



It's your destiny

Control  
Control

# Промышленная автоматика





# Główny Instytut Górnictwa

JEDNOSTKA CERTYFIKUJĄCA



AC 083  
QMS  
EMS  
BHP

## CERTYFIKAT SYSTEMU ZARZĄDZANIA JAKOŚCIĄ

Nr QS / 41 / 10

Potwierdza się, że:

*SELS spółka z o.o. spółka komandytowa  
w Warszawie*

spełnia wymagania normy PN-EN ISO 9001:2009 „Systemy zarządzania jakością. Wymagania” w obszarze działalności:

*Projektowanie, produkcja i sprzedaż elementów i systemów automatyki przemysłowej*

Certyfikat ważny w okresie od 30 sierpnia 2010 r. do 29 sierpnia 2013 r. pod warunkiem przestrzegania przez jego posiadacza wymagań normy PN-EN ISO 9001:2009 oraz ustaleń zawartych w umowie o nadzorze

KIEROWNIK  
Jednostki Certyfikującej

dr inż. Dariusz Stefaniak



NACZELNY DYREKTOR  
Głównego Instytutu Górnictwa

prof. dr hab. inż. Józef Dubiński

KATOWICE, DNIA 30 sierpnia 2010 r.

GLÓWNY INSTYTUT GÓRNICZWA, PLAC GWARKÓW 1, 40-166 KATOWICE





SELS

1984

ISO 9001-2009,



QUALITY.

KEMA REGISTERED

KD Barbara -

SELS,

SELS

SELS

. SELS.





.....	1 - 5
.....	6
DC .....	6 - 10
DC - .....	11
DC - F40 .....	11
.....	12
.....	13
.....	14
AC .....	15
.....	15
.....	16
.....	17
.....	18
.....	18 - 19
.....	20 - 21
.....	22
, , .....	23
.....	24 - 25
( ) .....	26 - 27
.....	28
.....	29
.....	30
/ .....	31 - 37
/ .....	38 - 39
.....	40
.....	41
.....	42
.....	43
.....	49
.....	50 - 51
.....	52 - 56



( , , ).

PCR

LED

PCR

( , , ).

PCIN

PCIN

NAMUR.

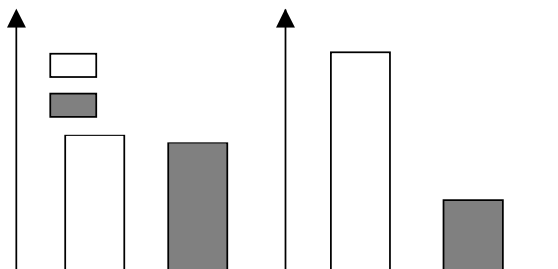
WE: KDB 04ATEX244.

PCIDX PCIAX  
PCIF,

6

0,1

5%.



( , , ).



( )

FT 50 C

# DATAMATRIX,

DATAMATRIX,

32

0,8

120 80

300 - 2100



MF

( )

3 - 960W.

5/12/15/24 VDC

2 . 4800

160°C,

( , - ),

14 20

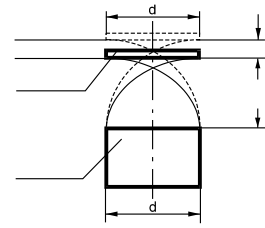
14-50

35, 40, 50

RS485.

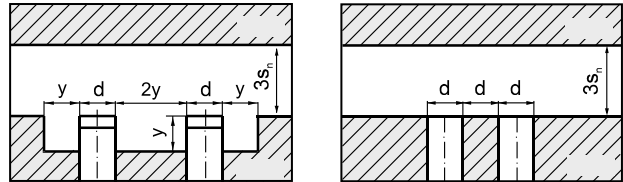
Palmtopa,



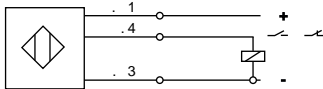


d -  
 $s_n$  -  
 $y=d$  -  
 $y=22$  -  
 $y=40$  -

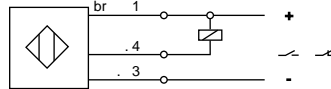
M18 . Sn  
 M30 . Sn



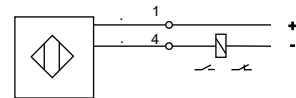
PNP DC



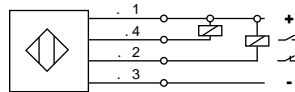
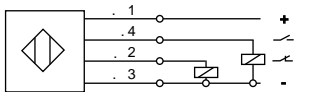
NPN



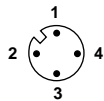
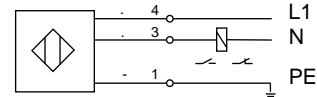
DC



DC



AC



M12



M8

( PCID-1,5; 2,5;KD; KL)

	1,00	0,50
	0,55	0,30 - 0,50
	0,40	pcv 0,60
	0,90	1,00
		1,00

PCID PCPD

PCIDz-xyP-KW

D -  
 A -  
 Z: \_ -  
 T - 8, M12  
 X - X  
 F - F  
 x = 1,5; 2; 2,5; 4; 5; 8; 10; 15

W -  
 K -  
 P - PNP  
 N - NPN  
 y = Z - (NO)  
 y = R - (N )  
 y = ZR - (NO)  
 (N )

PCPD-xZP-K PCPA-xZ-K

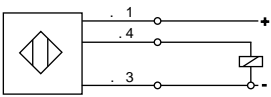
D -  
 x = 15; 20  
 Z - (NO)  
 R - (N )  
 P - PNP  
 N - NPN  
 K -

K -  
 Z - (NO)  
 R - (N )  
 x = 20  
 A -

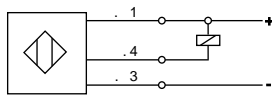


**PNP**

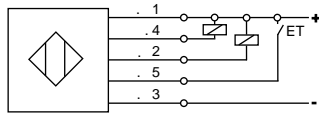
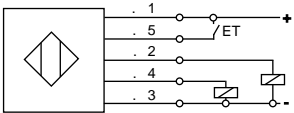
▶ **3pin**



**NPN**

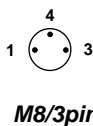
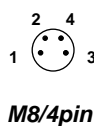
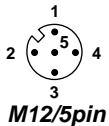
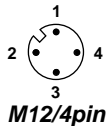


▶ **5pin ( F 40)**



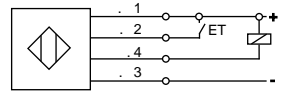
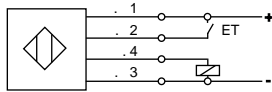
ET -

▶



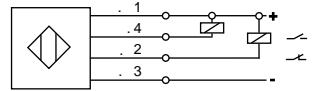
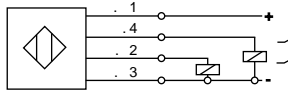
**PNP**

▶ **4pin ( F 20 F55)**

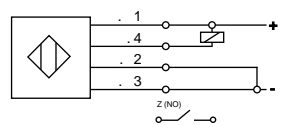
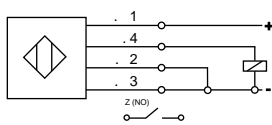
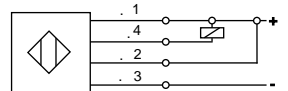
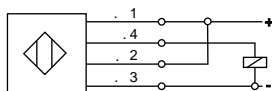


ET -

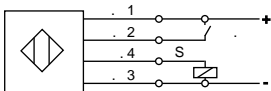
▶ **4pin**



▶ **4pin ( F18-1)**



▶

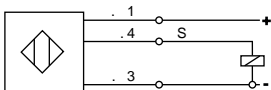


**UM 18**

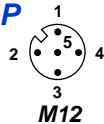
▶

**UM 18**

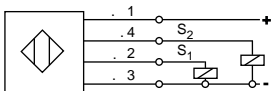
▶



**UM 30...P**



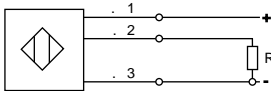
▶



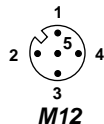
**UM 30...PP**

▶

▶



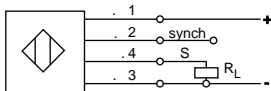
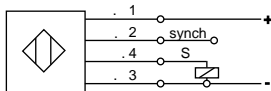
**UM 30...A**



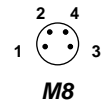
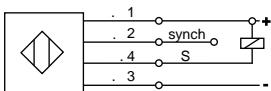
▶

**UT 20**

**PNP**



**NPN**



synch -  
S -

Nr pin	UM 18	
1	+Ub	.
3	-Ub	
4	S	
2	.	
5		

**UM 30**

Nr pin	UM 30...P	UM 30...PP	UM 30...A	
1	+Ub	+Ub	+Ub	.
3	-Ub	-Ub	-Ub	
4	S	S <sub>2</sub>	-	
2	-	S <sub>1</sub>	.	
5				

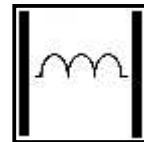
**UT 20**

Nr pin	UT 20	
1	+Ub	.
3	-Ub	
4	S	
2	synch.	



## - DC

										L (mm)	φ (mm)
PNP	NPN		(mm)		V	(mA)		(Hz)			
<b>3</b>											
IS 33 52	IS 33 51	•	0,6		•	10 - 30 DC	100	NO	3000	22	
<b>M4</b>											
IS 34 52	IS 34 51	•	0,6		•	10 - 30 DC	100	NO	3000	22	19
<b>4</b>											
IS 44 02	IS 44 01	•	0,8		•	10 - 30 DC	200	NO	3000	25	
IS 44 12	IS 44 11	•	0,8	M8/3pin	•	10 - 30 DC	200	NO	3000	38	
<b>M5</b>											
IS 45 02	IS 45 01	•	0,8		•	10 - 30 DC	200	NO	3000	25	20
IS 45 12	IS 45 11	•	0,8	M8/3pin	•	10 - 30 DC	200	NO	3000	38	23
<b>□ 5x5</b>											
IS 455 02	IS 455 01	•	0,8		•	10 - 30 DC	200	NO	3000	25	
<b>6,5</b>											
IS 46 02	IS 46 01	•	1,5		•	10 - 30 DC	200	NO	2000	16	
IS 46 12	IS 46 11 T	•	1,5	M8/3pin	•	10 - 30 DC	200	NO	2000	29	
ISZ 46 02	ISZ 46 01	•	1,5		•	10 - 30 DC	200	NO	2000	16	
IS 56 02	IS 56 01	•	3		•	10 - 30 DC	200	NO	1000	45	
IS 56 12	IS 56 11 T	•	3	M8/3pin	•	10 - 30 DC	200	NO	1000	60	
IS 56 42	IS 56 41	•	3	M12/4pin	•	10 - 30 DC	200	NO	1000	66	
<b>□ 8x8</b>											
IS 588 02	IS 588 01	•	3		•	10 - 30 DC	200	NO	1000	40	
:- ( IS 33, IS 44, IS 46-0... ISZ-46), - ( ) : IP 67 : PVC, 2 . : - NC											



## - DC

## M8

										L	ϕ
			(mm)			(mA)		(Hz)	(mm)	(mm)	
PNP	NPN										
<b>M8</b>											
PCID 1,5 ZP	PCID 1,5 ZN	•	1,5		•	10 - 30 DC	200	NO	3000	41	30
PCID 1,5 ZPK	PCID 1,5 ZNK	•	1,5	M8/3pin	•	10 - 30 DC	200	NO	3000	50	30
PCID 1,5 RP	PCID 1,5 RN	•	1,5		•	10 - 30 DC	200	NC	3000	41	30
PCID 1,5 RPK	PCID 1,5 RNK	•	1,5	M8/3pin	•	10 - 30 DC	200	NC	3000	50	30
PCID 2,5 ZP	PCID 2,5 ZN	•	2,5		•	10 - 30 DC	200	NO	1000	41	30
PCID 2,5 ZPK	PCID 2,5 ZNK	•	2,5	M8/3pin	•	10 - 30 DC	200	NO	1000	50	30
PCID 2,5 RP	PCID 2,5 RN	•	2,5		•	10 - 30 DC	200	NC	1000	41	30
PCID 2,5 RPK	PCID 2,5 RNK	•	2,5	M8/3pin	•	10 - 30 DC	200	NC	1000	50	30
PCIDT 1,5 ZPK	PCIDT 1,5 ZNK	•	1,5	M12/4pin	•	10 - 30 DC	200	NO	1000	64	40
PCIDT 1,5 RPK	PCIDT 1,5 RNK	•	1,5	M12/4pin	•	10 - 30 DC	200	NC	1000	64	40
PCIDT 2,0 ZPK	PCIDT 2,0 ZNK	•	2	M12/4pin	•	10 - 30 DC	200	NO	1000	64	40
PCIDT 2,0 RPK	PCIDT 2,0 RNK	•	2	M12/4pin	•	10 - 30 DC	200	NC	1000	64	40
PCIDT 2,5 ZPK	PCIDT 2,5 ZNK	•	2,5	M12/4pin	•	10 - 30 DC	200	NO	1000	64	40
PCIDT 2,5 RPK	PCIDT 2,5 RNK	•	2,5	M12/4pin	•	10 - 30 DC	200	NC	1000	64	40
IS 48 02	IS 48 01	•	1,5		•	10 - 30 DC	200	NO	3000	16	16
IS 48 12 T	IS 48 11 T	•	1,5	M8/3pin	•	10 - 30 DC	200	NO	3000	29	17

<b>M8 -</b>											
IS 58 02	IS 58 01	•	3		•	10 - 30 DC	200	NO	1000	45	45
IS 58 12 T	IS 58 11 T	•	3	M8/3pin	•	10 - 30 DC	200	NO	1000	60	45
IS 58 42	IS 58 41	•	3	M12/4pin	•	10 - 30 DC	200	NO	1000	66	44
IS 58 04 S	IS 58 03	•	6		•	10 - 30 DC	200	NO	500	49	45
IS 58 14-S	IS 58 13 T	•	6	M8/3pin	•	10 - 30 DC	200	NO	500	64	45
IS 58 44-S	IS 58 43	•	6	M12/4pin	•	10 - 30 DC	200	NO	500	66	44

- ; - IP 67; - PVC, 2 .

