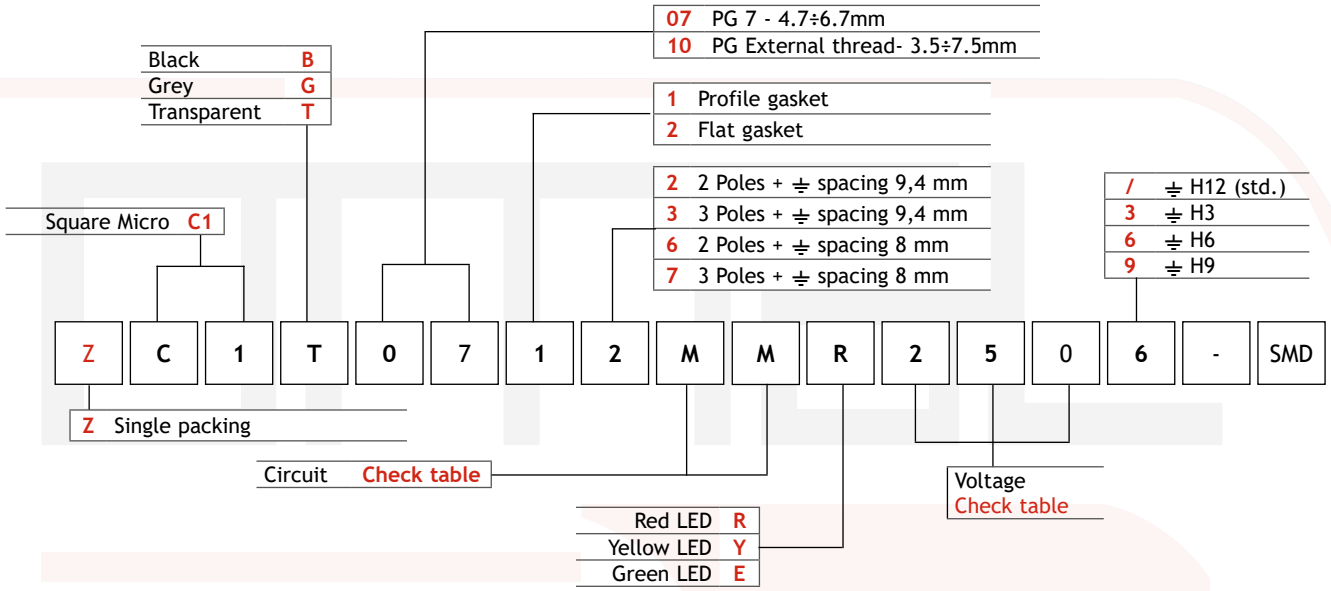
C1 series cable gland PGE IP67
Spacing 8 mm

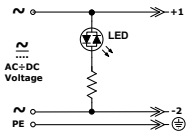
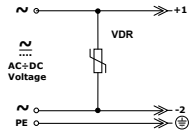
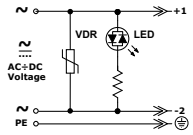
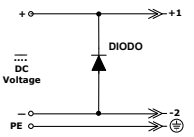
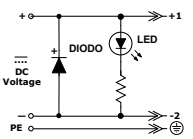


C1 series cable gland PGE IP67
Spacing 9,4 mm

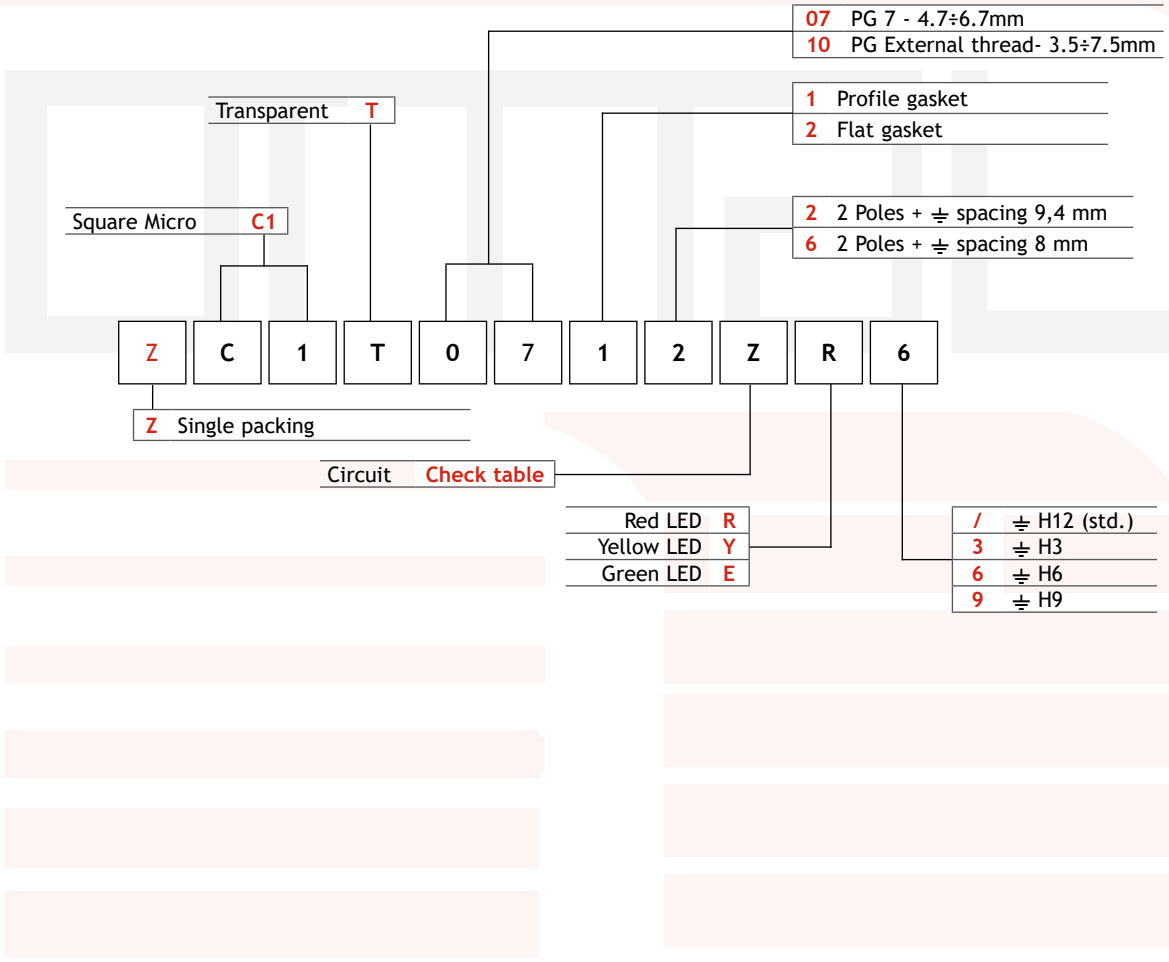


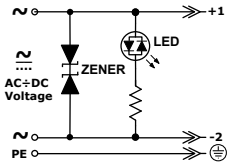
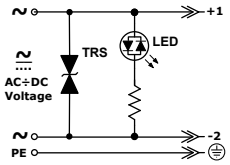
SMD CIRCUITS

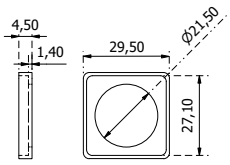
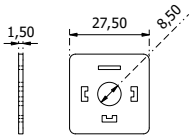
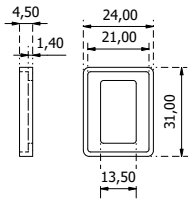
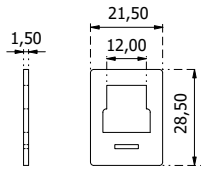
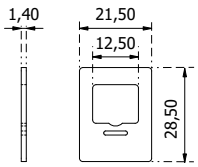
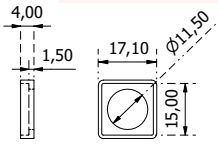
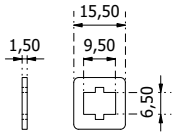
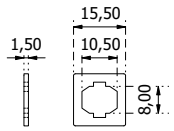


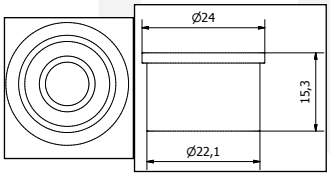
Circuit diagram	Circuit specification	Circuit code	Housing C	Voltage code (V)	Housing color
	Without circuit	A	●	250 (10/250V)	Black - Grey - Transparent Black=standard
	LED	B	●	MV (10/50V)	Transparent
		B	●	110 (110V)	
		B	●	250 (250V)	
	Varistor	V	●	12 (12V)	Black
		V	●	24 (24V)	
		V	●	48 (48V)	
		V	●	110 (110V)	
		V	●	250 (250V)	
	LED + Varistor	G	●	12 (12V)	Transparent
		G	●	24 (24V)	
		G	●	48 (48V)	
		G	●	110 (110V)	
		G	●	250 (250V)	
	Diode (LL = 2 A Diode)	L	●	250 (10/250V)	Black
	LED + Diode (MM = 2 A Diode)	M	●	MV (10/50V)	Transparent
		M	●	110 (110V)	
		M	●	250 (250V)	

THT CIRCUITS



Circuit diagram	Circuit specification	Circuit code	Housing C	Voltage (V)	Housing color
	Double Zener + LED	Z	●	24	Transparent
	Transil + LED	S	●	24	Transparent
		T	●	110	

THERMOPLASTIC RUBBER GASKETS FOR A - B - C CONNECTORS			
Technical drawing	Description	P/N	Packaging
	Profile gasket for form a connectors	M00101 GPRA	100 pieces
	Flat gasket for form a connectors	M00102 GPIA	100 pieces
	Profile gasket for form b connectors	M001015 GPRB	100 pieces
	Flat gasket for form b connectors spacing 10 mm	M00104 GPIB5	100 pieces
	Flat gasket for form b connectors spacing 11 mm	M00103 GPIB	100 pieces
	Profile gasket for form c connectors	M00181 GPRC	100 pieces
	Flat gasket for form c connectors spacing 8 mm	M00182 GPIC8	100 pieces
	Flat gasket for form c connectors spacing 9,4 mm	M00432 GPIC94	100 pieces

Cap	Description	P/N	Packaging
	Contact protection cap	V00294 PXAR	100 pieces

Screw	Description	P/N	Packaging
	Screw 3 x 28 field-wireable connector form A - B - C spacing 9,4 mm	H00016 V1030	100 pieces
	Screw 3 x 30 field-wireable connector form A - B	H00001 V1006	100 pieces
	Screw 3 x 29 field-wireable connector form A - B	H00013 V1011	100 pieces
	Screw 2,5 x 27 field-wireable connector form C spacing 8 mm	H00010 V1040	100 pieces
	Screw 3 x 27 field-wireable connector form C spacing 9,4 mm	H00011 V1013	100 pieces
	Screw 3 x 30 INOX field-wireable connector form A - B	H00017 V1042	100 pieces
	Screw 3 x 29 INOX field-wireable connector form A - B	H00012 V1008	100 pieces

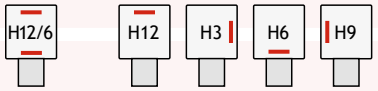
Moulded Connectors
Form A-B-C

Version without circuitry

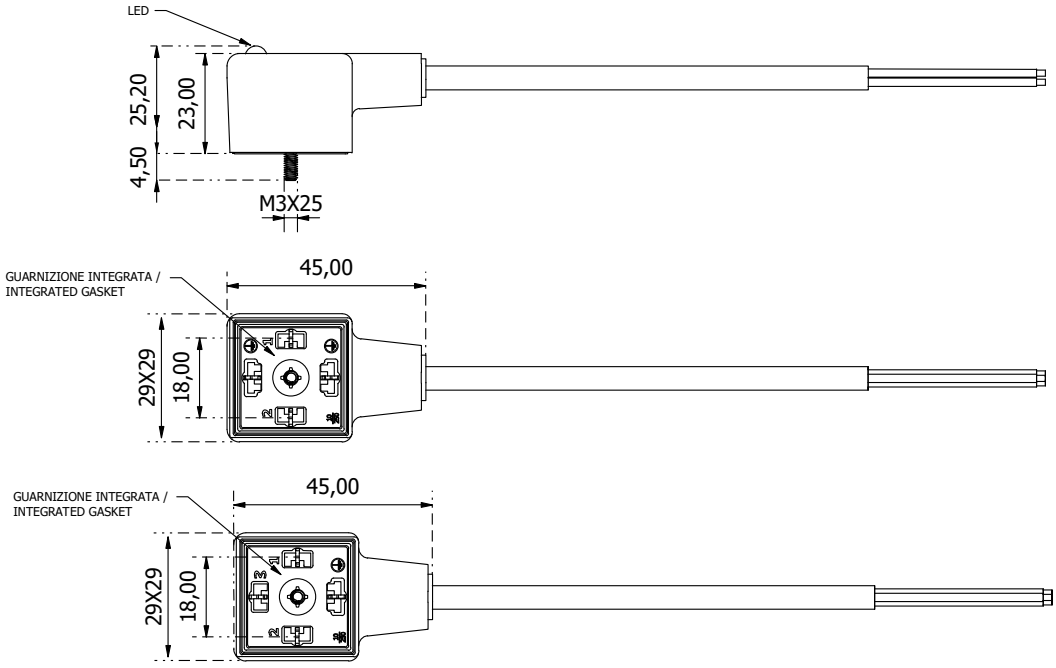
Version with circuitry

Housing material	TPC - ET	
Contacts material	CuZn (Ag)	
Voltage (max)	Without circuit:	250 V AC/300 V DC
	With circuit:	according to circuit
Max current	16 A	
Operating current:	10 A	
Spacing	18 mm	
Screw tightening torque	40/50 cN.m	
Wire section	0.50/1 mm²	
Cable diameter	MIN 4,3mm - MAX 7,7 mm	
Protection class	EN 60529 (DIN 40050)	IP67
Working temperature	Without circuit:	-30°C / +125°C
	With circuit:	-25°C / +90°C

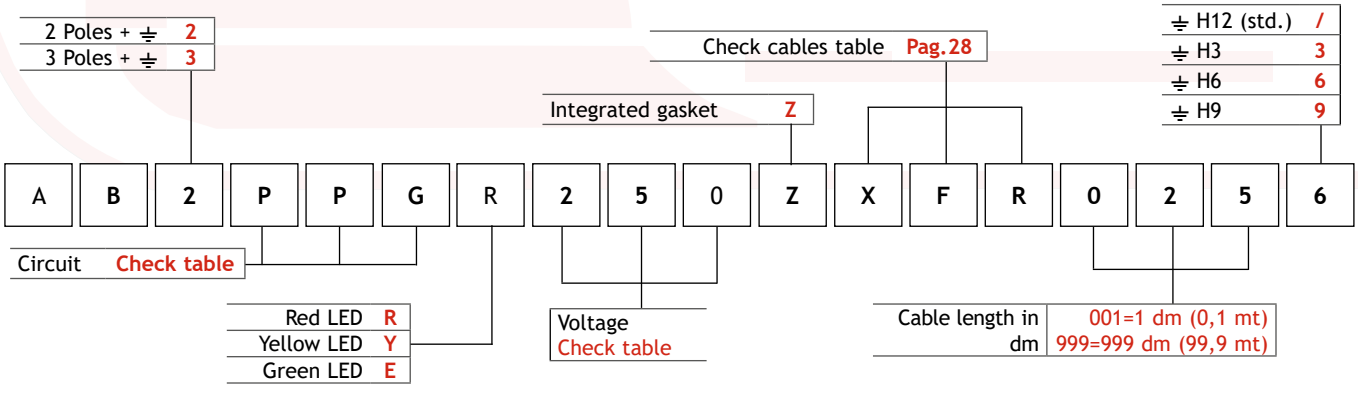
Earth position



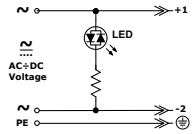
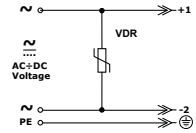
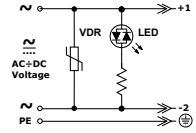
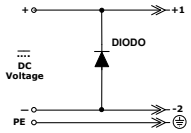
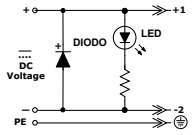
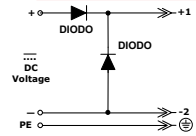
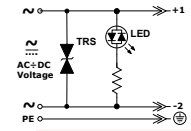
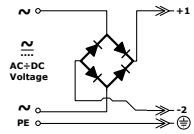
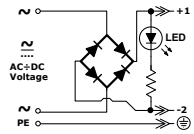
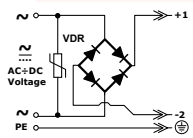
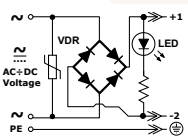
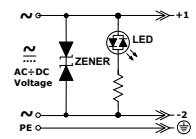
2 Poles + ⏚ 3 Poles + ⏚



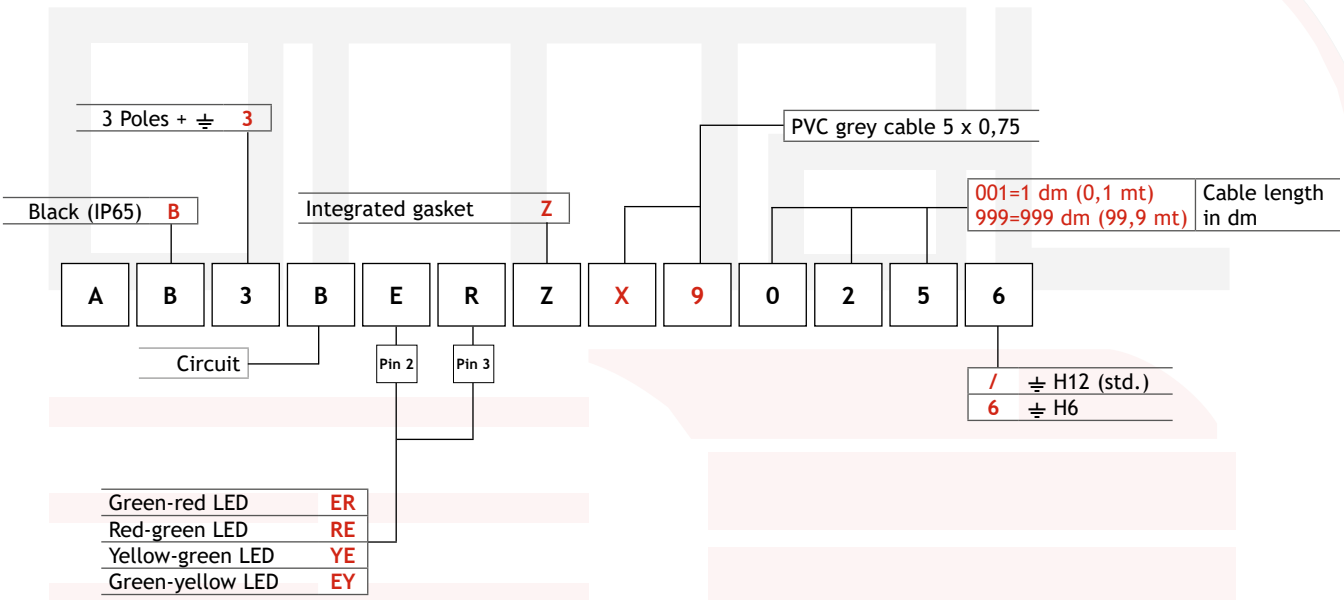
AB2 - AB3 series with or without circuitry



AVAILABLE CIRCUITS

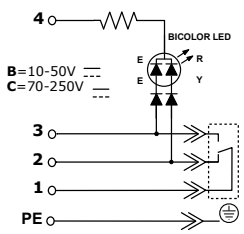
Circuit diagram	Circuit specification	Circuit code	Voltage code (V)
	Without circuit	AA	250 (10/250V)
	LED	B	-MV (10/50V)
		B	110 (110V)
		B	250 (250V)
	Varistor	V	24 (24V)
		V	48 (48V)
		V	110 (110V)
		V	250 (250V)
	LED + Varistor	G	24 (24V)
		G	48 (48V)
		G	110 (110V)
		G	250 (250V)
	Diode (LL = 2 A Diode)	L	250 (10/250V)
	LED + Diode (MM = 2 A Diode)	M	-MV (10/50V)
		M	110 (110 V)
		M	250 (250V)
	Half-wave rectifier	W	250 (10/250V)
	Transil + LED	S	24 (24V)
		T	110 (110V)
	Bridge rectifier (PP = 2 A Diode)	P	250 (10/250V)
	Bridge rectifier + LED (QQ = 2 A Diode)	Q	-MV (10/50V)
		Q	110 (110V)
		Q	250 (250V)
	Bridge rectifier + Varistor (PP = 2 A Diode)	PV	24 (24V)
		PV	48 (48V)
		PV	110 (110V)
		PV	250 (250V)
	Bridge rectifier + LED + Varistor (PPG = 2 A Diode)	PG	24 (24V)
		PG	48 (48V)
		PG	110 (110V)
		PG	250 (250V)
	Double Zener + LED	Z	24 (24V)

CONNECTOR FOR PRESSURE SWITCHES WITH DOUBLE LED INDICATOR



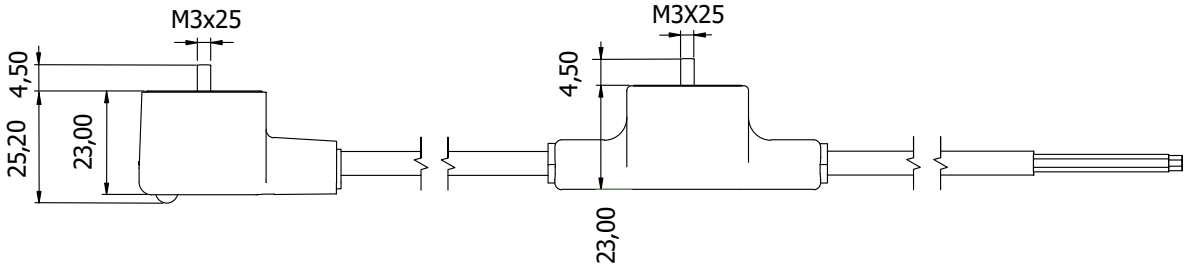
⏚ - Yellow-Green
4 - Blue
3 - Black
2 - Grey
1 - Brown

