# Ø 12

# 10÷30 Vdc - 3 WIRES NPN OR PNP OUTPUT



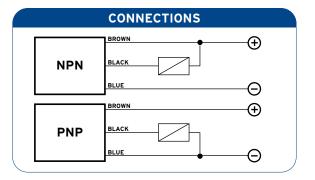


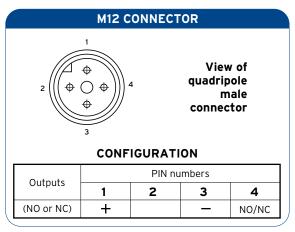
- 2 mm to 4 mm operating distance shielded, unshielded • Short housing models
- Short nousing modelsCable or M8 or M12 connector models
- Output status LED

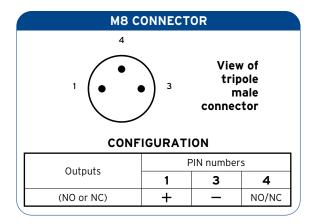
# **TECHNICAL DATA**

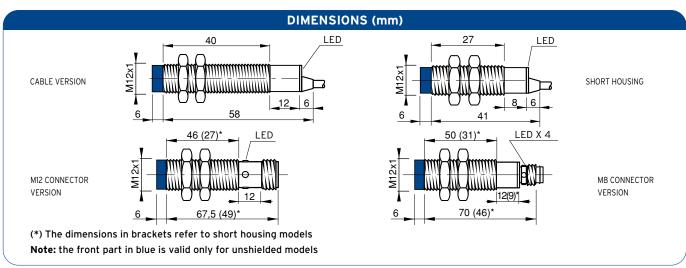
	SHIELDED	UNSHIELDED
OPERATING DISTANCE (Sn)	2 mm	4 mm
POWER SUPPLY	10 ÷ 30 Vdc	(-15 / +10%)
RIPPLE	≤1	0%
HYSTERESIS	< 1	0%
OUTPUT CURRENT	200 m	A max.
CONSUMPTION	< 10 mA	@ 24 Vdc
SATURATION VOLTAGE	< 1.8 V (I :	= 100 mA)
INDICATORS	Yello	w LED
SWITCHING FREQUENCY	100	0 Hz
DELAY AT POWER ON	≤ 50 ms	
REPEATABILITY	≤3%	
SHORT CIRCUIT PROTECTION	Present (self-resetting)	
PROTECTIONS CIRCUIT	Against polarity reversal - inductive loads	
OPERATING TEMPERATURE	- 25 ÷	+60 °C
MECHANICAL PROTECTION	IP	67
CONNECTIONS	2 m cable (3	x 0.25 mm <sup>2</sup> )
HOUSING MATERIAL	Nickel-pla	ated brass
WEIGHT	110 g cab	le version
	60 g M8 conr	nector version
	60 g M12 con	nector version

<sup>(4)</sup> Device marking (5) II 3D IP67 T6X.





















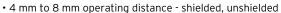
	MODEL SELECTION TABLE				
DIAMETER	CONSTRUCTION	OUTPUT	CONNECTION		
04 = 4 mm	A= shielded standard housing	1 = 10-30 Vdc PNP NO	02 = 500 mm CABLE		
05 = 5 mm	B= shielded short housing	2 = 10-30 Vdc PNP NC	03 = 2 m CABLE		
08 = 8 mm	C= unshielded standard housing	3 = 10-30 Vdc NPN NO	S1 = M8 CONN.		
12 = 12 mm	D= unshielded short housing	4 = 10-30 Vdc NPN NC	S2 = M12 CONN.		
18 = 18 mm	m E= shielded standard housing, double operating distance 5 = 10-30 Vdc PNP NO-NC				
30 = 30 mm	F= unshielded standard housing, double operating distance	6 = 10-30 Vdc NPN NO-NC			
	G= shielded short housing, double operating distance	7 = 24-230 Vac - 2 wires NO			
	H= unshielded short housing, double operating distance	8 = 24-230 Vac - 2 wires NC			
	I= shielded standard metal housing	9 = 10-30 Vac - 2 wires NO-NC			
	L= unshielded standard metal housing	0 = 12-30 Vac - 4 wires			