- ( PCID)

- NC ( IS)



## - DC

## M12

										L	ϕ
			(mm)			(mA)		(Hz)		(mm)	(mm)
PNP	NPN										
<b>M12</b>											
PCID 2 ZP <sup>1)</sup>	PCID 2 ZN <sup>1)</sup>	•	2		•	10 - 30 DC	200	NO	1000	62	41
PCID 2 ZPK <sup>1)</sup>	PCID 2 ZNK <sup>1)</sup>	•	2	M12/4pin	•	10 - 30 DC	200	NO	1000	70	41
PCID 2 RP <sup>1)</sup>	PCID 2 RN <sup>1)</sup>	•	2		•	10 - 30 DC	200	NC	1000	62	41
PCID 2 RPK <sup>1)</sup>	PCID 2 RNK <sup>1)</sup>	•	2	M12/4pin	•	10 - 30 DC	200	NC	1000	70	41
PCID 2 ZRP	PCID 2 ZRN	•	2		•	10 - 30 DC	200	NO NC	1000	62	41
PCID 2 ZRPK	PCID 2 ZRNK	•	2	M12/4pin	•	10 - 30 DC	200	NO NC	1000	70	41
SCID 2 ZP <sup>1)</sup>	SCID 2 ZN <sup>1)</sup>	•	2		•	10 - 30 DC	200	NO	1000	51	44
SCID 2 ZPK <sup>1)</sup>	SCID 2 ZNK <sup>1)</sup>	•	2	M12/4pin	•	10 - 30 DC	200	NO	1000	59	44
SCID 2 RP <sup>1)</sup>	SCID 2 RN <sup>1)</sup>	•	2		•	10 - 30 DC	200	NC	1000	51	44
SCID 2 RPK <sup>1)</sup>	SCID 2 RNK <sup>1)</sup>	•	2	M12/4pin	•	10 - 30 DC	200	NC	1000	59	44
SCID 2 ZRP	SCID 2 ZRN	•	2		•	10 - 30 DC	200	NO NC	1000	51	44
SCID 2 ZRPK	SCID 2 ZRNK	•	2	M12/4pin	•	10 - 30 DC	200	NO NC	1000	59	44
PCID 4 ZP <sup>1)</sup>	PCID 4 ZN <sup>1)</sup>	•	4		•	10 - 30 DC	200	NO	800	62	36
PCID 4 ZPK <sup>1)</sup>	PCID 4 ZNK <sup>1)</sup>	•	4	M12/4pin	•	10 - 30 DC	200	NO	800	70	36
PCID 4 ZPW	PCID 4 ZNW	•	4		•	10 - 30 DC	200	NO	800	62	41
PCID 4 ZPKW	PCID 4 ZNKW	•	4	M12/4pin	•	10 - 30 DC	200	NO	800	70	41
PCID 4 RP <sup>1)</sup>	PCID 4 RN <sup>1)</sup>	•	4		•	10 - 30 DC	200	NC	800	62	36
PCID 4 RPK <sup>1)</sup>	PCID 4 RNK <sup>1)</sup>	•	4	M12/4pin	•	10 - 30 DC	200	NC	800	70	36
PCID 4 RPW	PCID 4 RNW	•	4		•	10 - 30 DC	200	NC	800	62	41
PCID 4 RPKW	PCID 4 RNKW	•	4	M12/4pin	•	10 - 30 DC	200	NC	800	70	41
PCID 4 ZRP	PCID 4 ZRN	•	4		•	10 - 30 DC	200	NO NC	800	62	36
PCID 4 ZRPK	PCID 4 ZRNK	•	4	M12/4pin	•	10 - 30 DC	200	NO NC	800	70	36
PCID 4 ZRPW	PCID 4 ZRNW	•	4		•	10 - 30 DC	200	NO NC	800	62	41
PCID 4 ZRPKW	PCID 4 ZRNKW	•	4	M12/4pin	•	10 - 30 DC	200	NO NC	800	70	41
SCID 4 ZP <sup>1)</sup>	SCID 4 ZN <sup>1)</sup>	•	4		•	10 - 30 DC	200	NO	800	51	38
SCID 4 ZPK <sup>1)</sup>	SCID 4 ZNK <sup>1)</sup>	•	4	M12/4pin	•	10 - 30 DC	200	NO	800	59	38
SCID 4 ZPW	SCID 4 ZNW	•	4		•	10 - 30 DC	200	NO	800	51	44
SCID 4 ZPKW	SCID 4 ZNKW	•	4	M12/4pin	•	10 - 30 DC	200	NO	800	59	44
SCID 4 RP <sup>1)</sup>	SCID 4 RN <sup>1)</sup>	•	4		•	10 - 30 DC	200	NC	800	51	38
SCID 4 RPK <sup>1)</sup>	SCID 4 RNK <sup>1)</sup>	•	4	M12/4pin	•	10 - 30 DC	200	NC	800	59	38
SCID 4 RPW	SCID 4 RNW	•	4		•	10 - 30 DC	200	NC	800	51	44
SCID 4 RPKW	SCID 4 RNKW	•	4	M12/4pin	•	10 - 30 DC	200	NC	800	59	44
SCID 4 ZRP	SCID 4 ZRN	•	4		•	10 - 30 DC	200	NO NC	800	51	38
SCID 4 ZRPK	SCID 4 ZRNK	•	4	M12/4pin	•	10 - 30 DC	200	NO NC	800	59	38
SCID 4 ZRPW	SCID 4 ZRNW	•	4		•	10 - 30 DC	200	NO NC	800	51	44
SCID 4 ZRPKW	SCID 4 ZRNKW	•	4	M12/4pin	•	10 - 30 DC	200	NO NC	800	59	44
<b>M12 -</b>											
IS 512 02	IS 512 01	•	6		•	10 - 30 DC	200	NO	800	50	40
IS 512 42	IS 512 41	•	6	M12/4pin	•	10 - 30 DC	200	NO	800	60	40
IS 512 04-S	IS 512 03-S	•	10		•	10 - 30 DC	200	NO	400	50	40
IS 512 44-S	IS 512 43	•	10	M12/4pin	•	10 - 30 DC	200	NO	400	60	40

- IP 67;

PVC,

2

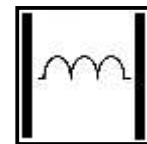
IS)

NC ( IS)

-1) 24-60 VDC 5 VDC 400 mA



SELS limited partnership, 02-641 Warsaw, 5a Malawskiego Str.  
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## - DC

## M18

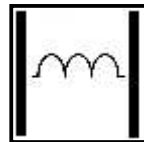
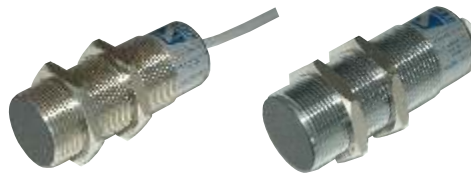
										L	ϕ
				(mm)		(V)	(mA)		(Hz)	(mm)	(mm)
PNP	NPN										
<b>M18</b>											
PCID 5 ZP <sup>1)</sup>	PCID 5 ZN <sup>1)</sup>	•		5		10 - 30 DC	200	NO	500	77	57
PCID 5 ZPK <sup>1)</sup>	PCID 5 ZNK <sup>1)</sup>	•		5	M12/4pin	10 - 30 DC	200	NO	500	90	57
PCID 5 RP <sup>1)</sup>	PCID 5 RN <sup>1)</sup>	•		5		10 - 30 DC	200	NC	500	77	57
PCID 5 RPK <sup>1)</sup>	PCID 5 RNK <sup>1)</sup>	•		5	M12/4pin	10 - 30 DC	200	NC	500	90	57
PCID 5 ZRP	PCID 5 ZRN	•		5		10 - 30 DC	200	No NC	500	77	57
PCID 5 ZRPK	PCID 5 ZRNK	•		5	M12/4pin	10 - 30 DC	200	NO NC	500	90	57
SCID 5 ZP <sup>1)</sup>	SCID 5 ZN <sup>1)</sup>	•		5		10 - 30 DC	200	NO	500	51	44
SCID 5 ZPK <sup>1)</sup>	SCID 5 ZNK <sup>1)</sup>	•		5	M12/4pin	10 - 30 DC	200	NO	500	64	44
SCID 5 RP <sup>1)</sup>	SCID 5 RN <sup>1)</sup>	•		5		10 - 30 DC	200	NC	500	51	44
SCID 5 RPK <sup>1)</sup>	SCID 5 RNK <sup>1)</sup>	•		5	M12/4pin	10 - 30 DC	200	NC	500	64	44
SCID 5 ZRP	SCID 5 ZRN	•		5		10 - 30 DC	200	NO NC	500	51	44
SCID 5 ZRPK	SCID 5 ZRNK	•		5	M12/4pin	10 - 30 DC	200	No NC	500	64	44
PCID 8 ZP <sup>1)</sup>	PCID 8 ZN <sup>1)</sup>	•		8		10 - 30 DC	200	NO	200	77	46
PCID 8 ZPK <sup>1)</sup>	PCID 8 ZNK <sup>1)</sup>	•		8	M12/4pin	10 - 30 DC	200	NO	200	90	46
PCID 8 ZPW	PCID 8 ZNW	•		8		10 - 30 DC	200	NO	200	77	57
PCID 8 ZPKW	PCID 8 ZNKW	•		8	M12/4pin	10 - 30 DC	200	NO	200	90	57
PCID 8 RP <sup>1)</sup>	PCID 8 RN <sup>1)</sup>	•		8		10 - 30 DC	200	NC	200	77	46
PCID 8 RPK <sup>1)</sup>	PCID 8 RNK <sup>1)</sup>	•		8	M12/4pin	10 - 30 DC	200	NC	200	90	46
PCID 8 RPW	PCID 8 RNW	•		8		10 - 30 DC	200	NC	200	77	57
PCID 8 RPKW	PCID 8 RNKW	•		8	M12/4pin	10 - 30 DC	200	NC	200	90	57
PCID 8 ZRP	PCID 8 ZRN	•		8		10 - 30 DC	200	NO NC	200	77	46
PCID 8 ZRPK	PCID 8 ZRNK	•		8	M12/4pin	10 - 30 DC	200	NO NC	200	90	46
PCID 8 ZRPW	PCID 8 ZRNW	•		8		10 - 30 DC	200	NO NC	200	77	57
PCID 8 ZRPKW	PCID 8 ZRNKW	•		8	M12/4pin	10 - 30 DC	200	NO NC	200	90	57
SCID 8 ZP <sup>1)</sup>	SCID 8 ZN <sup>1)</sup>	•		8		10 - 30 DC	200	NO	200	51	33
SCID 8 ZPK <sup>1)</sup>	SCID 8 ZNK <sup>1)</sup>	•		8	M12/4pin	10 - 30 DC	200	NO	200	64	33
SCID 8 ZPW	SCID 8 ZNW	•		8		10 - 30 DC	200	NO	200	51	44
SCID 8 ZPKW	SCID 8 ZNKW	•		8	M12/4pin	10 - 30 DC	200	NO	200	64	44
SCID 8 RP <sup>1)</sup>	SCID 8 RN <sup>1)</sup>	•		8		10 - 30 DC	200	NC	200	51	33
SCID 8 RPK <sup>1)</sup>	SCID 8 RNK <sup>1)</sup>	•		8	M12/4pin	10 - 30 DC	200	NC	200	64	33
SCID 8 RPW	SCID 8 RNW	•		8		10 - 30 DC	200	NC	200	51	44
SCID 8 RPKW	SCID 8 RNKW	•		8	M12/4pin	10 - 30 DC	200	NC	200	64	44
SCID 8 ZRP	SCID 8 ZRN	•		8		10 - 30 DC	200	NO NC	200	51	33
SCID 8 ZRPK	SCID 8 ZRNK	•		8	M12/4pin	10 - 30 DC	200	NO NC	200	64	33
SCID 8 ZRPW	SCID 8 ZRNW	•		8		10 - 30 DC	200	NO NC	200	51	44
SCID 8 ZRPKW	SCID 8 ZRNKW	•		8	M12/4pin	10 - 30 DC	200	NO NC	200	64	44
<b>M18 -</b>											
IS 518 02	IS 518 01	•		12		10 - 30 DC	200	NO	500	50	40
IS 518 42	IS 518 41	•		12	M12/4pin	10 - 30 DC	200	NO	500	64	40
IS 518 04-S	IS 518 03	•		20		10 - 30 DC	200	NO	200	50	40
IS 518 44-S	IS 518 43	•		20	M12/4pin	10 - 30 DC	200	NO	200	64	40