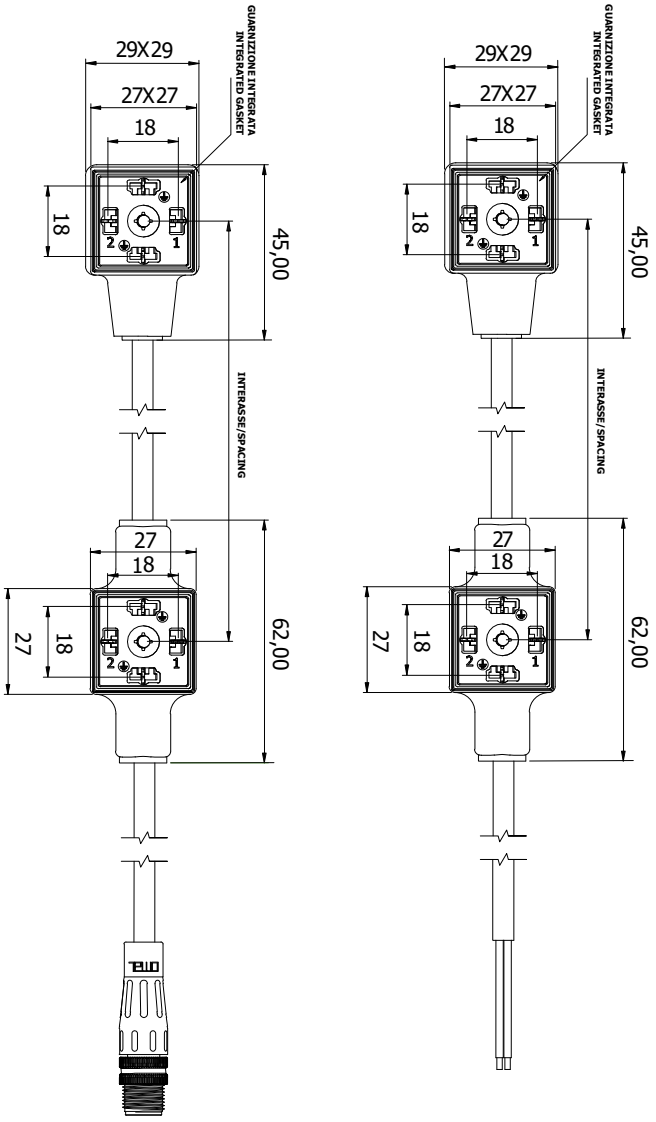
1 - Brown
2 - Grey
3 - Black
4 - Blue
PE - Yellow/Green

Circuit diagram	Circuit specification	Circuit code	Voltage (V)
 1 - Brown 2 - Grey 3 - Black 4 - Blue PE - Yellow/Green **H0**; 1 - Brown 2 - Black 3 - Grey 4 - Blue PE - Yellow/Green **H6**	Bicolored LED	B	10/50
		C	70/250

FORM A DUAL-DIN CONNECTORS

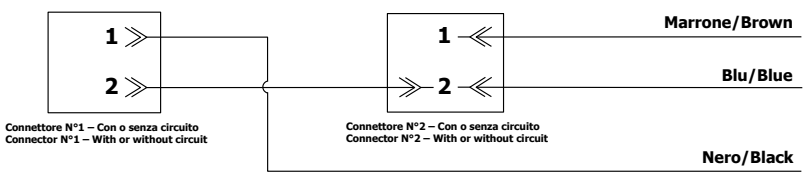
For enquiries, please contact our sales dept.





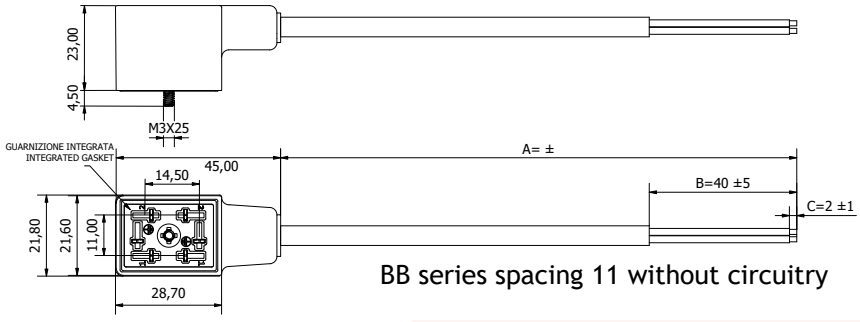
Housing material	TPC-ET	
Contacts material	CuZn (Ag)	
Voltage (max)	Without circuit:	250 V AC/300 V DC
	With circuit:	according to circuit
Max current	16 A (M12: 4A)	
Operating current:	10 A (M12: 4A)	
Spacing	18 mm	
Protection class	EN 60529 (DIN 40050)	IP67
Insulation class	C - VDE 0110	
Working temperature	Without circuit:	-30°C / +125°C
	With circuit:	-25°C / +90°C

Earth position

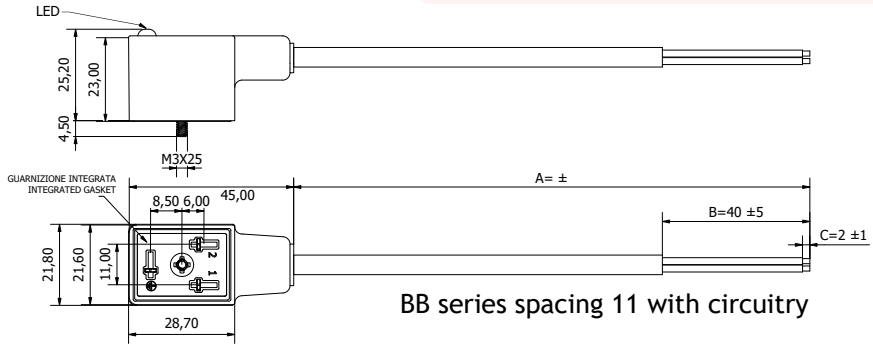


Version without circuitry

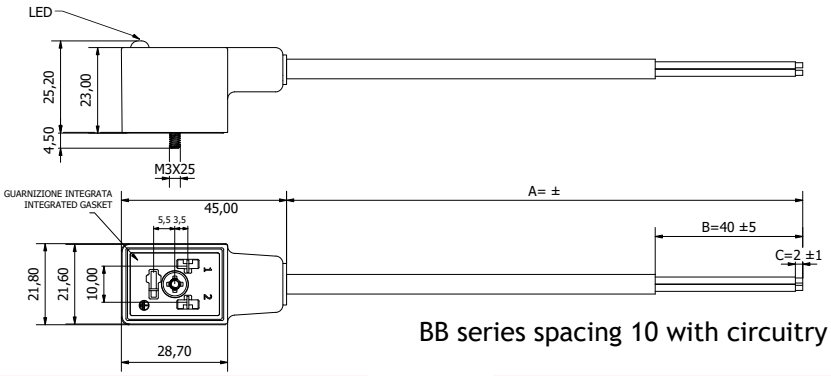
Version with circuitry



BB series spacing 11 without circuitry



BB series spacing 11 with circuitry

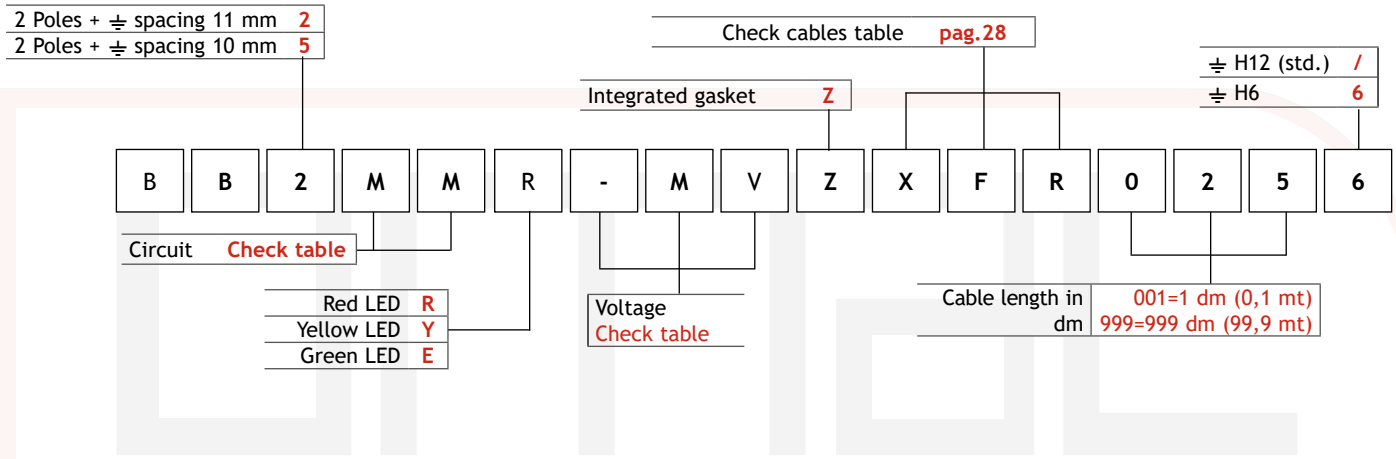


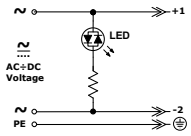
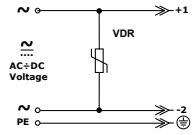
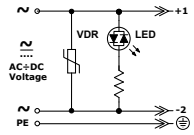
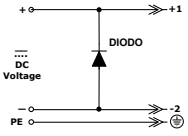
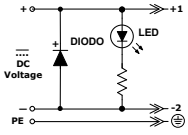
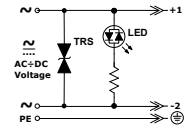
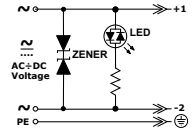
BB series spacing 10 with circuitry

Housing material	TPC - ET
Contacts material	CuZn (Ag)
Voltage (max)	Without circuit: 250 V AC/300 V DC
	With circuit: according to circuit
Max current	16 A
Operating current:	10 A
Spacing	10 mm EN 175301-803
	11 mm Industrial standard
Screw tightening torque	40/50 cN.m
Wire section	0.50/1 mm²
Cable diameter	MIN 4,3mm - MAX 7,7 mm
Protection class	EN 60529 (DIN 40050) IP67
Working temperature	Without circuit: -30°C / +125°C
	With circuit: -25°C / +90°C

Earth position	H12	H6	H6/12
	Spacing 10 mm		Spacing 11 mm

CIRCUITS



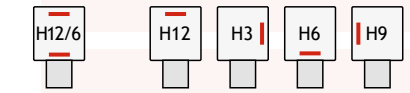
Circuit diagram	Circuit specification	Circuit code	Voltage code (V)
	Without circuit	AA	250 (10/250V)
	LED	B	-MV (10/50V)
		B	110 (110V)
		B	250 (250V)
	Varistor	V	24 (24V)
		V	48 (48V)
		V	110 (110V)
		V	250 (250V)
	LED + Varistor	G	24 (24V)
		G	48 (48V)
		G	110 (110V)
		G	250 (250V)
	Diode (LL = 2 A Diode)	L	250 (10/250V)
	LED + Diode (MM = 2 A Diode)	M	-MV (10/50V)
		M	110 (110V)
		M	250 (250V)
	Transil + LED	S	24 (24V)
		T	110 (110V)
	Double Zener + LED	Z	24 (24V)

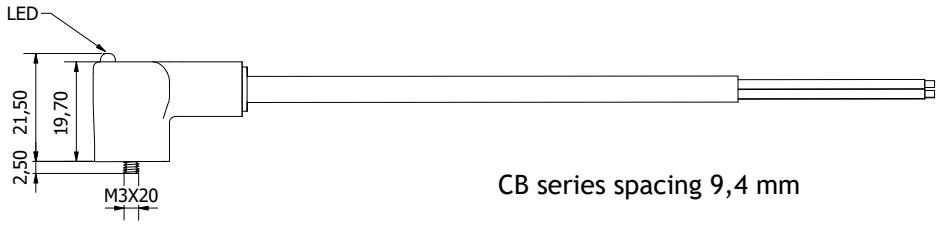
Version without circuitry

Version with circuitry

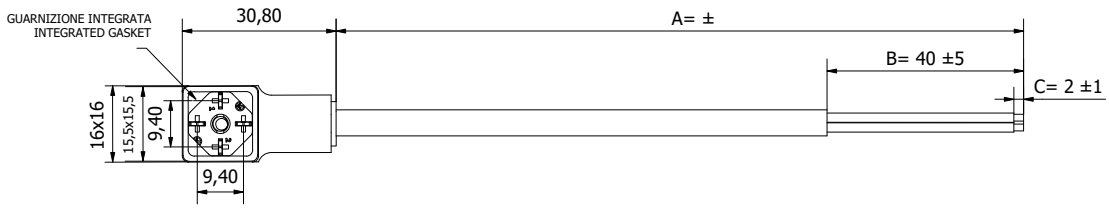
Connector material	TPC - ET	
Contacts material	CuZn (Ag)	
Voltage (max)	Without circuit:	250 V AC/300 V DC
	With circuit:	according to circuit
Max current	10 A	
Operating current:	6 A	
Spacing	8 mm EN 175301-803	
	9,4 mm Industrial standard	
Screw tightening torque	40/50 cN.m	
Wire section	0.34/0.50 mm²	
Cable diameter	MIN 4,0mm - MAX 6,4 mm	
Protection class	EN 60529 (DIN 40050)	IP67
Working temperature	Without circuit:	-30°C / +125°C
	With circuit:	-25°C / +90°C

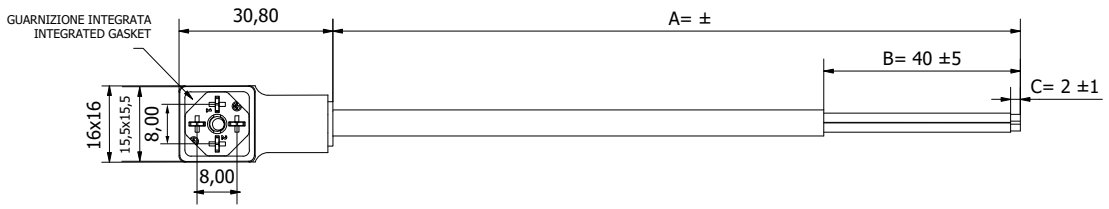
Earth position



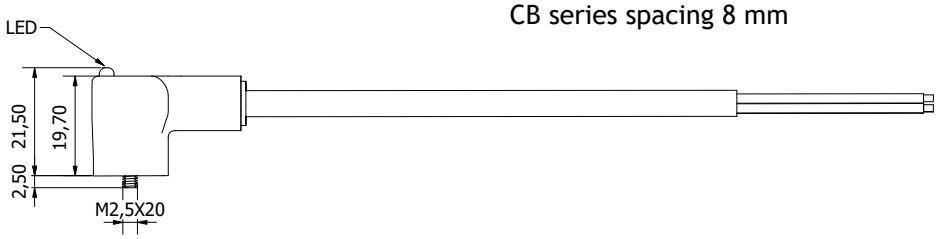


CB series spacing 9,4 mm





CB series spacing 8 mm



CIRCUITS

2 Poles + ⏚ spacing 9,4 mm 2
3 Poles + ⏚ spacing 9,4 mm 3
2 Poles + ⏚ spacing 8 mm 6
3 Poles + ⏚ spacing 8 mm 7

Check cables table Pag. 28

Integrated gasket Z

⏚ H12 (std.) /
⏚ H3 3
⏚ H6 6
⏚ H9 9

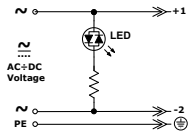
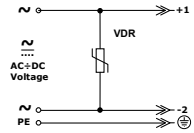
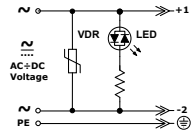
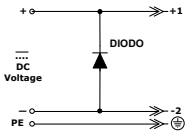
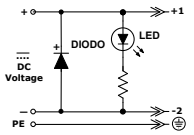
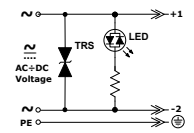
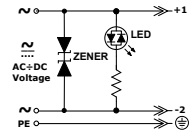
C	B	2	M	M	R	2	5	0	Z	X	F	R	0	2	5	6

Circuit Check table

Red LED R
Yellow LED Y
Green LED E

Voltage Check table

Cable length in dm
001=1 dm (0,1 mt)
999=999 dm (99,9 mt)

Circuit diagram	Circuit specification	Circuit code	Voltage code (V)
	Without circuit	AA	250 (10/250V)
	LED	B	-MV (10/50V)
		B	110 (110V)
		B	250 (250V)
	Varistor	V	24 (24V)
		V	48 (48V)
		V	110 (110V)
		V	250 (250V)
	LED + Varistor	G	24 (24V)
		G	48 (48V)
		G	110 (110V)
		G	250 (250V)
	Diode (LL = 2 A Diode)	L	250 (10/250V)
	LED + Diode (MM = 2 A Diode)	M	-MV (10/50V)
		M	110 (110 V)
		M	250 (250V)
	Transil + LED	S	24 (24V)
		T	110 (110V)
	Double Zener + LED	Z	24 (24V)

AVAILABLE CABLES

Cable code	Material	Specifications	Color sheath	Color Conductors	Section	Ø ext. cable ± mm	Form A	Form B	Form C
X4	Pvc		Grey	BR-BL	2 X 0,50	5 ± 0,2	●	●	●
U4	Pvc		Black	BR-BL	2 X 0,50	4,9 ± 0,2	●	●	●
F2	Pvc		Grey	BR-BL	2 X 0,50	5 ± 0,2	●	●	●
X1	Pvc		Grey	BR-BL-Y/G	3 X 0,50	5,5 ± 0,2	■	■	■
U1	Pvc		Black	BR-BL-Y/G	3 X 0,50	5,1 ± 0,2	■	■	■
U8	Pvc		Black	BR-GR-BK-Y/G	4 X 0,50	6 ± 0,2	●		●
U5	Pvc		Black	BR-BL	2 x 0,75	7,2 ± 0,2	●	●	
XFR	Pvc		Grey	BR-BL	2 x 0,75	6,6 ± 0,2	●	●	
U2	Pvc		Black	BR-BL-Y/G	3 X 0,75	7,6 ± 0,2	■	■	
XO	Pvc		Grey	BR-BL-Y/G	3 X 0,75	9,9 ± 0,2	●	●	
L5	Pvc	UL	Black		3 X AWG18 (0.82 mm²)	5,8 ± 0,2	●	●	
U6	Pvc		Black	BR-BK-GR-Y/G	4 X 0,75	8,3 ± 0,2	●		
X9	Pvc		Grey	BR-BL-BK-GR-Y/G	5 X 0,75	8 ± 0,2	●		
X3	Pvc		Grey	BR-BL	2 X 1	7,3 ± 0,2	●		
U7	Pvc		Black	BR-BL	2 x 1	6,6 ± 0,2	●		
X2	Pvc		Grey	BR-BL-Y/G	3 X 1	7,4 ± 0,2	●		
U3	Pvc		Black	BR-BL-Y/G	3 X 1	7 ± 0,2	●		
WX	Pur	On demand	Black	BR-BL	2 X 0,50	On demand	●	●	●
WZ	Pur	On demand	Black	BR-BL-Y/G	3 X 0,50	On demand	■	■	■
WY	Pur	On demand	Black	BR-BL-BK-Y/G	4 X 0,50	On demand	●	●	●
W2	Pur		Black	BR-BL-Y/G	3 X 0,75	6,6 ± 0,2	■	■	
WG	Pur		Black	BR-BL-BK-Y/G	4 X 0,75	9,7 ± 0,2	■	■	
S2	Silicon		Pink	BR-BL-Y/G	3 X 0,75	6,7 ± 0,2	■	■	

● = available
■ = recommended cables

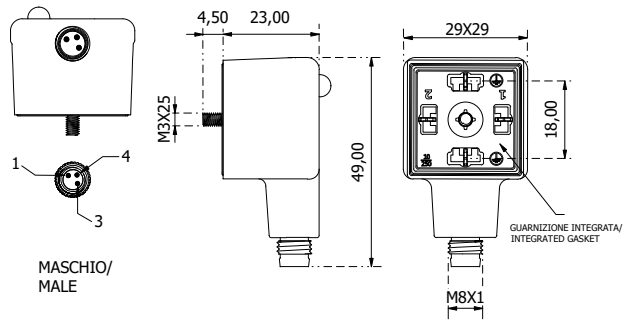
Screw	Description	Code	Packaging
	Screw 3 x 25 moulded connector Form A - B	H00014 V1012	100 pieces
	Screw 2,5 x 20 moulded connector Form C spacing 8 mm	H00004 V1010	100 pieces
	Screw 3 x 20 moulded connector Form C spacing 9,4 mm	H00003 V1009	100 pieces
	Screw 3 x 23 INOX moulded connector Form C spacing 9,4 mm	H00017 V1042	100 pieces
	Screw 3 x 25 INOX moulded connector Form A - B	H00015 V1016	100 pieces