PRODUCT TABLE				
DESCRIPTION	CONNECTION	SHIELDED	HOUSING	ORDER CODE
IS-12-A1-03	2 m CABLE	yes	standard	95B061240
IS-12-A1-S1	M8 CONNECTOR	ves	standard	95B061260
IS-12-A1-S2	M12 CONNECTOR	yes	standard	95B061250
IS-12-A2-03	2 m CABLE	yes	standard	95B061270
IS-12-A2-S1	M8 CONNECTOR	yes	standard	95B061290
IS-12-A2-S2	M12 CONNECTOR	yes	standard	95B061280
IS-12-A3-03	2 m CABLE	yes	standard	95B061180
IS-12-A3-S1	M8 CONNECTOR	ves	standard	95B061200
IS-12-A3-S2	M12 CONNECTOR	yes	standard	95B061190
IS-12-A4-03	2 m CABLE	yes	standard	95B061210
IS-12-A4-S1	M8 CONNECTOR	yes	standard	95B061230
IS-12-A4-S2	M12 CONNECTOR	ves	standard	95B061220
IS-12-B1-03	2 m CABLE	yes	short	95B062040
IS-12-B1-S1	M8 CONNECTOR	yes	short	95B062060
IS-12-B1-S2	M12 CONNECTOR	ves	short	95B062050
IS-12-B2-03	2 m CABLE	yes	short	95B062070
IS-12-B2-S1	M8 CONNECTOR	yes	short	95B062090
IS-12-B2-S2	M12 CONNECTOR	ves	short	95B062080
IS-12-B3-03	2 m CABLE	yes	short	95B061980
IS-12-B3-S1	M8 CONNECTOR	ves	short	95B062000
IS-12-B3-S2	M12 CONNECTOR	yes	short	95B061990
IS-12-B4-03	2 m CABLE	yes	short	95B062010
IS-12-B4-S1	M8 CONNECTOR	yes	short	95B062030
IS-12-B4-S2	M12 CONNECTOR	yes	short	95B062020
IS-12-C1-03	2 m CABLE	no	standard	95B061640
IS-12-C1-S1	M8 CONNECTOR	no	standard	95B061660
IS-12-C1-S2	M12 CONNECTOR	no	standard	95B061650
IS-12-C2-03	2 m CABLE	no	standard	95B061670
IS-12-C2-S1	M8 CONNECTOR	no	standard	95B061690
IS-12-C2-S2	M12 CONNECTOR	no	standard	95B061680
IS-12-C3-03	2 m CABLE	no	standard	95B061580
IS-12-C3-S1	M8 CONNECTOR	no	standard	95B061600
IS-12-C3-S2	M12 CONNECTOR	no	standard	95B061590
IS-12-C4-03	2 m CABLE	no	standard	95B061610
IS-12-C4-S1	M8 CONNECTOR	no	standard	95B061630
IS-12-C4-S2	M12 CONNECTOR	no	standard	95B061620
IS-12-D1-03	2 m CABLE	no	short	95B062440
IS-12-D1-S1	M8 CONNECTOR	no	short	95B062460
IS-12-D1-S2	M12 CONNECTOR	no	short	95B062450
IS-12-D2-03	2 m CABLE	no	short	95B062470
IS-12-D2-S1	M8 CONNECTOR	no	short	95B062470
IS-12-D2-S2	M12 CONNECTOR	no	short	95B062480
IS-12-D3-03	2 m CABLE	no	short	95B062380
IS-12-D3-S1	M8 CONNECTOR	no	short	95B062300 95B062400
IS-12-D3-S2	M12 CONNECTOR	no	short	95B062390
	2 m CABLE	no	short	95B062410
		110	311011	750002410
IS-12-D4-03 IS-12-D4-S1	M8 CONNECTOR	no	short	95B062430



# Ø 12 DOUBLE OPERATING DISTANCE

10÷30 Vdc - 3 WIRES NPN OR PNP OUTPUT



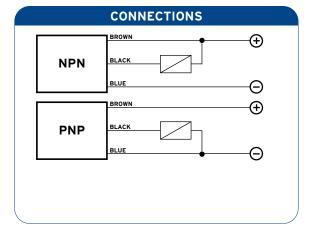
- Short housing models
- Cable or M12 connector models
- Output status LED