- IP 67; - PVC, 2 .

( IS)

NC ( IS)

-1) 24-60 VDC 5 VDC 400 mA



## - DC

## M30

										L	Ø
			(mm)		Σ	(mA)		(Hz)		(mm)	(mm)
PNP	NPN										
<b>M30</b>											
PCID 10 ZP <sup>1)</sup>	PCID 10 ZN <sup>1)</sup>	•	10		•	10 - 30 DC	200	NO	300	77	57
PCID 10 ZPK <sup>1)</sup>	PCID 10 ZNK <sup>1)</sup>	•	10	M12/4pin	•	10 - 30 DC	200	NO	300	90	57
PCID 10 RP <sup>1)</sup>	PCID 10 RN <sup>1)</sup>	•	10		•	10 - 30 DC	200	NC	300	77	57
PCID 10 RPK <sup>1)</sup>	PCID 10 RNK <sup>1)</sup>	•	10	M12/4pin	•	10 - 30 DC	200	NC	300	90	57
PCID 10 ZRP	PCID 10 ZRN	•	10		•	10 - 30 DC	200	NO NC	300	77	57
PCID 10 ZRPK	PCID 10 ZRNK	•	10	M12/4pin	•	10 - 30 DC	200	NO NC	300	90	57
SCID 10 ZP <sup>1)</sup>	SCID 10 ZN <sup>1)</sup>	•	10		•	10 - 30 DC	200	NO	300	54	44
SCID 10 ZPK <sup>1)</sup>	SCID 10 ZNK <sup>1)</sup>	•	10	M12/4pin	•	10 - 30 DC	200	NO	300	66	44
SCID 10 RP <sup>1)</sup>	SCID 10 RN <sup>1)</sup>	•	10		•	10 - 30 DC	200	NC	300	54	44
SCID 10 RPK <sup>1)</sup>	SCID 10 RNK <sup>1)</sup>	•	10	M12/4pin	•	10 - 30 DC	200	NC	300	66	44
SCID 10 ZRP	SCID 10 ZRN	•	10		•	10 - 30 DC	200	NO NC	300	54	44
SCID 10 ZRPK	SCID 10 ZRNK	•	10	M12/4pin	•	10 - 30 DC	200	NO NC	300	66	44
PCID 15 ZP <sup>1)</sup>	PCID 15 ZN <sup>1)</sup>	•	15		•	10 - 30 DC	200	NO	100	77	43
PCID 15 ZPK <sup>1)</sup>	PCID 15 ZNK <sup>1)</sup>	•	15	M12/4pin	•	10 - 30 DC	200	NO	100	90	43
PCID 15 ZPW	PCID 15 ZNW	•	15		•	10 - 30 DC	200	NO	100	77	57
PCID 15 ZPKW	PCID 15 ZNKW	•	15	M12/4pin	•	10 - 30 DC	200	NO	100	90	57
PCID 15 RP <sup>1)</sup>	PCID 15 RN <sup>1)</sup>	•	15		•	10 - 30 DC	200	NC	100	77	43
PCID 15 RPK <sup>1)</sup>	PCID 15 RNK <sup>1)</sup>	•	15	M12/4pin	•	10 - 30 DC	200	NC	100	90	43
PCID 15 RPW	PCID 15 RNW	•	15		•	10 - 30 DC	200	NC	100	77	57
PCID 15 RPKW	PCID 15 RNKW	•	15	M12/4pin	•	10 - 30 DC	200	NC	100	90	57
PCID 15 ZRP	PCID 15 ZRN	•	15		•	10 - 30 DC	200	NO NC	100	77	43
PCID 15 ZRPK	PCID 15 ZRNK	•	15	M12/4pin	•	10 - 30 DC	200	NO NC	100	90	43
PCID 15 ZRPW	PCID 15 ZRNW	•	15		•	10 - 30 DC	200	NO NC	100	77	57
PCID 15 ZRPKW	PCID 15 ZRNKW	•	15	M12/4pin	•	10 - 30 DC	200	NO NC	100	90	57
SCID 15 ZP <sup>1)</sup>	SCID 15 ZN <sup>1)</sup>	•	15		•	10 - 30 DC	200	NO	100	54	33
SCID 15 ZPK <sup>1)</sup>	SCID 15 ZNK <sup>1)</sup>	•	15	M12/4pin	•	10 - 30 DC	200	NO	100	66	33
SCID 15 ZPW	SCID 15 ZNW	•	15		•	10 - 30 DC	200	NO	100	54	44
SCID 15 ZPKW	SCID 15 ZNKW	•	15	M12/4pin	•	10 - 30 DC	200	NO	100	66	44
SCID 15 RP <sup>1)</sup>	SCID 15 RN <sup>1)</sup>	•	15		•	10 - 30 DC	200	NC	100	52	33
SCID 15 RPK <sup>1)</sup>	SCID 15 RNK <sup>1)</sup>	•	15	M12/4pin	•	10 - 30 DC	200	NC	100	66	33
SCID 15 RPW	SCID 15 RNW	•	15		•	10 - 30 DC	200	NC	100	52	44
SCID 15 RPKW	SCID 15 RNKW	•	15	M12/4pin	•	10 - 30 DC	200	NC	100	66	44
SCID 15 ZRP	SCID 15 ZRN	•	15		•	10 - 30 DC	200	NO NC	100	52	33
SCID 15 ZRPK	SCID 15 ZRNK	•	15	M12/4pin	•	10 - 30 DC	200	NO NC	100	66	33
SCID 15 ZRPW	SCID 15 ZRNW	•	15		•	10 - 30 DC	200	NO NC	100	52	44
SCID 15 ZRPKW	SCID 15 ZRNKW	•	15	M12/4pin	•	10 - 30 DC	200	NO NC	100	66	44
<b>M30 -</b>											
IS 530 02	IS 530 01	•	22		•	10 - 30 DC	200	NO	300	60	50
IS 530 42	IS 530 41	•	22	M12/4pin	•	10 - 30 DC	200	NO	300	74	50
IS 530 04-S	IS 530 03	•	40		•	10 - 30 DC	200	NO	100	60	50
IS 530 44-S	IS 530 43	•	40	M12/4pin	•	10 - 30 DC	200	NO	100	74	50

- ; - IP 67; - PVC, 2 .  
 - ( IS)  
 - NC ( IS)  
 -1) 24-60 VDC 5 VDC 400 mA



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 e-mail: sels@sels.pl, http://www.sels.pl





## - DC

			(mm)	$\Sigma$	(mA)		(Hz)			L (mm)	G (mm)
PCID 2 ZK	•		2	10 - 30 DC	150	NO	1000	M12/B	M12	59	40
PCID 2 Z	•		2	10 - 30 DC	150	NO	1000	M12/A		50	42
PCID 2 RK	•		2	10 - 30 DC	150	NC	1000	M12/B	M12	59	40
PCID 2 R	•		2	10 - 30 DC	150	NC	1000	M12/A		50	42
PCID 4 ZK		•	4	10 - 30 DC	150	NO	500	M12/D	M12	59	34
PCID 4 Z		•	4	10 - 30 DC	150	NO	500	M12/C		50	36
PCID 4 RK		•	4	10 - 30 DC	150	NC	500	M12/D	M12	59	34
PCID 4 R		•	4	10 - 30 DC	150	NC	500	M12/C		50	36
PCID 5 ZK	•		5	10 - 30 DC	150	NO	500	M18/B	M12	60	40
PCID 5 Z	•		5	10 - 30 DC	150	NO	500	M18/A		50	42
PCID 5 RK	•		5	10 - 30 DC	150	NC	500	M18/B	M12	60	40
PCID 5 R	•		5	10 - 30 DC	150	NC	500	M18/A		50	42
PCID 8 ZK		•	8	10 - 30 DC	150	NO	300	M18/D	M12	60	30
PCID 8 Z		•	8	10 - 30 DC	150	NO	300	M18/C		50	32
PCID 8 RK		•	8	10 - 30 DC	150	NC	300	M18/D	M12	60	30
PCID 8 R		•	8	10 - 30 DC	150	NC	300	M18/C		50	32
PCID 10 ZK	•		10	10 - 30 DC	150	NO	300	M30/B	M12	60	42
PCID 10 Z	•		10	10 - 30 DC	150	NO	300	M30/A		50	42
PCID 10 RK	•		10	10 - 30 DC	150	NC	300	M30/B	M12	60	42
PCID 10 R	•		10	10 - 30 DC	150	NC	300	M30/A		50	42
PCID 15 ZK		•	15	10 - 30 DC	150	NO	200	M30/D	M12	60	30
PCID 15 Z		•	15	10 - 30 DC	150	NO	200	M30/C		50	30
PCID 15 RK		•	15	10 - 30 DC	150	NC	200	M30/D	M12	60	30
PCID 15 R		•	15	10 - 30 DC	150	NC	200	M30/C		50	30

- IP 67;

PVC,

2 .