Moulded connectors
A - B - C
With M8/M12

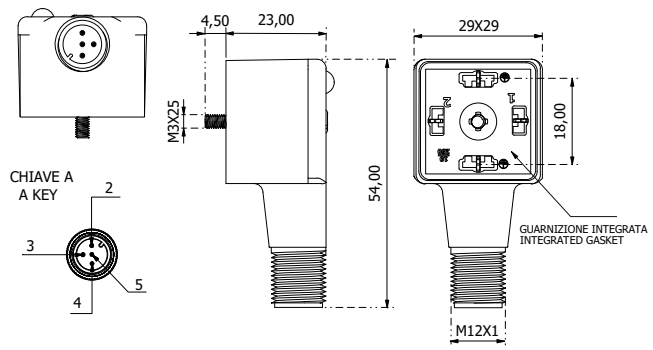
Form A

Form B

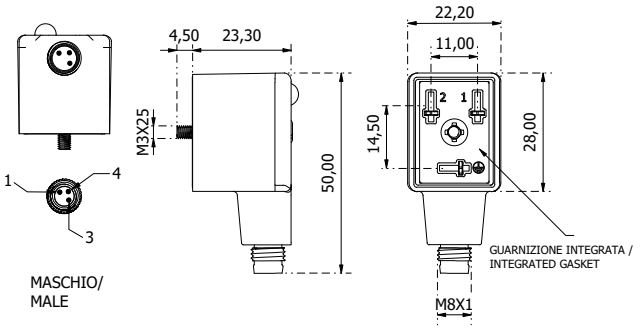
Form C



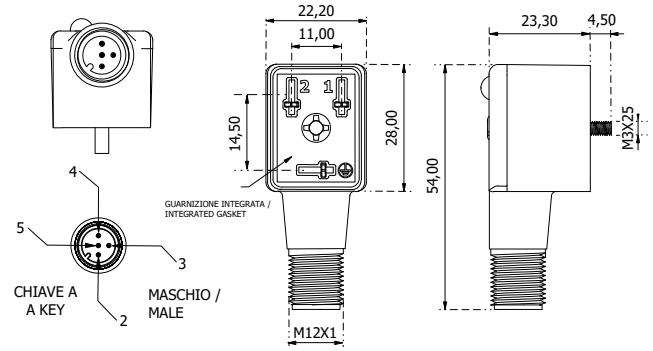
AB2 with M8



AB2 with M12



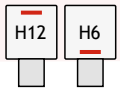
BB2 with M8

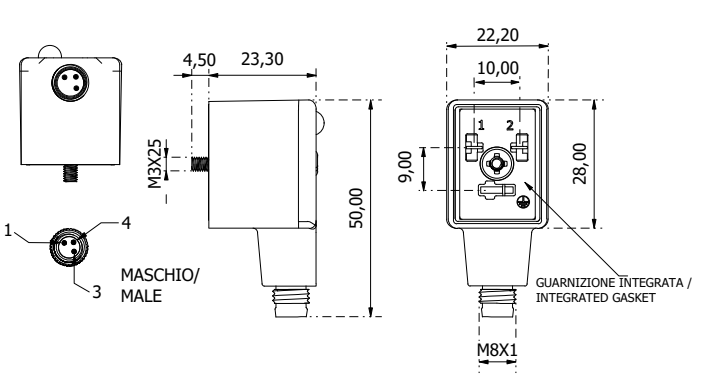


BB2 with M12

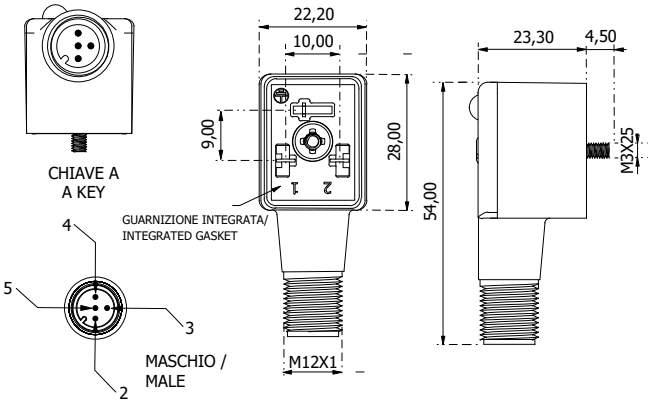
	A	B	C	A-B-C with M8	A-B-C with M12
	EN175301-803				
Connector material	TPC-ET				
Contacts material	CuZn (Ag)				
Voltage (max)				Without circuit: 60 V	250 V AC
				With circuit: according to circuit	
Max current	4 A				
Contacts spacing	18 mm	10/11 mm	8/9,4 mm		
Screw tightening torque	40/50 cN.m				
Protection class	IP67				
Regulation	IEC61076-2-104 version with M8 IEC61076-2-101 version with M12				
Insulation class	C - VDE 0110				
Working temperature	-30°C / +125°C				

Earth position

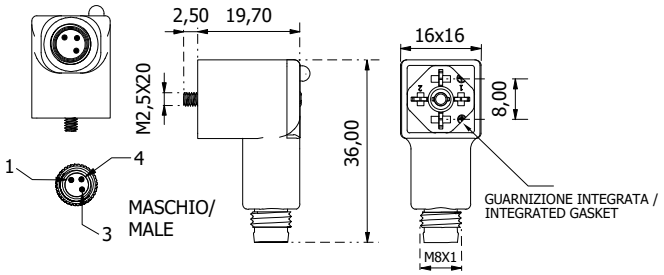




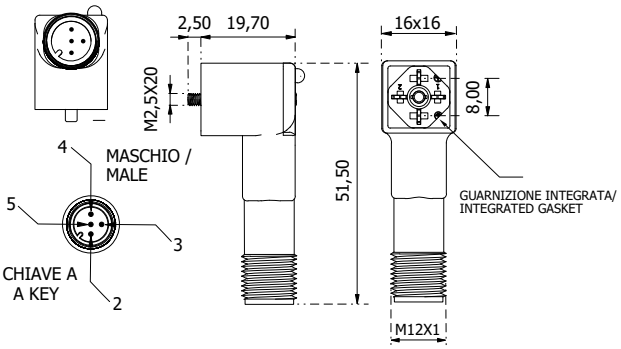
BB5 with M8



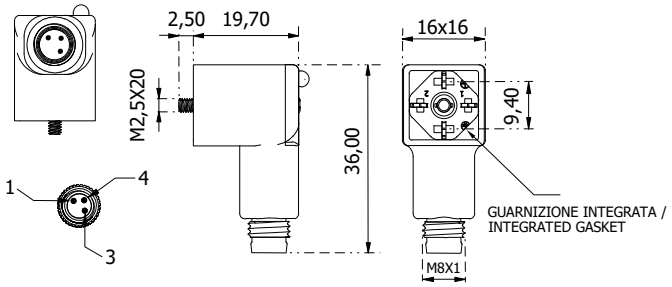
BB2 with M12



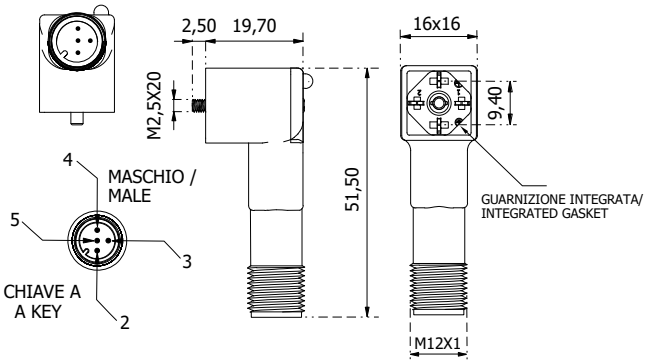
CB6 with M8



CB6 with M12



CB2 with M8



CB2 with M12

Form A spacing 18 mm	AB2
Form B spacing 11 mm	BB2
Form B spacing 10 mm	BB5
Form C spacing 9,4 mm	CB2
Form C spacing 8 mm	CB6

M8	M8 male 3 Poles
M12	M12 male 4 Poles

Integrated gasket Z

A	B	2	P	P	G	R	Z	0	M	1	2	M	R

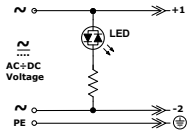
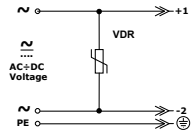
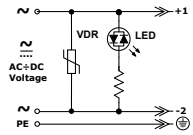
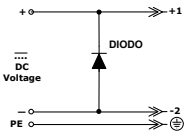
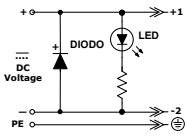
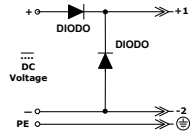
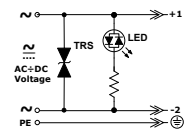
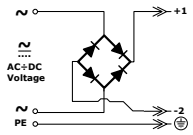
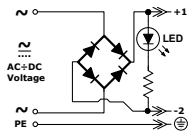
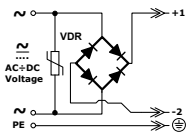
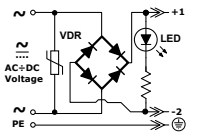
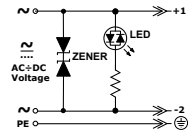
Circuit Check table

Red LED	R
Yellow LED	Y
Green LED	E

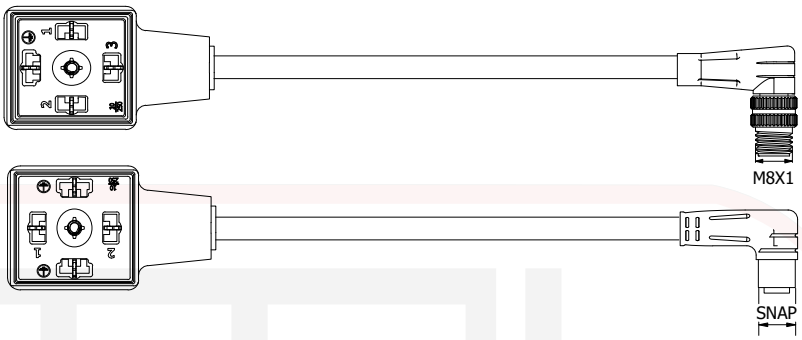
0	⏚ H12 (std.)
6	⏚ H6

MR	⏚ snap-in ring

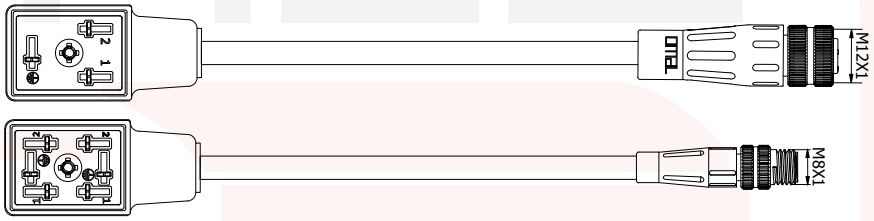
CIRCUITS

Circuit diagram	Circuit specification	Code Circuit	Voltage code (V)	Version with M8 connector			Version with M12 connector		
				AB2	BB2/BB5	CB2/CB6	AB2	BB2/BB5	CB2/CB6
	Without circuit	AA	12/250	●	●	●	●	●	●
	LED	B	-MV (10/50V)	●	●	●	●	●	●
		B	110 (110V)				●	●	●
		B	250 (250V)				●	●	●
	Varistor	V	24	●	●	●	●	●	●
		V	48	●	●	●	●	●	●
		V	110				●	●	●
		V	250				●	●	●
	LED + Varistor	G	24	●	●	●	●	●	●
		G	48	●	●	●	●	●	●
		G	110				●	●	●
		G	250				●	●	●
	Diode (LL = 2 A Diode)	L	12/250	60 V max.	60 V max.	60 V max.	●	●	●
	LED + Diode (MM = 2 A Diode)	M	-MV (10/50V)	●	●	●	●	●	●
		M	110 (110V)				●	●	●
		M	250 (250V)				●	●	●
	Half-wave rectifier	W	250	60 V max.			●	●	●
	Transil + LED	S	24	●	●	●	●	●	●
		T	110				●	●	●
	Bridge rectifier (PP = 2 A Diode)	P	250	60 V max.			●		
	Bridge rectifier + LED (QQ = 2 A Diode)	Q	-MV (10/50V)	●			●		
		Q	110 (110V)				●		
		Q	250 (250V)				●		
	Bridge rectifier + Varistor (PP = 2 A Diode)	PV	24	●			●		
		PV	48	●			●		
		PV	110				●		
		PV	250				●		
	Bridge rectifier + LED + Varistor (PPG = 2 A Diode)	PG	24	●			●		
		PG	48	●			●		
		PG	110				●		
		PG	250				●		
	Double Zener + LED	Z	24	●	●		●	●	

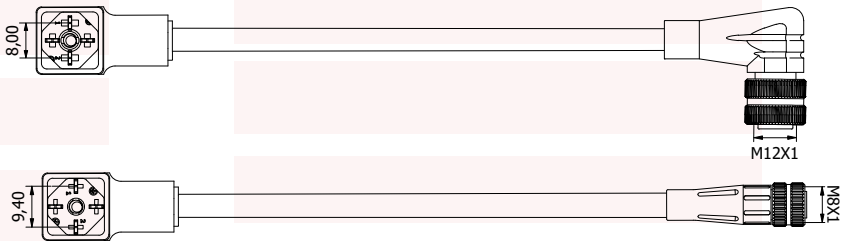
Form A



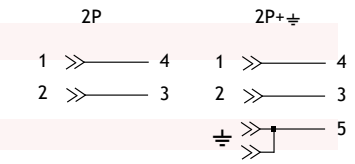
Form B



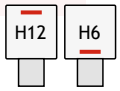
Form C

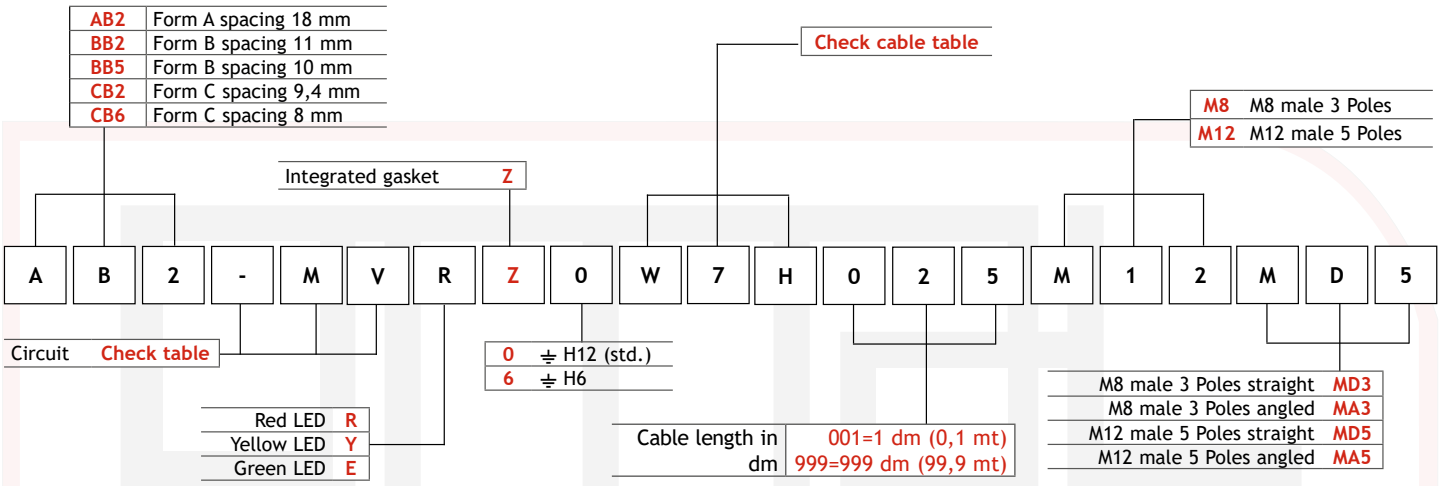


	A	B	C	A-B-C with M8	A-B-C with M12
	EN175301-803				
Connector material	TPC-ET				
Contacts material	CuZn (Ag)				
Voltage (max)	Without circuit:			60 V	250 V AC
	With circuit:			according to circuit	
Max current	4 A				
Contacts spacing	18 mm	10/11 mm	8/9,4 mm		
Screw tightening torque	40/50 cN.m				
Protection class	IP67				
Regulation	IEC61076-2-104 M8 IEC61076-2-101 M12				
Insulation class	C - VDE 0110				
Working temperature	-30°C / +125°C				



Earth position

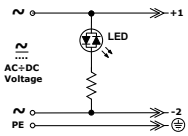
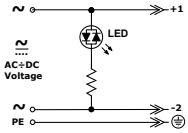
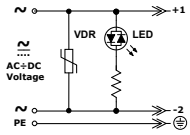
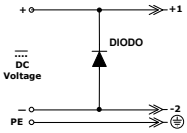
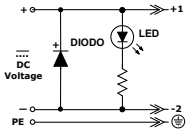
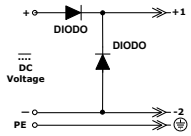
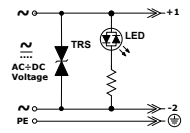
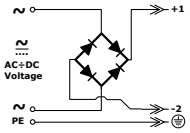
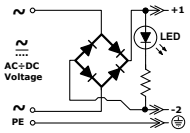
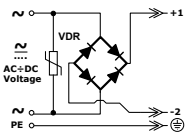
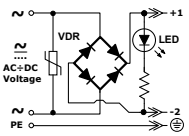
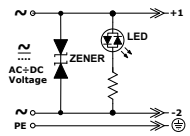




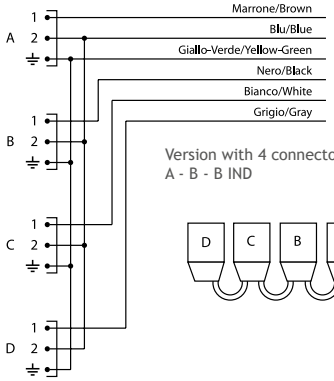
AVAILABLE CABLES

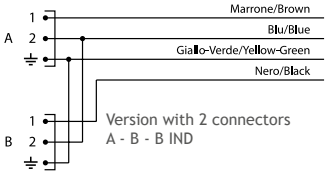
Cables table					
Cable code	Material	Specifications	Color sheath	Color Conductors	Section
X6	Pvc		Grey	BR-BL-BK	3 X 0,34
XL	Pvc		Black	BR-BL-BK	3 X 0,34
M5	Pvc	UL	Black	BR-BL-BK	3 X 0,34
UL3	Pvc	UL	Black	BR-BL-BK	3 X AWG22
X4	Pvc		Grey	BR-BL	2 X 0,50
U4	Pvc		Black	BR-BL	2 X 0,50
F2	Pvc		Grey	BR-BL	2 X 0,50
X1	Pvc		Grey	BR-BL-Y/G	3 X 0,50
W7	Pur		Black	BR-BL-BK	3 X 0,34
W7H	Pur	Shielded	Black	BR-BL-BK	3 X 0,34
WX	Pur	On demand	Black	BR-BL	2 X 0,50
WZ	Pur		Black	BR-BL-Y/G	3 X 0,50

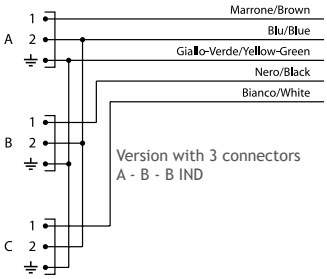
CIRCUITS

Circuit diagram	Circuit specification	Circuit code	Voltage code (V)	Version with M8 connector			Version with M12 connector		
				AB2	BB2/BB5	CB2/CB6	AB2	BB2/BB5	CB2/CB6
	Without circuit	AA	12/250	●	●	●	●	●	●
	LED	B	-MV (10/50V)	●	●	●	●	●	●
		B	110 (110V)				●	●	●
		B	250 (250V)				●	●	●
	Varistor	V	24	●	●	●	●	●	●
		V	48	●	●	●	●	●	●
		V	110				●	●	●
		V	250				●	●	●
	LED + Varistor	G	24	●	●	●	●	●	●
		G	48	●	●	●	●	●	●
		G	110				●	●	●
		G	250				●	●	●
	Diode (LL = 2 A Diode)	L	12/250	60 V max.	60 V max.	60 V max.	●	●	●
	LED + Diode (MM = 2 A Diode)	M	-MV (10/50V)	●	●	●	●	●	●
		M	110 (110V)				●	●	●
		M	250 (250V)				●	●	●
	Half-wave rectifier	W	250	60 V max.			●	●	
	Transil + LED	S	24	●	●	●	●	●	●
		T	110				●	●	●
	Bridge rectifier (PP = 2 A Diode)	P	250	60 V max.			●		
	Bridge rectifier + LED (QQ = 2 A Diode)	Q	-MV (10/50V)	●			●		
		Q	110 (110V)				●		
		Q	250 (250V)				●		
	Bridge rectifier + Varistor (PP = 2 A Diode)	PV	24	●			●		
		PV	48	●			●		
		PV	110				●		
		PV	250				●		
	Bridge rectifier + LED + Varistor (PPG = 2 A Diode)	PG	24	●			●		
		PG	48	●			●		
		PG	110				●		
		PG	250				●		
	Double Zener + LED	Z	24	●	●		●	●	

MULTIPLE CONNECTORS WITH 2-4 SOLENOID VALVE CONNECTORS FORM A - B - C + M8/M12

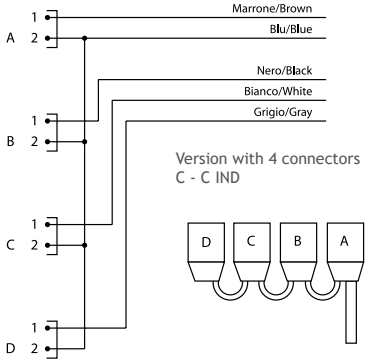


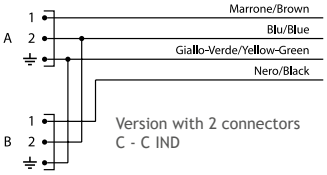


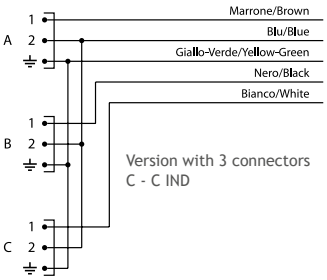


For further information, please contact our sales dept.