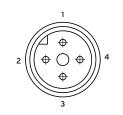


# TECHNICAL DATA

	SHIELDED UNSHI	ELDED	
OPERATING DISTANCE (Sn)	4 mm 8 m	ım	
POWER SUPPLY	10 ÷ 30 Vdc (-15 / +109	%)	
RIPPLE	≤ 10%		
HYSTERESIS	< 10%		
OUTPUT CURRENT	200 mA max.		
CONSUMPTION	< 10 mA @ 24 Vdc		
SATURATION VOLTAGE	< 1.2 V (I = 100 mA)		
INDICATORS	Yellow LED	Yellow LED	
SWITCHING FREQUENCY	500 Hz	500 Hz	
DELAY AT POWER ON	≤ 75 ms	≤ 75 ms	
REPEATABILITY	≤3%	≤ 3%	
SHORT CIRCUIT PROTECTION	Present (self-resetting	Present (self-resetting)	
PROTECTIONS CIRCUIT	Against polarity reversal - indu	ctive loads	
OPERATING TEMPERATURE	- 25 ÷ +70 °C		
MECHANICAL PROTECTION	IP67		
CONNECTIONS	2 m cable (3 x 0.25 mm	ı <sup>2</sup> )	
HOUSING MATERIAL	Nickel-plated brass		
WEIGHT	110 g cable version		
	60 g M12 connector vers	ion	



# **M12 CONNECTOR**



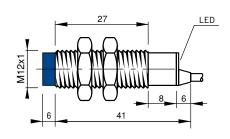
View of quadripole male connector

# **CONFIGURATION**

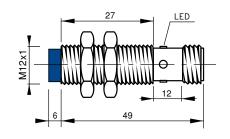
Outputs		PIN nu	ımbers	
Outputs	1	2	3	4
(NO or NC)	+		_	NO/NC

# **DIMENSIONS (mm)**

CABLE VERSION



M12 CONNECTOR VERSION















## **MODEL SELECTION TABLE** CONSTRUCTION DIAMETER OUTPUT CONNECTION A= shielded standard housing 04 = 4 mm 1 = 10-30 Vdc PNP NO 02 = 500 mm CABLE 05 = 5 mm B= shielded short housing 2 = 10-30 Vdc PNP NC 03 = 2 m CABLE 08 = 8 mmC= unshielded standard housing 3 = 10-30 Vdc NPN NO S1 = M8 CONN. 12 = 12 mm D= unshielded short housing 4 = 10-30 Vdc NPN NC S2 = M12 CONN. 18 = 18 mm 5 = 10-30 Vdc PNP NO-NC E= shielded standard housing, double operating distance 30 = 30 mm F= unshielded standard housing, double operating distance 6 = 10-30 Vdc NPN NO-NC G= shielded short housing, double operating distance 7 = 24-230 Vac - 2 wires NO H= unshielded short housing, double operating distance 8 = 24-230 Vac - 2 wires NC I= shielded standard metal housing 9 = 10-30 Vac - 2 wires NO-NC L= unshielded standard metal housing 0 = 12-30 Vac - 4 wires

PRODUCT TABLE					
DESCRIPTION	CONNECTION	SHIELDED	HOUSING	ORDER CODE	
IS-12-G1-03	CABLE	yes	short	95B063360	
IS-12-G1-S2	M12	yes	short	95B063370	
IS-12-G2-03	CABLE	yes	short	95B063380	
IS-12-G2-S2	M12	yes	short	95B063390	
IS-12-G3-03	CABLE	yes	short	95B063320	
IS-12-G3-S2	M12	yes	short	95B063330	
IS-12-G4-03	CABLE	yes	short	95B063340	
IS-12-G4-S2	M12	yes	short	95B063350	
IS-12-H1-03	CABLE	no	short	95B063440	
IS-12-H1-S2	M12	no	short	95B063450	
IS-12-H2-03	CABLE	no	short	95B063460	
IS-12-H2-S2	M12	no	short	95B063470	
IS-12-H3-03	CABLE	no	short	95B063400	
IS-12-H3-S2	M12	no	short	95B063410	
IS-12-H4-03	CABLE	no	short	95B063420	
IS-12-H4-S2	M12	no	short	95B063430	



# **Ø 12 DOUBLE OPERATING DISTANCE** 10÷30 Vdc - 4 WIRES NPN OR PNP OUTPUT



- 4 mm to 8 mm operating distance shielded, unshielded
- Short housing models
- Cable or M12 connector models
- 200mA NPN or PNP
- Output status LED