## - DC

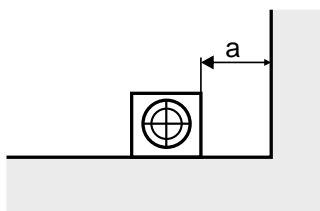
			(mm)	$\Sigma$	(mA)		(Hz)	*		L (mm)	G (mm)
PNP	NPN										
IT 12 BM PSL4		•	6	10 - 30 DC	200	NO	400	M12/B	M12	60	41
IT 12 NBM PSL4		•	10	10 - 30 DC	200	NO	400	M12/D	M12	60	36
IT 18 BM PSL4		•	10	10 - 30 DC	200	NO	200	M18/A	M12	64	43
IT 18 NBM PSL4		•	20	10 - 30 DC	200	NO	200	M18/D	M12	64	36
IT 30 BM PSL4		•	20	10 - 30 DC	200	NO	100	M30/A	M12	64	43
IT 30 NBM PSL4		•	40	10 - 30 DC	200	NO	100	M30/D	M12	64	33

M12, M18, M30



- DC A X									
				(mm)	Σ	(mA)		(Hz)	*
PNP	NPN								
PCIDX 15 P	PCIDX 15 N	•		15	10 - 30 DC	200	NO NC	100	X
PCIDX 20 P	PCIDX 20 N		•	20	10 - 30 DC	200	NO NC	100	X
PCIDX 25 P	PCIDX 25 N		•	25	10 - 30 DC	200	NO NC	100	X
PCIF 5 ZP	PCIF 5 ZN	•		5	10 - 30 DC	200	NO	500	F
PCIF 5 ZPK	PCIF 5 ZNK	•		5	10 - 30 DC	200	NO	500	FK <sup>1)</sup>
PCIF 5 RP	PCIF 5 RN	•		5	10 - 30 DC	200	NC	500	F
PCIF 5 RPK	PCIF 5 RNK	•		5	10 - 30 DC	200	NC	500	FK <sup>1)</sup>
PCIAX 15 Z		•		15	90 - 250 AC	10 - 200	NO	15	X
PCIAX 15 R		•		15	90 - 250 AC	10 - 200	NC	15	X
PCIAX 20 Z			•	20	90 - 250 AC	10 - 200	NO	15	X
PCIAX 20 R			•	20	90 - 250 AC	10 - 200	NC	15	X
PCIAX 25 Z			•	25	90 - 250 AC	10 - 200	NO	10	X
PCIAX 25 R			•	25	90 - 250 AC	10 - 200	NC	10	X

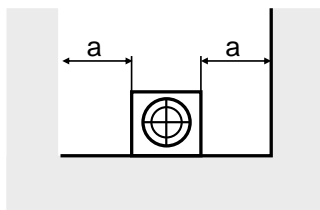
- ; IP 67;  
 : PCIDX - 24-60VDC 400mA, PCIF - 5VDC  
 1) - M8/3pin



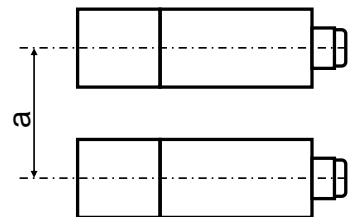
S <sub>n</sub>	a
15 mm	>0 mm
20 mm	>40 mm
25 mm	>50 mm



S <sub>n</sub>	a
15 mm	>0 mm
20 mm	>25 mm
25 mm	>30 mm



S <sub>n</sub>	a
15 mm	>0 mm
20 mm	>60 mm
25 mm	>60 mm

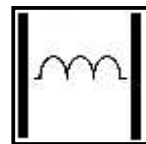


S <sub>n</sub>	a
15 mm	>80 mm
20 mm	>120 mm
25 mm	>120 mm

- DC AC F40										
				(mm)	Σ	(mA)		(Hz)	*	L (mm)
PNP	NPN									
IT 40 B PAL4	IT 40 B NAL4	•		15	15 - 34 DC	200	NO NC	100	F40	M12
IT 40 B AC SL4		•		15	20 - 265 AC	300	NO	25	F40	M12
IT 40 BD PAL4	IT 40 BD NAL4	•		20	15 - 34 DC	200	NO NC	30	F40	M12
IT 40 BD AC SL4		•		20	20 - 265 AC	300	NO	25	F40	M12
IT 40 NB PAL4	IT 40 NB NAL4		•	35	15 - 34 DC	200	NO NC	30	F40	M12
IT 40 NB AC SL4			•	35	20 - 265 AC	300	NO	25	F40	M12

F40, ABS, IP 67

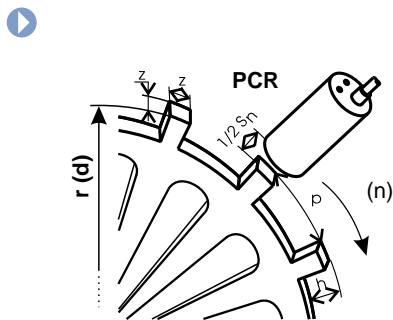
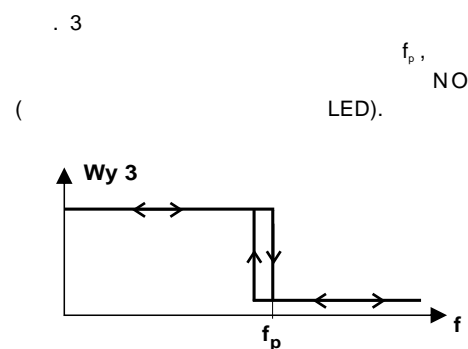
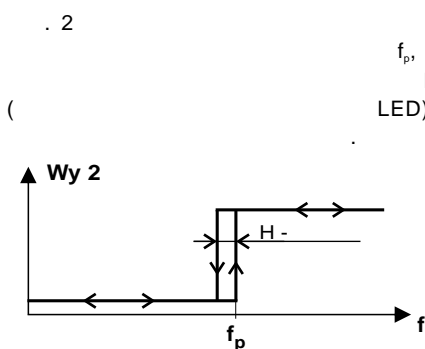
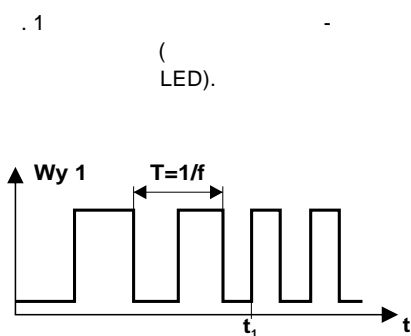




# PCR

				(mm)	~	(mA)		f <sub>p</sub> (imp/min)	H (%)	*		L (mm)	φ (mm)
PNP	NPN												
PCR 10 ZP	PCR 10 ZN	•		10	15 - 30 DC	200	NO	6 - 6000	10 - 80	M30/A		84	60
PCR 10 ZPK	PCR 10 ZNK	•		10	15 - 30 DC	200	NO	6 - 6000	10 - 80	M30/B	M12	87	60
PCR 10 RP	PCR 10 RN	•		10	15 - 30 DC	200	NC	6 - 6000	10 - 80	M30/A		84	60
PCR 10 RPK	PCR 10 RNK	•		10	15 - 30 DC	200	NC	6 - 6000	10 - 80	M30/B	M12	87	60
PCR 15 ZP	PCR 15 ZN	•		15	15 - 30 DC	200	NO	6 - 6000	10 - 80	M30/C		84	48
PCR 15 ZPK	PCR 15 ZNK	•		15	15 - 30 DC	200	NO	6 - 6000	10 - 80	M30/D	M12	87	48
PCR 15 RP	PCR 15 RN	•		15	15 - 30 DC	200	NC	6 - 6000	10 - 80	M30/C		84	48
PCR 15 RPK	PCR 15 RNK	•		15	15 - 30 DC	200	NC	6 - 6000	10 - 80	M30/D	M12	87	48

- ; - IP 67; - PVC, 2 .  
± 50%; C - ; .



$$= (f_p - f_w) / f_p \cdot 100\%$$

PCR 80%

PCR 4

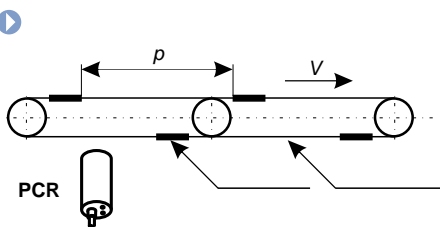
( ); 20

$$t = 60 / f_p (c)$$

S<sub>n</sub>

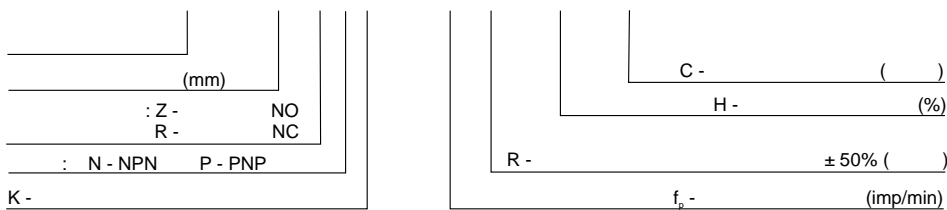
(Z);

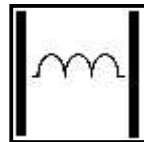
? S<sub>n</sub>



	1/2 S <sub>n</sub>	z	p	h
PCR - 10	5 mm	10 mm	40 mm	15 mm
PCR - 15	7,5 mm	15 mm	70 mm	20 mm

## PCR - 10 ZNK - 100R - 20 - C





## PCIN

			(mm)	Σ	(mA)		(Hz)	*		L (mm)	ϕ (mm)
					$R_S=1k\Omega$	$U_Z=8,2V$					
PCIN 2 Ex	•		2	7 - 18 DC	<1,0	>2,2	1000	M12/A	•	40	30
PCIN 4 Ex		•	4	7 - 18 DC	<1,0	>2,2	500	M12/C	•	40	30
PCIN 5 Ex	•		5	7 - 18 DC	<1,0	>2,2	500	M18/A	•	50	34
PCIN 8 Ex		•	8	7 - 18 DC	<1,0	>2,2	200	M18/C	•	50	34
PCIN 10 Ex	•		10	7 - 18 DC	<1,0	>2,2	200	M30/A	•	50	34
PCIN 15 Ex		•	15	7 - 18 DC	<1,0	>2,2	100	M30/C	•	50	34

- ; - IP 67; - PVC, 2 .



PCIN

94/9/WE.

WE nr: KDB 04 ATEX244, KDB 04 ATEX244/1



I M1 Ex ia I

II 2G Ex ia IIC T6

II 2D Ex iaD 21 T85°C



PCIN

NAMUR.

PCIN

LED

## PCIN - SBEx-2

SBEx-2

NAMUR

1,2 / 2,1 m (DIN 19234).

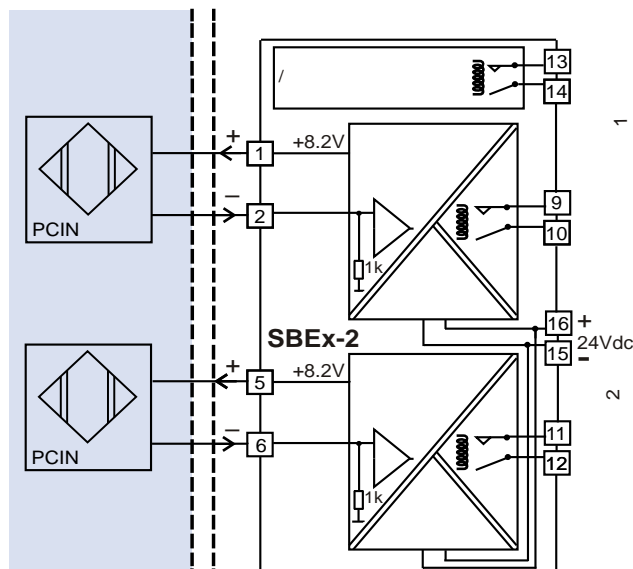
(0 - 24 V),

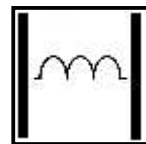
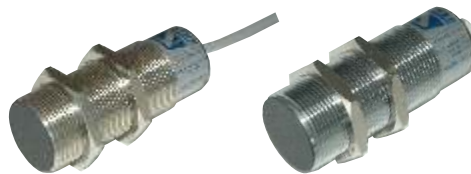
PCIN,

WE: KDB 04ATEX061 CECHA II (1) GD [EEx ia] IIC, I (M1) [EEx ia] I

PCIN,

	20-28 VDC / max 50 mA
	8,2 V ±5% 1kOhm
PCIN:	PCIN,
I (2 6):	1,2 / 2,1 mA (NAMUR)
	1 kOhm
	30 kOhm
	I < 0,1 mA
	I > 0,25 mA
	R < 100kOhm
	R > 360kOhm
	max 3 ms
	max 50 Hz
	max 250 VAC / 0,3 A
	max 30 VDC / 1 A
	U > 10 mV, I > 10 μA
OC:	350 V; 0,1A; 450 Hz; r = 30 kOhm
	IP 20
	-20...+60°C
	99 x 22,5 x 114,5 mm (TS35)





## - AC

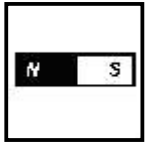
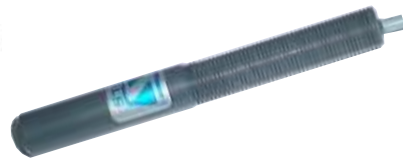
## PCIA, SCIA