MULTIPLE CONNECTORS WITH 2-4 SOLENOID VALVE CONNECTORS FORM A - B - C

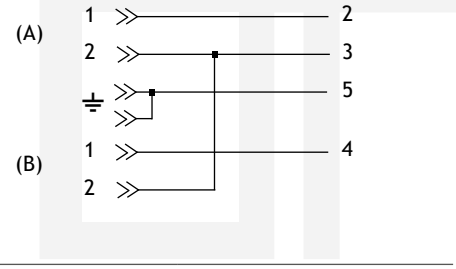


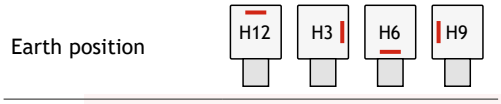


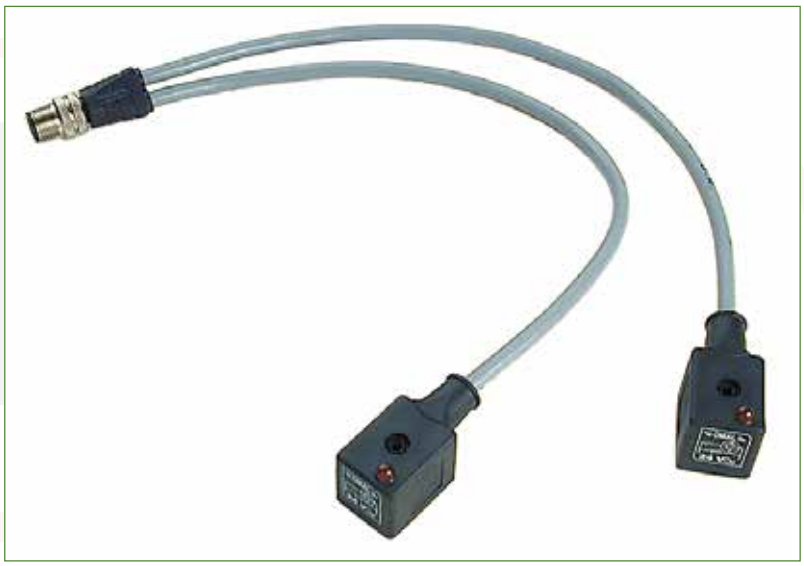


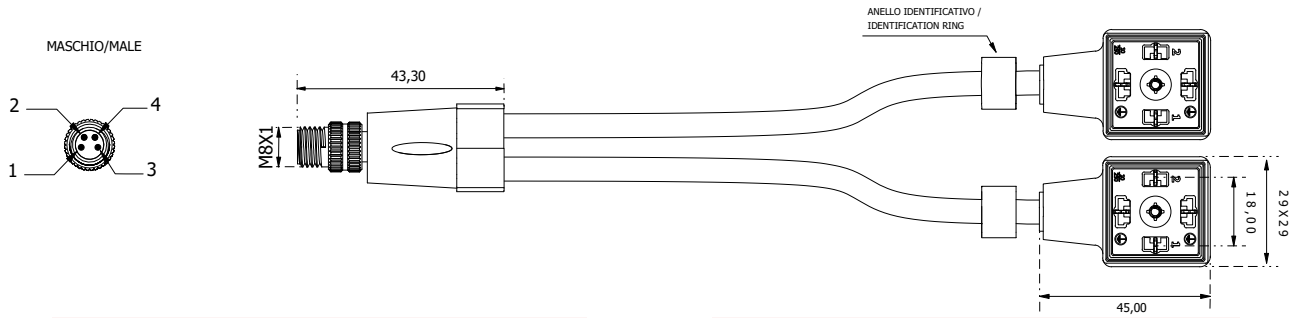
FORM A-B-C Y-COUPLERS CONNECTORS WITH M8/M12 CONNECTORS

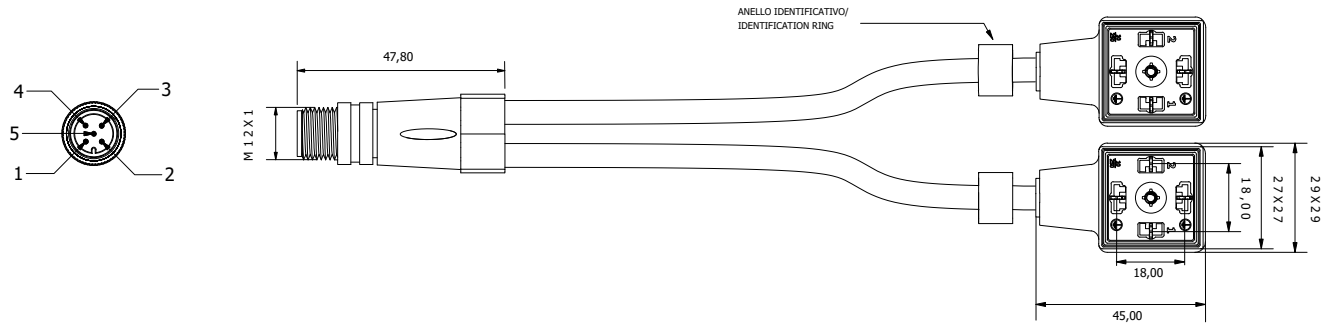
For further information, please contact our sales dept.

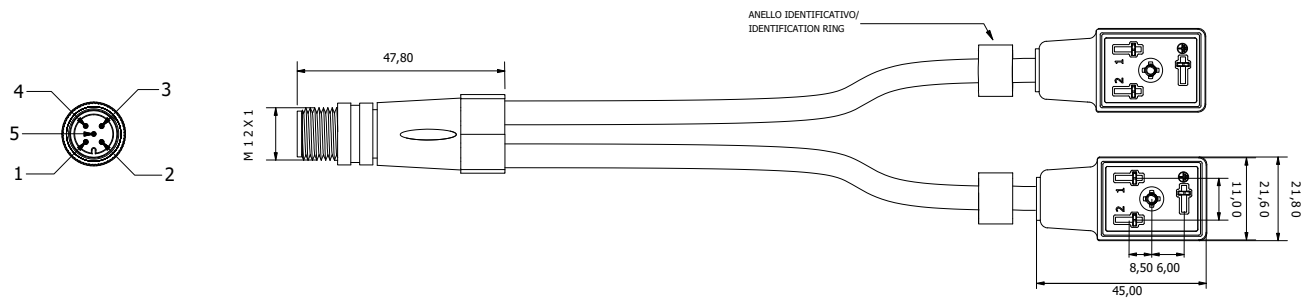












Male Plugs

Form A

Form B

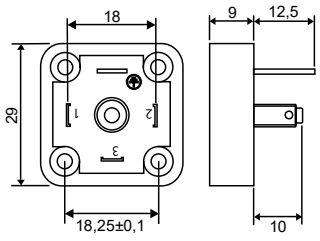
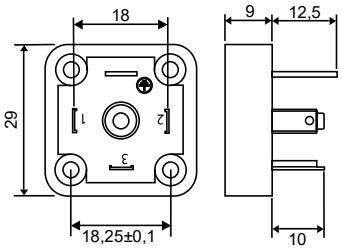
Form C

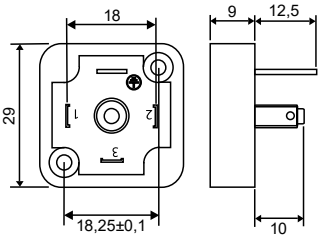
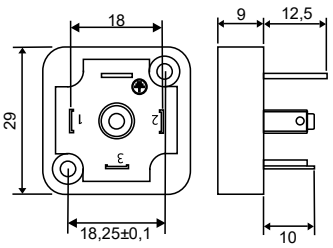
M 12

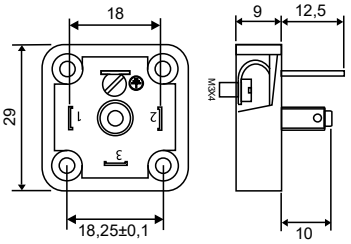
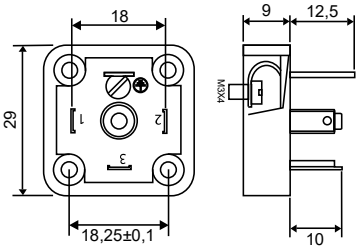
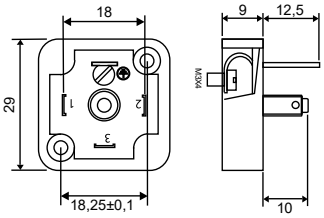
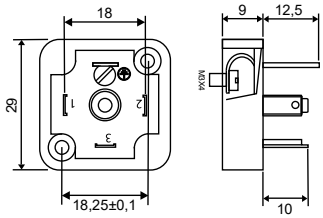
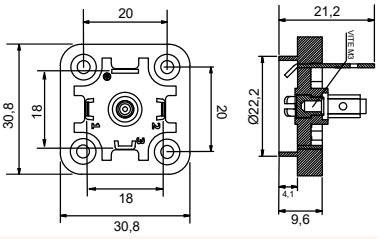
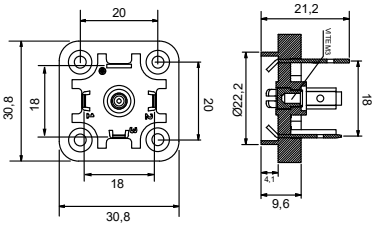
	Form A	Form B	Form C
Connector material		PA66 + 30% FV	
Contacts material		CuZn (Ag)	
Voltage (max)		250 V AC	
Max current	16 A (AM12M5 = 6A)	16 A	10 A
Operating current	10 A (AM12M5 = 6A)	10 A	6 A
Max conductor cross-section	1 mm²	1 mm²	0,75 mm²
Spacing	18 mm	10 - 11 mm	9,4 mm
Working temperature		-30°C / +125°C	

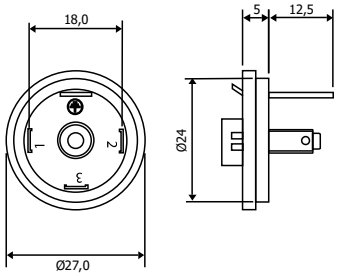
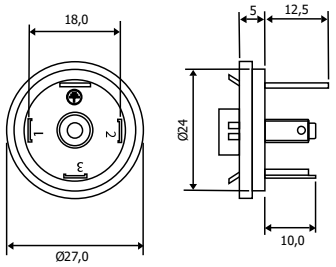
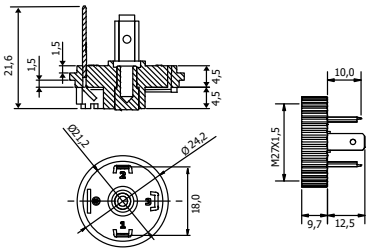
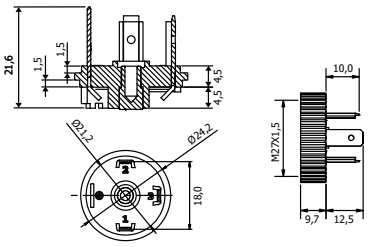
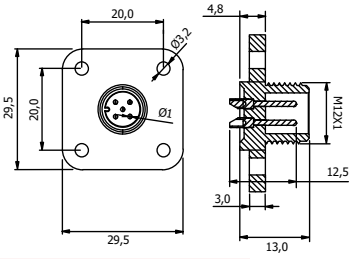
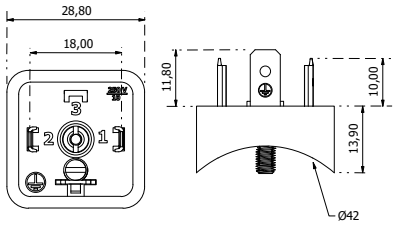
Male plug WITH CABLE

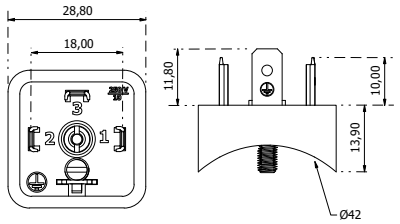
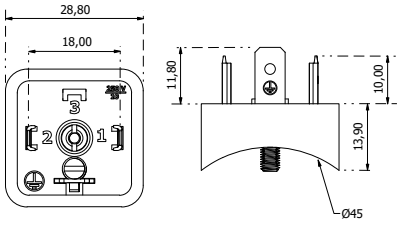
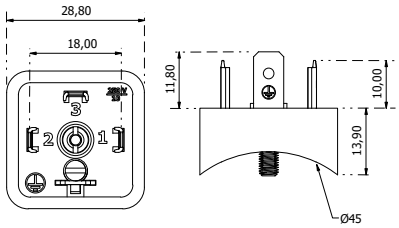
For further information, please contact our sales dept.

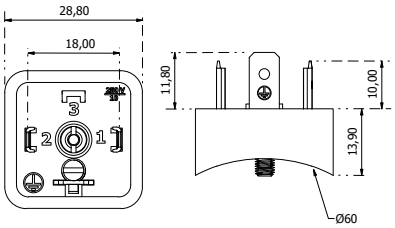
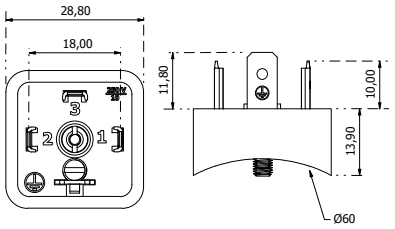
Form A (other radii can be made on demand)		
Code	Description	Technical drawing
A02	Square male plug 2 Poles + ⏚	
A03	Square male plug 3 Poles + ⏚	

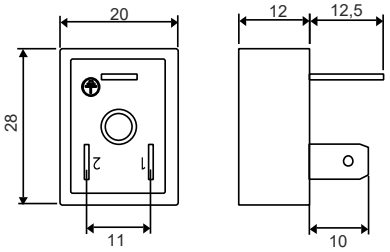
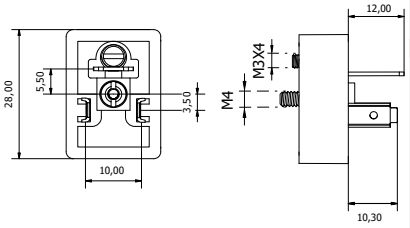
Form A (other radii can be made on demand)		
Code	Description	Technical drawing
A02-2F	Square male plug 2 Poles + ⏚ with 2 fixing holes	
A03-2F	Square male plug 3 Poles + ⏚ with 2 fixing holes	

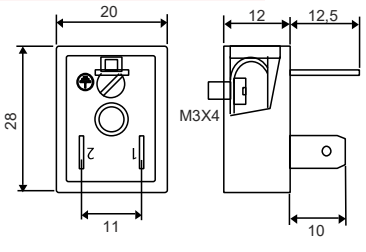
Form A (other radii can be made on demand)		
Code	**Description**	**Technical drawing**
AV02	Square male plug 2 Poles + ⏚ with earth screw	
AV03	Square male plug 3 Poles + ⏚ with earth screw	
AV02-2F	Square male plug 2 Poles + ⏚ with earth screw and 2 fixing holes	
AV03-2F	Square male plug 3 Poles + ⏚ with earth screw and 2 fixing holes	
A02C	Square male plug 2 Poles + ⏚ with earth screw and 4 fixing holes	
A03C	Square male plug 3 Poles + ⏚ with earth screw and 4 fixing holes	

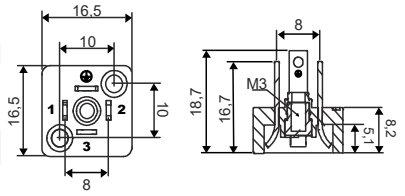
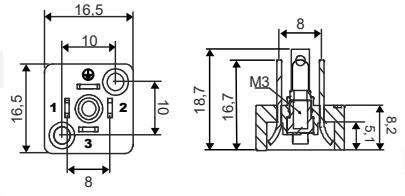
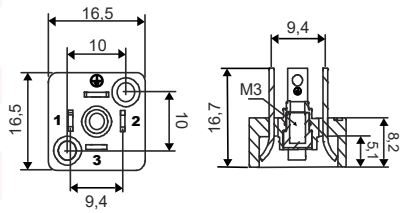
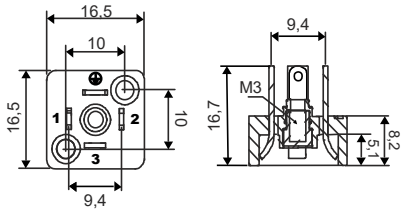
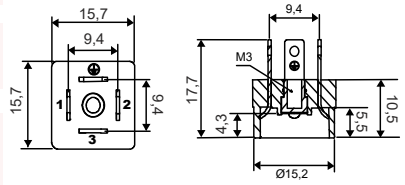
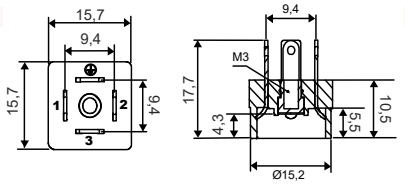
Form A (other radii can be made on demand)		
Code	**Description**	**Technical drawing**
AR02	Round male plug 2 Poles + ⏚	
AR03	Round male plug 3 Poles + ⏚	
ARB02G	Round male plug 2 Poles + ⏚ with ring nut	
ARB03G	Round male plug 3 Poles + ⏚ with ring nut	
AM12M5	Square male plug with M12 male 5 Poles	
AVR02-42	Radial square male plug 2 Poles + ⏚ Ø 42 with eyelet	

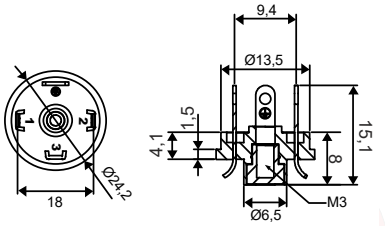
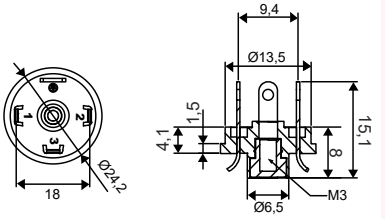
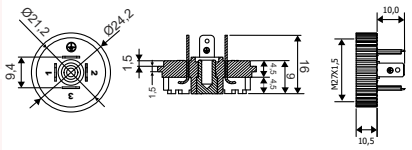
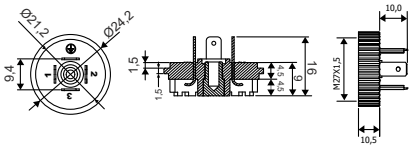
Form A (other radii can be made on demand)		
Code	Description	Technical drawing
AVR03-42	Radial square male plug 3 Poles + ⏚ Ø 42 with eyelet	
AVR02-45	Radial square male plug 2 Poles + ⏚ Ø 45 with eyelet	
AVR03-45	Radial square male plug 3 Poles + ⏚ Ø 45 with eyelet	

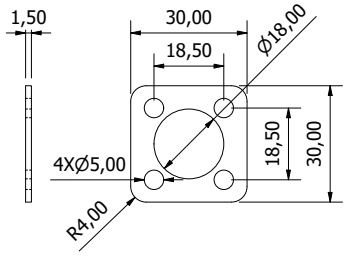
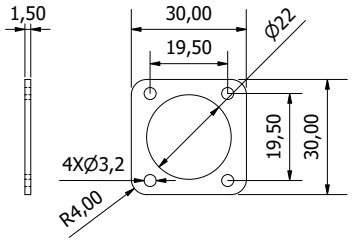
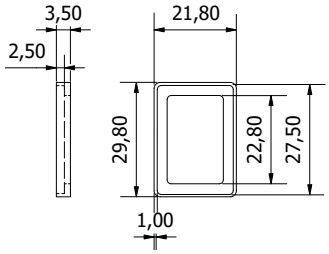
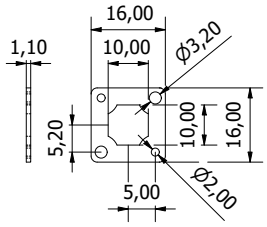
Form A (other radii can be made on demand)		
Code	Description	Technical drawing
AVR02-60	Radial square male plug 2 Poles + ⏚ Ø 60 with eyelet	
AVR03-60	Radial square male plug 3 Poles + ⏚ Ø 60 with eyelet	

Form B		
Code	Description	Technical drawing
B02	Male plug Rectangular 2 Poles + ⏚ spacing 11 mm	
B05	Male plug Rectangular 2 Poles + ⏚ spacing 10 mm	

Form B		
Code	Description	Technical drawing
BV02	Male plug Rectangular 2 Poles + ⏚ spacing 11 mm with earth screw	

Form C		
Code	Description	Technical drawing
C06	Square male plug micro 2 Poles + ⏚ spacing 8 mm	
C07	Square male plug micro 3 Poles + ⏚ spacing 8 mm	
C02	Square male plug micro 2 Poles + ⏚ spacing 9,4 mm	
C03	Square male plug micro 3 Poles + ⏚ spacing 9,4 mm	
C02C	Square male plug micro 2 Poles + ⏚ spacing 9,4 mm	
C03C	Square male plug micro 3 Poles + ⏚ spacing 9,4 mm	

Form C		
Code	Description	Technical drawing
CR02	Round male plug micro 2 Poles + ⏚ spacing 9,4 mm	
CR03	Round male plug micro 3 Poles + ⏚ spacing 9,4 mm	
CRB02G	Round male plug micro 2 Poles + ⏚ with ring nut spacing 9,4 mm	
CRB03G	Round male plug micro 3 Poles + ⏚ with ring nut spacing 9,4 mm	

THERMOPLASTIC RUBBER GASKET FOR MALE PLUGS Form A -B - C			
Form	Code	Description	Technical drawing
	GBAS-A	Gasket for male plug Form A	
	GBAS-AC	Gasket for male plug Form A	
	GBAS-B	Gasket for male plug Form B	
	GBAS-C	Gasket for male plug Form C	

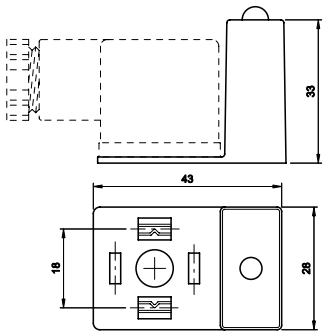
Surge Suppressors

EA - EB - EC

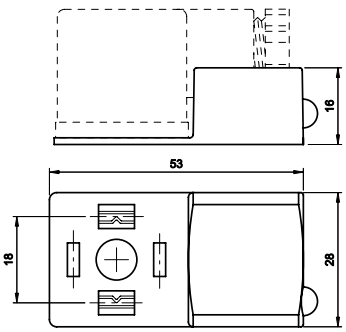
ERA - ERB

	EA - ERA	EB - EB5 - ERB - ERB5	EC - EC6
Connector material		PA66 + 30% FV	
Contacts material		CuZn (Ag)	
Max voltage		according to circuit	
Max current	16 A	16 A	10 A
Operating current	10 A	10 A	6 A
Contacts spacing	18 mm	10 - 11 mm	9,4 mm
Working temperature		-25°C / +90°C	