# **TECHNICAL DATA**

	SHIELDED UNSH	IELDED		
OPERATING DISTANCE (Sn)	4 mm 8 ı	nm		
POWER SUPPLY	10 ÷ 30 Vdc (-15 / +10	%)		
RIPPLE	≤10%			
HYSTERESIS	< 10%			
OUTPUT CURRENT	200 mA max.			
CONSUMPTION	< 10 mA @ 24 Vdc			
SATURATION VOLTAGE	< 1.2 V (I = 100 mA)			
INDICATORS	Yellow LED	Yellow LED		
SWITCHING FREQUENCY	500 Hz	500 Hz		
DELAY AT POWER ON	75 ms			
REPEATABILITY	3%			
SHORT CIRCUIT PROTECTION	Present (self-resetting)			
PROTECTIONS CIRCUIT	Against polarity reversal - indu	ctive loads		
OPERATING TEMPERATURE	- 25 ÷ +70 ℃			
MECHANICAL PROTECTION	IP67			
CONNECTIONS	2 m cable (3 x 0.25 mr	n²)		
HOUSING MATERIAL	Nickel-plated brass	Nickel-plated brass		
WEIGHT	110 g cable version			
	60 g M12 connector ver	sion		

# **CONNECTIONS** BROWN $\oplus$ BLACK NPN WHITE NO-NC BLUE BROWN $\oplus$ WHITE **PNP** NO-NC NO

# **M12 CONNECTOR**

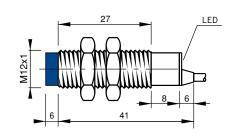
View of quadripole male connector

# **CONFIGURATION**

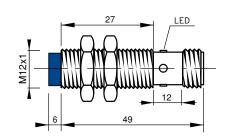
Outputs	PIN numbers			
Outputs	1 2		3	4
(NO + NC)	+	NC	_	NO

# **DIMENSIONS (mm)**

CABLE VERSION



M12 CONNECTOR VERSION















MODEL SELECTION TABLE				
DIAMETER	CONSTRUCTION	OUTPUT	CONNECTION	
04 = 4 mm	A= shielded standard housing	1 = 10-30 Vdc PNP NO	02 = 500 mm CABLE	
05 = 5 mm	B= shielded short housing	2 = 10-30 Vdc PNP NC	03 = 2 m CABLE	
08 = 8 mm	C= unshielded standard housing	3 = 10-30 Vdc NPN NO	S1 = M8 CONN.	
12 = 12 mm	D= unshielded short housing	4 = 10-30 Vdc NPN NC	S2 = M12 CONN.	
18 = 18 mm	E= shielded standard housing, double operating distance	5 = 10-30 Vdc PNP NO-NC		
30 = 30 mm	F= unshielded standard housing, double operating distance 6 = 10-30 Vdc NPN NO-NC			
	G= shielded short housing, double operating distance	7 = 24-230 Vac - 2 wires NO		
	H= unshielded short housing, double operating distance	8 = 24-230 Vac - 2 wires NC		
	I= shielded standard metal housing	9 = 10-30 Vac - 2 wires NO-NC		
	L= unshielded standard metal housing	0 = 12-30 Vac - 4 wires		

		PRODUCT TA	BLE	
DESCRIPTION	CONNECTION	SHIELDED	HOUSING	ORDER CODE
IS-12-G5-03	2 m CABLE	yes	standard	95B062680
IS-12-G5-S2	M12 CONNECTOR	yes	standard	95B062690
IS-12-G6-03	2 m CABLE	yes	standard	95B062660
IS-12-G6-S2	M12 CONNECTOR	yes	standard	95B062670
IS-12-H5-03	2 m CABLE	no	standard	95B062760
IS-12-H5-S2	M12 CONNECTOR	no	standard	95B062770
IS-12-H6-03	2 m CABLE	no	standard	95B062740
IS-12-H6-S2	M12 CONNECTOR	no	standard	95B062750



# Ø 12 DOUBLE OPERATING DISTANCE 12÷30 Vdc - 4 WIRES PROGRAMMABLE OUTPUT



- 4 mm to 8 mm operating distance shielded, unshielded
- Programmable outputs: NPN/PNP, NO or NC
- Cable models
- Nickel plated brass
- Output status LED
- 200 mA max output