			(mm)	V	(mA)		(Hz)	*		PCIA		SCIA			
										L (mm)	G (mm)	L (mm)	G (mm)		
PCIA 2 ZK	•		2	90-250 AC	10 - 200	NO	10	M12/B	M12		70	40			
PCIA 2 Z	•		2	90-250 AC	10 - 200	NO	10	M12/A		•	62	55			
PCIA 2 RK	•		2	90-250 AC	10 - 200	NC	10	M12/B	M12		70	40			
PCIA 2 R	•		2	90-250 AC	10 - 200	NC	10	M12/A		•	62	55			
PCIA 4 ZK		•	4	90-250 AC	10 - 200	NO	10	M12/D	M12		70	34			
PCIA 4 Z		•	4	90-250 AC	10 - 200	NO	10	M12/C		•	62	46			
PCIA 4 RK		•	4	90-250 AC	10 - 200	NC	10	M12/D	M12		70	34			
PCIA 4 R		•	4	90-250 AC	10 - 200	NC	10	M12/C		•	62	46			
PCIA 5 ZK	SCIA 5 ZK	•	5	90-250 AC	10 - 200	NO	15	M18/B	M12		85	59	60	44	
PCIA 5 Z	SCIA 5 Z	•	5	90-250 AC	10 - 200	NO	15	M18/A		•	77	56	51	44	
PCIA 5 RK	SCIA 5 RK	•	5	90-250 AC	10 - 200	NC	15	M18/B	M12		85	59	60	44	
PCIA 5 R	SCIA 5 R	•	5	90-250 AC	10 - 200	NC	15	M18/A		•	77	56	51	44	
PCIA 8 ZK	SCIA 8 ZK		•	8	90-250 AC	10 - 200	NO	10	M18/D	M12		85	49	60	34
PCIA 8 Z	SCIA 8 Z		•	8	90-250 AC	10 - 200	NO	10	M18/C		•	77	46	51	34
PCIA 8 RK	SCIA 8 RK		•	8	90-250 AC	10 - 200	NC	10	M18/D	M12		85	49	60	34
PCIA 8 R	SCIA 8 R		•	8	90-250 AC	10 - 200	NC	10	M18/C		•	77	46	51	34
PCIA 10 ZK	SCIA 10 ZK	•	10	90-250 AC	10 - 200	NO	10	M30/B	M12		86	57	62	46	
PCIA 10 Z	SCIA 10 Z	•	10	90-250 AC	10 - 200	NO	10	M30/A		•	77	57	52	46	
PCIA 10 RK	SCIA 10 RK	•	10	90-250 AC	10 - 200	NC	10	M30/B	M12		86	57	62	46	
PCIA 10 R	SCIA 10 R	•	10	90-250 AC	10 - 200	NC	10	M30/A		•	77	57	52	46	
PCIA 15 ZK	SCIA 15 ZK		•	15	90-250 AC	10 - 200	NO	5	M30/D	M12		86	44	64	34
PCIA 15 Z	SCIA 15 Z		•	15	90-250 AC	10 - 200	NO	5	M30/C		•	77	44	54	34
PCIA 15 RK	SCIA 15 RK		•	15	90-250 AC	10 - 200	NC	5	M30/D	M12		86	44	64	34
PCIA 15 R	SCIA 15 R		•	15	90-250 AC	10 - 200	NC	5	M30/C		•	77	44	54	34

-	:	- IP 67;	-	PVC,	2 .
-	:				
-		24 VAC (20 - 500 mA)		M12	SCIA

			(mm)	V	(mA)	(mA)	(mm)	( )	*		(°C)	L (mm)	G (mm)
IS 512 02AI	•		0...6	15-30 DC	< 10	4...20 <sup>1)</sup>	< 0,3	0/200	M12/A	•	-10...+60	50	50
IS 518 02A	•		0...10	15-30 DC	< 10	4...20 <sup>1)</sup>	< 0,3	0/200	M18/A	•	-10...+60	50	50

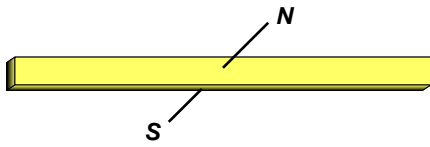
-													
IP 67													
1) -						0...10 V.							



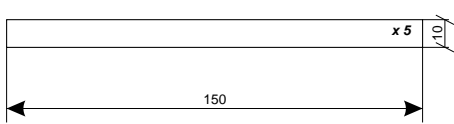
## DH

	(mm)	(V)	(mA)	(VA)		(Hz)	*			L (mm)	ϕ (mm)
DH 96	30	220 AC	5	180	NO	370	M12		•	100	50
DH 97	30	150 AC	0,5	12	NO	900	M12		•	100	50
DH 98	30	150 AC	0,5	12	NO	900	M12/C		•	66	41
DH 99	30	220 AC	5	180	NO	370	M12/C		•	66	41
DH 100	30	220 AC	0,5	20	NO/NC	900	M12		•	100	50
DH 101	30	220 AC	0,5	20	NO/NC	900	M12/C		•	66	41

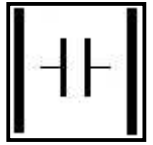
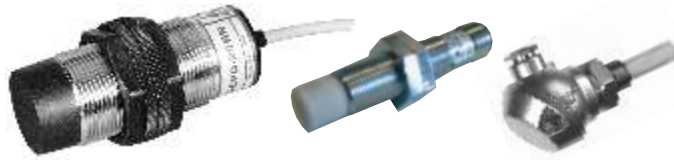
- ( C), PUR - ; I 67; - PVC, 2 .  
: C - ( A).



15





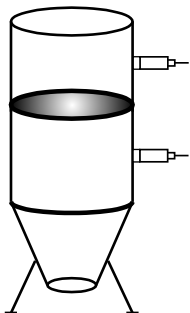


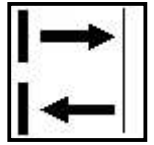
								*			L (mm)	φ (mm)
			(mm)	(V)	(mA)		(Hz)					
PNP	NPN											
KD 06 B PSM3	KD 06 B NSM3	•	1,5	10 - 30 DC	200	NO	200	6,5/F	8 <sup>1)</sup>		46	36
KD 06 B POM3	KD 06 B NOM3	•	1,5	10 - 30 DC	200	NC	200	6,5/F	8 <sup>1)</sup>		46	36
KD 08 B PSM3	KD 08 B NSM3	•	1,5	10 - 30 DC	200	NO	200	M8/B	M8		46	36
KD 08 B POM3	KD 08 B NOM3	•	1,5	10 - 30 DC	200	NC	200	M8/B	M8		46	36
KL 06 NB PSM3	KL 06 NB NSM3	•	3	10 - 30 DC	200	NO	200	6,5/F	8 <sup>1)</sup>		46	36
KL 06 NB POM3	KL 06 NB NOM3	•	3	10 - 30 DC	200	NC	200	6,5/F	8 <sup>1)</sup>		46	36
KL 08 NB PSM3	KL 08 NB NSM3	•	3	10 - 30 DC	200	NO	200	M8/D	M8		46	36
KL 08 NB POM3	KL 08 NB NOM3	•	3	10 - 30 DC	200	NC	200	M8/D	M8		46	36
KD 12 B PSL4	KD 12 B NSL4	•	4	10 - 30 DC	200	NO	100	M12/B	M12		60	40
KD 12 B POL4	KD 12 B NOL4	•	4	10 - 30 DC	200	NC	100	M12/B	M12		60	40
KL 12 NB PSL4	KL 12 NB NSL4	•	8	10 - 30 DC	200	NO	100	M12/D	M12		60	40
KL 12 NB POL4	KL 12 NB NOL4	•	8	10 - 30 DC	200	NC	100	M12/D	M12		60	40
KD 18 B PSL4	KD 18 B NSL4	•	8	10 - 30 DC	300	NO	100	M18/B	M12		75	60
KD 18 B POL4	KD 18 B NOL4	•	8	10 - 30 DC	300	NC	100	M18/B	M12		75	60
KL 18 NB PSL4	KL 18 NB NSL4	•	15	10 - 30 DC	300	NO	100	M18/D	M12		75	60
KL 18 NB POL4	KL 18 NB NOL4	•	15	10 - 30 DC	300	NC	100	M18/D	M12		75	60
KD 30 B PSOL4	KD 30 B NSOL4	•	20	10 - 30 DC	300	NO/NC	100	M30/B	M12		78	60
PCPD 15 ZP <sup>2)</sup>	PCPD 15 ZN <sup>2)</sup>	•	15	10 - 30 DC	200	NO	200	M30/A		•	77	57
PCPD 15 RP <sup>2)</sup>	PCPD 15 RN <sup>2)</sup>	•	15	10 - 30 DC	200	NC	200	M30/A		•	77	57
PCPD 15 ZPK <sup>2)</sup>	PCPD 15 ZNK <sup>2)</sup>	•	15	10 - 30 DC	200	NO	200	M30/B	M12		86	57
PCPD 15 RPK <sup>2)</sup>	PCPD 15 RNK <sup>2)</sup>	•	15	10 - 30 DC	200	NC	200	M30/B	M12		86	57
PCPD 20 ZP <sup>2)</sup>	PCPD 20 ZN <sup>2)</sup>	•	20	10 - 30 DC	200	NO	200	M30/C		•	77	44
PCPD 20 RP <sup>2)</sup>	PCPD 20 RN <sup>2)</sup>	•	20	10 - 30 DC	200	NC	200	M30/C		•	77	44
PCPD 20 ZPK <sup>2)</sup>	PCPD 20 ZNK <sup>2)</sup>	•	20	10 - 30 DC	200	NO	200	M30/D	M12		86	44
PCPD 20 RPK <sup>2)</sup>	PCPD 20 RNK <sup>2)</sup>	•	20	10 - 30 DC	200	NC	200	M30/D	M12		86	44
PCPA 20 Z		•	20	90-250 AC	10-200	NO	10	M30/C		•	77	44
PCPA 20 R		•	20	90-250 AC	10-200	NC	10	M30/C		•	77	44
PCPA 20 ZK		•	20	90-250 AC	10-200	NO	10	M30/D	M12		86	44
PCPA 20 RK		•	20	90-250 AC	10-200	NC	10	M30/D	M12		86	44
KL 30 NB PSOL4	KL 30 NB NSOL4	•	30	10 - 30 DC	300	NO/NC	100	M30/D	M12		78	60
KL 18 NBHDT PSP	KL 18 NBHDT NSP		125°C	10 - 30 DC	100	NO	5		PG 9		12 x L35	
KL 18 NBHDT POP	KL 18 NBHDT NOP		10bar	10 - 30 DC	100	NC	5		PG 9		12 x L35	

- IP 65; - PVC, 2 .

1) - ; : RKM3/06/2M ( ) RKMW3/06/2M ( 90°)

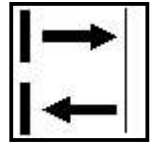
2) - PCPD... .48.