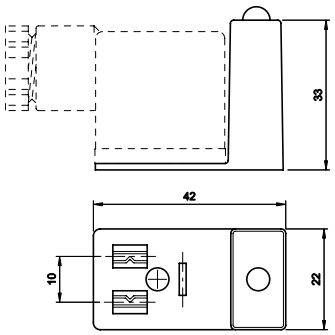
EA



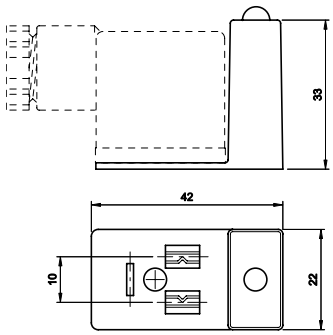
ERA



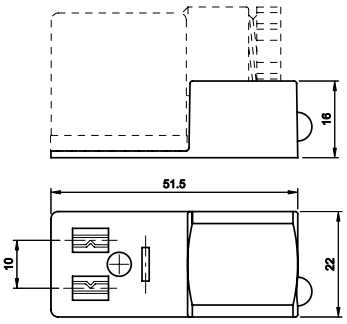
EB5 0



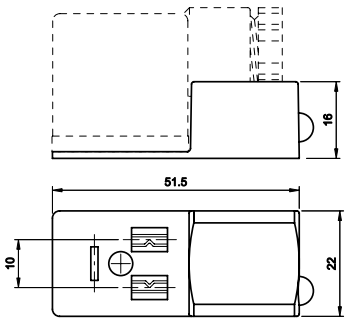
EB5 6



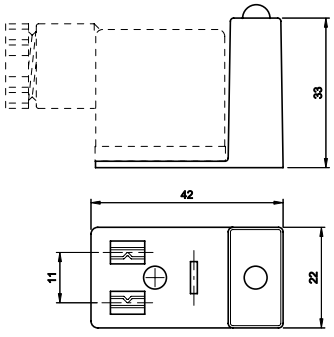
ERB5 0



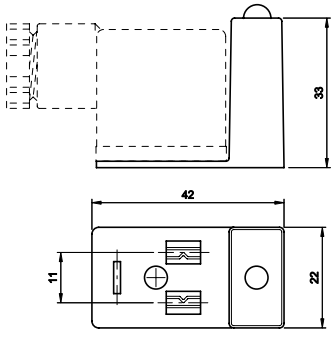
ERB5 6



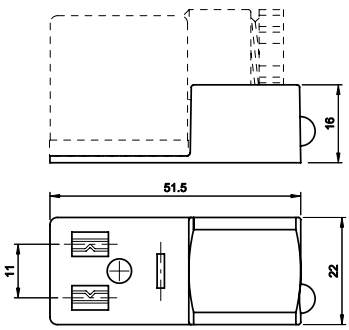
EB 0



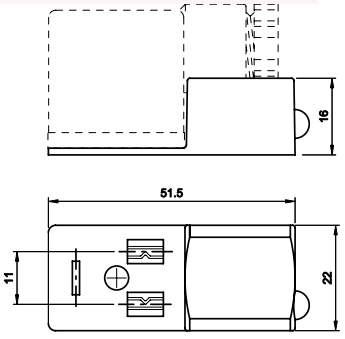
EB 6



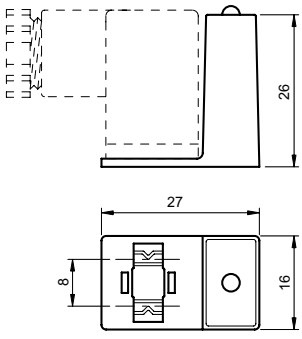
ERB 0



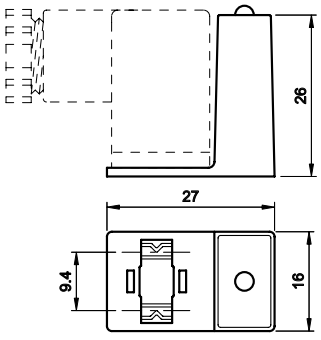
ERB 6



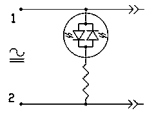
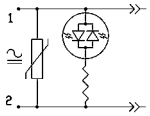
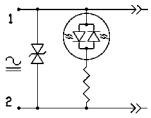
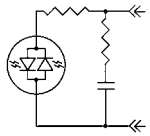
EC6



EC



CIRCUITS

Circuit diagram	Circuit specification	Circuit code	Available voltages (V)	EA	ERA	EB	ERB	EC
	LED	B	10/250	●	●	●	●	●
		C	70/250	●	●	●	●	●
	LED + Varistor	G	24	●	●	●	●	●
		H	48	●	●	●	●	●
		J	110	●	●	●	●	●
		K	250	●	●	●	●	●
	Transil + LED	S	24	●	●	●	●	●
		T	110	●	●	●	●	●
	LED bipolared + RC = 0,22µF + 150 Ω	U	10/250	●	●	●	●	
		X	70/250	●	●	●	●	

Form A 90°	EA
Form A straight	ERA
Form B 90° spacing 10 mm	EB5
Form B straight spacing 10 mm	ERB5
Form B 90° spacing 11 mm	EB
Form B straight spacing 11 mm	ERB
Form C straight spacing 9,4 mm	EC
Form C straight spacing 8 mm	EC6

E R B 5 B R 0

Circuit — Check table

Red LED	R
Yellow LED	Y
Green LED	E

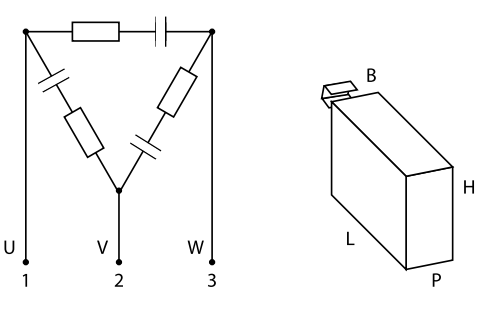
/	Double ⏚ H6/12
0	⏚ H12
6	⏚ H6

ANTI INTERFERENCE, 3-PHASE

Plastic case, components sealed with V0 epoxy resin. wires lenght 200 mm special terminals.

Equipped with mounting accessories.

Code	OMF410



Voltage	3 x 400 V ca
Frequency	50 / 60 Hz
Power	10 Kw
Components rating	0,47 µF + 220 Ω
Wire section	0,75 mm²
Protection class	IP 67
Working temperature	-10°C / +50°C
Dimensions mm	H 48 - L 49 - P 28 - B 13

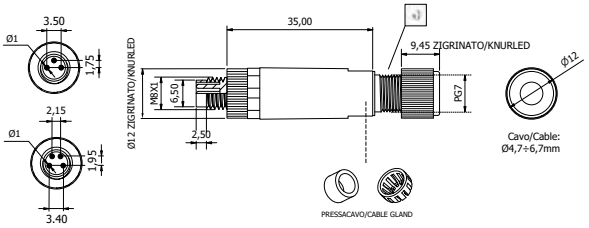
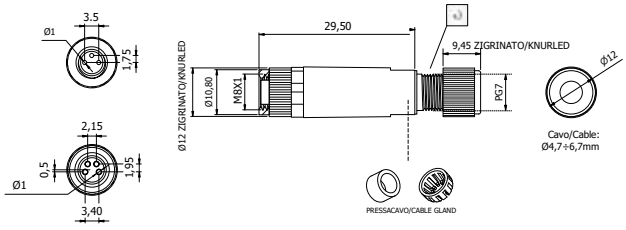
Round Connectors
M8/M12

WIREABLE M8 CONNECTORS

M8 Male

M8 Female

Connector material	PA66 + 30% FV
Contacts material	CuZn (Au)
Max voltage	50 V AC/ 60 V DC
Max current	3 A
Maximum cable diameter	4,6 mm
Protection class	IP67 EN 60529 (DIN 40050)
Working temperature	-25°C / +90°C

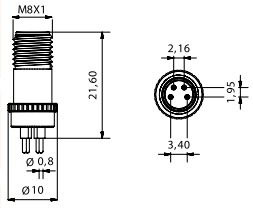
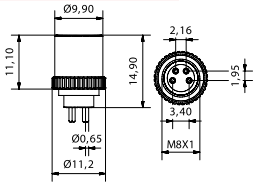
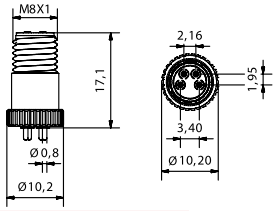
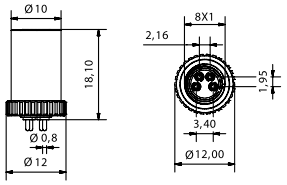
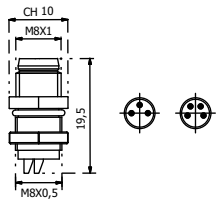
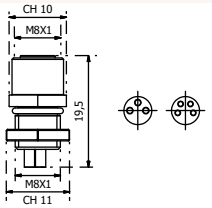
	Code	Description	Technical drawing
	M8MD3-C7	M8 male 3-Poles connector straight	
	M8MD4-C7	M8 male 4-Poles connector straight	
	M8FD3-C7	M8 female 3-Poles connector straight	
	M8FD4-C7	M8 male 4-Poles connector straight	

M8 CONNECTORS FOR PCB MOUNTING

M8 Male

M8 Female

Connector material	PA66 + 30% FV
Contacts material	CuZn (au)
Max voltage	50 V AC/ 60 V DC
Max current	3 A
Protection class	IP67 EN 60529 (DIN 40050)
Regulation	IEC61076-2-104
Working temperature	-25°C / +90°C

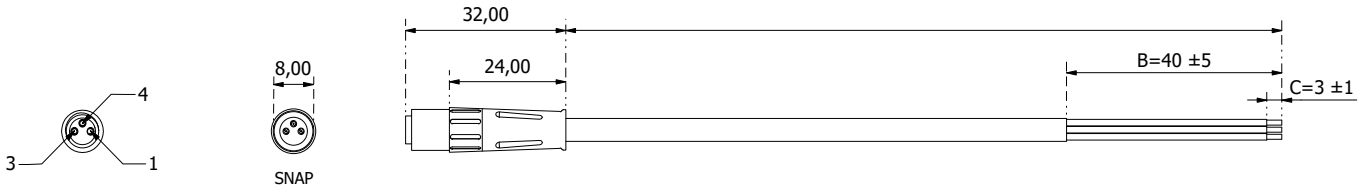
	Code	Description	Technical drawing
	M8M4PCB	M8 male 4-pole connector for PCB mounting	
	M8F3PCB	M8 female 3-pole connector for PCB mounting	
	M8F4PCB	M8 female 4-pole connector for PCB mounting	
	M8M4PM	M8 male 4-pole connector for PCB mounting	
	M8F4PM	M8 female 4-pole connector for PCB mounting	
	M8M3PF	M8 male 3-pole connector for front panel mounting	
	M8M4PF	M8 male 4-pole connector for front panel mounting	
	M8F3PF	M8 female 3-pole connector for front panel mounting	
	M8FAPF	M8 female 3-pole connector for front panel mounting	

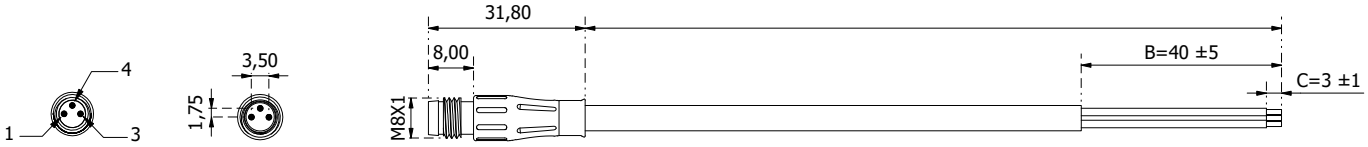
M8 SNAP-IN CONNECTORS

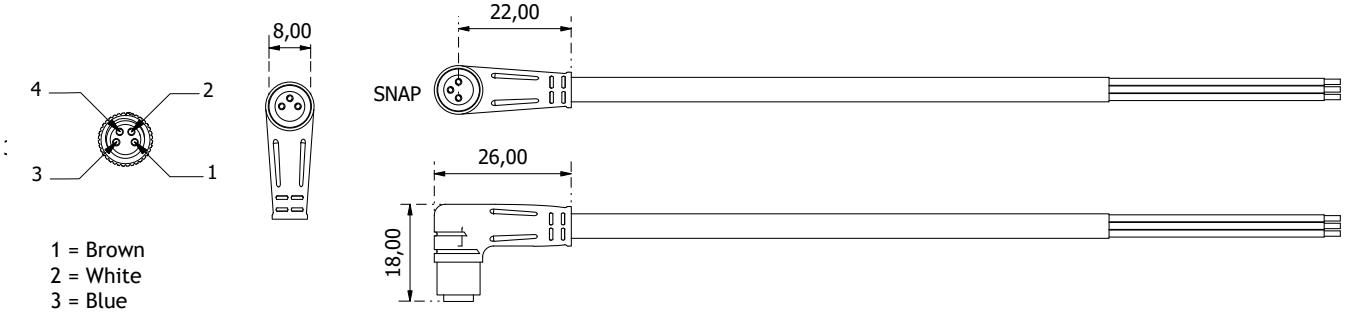
M8 Male snap-in ring

M8 Snap female

Connector material	TPC-ET
Contacts material	CuZn (au)
Max voltage	50 V AC/ 60 V DC
Max current	3 A
Protection class	IP67 EN 60529 (DIN 40050)
Regulation	IEC61076-2-104
Working temperature	-25°C / +90°C







1 = Brown
2 = White
3 = Blue
4 = Black

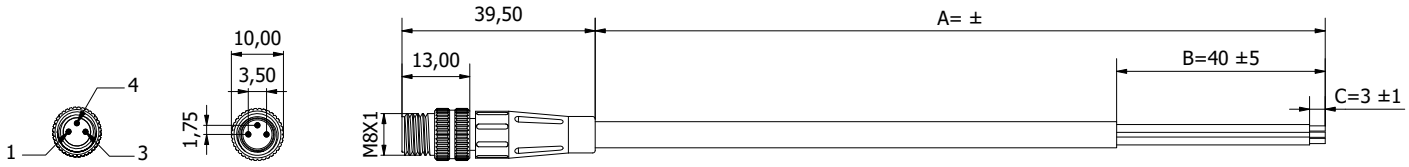
	Code	Description
	M8MR3	M8 male straight connector 3 Poles snap-in ring
	M8MR4	M8 male straight connector 4 Poles snap-in ring
	M8SD3	M8 female straight connector 3 Poles
	M8SD4	M8 female straight connector 4 Poles
	M8SA3	M8 Female Angled Connector 3 Poles
	M8SA4	M8 Female Angled Connector 4 Poles

M8 CONNECTORS WITH CABLE

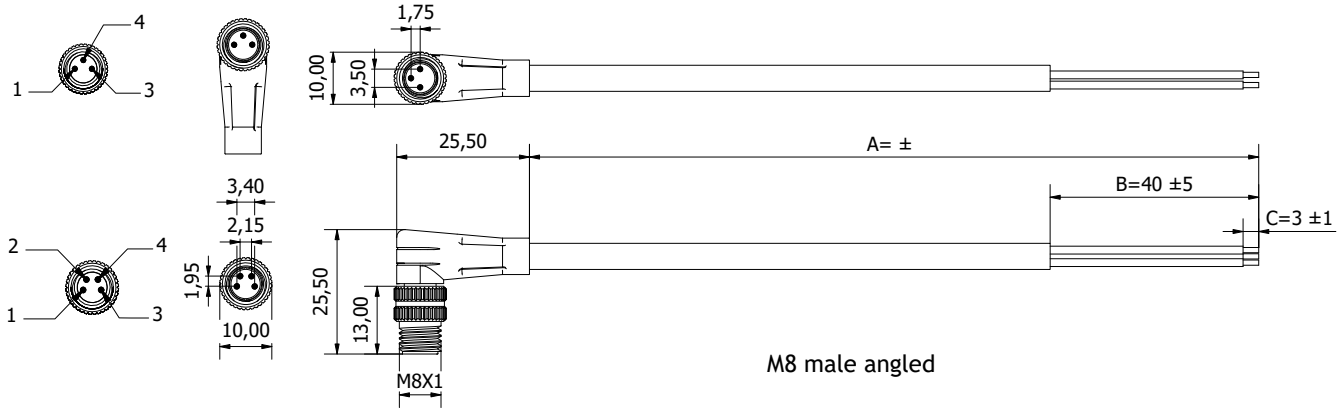
M8 Male

M8 Female

Connector material	TPC-ET
Contacts material	CuZn (au)
Max voltage	50 V AC/ 60 V DC
Max current	3 A
Protection class	IP67 EN 60529 (DIN 40050)
Regulation	IEC61076-2-104
Working temperature	-25°C / +90°C

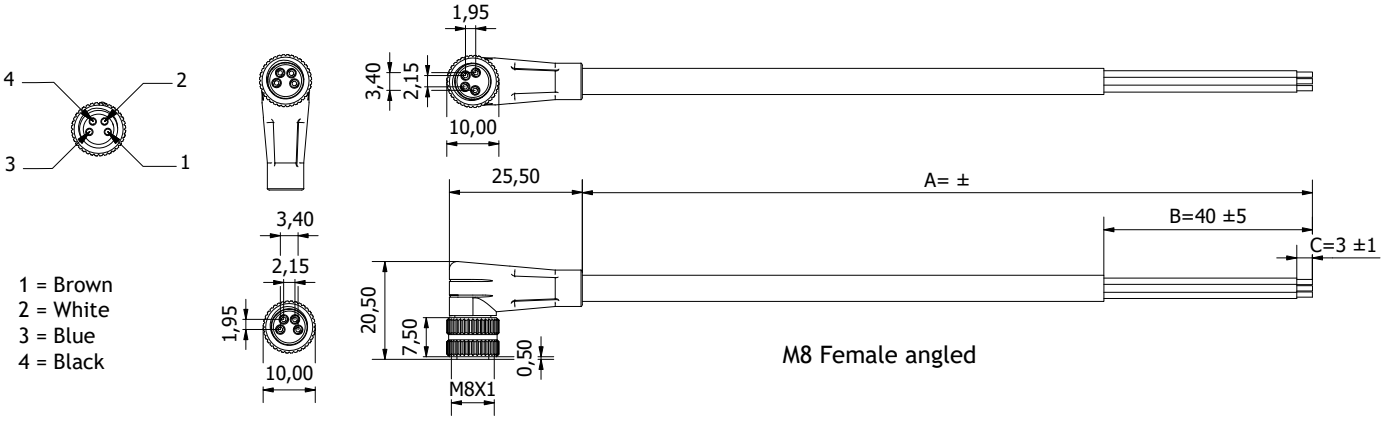


M8 male straight



M8 male angled

M8 female straight



M8 Female angled

M8 CONNECTORS WITH CABLE

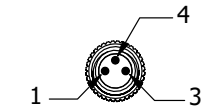
Male straight	MD
Male angled	MA
Female straight	FD
Female angled	FA

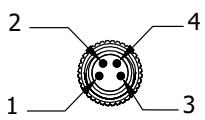
Check cables table Pag. 57

M	8	M	D	3	W	7	H	0	2	0

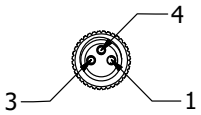
3 Poles	3
4 Poles	4

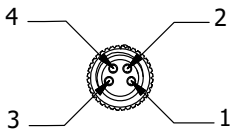
Cable length in dm (020 = 20 cm) (10 = 1 meter) L





M8
MASCHIO/MALE





M8
FEMMINA/FEMALE

Male straight	MD
Male angled	MA
Female straight	FD
Female angled	FA

Check cables table Pag. 57

3 Poles	3
4 Poles	4

M	8	M	D	3	W	7	H	0	2	0	M	8	F	A	3

3 Poles	3
4 Poles	4

Cable length in dm	001=1 dm (0,1 mt) 999=999 dm (99,9 mt)

Male straight	MD
Male angled	MA
Female straight	FD
Female angled	FA

M8 CONNECTORS WITH CABLE

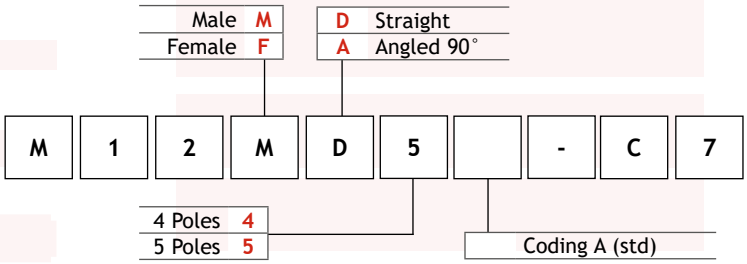
CABLES table						
Code cavo	Material	Specifications	Color sheath	Color Conductors	Ø ext. cable ± mm	Section
X6	Pvc		Grey	BR-BL-BK		3 X 0,34
XL	Pvc		Black	BR-BL-BK		3 X 0,34
M5	Pvc	UL	Black	BR-BL-BK		3 X 0,34
UL3	Pvc	UL	Black	BR-BL-BK		3 X AWG22
UL4	Pvc	UL	Black	BR-BL-BK-WH		4 X AWG22
XB	Pvc		Grey	BR-BL-BK-WH		4 X 0,34
XN	Pvc		Black	BR-BL-BK-WH		4 X 0,34
M3	Pvc	UL	Grey	BR-BL-BK-WH		4 X 0,34
W7	Pur		Black	BR-BL-BK		3 X 0,34
W7H	Pur	Shielded	Black	BR-BL-BK		3 X 0,34
W6	Pur		Black	BR-BL-BK-WH		4 X 0,34
W6H	Pur	Shielded	Black	BR-BL-BK-WH		4 X 0,34