# **TECHNICAL DATA**

	SHIELDED	UNSHIELDED	
OPERATING DISTANCE (Sn)	4 mm	8 mm	
POWER SUPPLY	12 ÷ 30 Vdc	(-15/+10%)	
RIPPLE	≤1	0%	
HYSTERESIS	< 1	0%	
OUTPUT	NPN or PNP	(selectable)	
CONTACT	NO or NC (	(selectable)	
OUTPUT CURRENT	200 m	A max.	
CONSUMPTION	< 1.2 mA	@ 24 Vdc	
SATURATION VOLTAGE	< 1,8 V (I = 100 mA)		
INDICATORS	Yellow LED		
SWITCHING FREQUENCY	500 Hz		
DELAY AT POWER ON	≤ 50 ms		
REPEATABILITY	≤3%		
SHORT CIRCUIT PROTECTION	Present (se	lf-resetting)	
PROTECTIONS CIRCUIT	Against polarity reve	ersal - inductive loads	
OPERATING TEMPERATURE	- 25 ÷	+70 °C	
MECHANICAL PROTECTION	IP	67	
CONNECTIONS	2 m cable (4	x 0.25 mm <sup>2</sup> )	
HOUSING MATERIAL	Nickel-pla	ated brass	
WEIGHT	110 g cab	le version	
(1) D :			

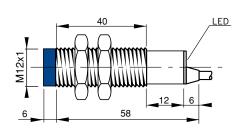
<sup>(1)</sup> Device marking (2) II 3D IP67 T6X.

## CONNECTIONS NPN NO BLACK NO Θ ( **NPN PNP** WHITE NC BLACK NC

These sensors, thanks to the unpaired output circuit offer 4 output configurations (NPN-NO, NPN-NC, PNP-NO, PNP-NC) on the  $\,$ same model.

# **DIMENSIONS (mm)**

CABLE VERSION















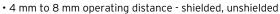
MODEL SELECTION TABLE				
CONSTRUCTION	OUTPUT	CONNECTION		
A= shielded standard housing	1 = 10-30 Vdc PNP NO	02 = 500 mm CABLE		
B= shielded short housing	2 = 10-30 Vdc PNP NC	03 = 2 m CABLE		
C= unshielded standard housing	3 = 10-30 Vdc NPN NO	S1 = M8 CONN.		
D= unshielded short housing	4 = 10-30 Vdc NPN NC	S2 = M12 CONN.		
E= shielded standard housing, double operating distance	5 = 10-30 Vdc PNP NO-NC			
F= unshielded standard housing, double operating distance 6 = 10-30 Vdc NPN NO-NC				
G= shielded short housing, double operating distance	7 = 24-230 Vac - 2 wires NO			
H= unshielded short housing, double operating distance	8 = 24-230 Vac - 2 wires NC			
I= shielded standard metal housing	9 = 10-30 Vac - 2 wires NO-NC			
L= unshielded standard metal housing	0 = 12-30 Vac - 4 wires			
	CONSTRUCTION  A= shielded standard housing B= shielded short housing C= unshielded standard housing D= unshielded short housing E= shielded standard housing, double operating distance F= unshielded standard housing, double operating distance G= shielded short housing, double operating distance H= unshielded short housing, double operating distance H= shielded standard metal housing	CONSTRUCTION  A= shielded standard housing  B= shielded short housing  C= unshielded standard housing  D= unshielded short housing  E= shielded standard housing  D= unshielded standard housing  C= unshielded standard housing  A= 10-30 Vdc NPN NO  D= unshielded standard housing  A= 10-30 Vdc NPN NC  E= shielded standard housing, double operating distance  F= unshielded standard housing, double operating distance  C= shielded short housing, double operating distance  C= shielded short housing, double operating distance  C= 24-230 Vac - 2 wires NO  H= unshielded standard metal housing  C= shielded standard metal housing  C= 10-30 Vac - 2 wires NC  C= shielded standard metal housing  C= 10-30 Vac - 2 wires NC		