		(mm)			(V)	(mA)			(Hz)	*			L (mm)	G (mm)
PNP	NPN													
FT 18-1 R PSK4	FT 18-1 R NSK4	400	.	R	10 - 30 DC	100	NO	NC	333	M18/A		•	71	30
FT 18-1 R PSL4	FT 18-1 R NSL4	400	.	R	10 - 30 DC	100	NO	NC	333	M18/B	M12		80	30
FT 18-1 ID PSK4	FT 18-1 ID NSK4	800	.	IR	10 - 30 DC	100	NO	NC	333	M18/A		•	71	30
FT 18-1 ID PSL4	FT 18-1 ID NSL4	800	.	IR	10 - 30 DC	100	NO	NC	333	M18/B	M12		80	30
SCOO 50 ZRP	SCOO 50 ZRN	50	.	IR	10 - 30 DC	100	NO	NC	250	M18/A		•	64	43
SCOO 50 ZRPK	SCOO 50 ZRNK	50	.	IR	10 - 30 DC	100	NO	NC	250	M18/B	M12		78	43
SCOO 100 ZRP	SCOO 100 ZRN	100	.	IR	10 - 30 DC	100	NO	NC	250	M18/A		•	64	43
SCOO 100 ZRPK	SCOO 100 ZRNK	100	.	IR	10 - 30 DC	100	NO	NC	250	M18/B	M12		78	43
SCOO 200 ZRP	SCOO 200 ZRN	200	.	IR	10 - 30 DC	100	NO	NC	250	M18/A		•	64	43
SCOO 200 ZRPK	SCOO 200 ZRNK	200	.	IR	10 - 30 DC	100	NO	NC	250	M18/B	M12		78	43
SCOO 700 ZRP	SCOO 700 ZRN	700	.	IR	10 - 30 DC	100	NO	NC	1000	M18/A		•	77	43
SCOO 700 ZRPK	SCOO 700 ZRNK	700	.	IR	10 - 30 DC	100	NO	NC	1000	M18/B	M12		82	43
SCOO 800 ZRP	SCOO 800 ZRN	800	.	IR	10 - 30 DC	100	NO	NC	250	M18/A		•	64	43
SCOO 800 ZRPK	SCOO 800 ZRNK	800	.	IR	10 - 30 DC	100	NO	NC	250	M18/B	M12		78	43
FM 04 163	FM 04 153	50	.	IR	10 - 30 DC	100		NO	200	4/F	M8		45	
FM 04 161	FM 04 151	50	.	IR	10 - 30 DC	100		NO	200	4/E		•	35	
FM 05 163	FM 05 153	50	.	IR	10 - 30 DC	100		NO	200	M5/B	M8		45	30
FM 05 161	FM 05 151	50	.	IR	10 - 30 DC	100		NO	200	M5/A		•	35	30
FT 12 R PSK4	FT 12 R NSK4	300	.	R	10 - 30 DC	200		NO	1000	M12/A		•	50	50
FT 12 R PSL4	FT 12 R NSL4	300	.	R	10 - 30 DC	200		NO	1000	M12/B	M12		60	41
FMS 12 183 <sup>1)</sup>		200	.	IR	10 - 30 DC	200		NC	200	M12	M8		83	74
FMS 12 163 <sup>1)</sup>		200	.	IR	10 - 30 DC	200		NO	200	M12	M8		83	74
FMS 12 162 <sup>1)</sup>		200	.	IR	10 - 30 DC	200		NO	200	M12		•	74	47
FMS 12 182 <sup>1)</sup>		200	.	IR	10 - 30 DC	200		NC	200	M12		•	74	47
FKS 18 W 34 UL4 <sup>1)</sup>		300	.	IR	10 - 30 DC	150	NO	NC	500	M18	M12		74	32
FMS 18 34 B		400	.	IR	10 - 30 DC	200		NO	1000	M18/A		•	85	46
FMS 18 34 B L4		400	.	IR	10 - 30 DC	200		NO	1000	M18/B	M12		83	46
FMS 30 34 B		1000	.	IR	10 - 30 DC	200		NO	100	M18/A		•	87	48
FMS 30 34 B L4		1000	.	IR	10 - 30 DC	200		NO	100	M18/B	M12		85	48
FT 18 R PSL4	FT 18 R NSL4	600	.	R	10 - 30 DC	200		NO	1000	M18/B	M12		64	46
FT 18 R PSK4	FT 18 R NSK4	600	.	R	10 - 30 DC	200		NO	1000	M18/A		•	50	50
FT 20 R PSK4	FT 20 R NSK4	300	.	R	10 - 30 DC	100	NO	NC	1000	F20		•		
FT 20 R PSM4	FT 20 R NSM4	300	.	R	10 - 30 DC	100	NO	NC	1000	F20	M8			
FT 23 R PSM4		300	.	R	10 - 30 DC	100	NO	NC	1000	F20	M8			
FT 20 RL PSK4	FT 20 RL NSK4	200	.	L	10 - 30 DC	100	NO	NC	4000	F20		•		
FT 20 RL PSM4	FT 20 RL NSM4	200	.	L	10 - 30 DC	100	NO	NC	4000	F20	M8			
FT 40R PSCL5 <sup>2)</sup>	FT 40R NSCL5 <sup>2)</sup>	1000	.	R	10 - 30 DC	200	NO	NC	1000	F40	M12			
FT 40R PAL4		1000	.	R	10 - 30 DC	200	NO	NC	1000	F40	M12			
FT 92 IL PSL4		6000	.	IRL	18 - 30 DC	100	NO	NC	13/31 ms	F92	M12			
FT 88 R GA L4 <sup>3)</sup>		2000	.	R	10 - 30 DC	100	NO	NC	125	F88	M12			

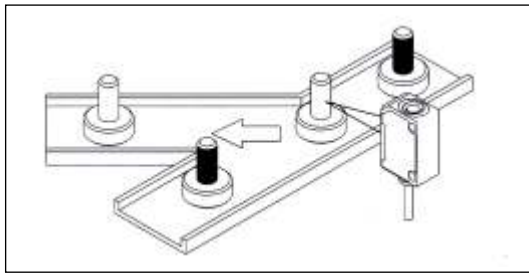
: SCOO50, SCOO100, SCOO200 - PBT/PC;  
 F20, F40, F55, F88, FKS - ABS; FM, FT12, FT18, FT18-1, FMS - ;  
 IR - í ð í é 880nm, R - 660 nm; L - 650 nm; IRL - 905 nm;  
 - PVC 2 m.  
 1) - , 2) - ,  
 3) - PushPull - NPN PNP,  
 IP67 ( FT 18-1... - IP65). FT 18-1... -



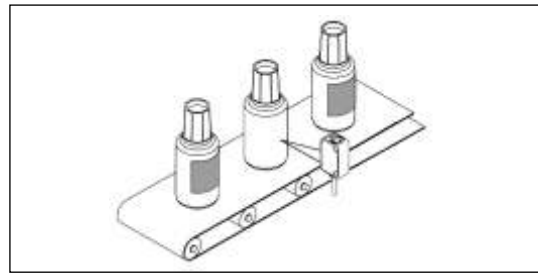
		(mm)			(V)	(mA)		(Hz)	*			
PNP	NPN											
FT 55-R-PS-L4	FT 55-R-NS-L4	2,0	.	R	10 - 30 DC	100	NO NC	600	F55	M12		
FT 55-R-PS-K4	FT 55-R-NS-K4	2,0	.	R	10 - 30 DC	100	NO NC	600	F55		•	ABS
FT 55-RL2-PS-L4	FT 55-RL2-NS-L4	1,2	.	L	10 - 30 DC	100	NO NC	1000	F55	M12		
FT 55-RL2-PS-K4	FT 55-RL2-NS-K4	1,2	.	L	10 - 30 DC	100	NO NC	1000	F55		•	
FT 55-RM-PS-L4 <sup>6)</sup>	FT 55-RM-NS-L4 <sup>6)</sup>	1,75	.	R	10 - 30 DC	100	NO NC	600	F55	M12		

<sup>6)</sup> IP69K **ECOLAB**

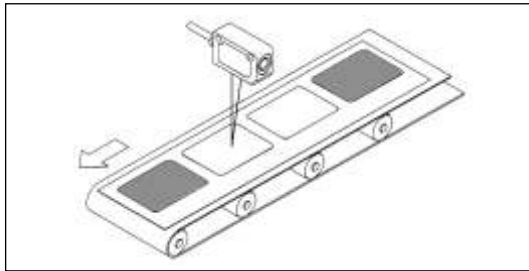
FT 20 R



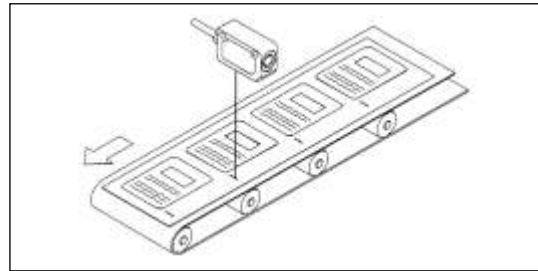
FT 20 R



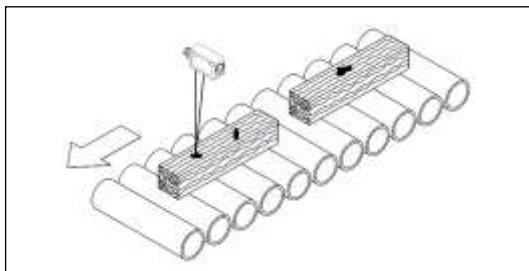
FT 20 R



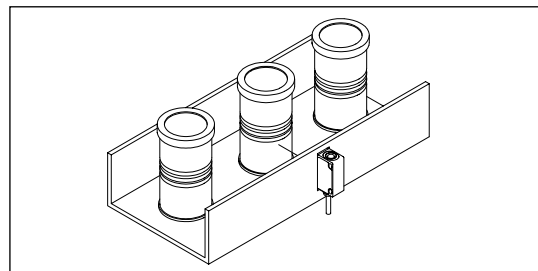
FT 20 RL

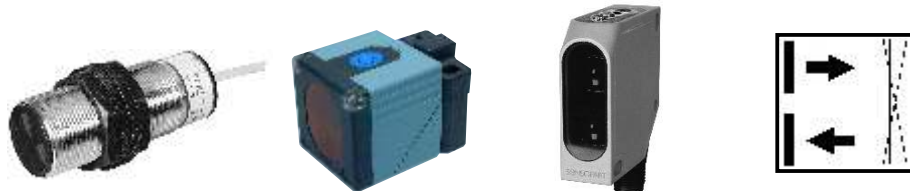


FT 20 R



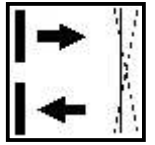
FT 20 R





		(mm)		R	10 - 30 DC	100	NO		1000	M12/B	M12		L (mm)	G (mm)
PNP	NPN													
FT 12 RF PSL4		23	-	R	10 - 30 DC	100	NO		1000	M12/B	M12		74	40
FT 12 RH PSL4		20 - 60	.	R	10 - 30 DC	100	NO		1000	M12/B	M12		74	40
FMH 18		40 - 120	.	R	10 - 30 DC	200	NO NC		600	M18/G		•	80,5	45
FMH 18W <sup>1)</sup>		40 - 120	.	R	10 - 30 DC	200	NO NC		600	M18/I		•	81,5	28
FMH 18 L4		40 - 120	.	R	10 - 30 DC	200	NO NC		600	M18/H	M12		81	45
FMH 18W L4 <sup>1)</sup>		40 - 120	.	R	10 - 30 DC	200	NO NC		600	M18/J	M12		82	28
FT 20 RH PSK4	FT 20 RH NSK4	25 - 100	.	R	10 - 30 DC	100	NO NC		1000	F20		•		
FT 20 RH PSM4	FT 20 RH NSM4	25 - 100	.	R	10 - 30 DC	100	NO NC		1000	F20	M8			
FT 20 IH PSM4	FT 20 IH NSM4	30 - 150	.	IR	10 - 30 DC	100	NO NC		800	F20	M8			
FT 20 IH PSK4	FT 20 IH NSK4	30 - 150	.	IR	10 - 30 DC	100	NO NC		800	F20		•		
FT 20 RLH PSK4	FT 20 RLH NSK4	20 - 60	.	L	10 - 30 DC	100	NO NC		1000	F20		•		
FT 20 RLH PSM4	FT 20 RLH NSM4	20 - 60	.	L	10 - 30 DC	100	NO NC		1000	F20	M8			
FT 20 RLHD PSK4	FT 20 RLHD NSK4	30 - 110	.	L	10 - 30 DC	100	NO NC		1000	F20		•		
FT 20 RLHD PSM4	FT 20 RLHD NSM4	30 - 110	.	L	10 - 30 DC	100	NO NC		1000	F20	M8			
FT 23 RF PSM4		60	-	R	10 - 30 DC	100	NO NC		1000	F20	M8			
FT 40 RH PAL4		50 - 250	.	R	10 - 30 DC	200	NO NC		200	F40	M12			
FT 40 RH PSCL5	FT 40 RH NSCL5	50 - 250	.	R	10 - 30 DC	200	NO NC	•	200	F40	M12			
FT 50 RH PAL4	FT 50 RH NAL4	30 - 300	.	R	10 - 30 DC	200	NO NC		1000	F50	M12			
FT 50 RH PSVL4	FT 50 RH NSVL4	30 - 300	.	R	10 - 30 DC	200	NO	•	1000	F50	M12			
FT 50 RH PAK4	FT 50 RH NAK4	30 - 300	.	R	10 - 30 DC	200	NO NC		1000	F50		•		
FT 50 RH PSVK4	FT 50 RH NSVK4	30 - 300	.	R	10 - 30 DC	200	NO	•	1000	F50		•		
FT 50 IH PAK4	FT 50 IH NAK4	150 - 600	.	IR	10 - 30 DC	200	NO NC		800	F50		•		
FT 50 IH PSVK4	FT 50 IH NSVK4	150 - 600	.	IR	10 - 30 DC	200	NO	•	800	F50		•		
FT 50 IH PAL4	FT 50 IH NAL4	150 - 600	.	IR	10 - 30 DC	200	NO NC		800	F50	M12			
FT 50 IH PSVL4	FT 50 IH NSVL4	150 - 600	.	IR	10 - 30 DC	200	NO	•	800	F50	M12			
FT 50 RLH PAL4	FT 50 RLH NAL4	30 - 150	.	L	10 - 30 DC	200	NO NC		2500	F50	M12			
FT 50 RLH PSVL4	FT 50 RLH NSVL4	30 - 150	.	L	10 - 30 DC	200	NO	•	2500	F50	M12			
FT 50 RLH PAK4	FT 50 RLH NAK4	30 - 150	.	L	10 - 30 DC	200	NO NC		2500	F50		•		
FT 50 RLH PSVK4	FT 50 RLH NSVK4	30 - 150	.	L	10 - 30 DC	200	NO	•	2500	F50		•		
FT 50 RLHD PAL4	FT 50 RLHD NAL4	50 - 300	.	L	10 - 30 DC	200	NO NC		2500	F50	M12			
FT 50 RLHD PAK4	FT 50 RLHD NAK4	50 - 300	.	L	10 - 30 DC	200	NO NC		2500	F50		•		
FT 88 RH PA L5	FT 88 RH NA L5	20 - 700	.	R	10 - 30 DC	200	NO NC		250	F88	M12 <sup>2)</sup>			
FT 88 IH PA L5	FT 88 IH NA L5	20 - 2000	.	IR	10 - 30 DC	200	NO NC		250	F88	M12 <sup>2)</sup>			
FT 88 RH RAT PM <sup>5)</sup>		20 - 700	.	R	AC/DC <sup>3)</sup>	2000	NO N <sup>4)</sup>		25	F88	M16x1.5			
FT 88 IH RAT PM <sup>5)</sup>		20 - 2000	.	IR	AC/DC <sup>3)</sup>	2000	NO N <sup>4)</sup>		25	F88	M16x1.5			