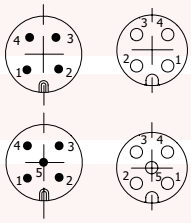
WIREABLE M12 CONNECTORS

M12 Male

M12 Female

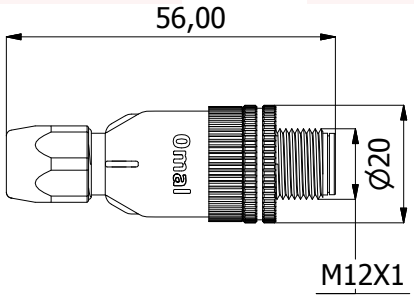
Connector material	PA66 + 30% FV	
Contacts material	CuZn (Au)	
Ring material	CuZn (Ni)	
Max voltage	4 Poles	250 V AC/DC
	5 Poles	60 V AC/DC
Max current	4 A	
Max wire section	1 mm²	
Cable gland PGE ext. thread	Cable diameter from 2.5 to 7.2 mm	
Protection class	IP67 EN 60529 (DIN 40050)	
Regulation	IEC61076-2-104	
Working temperature	-25°C / +90°C	



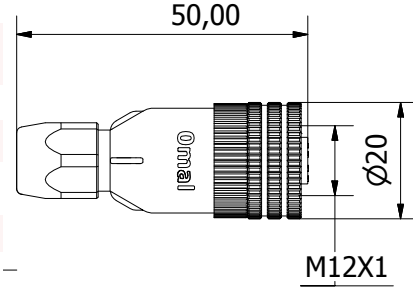


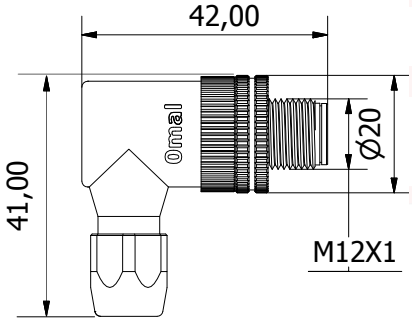
Coding A

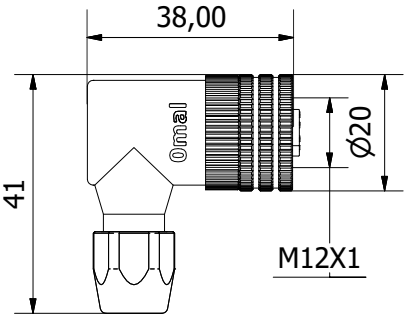
M12 Male



M12 Female





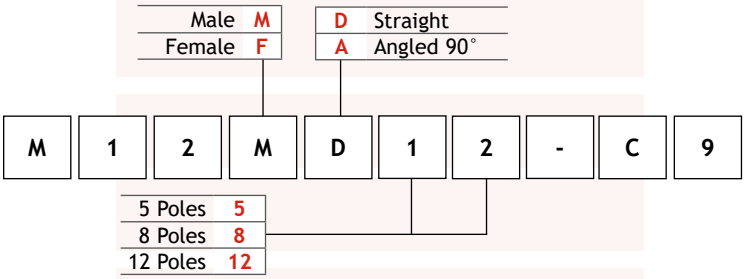


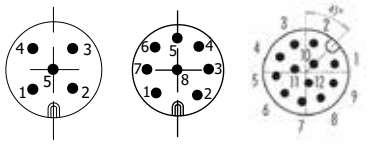
WIREABLE M12 CONNECTORS 5/8/12 POLES

M12 Male

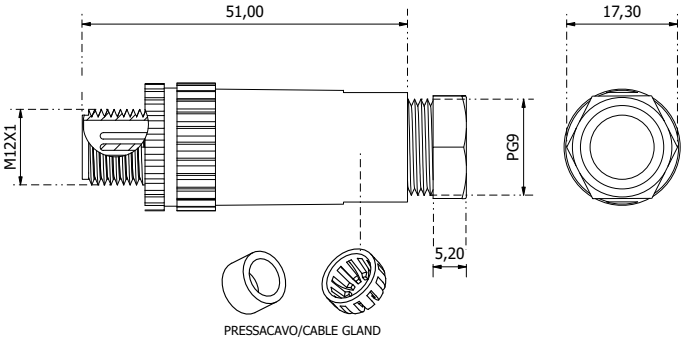
M12 Female

Connector material		PA66 + 30% FV
Contacts material		CuZn (Au)
Material ring		CuZn (Ni)
Max voltage	5 Poles	60 V AC/DC
	8 Poles	30 V AC/DC
	12 Poles	30 V AC/DC
Max current		4 A
Max wire section		1 mm²
Cable gland PG9		Cable diameter from 6 to 8 mm
Protection class		IP67 EN 60529 (DIN 40050)
Working temperature		-25°C / +90°C

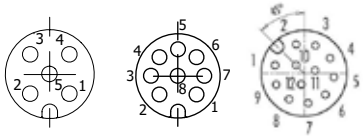




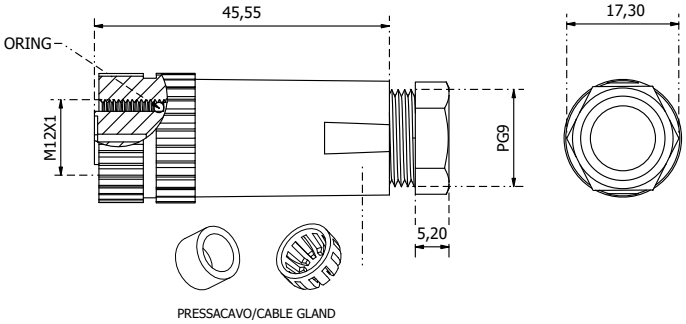
Coding A



M12 Male



Coding A



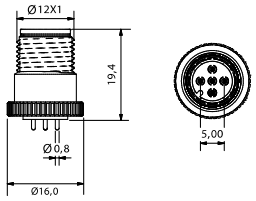
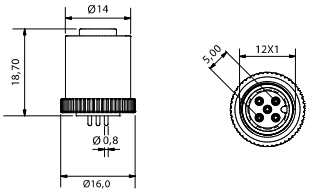
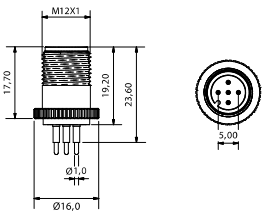
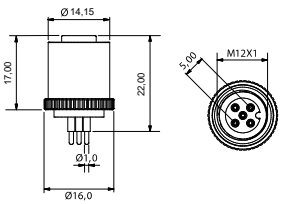
M12 Female

M12 CONNECTORS FOR PCB MOUNTING

M12 Male

M12 Female

Connector material	PA66 + 30% FV	
Contacts material	CuZn (Au)	
Ring material	CuZn (Ni)	
Max voltage	5 Poles	60 V AC/DC
Max current	4 A	
Protection class	IP67 EN 60529 (DIN 40050)	
Max wire section	0,5 mm²	
Working temperature	-25°C / +90°C	

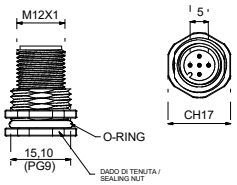
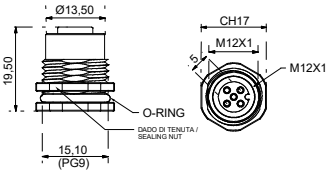
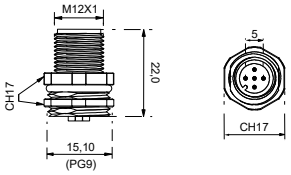
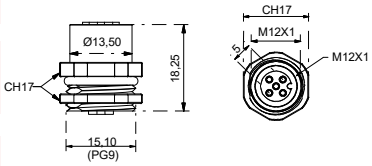
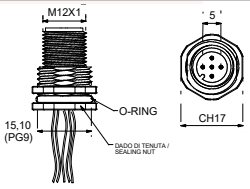
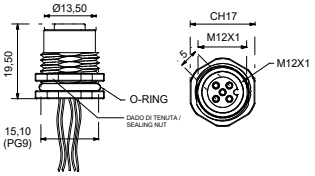
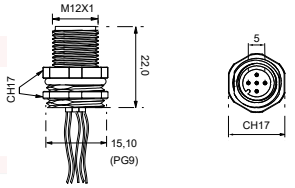
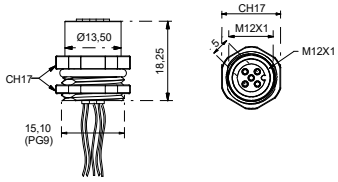
	Code	Description	Technical drawing
	M12M5PM	M12 male 5-pin connector for PCB mounting	
	M12F5PM	M12 female 5-pin connector for PCB mounting	
	M12M5PCB	M12 male 5-pin connector for PCB mounting	
	M12F5PCB	M12 female 5-pin connector for PCB mounting	

M12 PANEL CONNECTORS

M12 Male

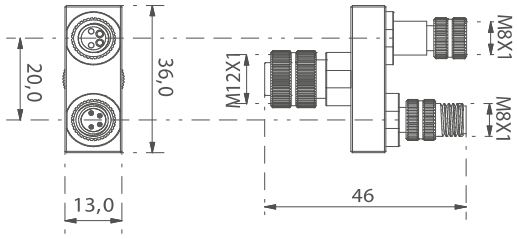
M12 Female

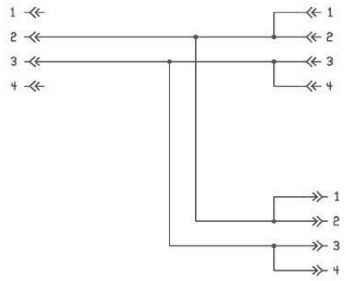
Connector material	PA66 + 30% FV	
Ring material	CuZn (Ni)	
Contacts material	CuZn (Au)	
Max voltage	5 Poles	60 V AC/DC
Max current	4 A	
Protection class	IP67 EN 60529 (DIN 40050)	
Max wire section	0,5 mm²	
Working temperature	-25°C / +90°C	

	Code	Description	Technical drawing
	M12M5PR	M12 male 5-pole panel connector Rear mounting, solder contacts	
	M12F5PR	M12 female 5-pole panel connector Rear mounting, solder contacts	
	M12M5PF	M12 male 5-pole panel connector Front mounting, solder contacts	
	M12F5PF	M12 female 5-pole panel connector Front mounting, solder contacts	
	M12M5PR03	M12 male 5-pole panel connector Rear mounting, cable length = 300 mm	
	M12F5PR03	M12 female 5-pole panel connector Rear mounting, cable length = 300 mm	
	M12M5PF03	M12 male 5-pole panel connector Front mounting, cable length = 300 mm	
	M12F5PF03	M12 female 5-pole panel connector Front mounting, cable length = 300 mm	

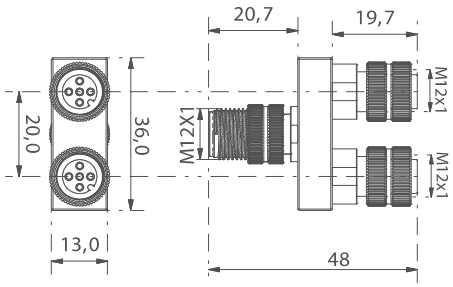
M8/M12 CONNECTORS Y-COUPLERS

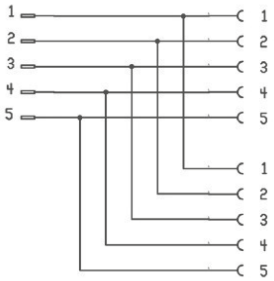
Y4F8MF2/3





Y5MFF





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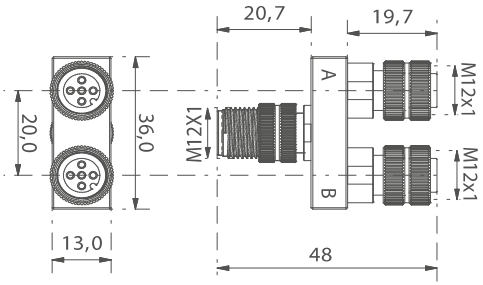

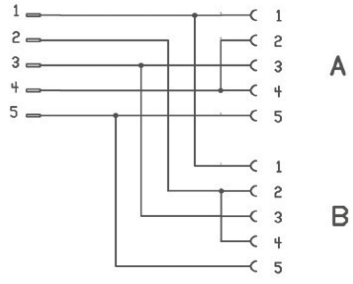

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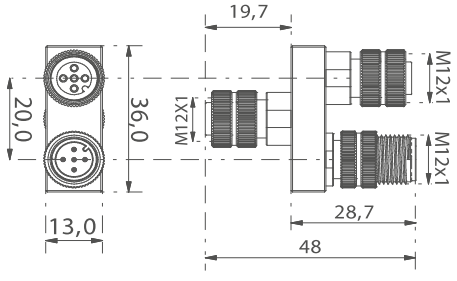
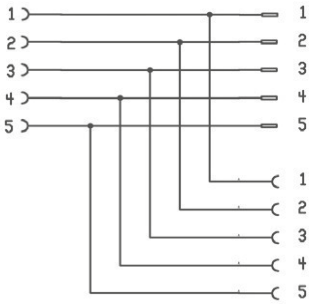


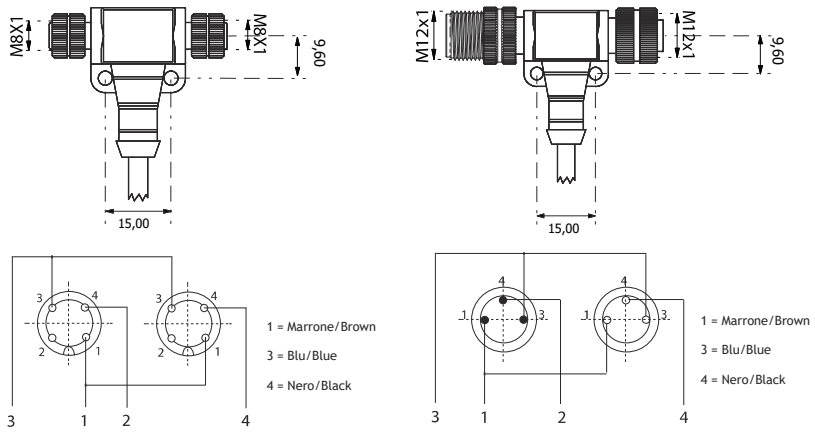


Housing	Polyhexamide resin (V0)
Contacts material	CuZn (Au)
Max voltage max:	60 V AC / 70 V DC
Max current	4 A
Protection class	IP67 - EN 60529 - (DIN 40050)
Working temperature	-25°C / +90°C
Ring material	CuZn (Ni)
O - Ring	NBR

M8/M12 T CONNECTORS

Female Female
Female Male
3/4/5 Poles

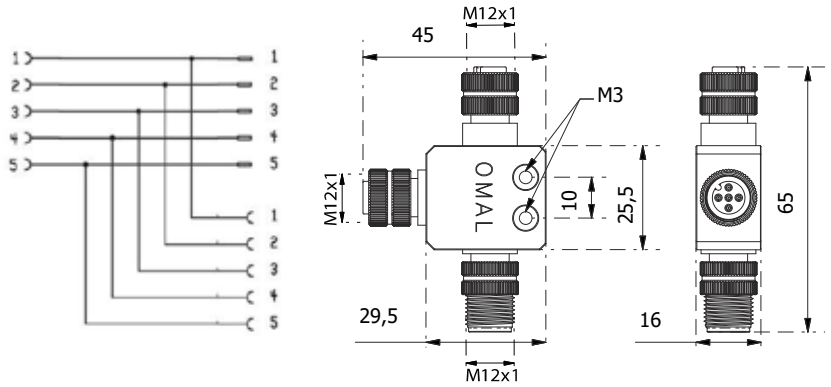
TM8 - TM12



Connector material	Polyhexamide resin (V0)
Contacts material	CuZn (Au)
Max voltage	110 V AC/DC
Max current	4 A
Protection class	IP67 - EN 60529 - (DIN 40050)
Working temperature	-25°C / +90°C
Ring material	CuZn (Ni)

Female-Female-Male
3/4/5 Poles

T5FFM - T5FFMG



Connector material	Polyhexamide resin (V0)
Contacts material	CuZn (Au)
Max voltage	110 V AC/DC
Max current	4 A
Protection class	IP67 - EN 60529 - (DIN 40050)
Working temperature	-25°C / +90°C
Ring material	CuZn (Ni)

For technical information and offers, please contact our sales dept.

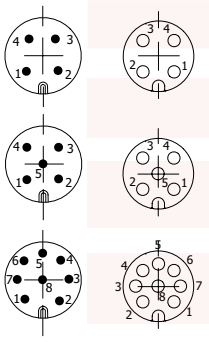
M12 CONNECTORS WITH CABLE

M12 Male

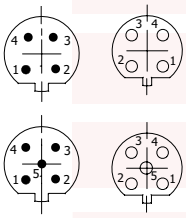
M12 Female

Connector material	TPC-ET	
Contacts material	CuZn (Au)	
Ring material	CuZn (Ni)	
Max voltage	4 Poles	250 V AC/DC
	5 Poles	60 V AC/DC
	8 Poles	30 V AC/DC
Max current	2 A	
Max wire section	0,5 mm²	
Protection class	IP67 EN 60529 (DIN 40050)	
Regulation	IEC 61076-2-101	
Working temperature	-25°C / +90°C	

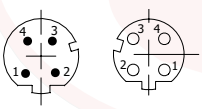
Coding A-B 4/5 Poles	Coding A 8 Poles	Coding D 4 Poles
1 = Brown	1 = White	1 = Yellow
2 = White	2 = Brown	2 = White
3 = Blue	3 = Green	3 = Brown
4 = Black	4 = Yellow	4 = Blue
5 = Grey	5 = Grey	
	6 = Purple	
	7 = Blue	
	8 = Red	



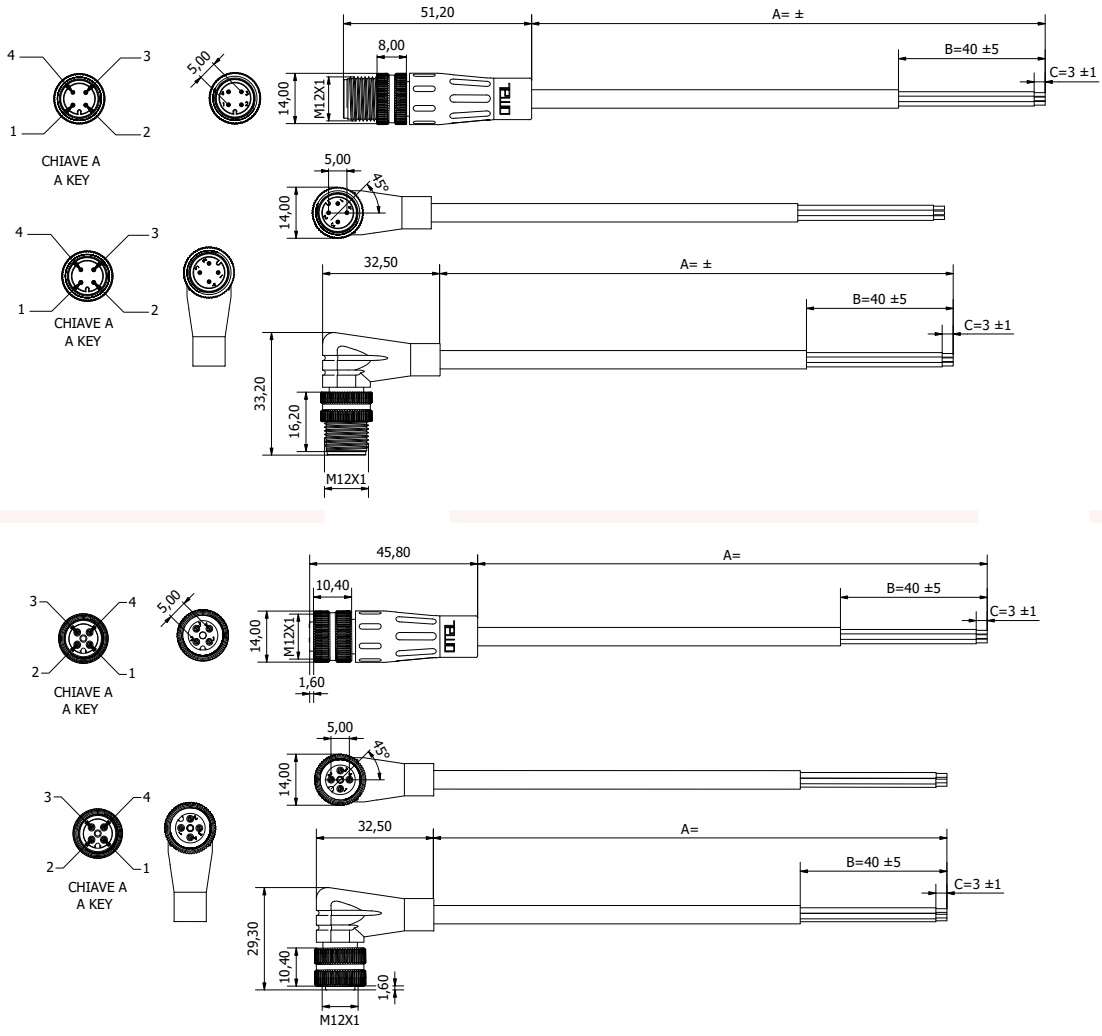
Coding A



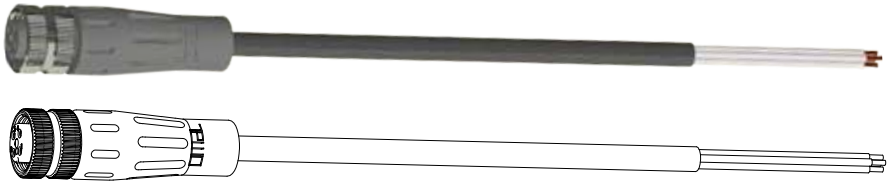
Coding B



Coding D



M12 CONNECTORS WITH CABLE



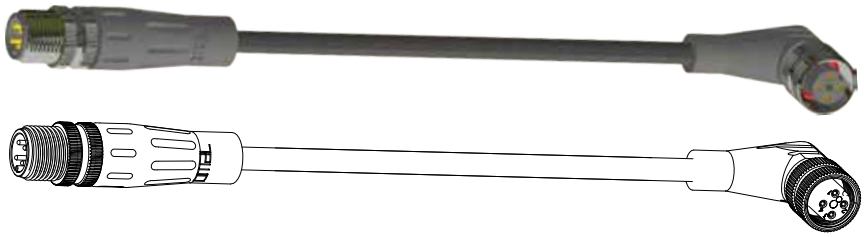
Male straight	MD
Male angled	MA
Female straight	FD
Female angled	FA

Check cables table **Pag. 66**

M	1	2	M	D	5	W	B	H	0	2	5

4 Poles	4
5 Poles	5
8 Poles	8

Cable length in dm	001=1 dm (0,1 mt) 999=999 dm (99,9 mt)



Male straight	MD
Male angled	MA
Female straight	FD
Female angled	FA

Check cables table **Pag. 66**

Male straight	MD
Male angled	MA
Female straight	FD
Female angled	FA

M	1	2	M	D	5	W	B	H	0	2	5	M	1	2	F	A	5

4 Poles	4
5 Poles	5
8 Poles	8

4 Poles	4
5 Poles	5
8 Poles	8

Cable length in dm	001=1 dm (0,1 mt) 999=999 dm (99,9 mt)

Shielded products available, please contact our sales dept.