		PRODUCT TAI	BLE	
DESCRIPTION	CONNECTION	SHIELDED	HOUSING	ORDER CODE
IS-12-E0-03	CABLE	yes	standard	95B063840



# **Ø 12 DOUBLE OPERATING DISTANCE**10÷30 Vdc 2 WIRES NO-NC PROGRAMMABLE OUTPUT





- Cable models
- Nickel plated brass

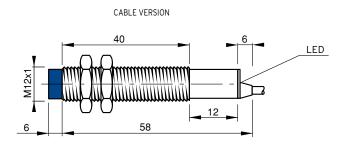


# **TECHNICAL DATA**

	SHIELDED	UNSHIELDED	
OPERATING DISTANCE (Sn)	4 mm	8 mm	
POWER SUPPLY	10 ÷ 30 Vdc	(-15 / +10%)	
RIPPLE	≤1	0%	
HYSTERESIS	< 1	0%	
OUTPUT CURRENT	100 m	A max.	
OUTPUT CURRENT	> 1,6 r	nA min.	
CONSUMPTION	< 1,6 mA	@ 24 Vdc	
SATURATION VOLTAGE	< 6,5 V (I = 100 mA)		
INDICATORS	Yellow LED		
SWITCHING FREQUENCY	500 Hz		
DELAY AT POWER ON	≤50	) ms	
REPEATABILITY	≤:	3%	
SHORT CIRCUIT PROTECTION	Present (se	lf-resetting)	
PROTECTIONS CIRCUIT	Against polarity reve	ersal - inductive loads	
OPERATING TEMPERATURE	- 25 ÷	+70 °C	
MECHANICAL PROTECTION	IP	67	
CONNECTIONS	2 m cable (2 x 0.25 mm²)		
HOUSING MATERIAL	Nickel-plated brass		
WEIGHT	110 g cab	le version	

# NO BROWN BLUE NC BROWN WARNING: The load can be connected in series to the blue wire or to the brown wire to simulate the NPN or PNP functioning logic.

# **DIMENSIONS (mm)**







9 = 10-30 Vac - 2 wires NO-NC

0 = 12-30 Vac - 4 wires







MODEL SELECTION TABLE					
DIAMETER	CONSTRUCTION	OUTPUT	CONNECTION		
04 = 4 mm	A= shielded standard housing	1 = 10-30 Vdc PNP NO	02 = 500 mm CABLE		
05 = 5 mm	B= shielded short housing	2 = 10-30 Vdc PNP NC	03 = 2 m CABLE		
08 = 8 mm	C= unshielded standard housing	3 = 10-30 Vdc NPN NO	S1 = M8 CONN.		
12 = 12 mm	D= unshielded short housing	4 = 10-30 Vdc NPN NC	S2 = M12 CONN.		
18 = 18 mm	E= shielded standard housing, double operating distance	5 = 10-30 Vdc PNP NO-NC			
30 = 30 mm	F= unshielded standard housing, double operating distance	6 = 10-30 Vdc NPN NO-NC			
	G= shielded short housing, double operating distance	7 = 24-230 Vac - 2 wires NO			
	H= unshielded short housing, double operating distance	8 = 24-230 Vac - 2 wires NC			

		PRODUCT TAE	BLE	
DESCRIPTION	CONNECTION	SHIELDED	HOUSING	ORDER CODE
IS-12-E9-03	CABLE	yes	standard	95B063800

I= shielded standard metal housing

L= unshielded standard metal housing



# Ø 12

# 24÷230 Vac - 2 WIRES NO OR NC OUTPUT



- 2 mm to 4 mm operating distance shielded, unshielded
- Cable or M12 connector models
- Very low consumption < 0,7 mA
- Inrush current (20ms) 1.5A
- 350 mA max output





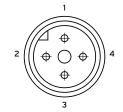
# **TECHNICAL DATA**

SHIELDED         UNSHIELDE           ERATING DISTANCE (Sn)         2 mm         4 mm           WER SUPPLY         24 ÷ 230 Vac (-15/+10%)           PLE         50 ÷ 60 Hz           STERESIS         < 10%           TPUT CURRENT         350 mA max.           TPUT CURRENT         20 mA min.
WER SUPPLY         24 ÷ 230 Vac (-15/+10%)           PLE         50 ÷ 60 Hz           STERESIS         < 10%           ITPUT CURRENT         350 mA max.           TPUT CURRENT         20 mA min.
PLE         50 ÷ 60 Hz           STERESIS         < 10%
STERESIS   < 10%
TPUT CURRENT 350 mA max. TPUT CURRENT 20 mA min.
TPUT CURRENT 20 mA min.
2011
RUSH CURRENT 1,5 A max. (20 ms)
NSUMPTION < 0,7 mA
TURATION VOLTAGE < 5 V (I = 100 mA)
DICATORS Yellow LED
TITCHING FREQUENCY 12 Hz
LAY AT POWER ON ≤ 300 ms
PEATABILITY ≤3%
ORT CIRCUIT PROTECTION -25 ÷ +70 °C
CHANICAL PROTECTION IP67
NNECTIONS 2 m cable (2 x 0.25 mm²)
USING MATERIAL Nickel-plated brass
IGHT 110 g cable version
60 g M12 connector cable

# CONNECTIONS 24 ÷ 230 Vac BLUE O N

**Warning:** Output short circuit are not possible. Wrong supply cable connections can damage the sensor. Therefore sensors whose output status is short-circuited will not be replaced under warranty.