: FT12, FMH - í ë î á í ; F20, F40, F50, F55, F88 - ABS; IP67  
 IR - í ô í é 880nm, R - 660 nm, L - 670nm; - PVC 2 m.  
 1) :  
 2) M12 / 5 pin<sup>3)</sup> 12..240 V AC/DC  
 4) : 5) M16x1,5

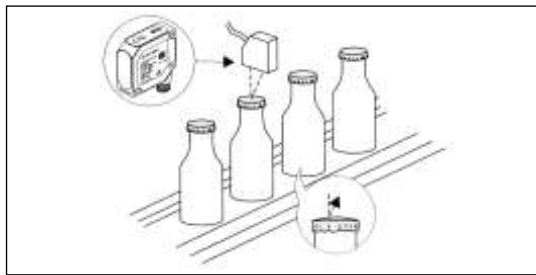


		(mm)			Σ	(mA)		(Hz)	*			
PNP	NPN											
FT 10 RLH PSE4	FT 10 RLH NSE4	2 - 60	.	L	10 - 30 DC	50	NO	1000	F10	M5		
FT 10 RLH PSK4	FT 10 RLH NSK4	2 - 60	.	L	10 - 30 DC	50	NO	1000	F10		•	
FT 10 RLH PSKM4	FT 10 RLH NSKM4	2 - 60	.	L	10 - 30 DC	50	NO	1000	F10	M8 <sup>7)</sup>		
FT 10 RLHR PSE4 <sup>8)</sup>	FT 10 RLHR NSE4 <sup>8)</sup>	2 - 60	.	L	10 - 30 DC	50	NO	1000	F10	M5		
FT 10 RLHR PSK4 <sup>8)</sup>	FT 10 RLHR NSK4 <sup>8)</sup>	2 - 60	.	L	10 - 30 DC	50	NO	1000	F10		•	
FT 10 RLHR PSKM4 <sup>8)</sup>	FT 10 RLHR NSKM4 <sup>8)</sup>	2 - 60	.	L	10 - 30 DC	50	NO	1000	F10	M8 <sup>7)</sup>		
FT 10 BRLF1 PSE4	FT 10 BRLF1 NSE4	2 - 15	-	L	10 - 30 DC	50	NO NC	1000	F10	M5		PUR
FT 10 BRLF1 PSK4	FT 10 BRLF1 NSK4	2 - 15	-	L	10 - 30 DC	50	NO NC	1000	F10		•	
FT 10 BRLF1 PSKM4	FT 10 BRLF1 NSKM4	2 - 15	-	L	10 - 30 DC	50	NO NC	1000	F10	M8 <sup>7)</sup>		
FT 10 BRLF2 PSE4	FT 10 BRLF2 NSE4	2 - 30	-	L	10 - 30 DC	50	NO NC	1000	F10	M5		
FT 10 BRLF2 PSK4	FT 10 BRLF2 NSK4	2 - 30	-	L	10 - 30 DC	50	NO NC	1000	F10		•	
FT 10 BRLF2 PSKM4	FT 10 BRLF2 NSKM4	2 - 30	-	L	10 - 30 DC	50	NO NC	1000	F10	M8 <sup>7)</sup>		
FT 55 RH PSL4	FT 55 RH NSL4	0 - 1200	.	R	10 - 30 DC	100	NO NC	600	F55	M12		
FT 55 RH PSK4	FT 55 RH NSK4	0 - 1200	.	R	10 - 30 DC	100	NO NC	600	F55		•	
FT 55 BRH PSL4	FT 55 BRH NSL4	0 - 800	.	R	10 - 30 DC	100	NO NC	600	F55	M12		
FT 55 BRH PSK4	FT 55 BRH NSK4	0 - 800	.	R	10 - 30 DC	100	NO NC	600	F55		•	ABS
FT 55 RL2H PSL4	FT 55 RL2H NSL4	0 - 1000	.	L	10 - 30 DC	100	NO NC	1000	F55	M12		
FT 55 RL2H PSK4	FT 55 RL2H NSK4	0 - 1000	.	L	10 - 30 DC	100	NO NC	1000	F55		•	
FT 55 RHM PSL4 <sup>6)</sup>	FT 55 RHM NSL4 <sup>6)</sup>	3 - 550	.	R	10 - 30 DC	100	NO NC	400	F55	M12		

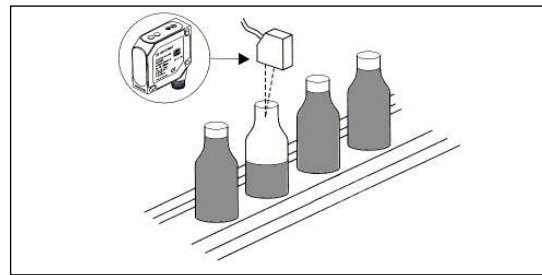
<sup>7)</sup> 20 MB/4pin <sup>8)</sup>

<sup>6)</sup> IP69K **ECOLAB**

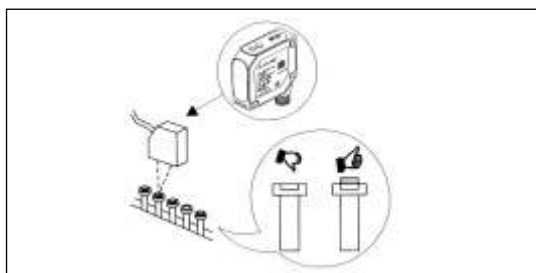
▶ FT 50 RLH



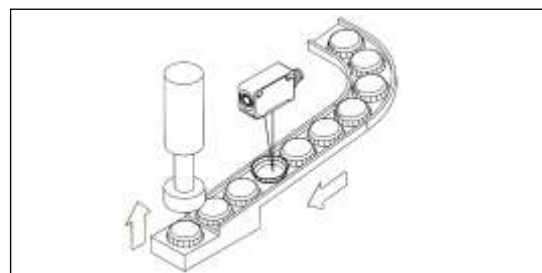
▶ FT 50 RH

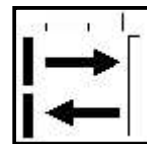


▶ FT 50 RLH



▶ FT 20 RH



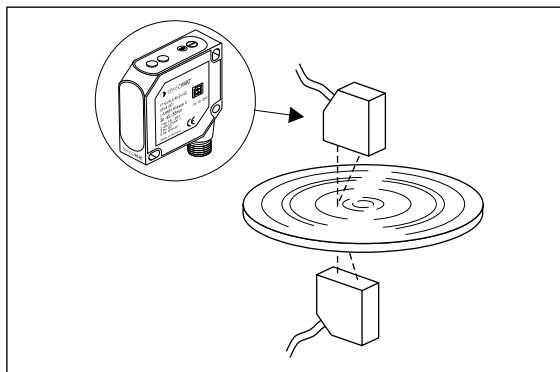


	(mm)	(V)	(mm)	(%)	(Hz)	(ms)		(V)	(mA), ( )	*		L (mm)	G (mm)
FT 20 RA 60 F M4	20 - 80	15 - 30 DC	0,5	-	200	.	R	0 - 10	3 mA	F20	M8		
FT 20 RA 60 F K4	20 - 80	15 - 30 DC	0,5	-	200	.	R	0 - 10	3 mA	F20		•	
FT 50 RLA 40 F K5	45 - 85	18 - 28 DC	0,08	1	400	-	L	0 - 10	3 mA	F50		•	
FT 50 RLA 40 F L4S	45 - 85	18 - 28 DC	0,08	1	400	-	L	0 - 10	3 mA	F50	M12		
FT 50 RLA 40 S K5	45 - 85	18 - 28 DC	0,02	1	40	-	L	0 - 10	3 mA	F50		•	
FT 50 RLA 40 S L4S	45 - 85	18 - 28 DC	0,02	1	40	-	L	0 - 10	3 mA	F50	M12		
FT 50 RLA 20 F K5	40 - 60	18 - 28 DC	0,04	1	400	-	L	0 - 10	3 mA	F50		•	
FT 50 RLA 20 F L4S	40 - 60	18 - 28 DC	0,04	1	400	-	L	0 - 10	3 mA	F50	M12		
FT 50 RLA 20 S K5	40 - 60	18 - 28 DC	0,007	1	40	-	L	0 - 10	3 mA	F50		•	
FT 50 RLA 20 S L4S	40 - 60	18 - 28 DC	0,007	1	40	-	L	0 - 10	3 mA	F50	M12		
FT 50 RLA 70 L8	30 - 100	18 - 30 DC	0,1	0,25	1000	.	L	4-20 mA	500	F50	M12		
FT 50 RLA 70S1 L8	30 - 100	18 - 30 DC	0,1	0,25	1000	.	L	RS 485 4-20 mA	500	F50	M12		
FT 50 RLA 70 PL5	30 - 100	18 - 30 DC	0,1	0,25	1000	.	L	4-20 mA	500	F50	M12		
FT 50 RLA 220 L8	80 - 300	18 - 30 DC	0,3	0,25	1000	.	L	4-20 mA	500	F50	M12		
FT 50 RLA 220S1 L8	80 - 300	18 - 30 DC	0,3	0,25	1000	.	L	RS 485 4-20 mA	500	F50	M12		
FT 50 RLA 220 PL5	80 - 300	18 - 30 DC	0,3	0,25	1000	.	L	4-20mA	500	F50	M12		
FT 80 RLA 500 L8	250 - 750	18 - 30 DC	0,5	0,25	1000	.	L	4-20mA	500	F50	M12		
FT 80 RLA 500S1 L8	250 - 750	18 - 30 DC	0,5	0,25	1000	.	L	RS 485 4-20 mA	500	F50	M12		
FT 90 ILA S2 Q12	0,5 - 10m	18 - 30 DC	0,1	+/- 8 mm	12 ms	.	IRL	RS 422 4-20 mA	500	F90	M16		
FR 90 ILA S2 Q12	0,5 - 250m	18 - 30 DC	0,1	+/- 3 mm <sup>1)</sup>	12 ms	.	IRL	RS422	500	F90	M16		
FT 91 ILA S2 Q12	0,5 - 6m	18 - 30 DC	0,1	+/- 10 mm	12 ms	.	IRL	RS 422 4-20 mA	500	F90	M16		
FR 91 ILA S2 Q12	0,5 - 50m	18 - 30 DC	0,1	+/- 5 mm <sup>1)</sup>	12 ms	.	IRL	RS422	500	F90	M16		
FT 92 ILA PSL5	0,2 - 6m	18 - 30 DC	-	+/- 40 mm	12 ms	.	IRL	4-20mA	500	F90	M12		
FR 92 ILA PSL5	0,2-30m	18 - 30 DC	-	+/- 60 mm	13,0 ms	.	IRL	4-20mA	500	F90	M12		
FAV 30 01	0 - 24	24 DC	-	10	200	.	IR	0-10V 0-10mA	-	M30/A		•	118 80

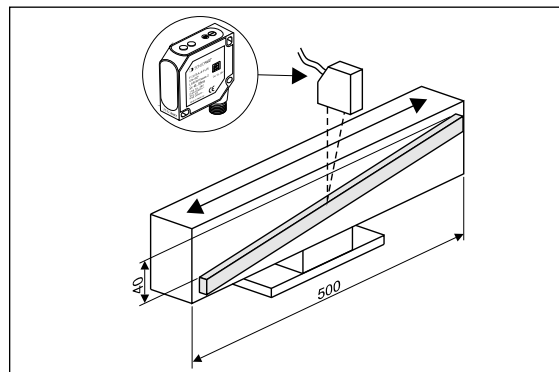
<sup>1)</sup> - 2 ; FT 20 on/off PNP/NO; FAV 30-01 30 QL;  
 IR - í ò í é 880 nm, R - 660 nm, L - 670nm, IRL - í ò í é 900 nm;  
 FT 50 RLA-220 - 650 nm; . - ;  
 IP 67 (FAV 30-01 IP 65), - 2 m.