CABLES table						
Cable code	Material	Specifications	Color sheath	Color Conductors	Ø ext. cable ± mm	Section
XG	Pvc		Grey	BR-WH-G-Y-GR-PINK-BL-RED	5,7 ± 0,2	8 X 0,25
UG	Pvc		Black	BR-WH-G-Y-GR-PINK-BL-RED	5,8 ± 0,2	8 X 0,25
UGH	Pvc	Shielded	Black	BR-WH-G-Y-GR-PINK-BL-RED	6,3 ± 0,2	8 X 0,25
X6	Pvc		Grey	BR-BL-BK	4,2 ± 0,2	3 X 0,34
XL	Pvc		Black	BR-BL-BK	4,2 ± 0,2	3 X 0,34
M5	Pvc	UL	Black	BR-BL-BK	4,5 ± 0,2	3 X 0,34
UL3	Pvc	UL	Black	BR-BL-BK	4,4 ± 0,2	3 X AWG22
UL4	Pvc	UL	Black	BR-BL-BK-WH	5,8 ± 0,2	4 X AWG22
XB	Pvc		Grey	BR-BL-BK-WH	4,5 ± 0,2	4 X 0,34
XN	Pvc		Black	BR-BL-BK-WH	4,5 ± 0,2	4 X 0,34
M3	Pvc	UL	Grey	BR-BL-BK-WH	4,7 ± 0,2	4 X 0,34
XM	Pvc		Grey	BR-BL-BK-WH-GR	4,9 ± 0,2	5 X 0,34
X4	Pvc		Grey	BR-BL	5 ± 0,2	2 X 0,50
U4	Pvc		Black	BR-BL	4,9 ± 0,2	2 X 0,50
F2	Pvc		Grey	BR-BL	5 ± 0,2	2 X 0,50
X1	Pvc		Grey	BR-BL-Y/G	5,5 ± 0,2	3 X 0,50
U1	Pvc		Black	BR-BL-Y/G	5,1 ± 0,2	3 X 0,50
U8	Pvc		Black	BR-GR-BK-Y/G	6 ± 0,2	4 X 0,50
W7	Pur		Black	BR-BL-BK	4,2 ± 0,2	3 X 0,34
W7H	Pur	Shielded	Black	BR-BL-BK	5 ± 0,2	3 X 0,34
W6	Pur		Black	BR-BL-BK-WH	4,5 ± 0,2	4 X 0,34
W6H	Pur	Shielded	Black	BR-BL-BK-WH	5,4 ± 0,2	4 X 0,34
W3	Pur		Black	BR-BL-BK-WH-GR	5 ± 0,2	5 X 0,34
WBH	Pur		Black	BR-BL-BK-WH-GR	5,8 ± 0,2	5 X 0,34
WX	Pur	On demand	Black	BR-BL	On demand	2 X 0,50
WZ	Pur	On demand	Black	BR-BL-Y/G	On demand	3 X 0,50
WY	Pur	On demand	Black	BR-BL-BK-Y/G	On demand	4 X 0,50

M8/M12 CORDSET

Connector material	TPC-ET
Contacts material	CuZn (au)
Max voltage	50 V AC/ 60 V DC
Max current	2 A
Protection class	IP67 EN 60529 (DIN 40050)
Regulation	IEC61076-2-104
Working temperature	-25°C / +90°C

Male straight	MD
Male angled	MA
Female straight	FD
Female angled	FA

Check cables table Pag. 66

MD	Male straight
MA	Male angled
FD	Female straight
FA	Female angled

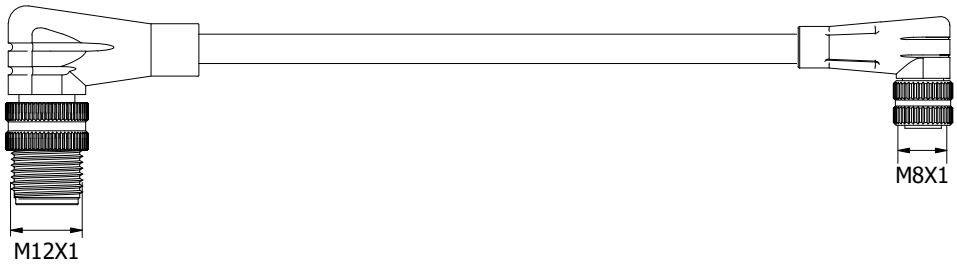
M	1	2	M	D	4	W	6	H	0	2	5	M	8	F	A	3	-	P	E

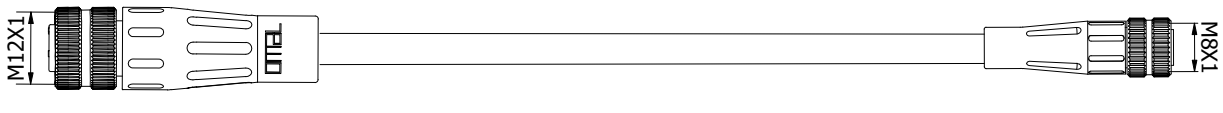
4 Poles	4
8 Poles	8

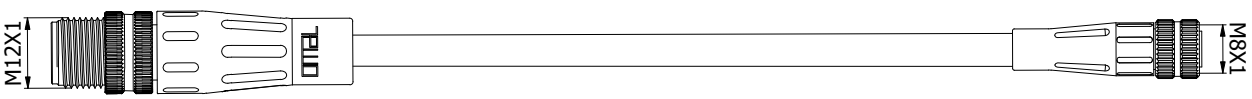
3 Poles	3
4 Poles	4

Cable length in dm	001=1 dm (0,1 mt) 999=999 dm (99,9 mt)

Without label holder	-
1 label holder	PE

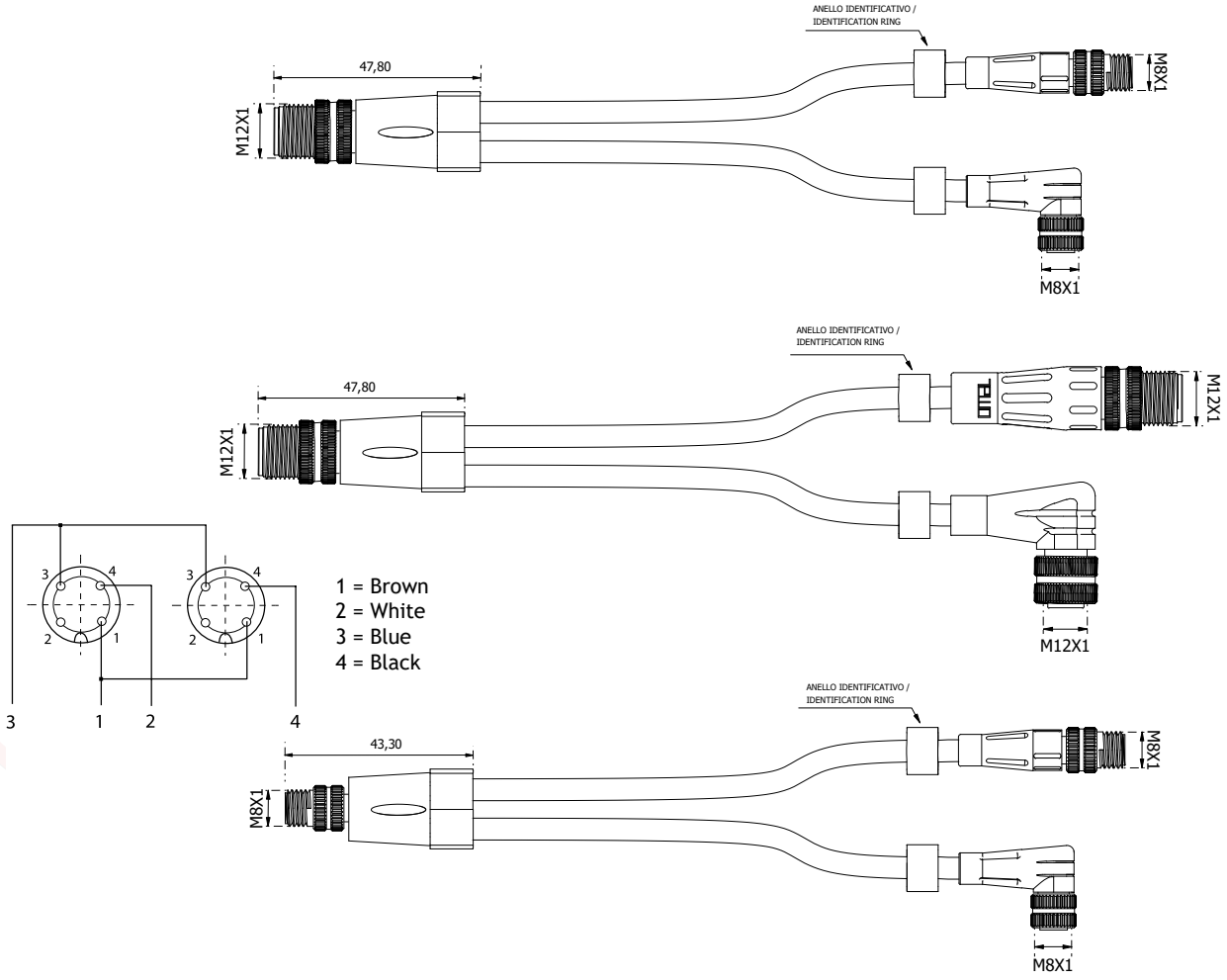




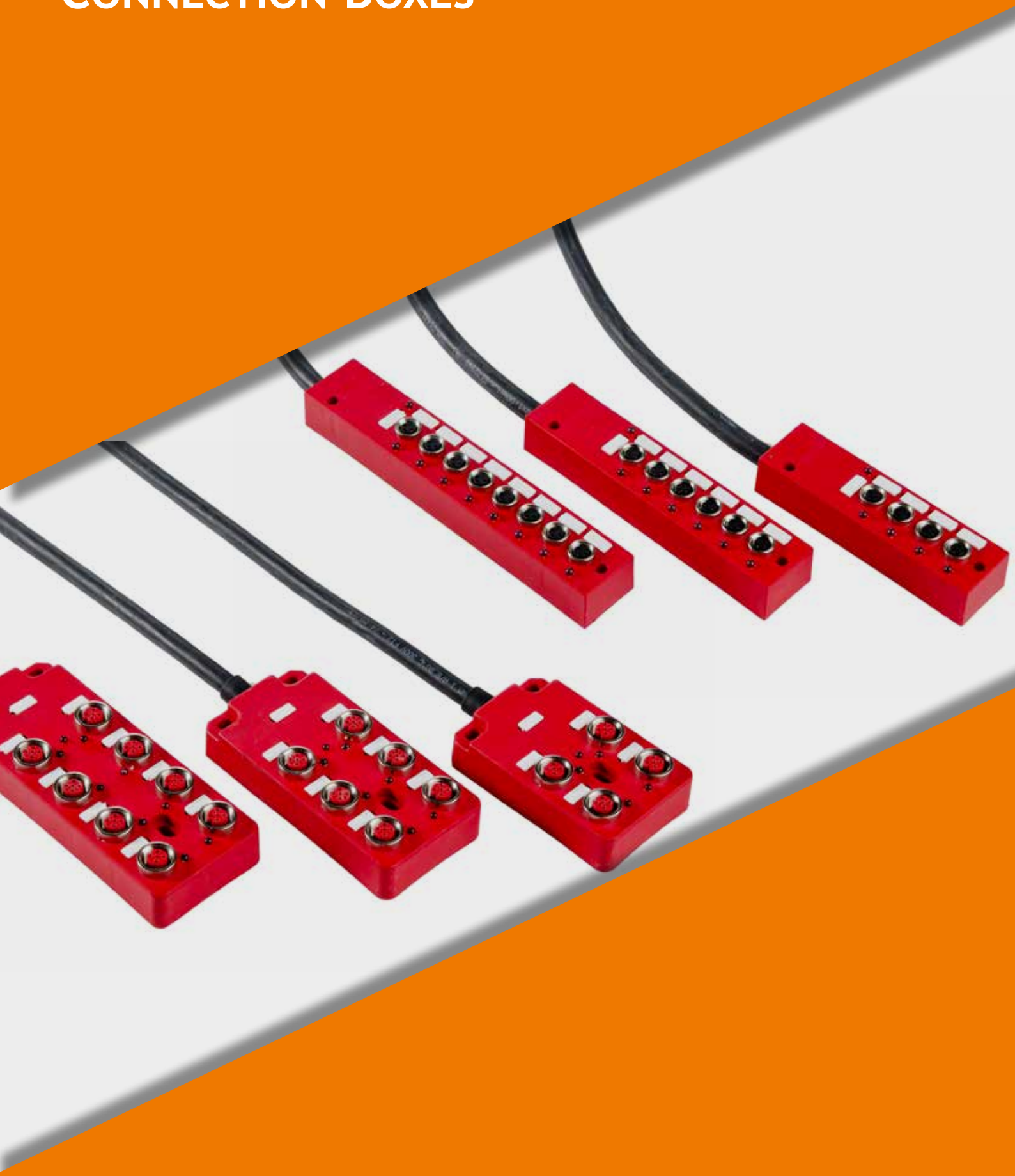


M12 MALE DERIVATIONS WITH 2-3 M8/M12 OUTPUTS

For technical information and offers,
please contact our sales dept.

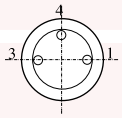


Connection Boxes

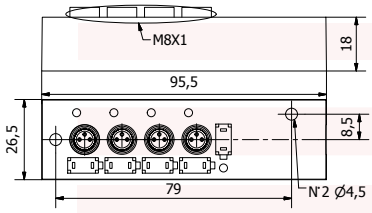


CONNECTION BOX M8

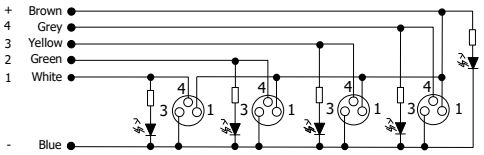
Material	PA66 + 30% FV
Epoxy resin	EC141 + W242
Contacts material	CuZn (au)
Max voltage	50 V AC/ 60 V DC
Max current	3 A
Total maximum current	3 A
Outputs	M8 female connector 3 Poles
Protection class	IP67
Insulation class	C-VDE 0110
Regulation	IEC61076-2-104
Working temperature	-25°C / +90°C

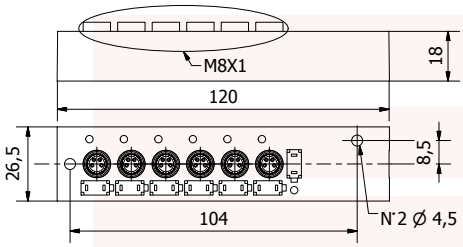


1 = + 10/60 V
3 = -
4 = IN/OUT

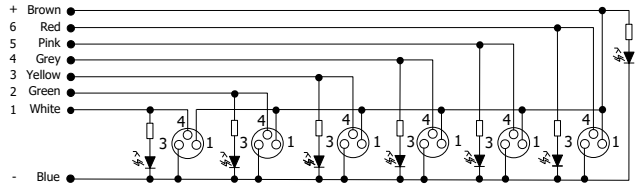


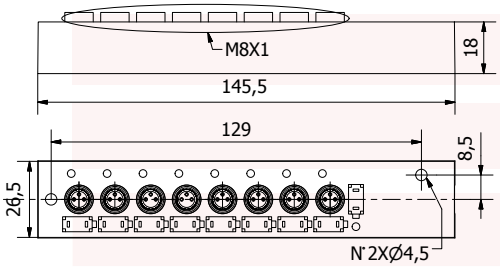
4 Outputs
3 Poles



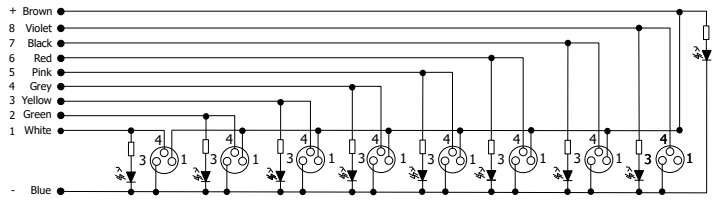


6 Outputs
3 Poles





8 Outputs
3 Poles



4 Outputs	4
6 Outputs	6
8 Outputs	8

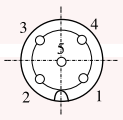
XPN	4/6 Outputs Black pvc cable 6 x 0,34 + 2 x 0,75
XRN	8 Outputs Black pvc cable 8 x 0,34 + 2 x 0,75

C	D	8	M	8	X	R	N	1	0

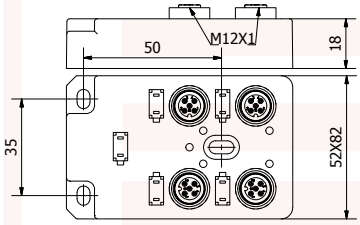
Cable length in dm (10 = 1 m) L

CONNECTION BOX M12 SINGLE SIGNAL

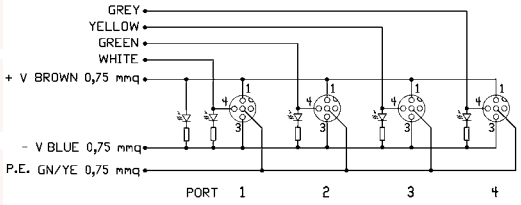
Material	PA66 + 30% FV
Epoxy resin	EC141 + W242
Contacts material	CuZn (au)
Max voltage	50 V AC/ 60 V DC
Max current	3 A
Total maximum current	3 A
Outputs	M12 female connector 5 Poles
Protection class	IP67
Insulation class	C-VDE 0110
Regulation	IEC61076-2-104
Working temperature	-25°C / +90°C

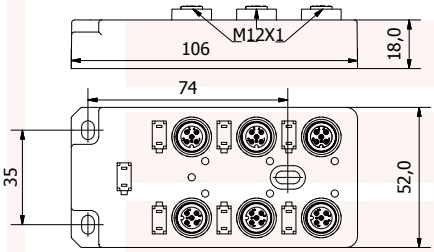


1 = + 10/60 V
3 = -
4 = IN/OUT
5 = ⏚

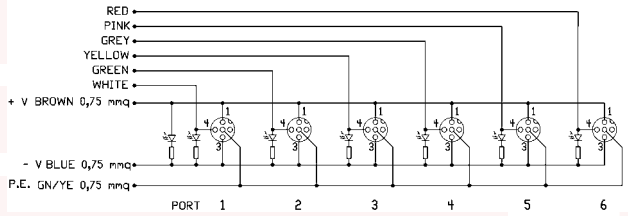


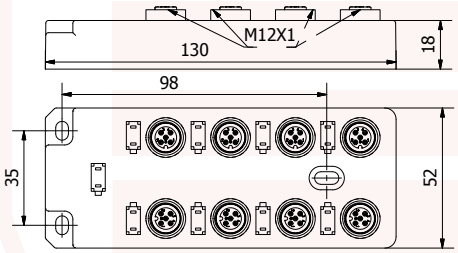
4 Outputs 4 Poles



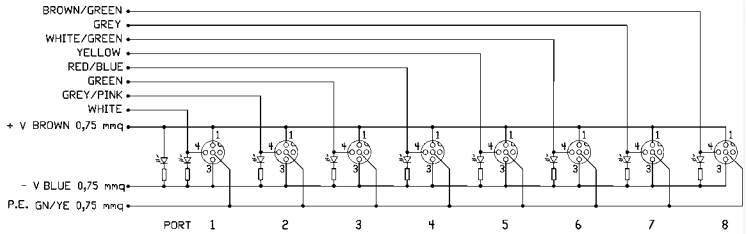


6 Outputs 4 Poles





8 Outputs 4 Poles



4 Outputs	4
6 Outputs	6
8 Outputs	8

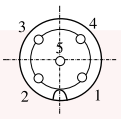
LDB	4 Outputs Black pur cable 4 x 0,34 + 3 x 0,75
LDC	6 Outputs Black pur cable 6 x 0,34 + 3 x 0,75
LDE	8 Outputs Black pur cable 8 x 0,34 + 3 x 0,75

C	D	8	M	1	2	L	D	E	1	0

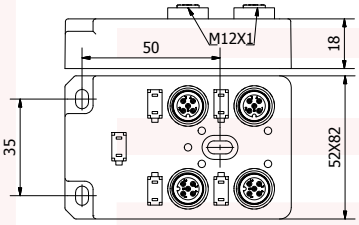
Cable length in dm (10 = 1 m) L

CONNECTION BOX M12 DOUBLE SIGNAL

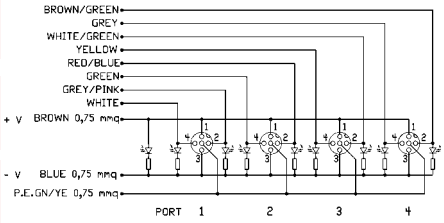
Material	PA66 + 30% FV
Epoxy resin	EC141 + W242
Contacts material	CuZn (au)
Max voltage	50 V AC/ 60 V DC
Max current	3 A
Total maximum current	3 A
Outputs	M12 female connector 5 Poles
Protection class	IP67
Insulation class	C-VDE 0110
Regulation	IEC61076-2-104
Working temperature	-25°C / +90°C