# M12 CONNECTOR

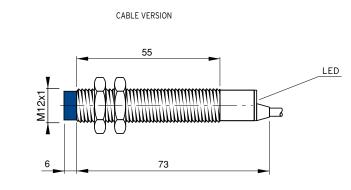


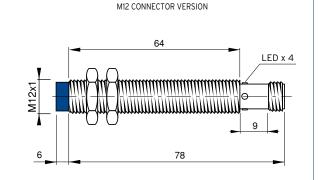
View of quadripole male connector.

# **CONFIGURATION**

Outputs	PIN numbers				
Outputs	1	2	3	4	
(NO or NC)	L		N		

# **DIMENSIONS (mm)**

















## **MODEL SELECTION TABLE** CONSTRUCTION DIAMETER OUTPUT CONNECTION A= shielded standard housing 04 = 4 mm 1 = 10-30 Vdc PNP NO 02 = 500 mm CABLE 05 = 5 mm B= shielded short housing 2 = 10-30 Vdc PNP NC 03 = 2 m CABLE 08 = 8 mmC= unshielded standard housing 3 = 10-30 Vdc NPN NO S1 = M8 CONN. 12 = 12 mm D= unshielded short housing 4 = 10-30 Vdc NPN NC S2 = M12 CONN. 5 = 10-30 Vdc PNP NO-NC 18 = 18 mm E= shielded standard housing, double operating distance 30 = 30 mm F= unshielded standard housing, double operating distance 6 = 10-30 Vdc NPN NO-NC G= shielded short housing, double operating distance 7 = 24-230 Vac - 2 wires NO H= unshielded short housing, double operating distance 8 = 24-230 Vac - 2 wires NC I= shielded standard metal housing 9 = 10-30 Vac - 2 wires NO-NC L= unshielded standard metal housing 0 = 12-30 Vac - 4 wires

PRODUCT TABLE					
DESCRIPTION	CONNECTION	SHIELDED	HOUSING	ORDER CODE	
IS-12-A7-03	2 m CABLE	yes	standard	95B062820	
IS-12-A7-S2	M12 CONNECTOR	yes	standard	95B062830	
IS-12-A8-03	2 m CABLE	yes	standard	95B062840	
IS-12-A8-S2	M12 CONNECTOR	yes	standard	95B062850	
IS-12-C7-03	2 m CABLE	no	standard	95B062940	
IS-12-C7-S2	M12 CONNECTOR	no	standard	95B062950	
IS-12-C8-03	2 m CABLE	no	standard	95B062960	
IS-12-C8-S2	M12 CONNECTOR	no	standard	95B062970	



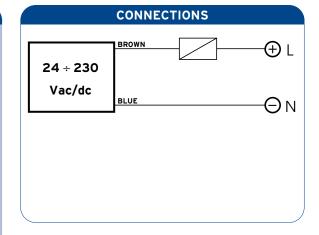
# **Ø 12 DOUBLE OPERATING DISTANCE** 24÷230 Vac/dc - 2 WIRES WIRES NO OR NC OUTPUT



- 4 mm to 8 mm operating distance shielded, unshielded
- Short circuit protection AC/DC
- Cable models
- Inrush current (20ms) 2.5A
- 350mA max output



TECHNICAL DATA				
	SHIELDED	UNSHIELDED		
OPERATING DISTANCE (Sn)	4 <b>mm</b>	8 mm		
POWER SUPPLY	24 ÷ 230 Vca/	dc (-15/+10%)		
RIPPLE	50 ÷	60 Hz		
HYSTERESIS	< 1	10%		
OUTPUT CURRENT	350 m	A max.		
OUTPUT CURRENT	4 mA min.			
INRUSH CURRENT	2,5 A max. (20 ms)			
CONSUMPTION	< 1,5 mA			
SATURATION VOLTAGE	< 6 V (I=100mA)			
INDICATORS	Yellow LED			
SWITCHING FREQUENCY	12	! Hz		
DELAY AT POWER ON	≤ 30	00 ms		
REPEATABILITY	Present (mar	nual resetting)		
OPERATING TEMPERATURE	≤	3%		
SHORT CIRCUIT PROTECTION	-25 ÷	+70 °C		
MECHANICAL PROTECTION	IP67			
CONNECTIONS	2 m cable (2	2 x 0.25 mm²)		
HOUSING MATERIAL	Nickel-pl	ated brass		
WEIGHT	110 g cal	ole version		



# CABLE VERSION CABLE VERSION 65 65 83 Note: the front part in blue is valid only for unshielded models













MODEL SELECTION TABLE					
DIAMETER	CONSTRUCTION	OUTPUT	CONNECTION		
04 = 4 mm	A= shielded standard housing	1 = 10-30 Vdc PNP NO	02 = 500 mm CABLE		
05 = 5 mm	B= shielded short housing	2 = 10-30 Vdc PNP NC	03 = 2 m CABLE		
08 = 8 mm	C= unshielded standard housing	3 = 10-30 Vdc NPN NO	S1 = M8 CONN.		
12 = 12 mm	D= unshielded short housing	4 = 10-30 Vdc NPN NC	S2 = M12 CONN.		
18 = 18 mm	E= shielded standard housing, double operating distance	5 = 10-30 Vdc PNP NO-NC			
30 = 30 mm	F= unshielded standard housing, double operating distance	6 = 10-30 Vdc NPN NO-NC			
	G= shielded short housing, double operating distance	7 = 24-230 Vac - 2 wires NO			
	H= unshielded short housing, double operating distance	8 = 24-230 Vac - 2 wires NC			
	I= shielded standard metal housing	9 = 10-30 Vac - 2 wires NO-NC			
	L= unshielded standard metal housing	0 = 12-30 Vac - 4 wires			

		PRODUCT TAE	BLE		
DESCRIPTION	CONNECTION	SHIELDED	HOUSING	ORDER CODE	
IS-12-E7-03	CABLE	yes	standard	95B063890	



# Ø 12

# 10÷30 Vdc - 3 WIRES PNP OUTPUT

- 2 mm to 4 mm operating distance shielded, unshielded
- Stainless steel housing
- Cable or M12 connector models Output status LED





# TECHNICAL DATA

	SHIELDED	UNSHIELDED
OPERATING DISTANCE (Sn)	2 mm	4 mm
POWER SUPPLY	10 ÷ 30 Vdc	(-15 / +10%)
RIPPLE	≤1	0%
HYSTERESIS	<1	5%
OUTPUT CURRENT	200 m	A max.
CONSUMPTION	< 10 mA	@ 24 Vdc
SATURATION VOLTAGE	< 1.5 V (I :	= 100 mA)
INDICATORS	Yello	w LED
SWITCHING FREQUENCY	2000 Hz	1000 Hz
REPEATABILITY	≤ '	1%
SHORT CIRCUIT PROTECTION	Present (se	lf-resetting)
OPERATING TEMPERATURE	- 25 ÷ ·	+70 °C
MECHANICAL PROTECTION	IP67	
ACTIVE FACE MATERIAL	Stainless steel	
HOUSING MATERIAL	Stainle	ss steel
WEIGHT	60 g cab	le version

# CONNECTIONS BROWN $\oplus$ **PNP** Θ



# **CONFIGURATION**

Outputs	PIN numbers				
Outputs	1	2	3	4	
NO	+		_	NO	

# **DIMENSIONS (mm)** SHIELDED UNSHIELDED 42 LED 34 LED M12x1 16 16 68 68













MODEL SELECTION TABLE							
DIAMETER	CONSTRUCTION	OUTPUT	CONNECTION				
04 = 4 mm	A= shielded standard housing	1 = 10-30 Vdc PNP NO	02 = 500 mm CABLE				
05 = 5 mm	B= shielded short housing	2 = 10-30 Vdc PNP NC	03 = 2 m CABLE				
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18 = 18 mm	E= shielded standard housing, double operating distance	5 = 10-30 Vdc PNP NO-NC					
30 = 30 mm	F= unshielded standard housing, double operating distance	6 = 10-30 Vdc NPN NO-NC					
G= shielded short housing, double operating distance		7 = 24-230 Vac - 2 wires NO					
	H= unshielded short housing, double operating distance	8 = 24-230 Vac - 2 wires NC					
	I= shielded standard metal housing	9 = 10-30 Vac - 2 wires NO-NC					
	L= unshielded standard metal housing	0 = 12-30 Vac - 4 wires					

		PRODUCT TABLE				
DESCRIPTION	CONNECTION	SHIELDED	HOUSING	ORDER CODE		
IS-12-L5-S2	M12	no	standard	95B063870		