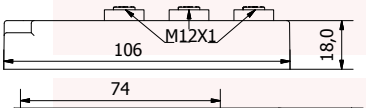


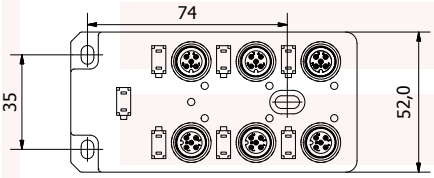
1 = + 10/60 V
2 = IN/OUT
3 = -
4 = IN/OUT
5 = ⏚



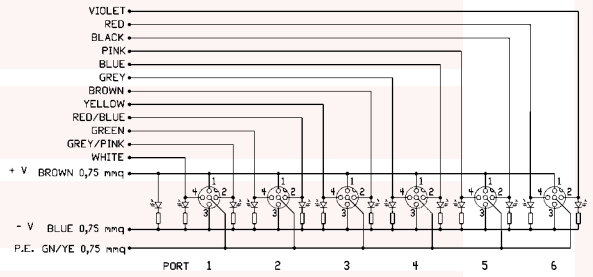
4 Outputs 5 Poles

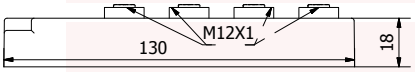


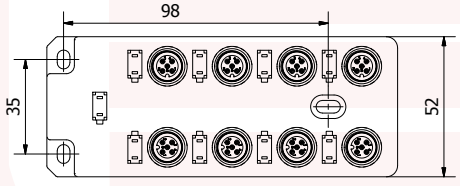




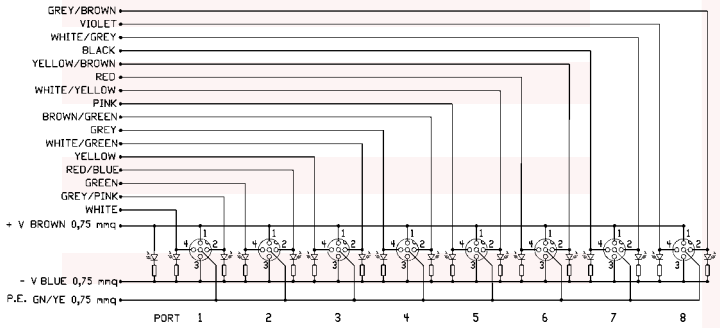
6 Outputs 5 Poles







8 Outputs 5 Poles



LDE	4 Outputs Black pur cable 8 x 0,34 + 3 x 0,75
LDF	6 Outputs Black pur cable 12 x 0,34 + 3 x 1
LDG	8 Outputs Black pur cable 16 x 0,34 + 3 x 0,75

4 Outputs	4
6 Outputs	6
8 Outputs	8

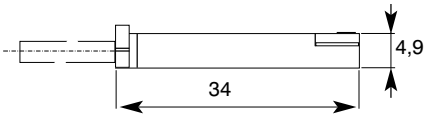
C	D	8	M	1	2	L	D	G	1	0

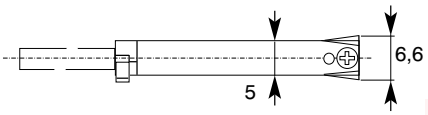
Cable length in dm (10 = 1 m) L

Magnetic Sensors

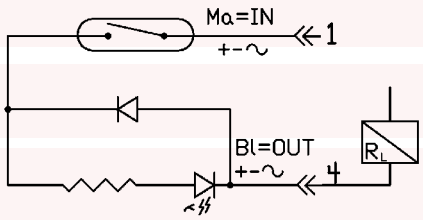
2-WIRE REED MAGNETIC SENSORS

Snap clamping system

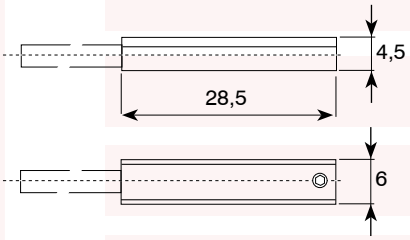




Housing material	PA6	
Operating voltage	10/110 V AC/DC (S) 10/240 V AC/DC (V)	Versions with flying cable or M12
	50 V AC - 60 V DC	Versions with M8
Maximum load W	10 W DC - 8 W AC	
Max current A	400 mA a 25°C	
Logic	PNP	
Protection class	EN 60529 (DIN 40050) - IP67	
Indicator light	Yellow LED	
Working temperature	-25°C / +90°C	

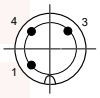


Screw clamping system



M8

M12



					XA PVC grey cable 2 x 0,20								D Straight A Angled 90° R Snap-in ring
110 V S 240 V V													
R	S	2	T	X	A	0	3	M	1	2	M	D	

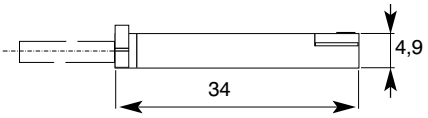
Snap clamping system (fit from above) I
Screw clamping system T

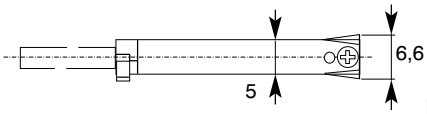
Cable length in dm: 01=1 dm (0,1 mt) … 99=99 dm (9,9 mt)

8 M8
12 M12

3-WIRE REED MAGNETIC SENSORS

Snap clamping system

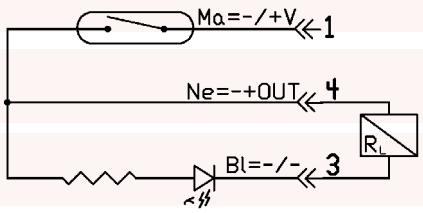




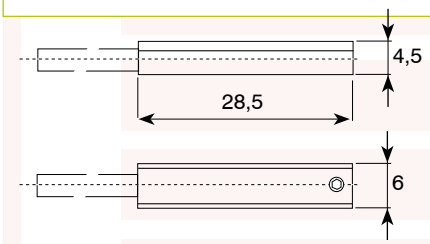
Housing material	PA6
Operating voltage	5/30 V DC
Maximum load W	10 W
Max current A	400 mA a 25°C
Logic	PNP
Protection class	EN 60529 (DIN 40050) - IP67
Indicator light	LED
Working temperature	-25°C / +90°C

M8

M12



Screw clamping system



R	S	3	T	X	C	0	3	M	1	2	M	D

XC PVC grey cable 3 x 0,20

D	Straight
A	Angled 90°
R	Snap-in ring

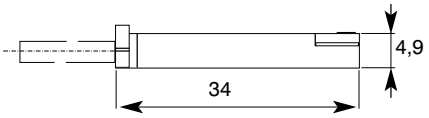
Snap clamping system (fit from above)	I
Screw clamping system	T

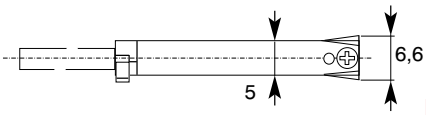
Cable length in dm	01=1 dm (0,1 mt) 99=99 dm (9,9 mt)

8	M8
12	M12

ELECTRONICS MAGNETIC SENSORS 3 WIRES

Snap clamping system

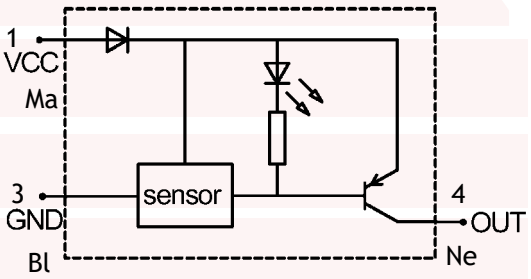




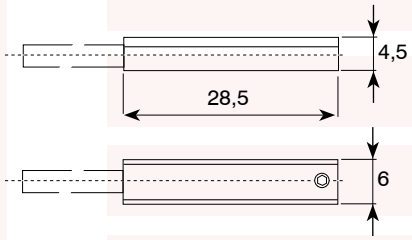
Housing material	PA6	
Operating voltage	10/110 V AC/DC (S) 10/240 V AC/DC (V)	Versions with flying cable or M12
	50 V AC - 60 V DC	Versions with M8
Maximum load W	10 W DC - 8 W AC	
Max current A	400 mA a 25°C	
Logic	PNP	
Protection class	EN 60529 (DIN 40050) - IP67	
Indicator light	Yellow LED	
Working temperature	-25°C / +90°C	

M8

M12



Screw clamping system



XC	PVC grey cable 3 x 0,20	

D	Straight
A	Angled 90°
R	Snap-in ring

G	M	P	T	X	C	0	3	M	1	2	M	D

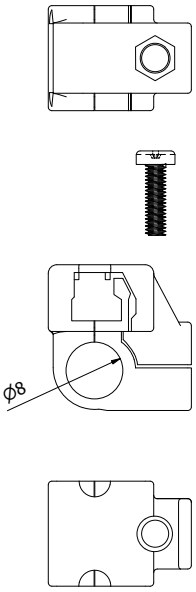
Snap clamping system (fit from above)	I
Screw clamping system	T

Cable length in dm	01=1 dm (0,1 mt) 99=99 dm (9,9 mt)

8	M8
12	M12

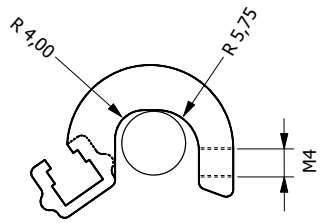
MAGNETIC SENSOR CLAMPS

Fixing clamps for screwed/caulked cylinders



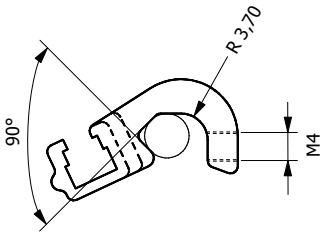
Ø C Cylinder bore mm	Cylinder jacket material	Clamp code
8	INOX	F093
10	INOX	F113
12	INOX	F133
12	ALUMINIUM	F160
16	INOX	F173
16	ALUMINIUM	F200
20	INOX	F213
20	ALUMINIUM	F240
25	INOX	F263
25	ALUMINIUM	F290

Brakets for tie-rod and extrusion-tube cylinders



L max. mm	Braket code
11,5	S115
14,5	S145
16,5	S165
17,5	S175

Brakets for tie-rod and extrusion-tube cylinders

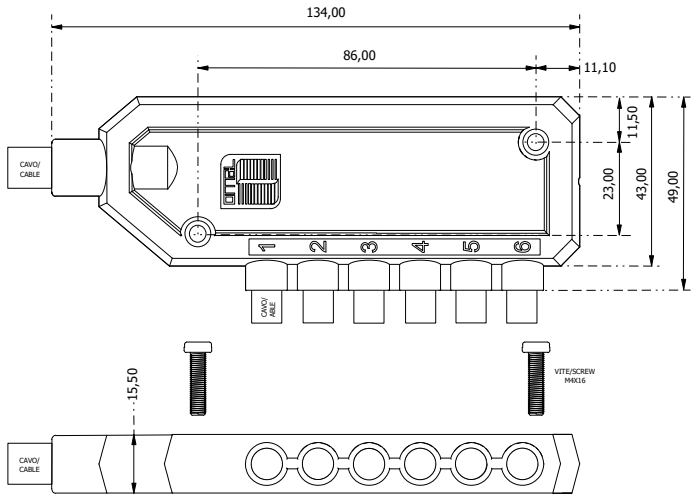


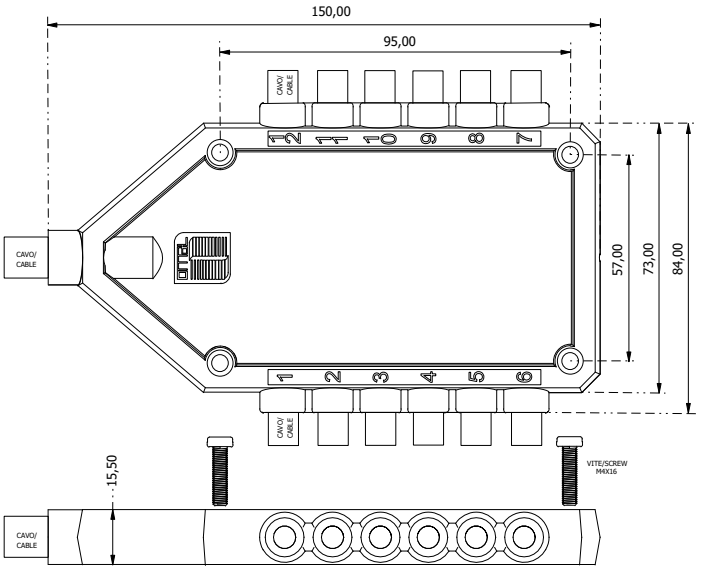
Ø tie-rod mm	Braket code
7	S70
10	S100

Adapters for different slots on demand, please contact the sales dept.

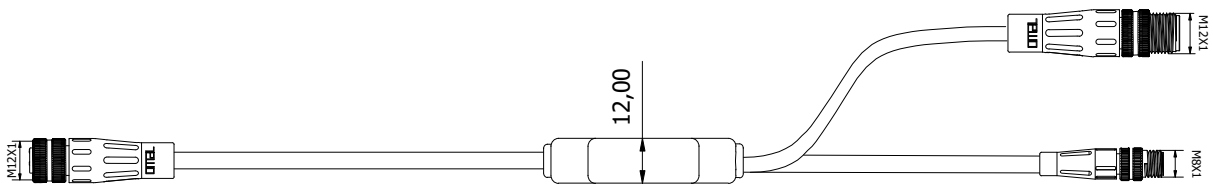
Omal creates custom multiple connection systems for specific customer needs.

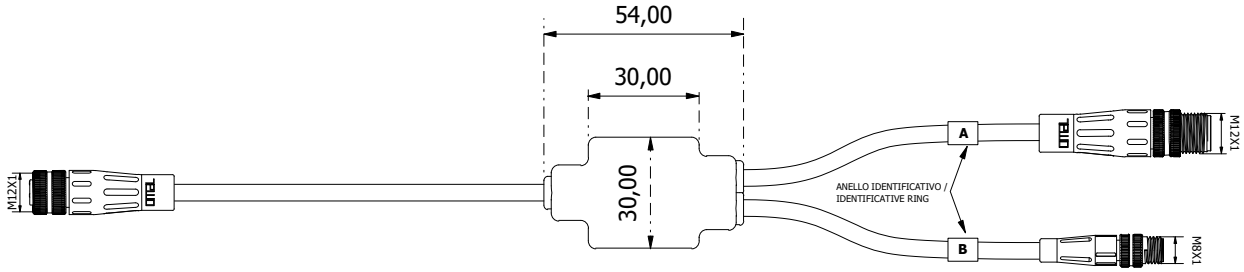
Our technical team work with the customer to define the data required for the circuit, including cable types, termination options with or without connectors, and the specifications of each individual output.



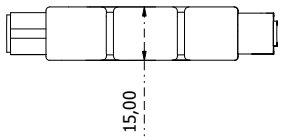


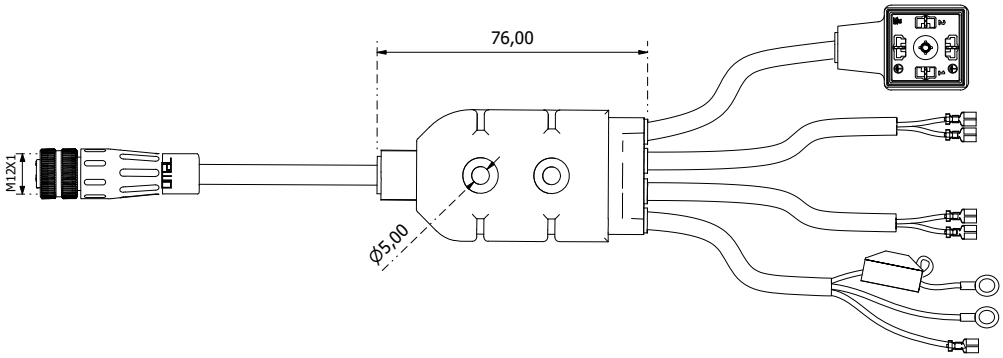
Customizable shunt with M8 – M12 outputs
For technical information, part numbers, and quotes, please contact our sales dept.



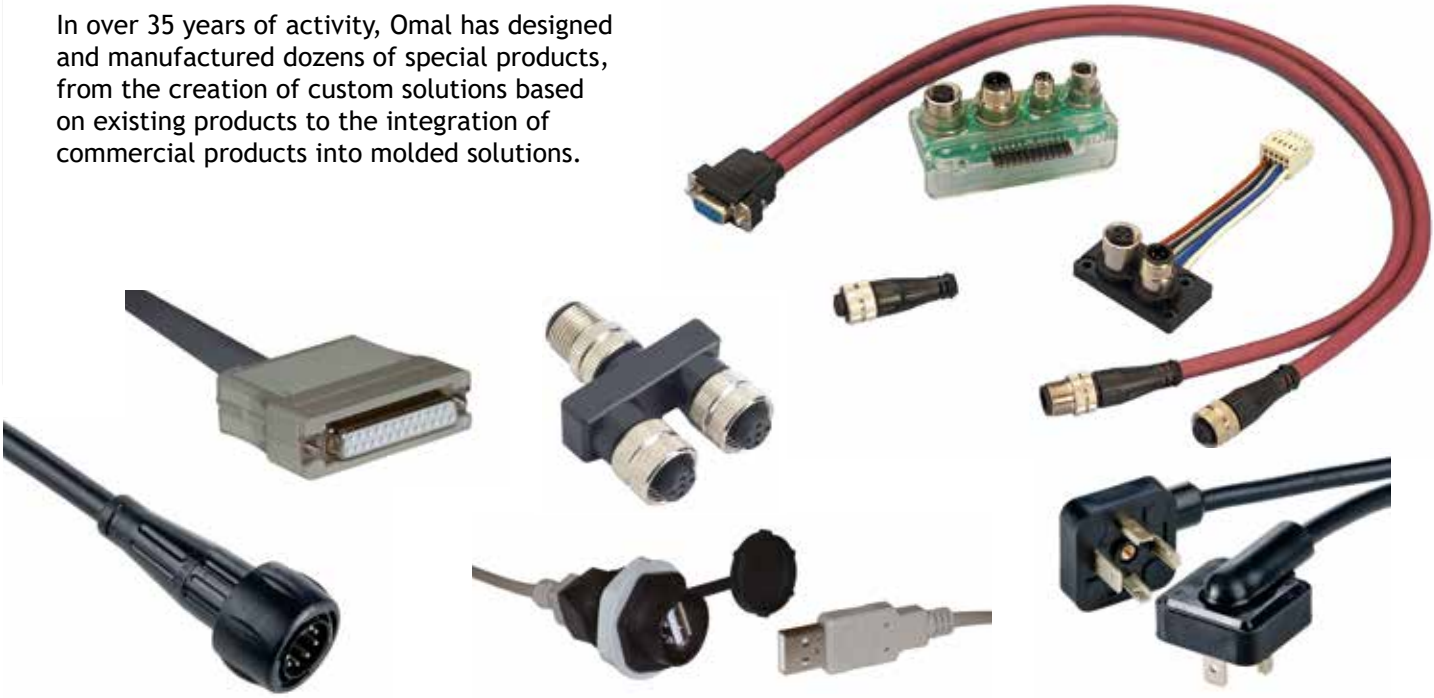


Custom connectors for automotive industry
For technical information, part numbers, and quotes, please contact our sales dept.





In over 35 years of activity, Omal has designed and manufactured dozens of special products, from the creation of custom solutions based on existing products to the integration of commercial products into molded solutions.



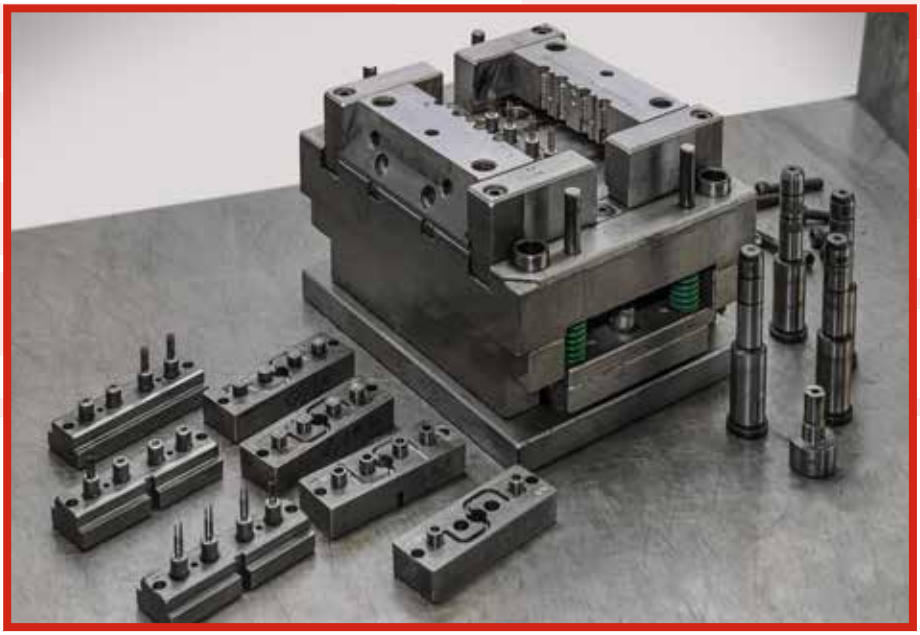
For any inquiries, please contact our sales dept., which will provide you with all the information you need
info@omalitalia.it

For **over 35 years**, thanks to the skills and experience of the founding members, production molds have been created for both OMAL standards and custom products. Any internal equipment is designed and manufactured to optimize the production, ranging from simple to complex, up to the construction of actual special machines.

This leads the Company to quickly solve any wear and tear issues making OMAL the best Partner for customers who need customized solutions.

The perfect harmony between the tooling department and the technical office allows the development of products with not only mechanical but also electrical and electronic features. As of today, tens of our customers have optimized their needs by integrating them into a custom-designed product.

For any enquiry, please contact our sales department or write to i**nfo@omalitalia.it**



MADE IN ITALY SINCE 1987

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11/2025