▶ FT 50 RLA 70S1 L8

▶ FT 50 RLA 40



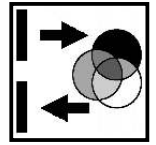
MASTER-SLAVE,



(500 mm)  
(40 mm),







		(mm)		(mm)	Σ	(mA)			(Hz)	*		
PNP	NPN											
FT 20 R PSK4	FT 20 R NSK4	300	.	660	10 - 30 DC	100	NO	NC	1000	F20		•
FT 20 R PSM4	FT 20 R NSM4	300	.	660	10 - 30 DC	100	NO	NC	1000	F20	M8 / 4pin	
FT 20 RL PSK4	FT 20 RL NSK4	200	.	650	10 - 30 DC	100	NO	NC	4000	F20		•
FT 20 RL PSM4	FT 20 RL NSM4	200	.	650	10 - 30 DC	100	NO	NC	4000	F20	M8 / 4pin	
FT 20 WT PSK4	FT 20 WT NSK4	15-19	.		10 - 30 DC	100	NO	NC	5000	F20		•
FT 20 WT PSM4	FT 20 WT NSM4	15-19	.		10 - 30 DC	100	NO	NC	5000	F20	M8 / 4pin	
FT 50 C 1 PSL8 <sup>1) 6)</sup>		12 - 32	.		12 - 28 DC	100	3 x NO		500	F50	M12 / 8pin	
FT 50 C 2 PSL8 <sup>2) 6)</sup>		15 - 30	.		12 - 28 DC	100	3 x NO		500	F50	M12 / 8pin	
FT 50 C 3 PSL8 <sup>3) 6)</sup>		18 - 22	.		12 - 28 DC	100	3 x NO		500	F50	M12 / 8pin	
FL 64 RG PSTK6	FL 64 RG NSTK6	50	.	. 660 . 565	12 - 30 DC	100	NO	NC	5000	F64		•
FL 64 RG PSTM4 <sup>4)</sup>	FL 64 RG NSTM4 <sup>4)</sup>	50	.	. 660 . 565	12 - 30 DC	100	NO	NC	5000	F64	M8 / 4pin	
FL 64-1-C PSTM4 <sup>4)5)</sup>		5 - 10	.	., .,	12 - 30 DC	100	NO	NC	550	F64	M8 / 4pin	
FT 82 RG 1 L4S		9	.		12 - 30 DC	200	NO	NC	10000	F82	M12 / 4pin	
FT 82 RG 1 K6			.			12 - 30 DC	200	NO	NC	10000	F82	
FT 82 RG 2 L4S		18	.		12 - 30 DC	200	NO	NC	10000	F82	M12 / 4pin	
FT 82 RG 2 K6			.			12 - 30 DC	200	NO	NC	10000	F82	

: F20, F50, F64 - ABS, F82 -

ë ÷ é, FA45 -

IP 65/67; . -

1) - 4 mm

22 mm; 4)

2) 2x2 mm

22 mm; 5)

3) 5x1 mm

22 mm; 6)

RS485

LLK 2 R PVC-1m-C

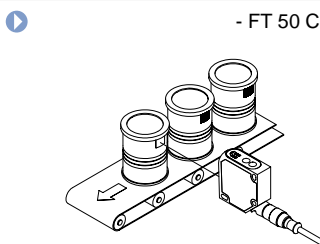
- PVC 2 m.

## , DATAMATRIX,

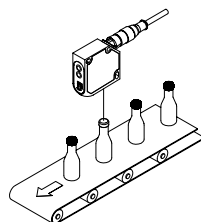
		(mm)	(mm x mm)	(mm)		Σ	(mA)					
								RS	LAN			
Data Matrix	FA 45 301 WCC OBO6LS4 <sup>1)</sup>	20	18x14	6	640x480, CCD	18 - 30 DC	200	4 (PNP) +	---	---		
	FA 45 300 WCC OBO6HS4	20	18x14	6	640x480, CCD	18 - 30 DC	200		RS 422	ethernet		
	FA 45 300 WCC OBO12HS4	20	8x6	12	640x480, CCD	18 - 30 DC	200					
	FA 45 300 CC OBOCSHS4 <sup>2)</sup>	.	.	.	640x480, CCD	18 - 30 DC	200					
		FA 45 300 WCC COO6HS4	10	6x5	6	640x480, CCD	18 - 30 DC	200	2 +	M12 / 8pin	M12 / 5pin	M12 / 8pin
		FA 45 300 WCC COO12HS4	25	8x6	12	640x480, CCD	18 - 30 DC	200				
		FA 45 300 WCC COOCSHS4 <sup>2)</sup>	.	.	.	640x480, CCD	18 - 30 DC	200				
		FA 45 300 WCC CRO6HS4	10	6x5	6	640x480, CCD	18 - 30 DC	200				
	FA 45 300 WCC CRO12HS4	25	8x6	12	640x480, CCD	18 - 30 DC	200					
	FA 45 300 CC CROCSHS4 <sup>2)</sup>	.	.	.	640x480, CCD	18 - 30 DC	200					

<sup>1)</sup> ; <sup>2)</sup> C-Mount ( )

: - 8, 12, 16, 25 mm



- FT 50 C



- FT 50 C

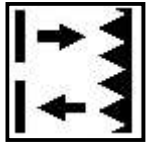


- FA 45



														L (mm)	G (mm)
		(mm)			(V)	(mA)				(Hz)	*				
PNP	NPN														
FR 18-1 R PSK4	FR 18-1 R NSK4	2000 <sup>4)</sup>	.	R	10 - 30 DC	100	NO	NC		333	M18/A		•	71	30
FR 18-1 R PSL4	FR 18-1 R NSL4	2000 <sup>4)</sup>	.	R	10 - 30 DC	100	NO	NC		333	M18/B	M12		80	30
FR 18-1 I PSK4	FR 18-1 I NSK4	4000 <sup>4)</sup>	.	IR	10 - 30 DC	100	NO	NC		333	M18/A		•	71	30
FR 18-1 I PSL4	FR 18-1 I NSL4	4000 <sup>4)</sup>	.	IR	10 - 30 DC	100	NO	NC		333	M18/B	M12		80	30
SCORK 3000 ZRP <sup>1)</sup>	SCORK 3000 ZRN <sup>1)</sup>	3000	.	R	10 - 30 DC	100	NO	NC		1000	M18/I		•	75	32
SCORK 3000 ZRPK <sup>1)</sup>	SCORK 3000 ZRNK <sup>1)</sup>	3000	.	R	10 - 30 DC	100	NO	NC		1000	M18/J	M12		74	32
SCOR 4500 ZRP	SCOR 4500 ZRN	4500	.	R	10 - 30 DC	100	NO	NC		1000	M18/A		•	77	34
SCOR 4500 ZRPK	SCOR 4500 ZRNK	4500	.	R	10 - 30 DC	100	NO	NC		1000	M18/A	M12		82	34
FR 12 R PSK4	FR 12 R NSK4	1500	-	R	10 - 30 DC	200		NO		1000	M12/A		•	50	50
FR 12 R PSL4	FR 12 R NSL4	1500	-	R	10 - 30 DC	200		NO		1000	M12/B	M12		60	41
FR 18 R PSL4	FR 18 R NSL4	2000	-	R	10 - 30 DC	200		NO		1000	M18/B	M12		64	46
FR 18 R PSK4	FR 18 R NSK4	2000	-	R	10 - 30 DC	200		NO		1000	M18/A		•	50	50
FR 20 RG PSK4	FR 20 RG NSK4	500	.	R	10 - 30 DC	100	N	NC		1000	F20		•		
FR 20 RG PSM4	FR 20 RG NSM4	500	.	R	10 - 30 DC	100	N	NC		1000	F20	M8			
FR 20 RG1 PSK4 <sup>2)</sup>		500	.	R	10 - 30 DC	100	NO	NC		1000	F20		•		
FR 20 RG1 PSM4 <sup>2)</sup>		500	.	R	10 - 30 DC	100	NO	NC		1000	F20	M8			
FR 20 RL PSM4	FR 20 RL NSM4	3000	.	L	10 - 30 DC	100	NO	NC		4000	F20	M8			
FR 20 RL PSK4	FR 20 RL NSK4	3000	.	L	10 - 30 DC	100	NO	NC		4000	F20		•		
FR 20 RLO PSM4 <sup>8)</sup>	FR 20 RLO NSM4 <sup>8)</sup>	4000	.	L	10 - 30 DC	100	NO	NC		4000	F20	M8			
FR 20 RLO PSK4 <sup>8)</sup>	FR 20 RLO NSK4 <sup>8)</sup>	4000	.	L	10 - 30 DC	100	NO	NC		4000	F20		•		
FR 20 R PSK4	FR 20 R NSK4	2500	.	R	10 - 30 DC	100	NO	NC		1000	F20		•		
FR 20 R PSM4	FR 20 R NSM4	2500	.	R	10 - 30 DC	100	NO	NC		1000	F20	M8			
FR 23 R PSM4		2500	-	R	10 - 30 DC	100	NO	NC		1000	F20	M8			
FR 20 RD PSM4	FR 20 RD NSM4	3500	.	R	10 - 30 DC	100	NO	NC		1000	F20	M8			
FR 20 RD PSK4	FR 20 RD NSK4	3500	.	R	10 - 30 DC	100	NO	NC		1000	F20		•		
FR 40 RG PSCL5	FR 40 RG NSCL5	1000	.	R	10 - 30 DC	200	NO	NC	•	1000	F40	M12			
FR 40 R PSCL5	FR 40 R NSCL5	6000	.	R	10 - 30 DC	200	NO	NC	•	1000	F40	M12			
FR 40 R PAL4		6000	.	R	10 - 30 DC	200	NO	NC		1000	F40	M12			
FR 50 R PAL4	FR 50 R NAL4	5500	.	R	10 - 30 DC	200	NO	NC		1000	F50	M12			
FR 50 R PAK4	FR 50 R NAK4	5500	.	R	10 - 30 DC	200	NO	NC		1000	F50		•		
FR 50 R PSVK4	FR 50 R NSVK4	5500	.	R	10 - 30 DC	200		NO	•	1000	F50		•		
FR 50 R PSVL4	FR 50 R NSVL4	5500	.	R	10 - 30 DC	200		NO	•	1000	F50	M12			
FR 50 RL PAL4 <sup>8)</sup>	FR 50 RL NAL4 <sup>8)</sup>	20000	.	L	10 - 30 DC	200	NO	NC		2500	F50	M12			
FR 50 RL PAK4 <sup>8)</sup>	FR 50 RL NAK4 <sup>8)</sup>	20000	.	L	10 - 30 DC	200	NO	NC		2500	F50		•		
FR 50 RL PSVK4	FR 50 RL NSVK4	20000	.	L	10 - 30 DC	200		NO	•	2500	F50		•		
FR 50 RL PSVL4	FR 50 RL NSVL4	20000	.	L	10 - 30 DC	200		NO	•	2500	F50	M12			
FR 88 R PAV L5	FR 88 R NAV L5	12000	.	R	10 - 30 DC	200	NO	NC	•	1000	F88	M12 <sup>5)</sup>			
FR 88 R RAT PM <sup>3)</sup> 7)		12000	.	R	AC / DC <sup>6)</sup>	2000	NO	NC		25	F88	M16x1.5			

: SCORK 3000 - PBT; FR12, FR18, FR18-1 - i è î â í ; F20, F40, F50, F88 - ABS  
 IR - í ó í é 880 nm, R - 660 nm, L - 670 nm;  
 1) - PVC 2 m.  
 2) ; . R5L  
 3) ;  
 4) RD8  
 5) M12/5 pin 6) 12 ... 240 V AC/DC 7) ; M16x1.5  
 8) ( )  
 FR 20 RG, FR 20 RG1 i FR 40 RG  
 IP67 ( FR 18-1... - IP65). FR 18-1... Rd46.



		(€)											
					(V)	(mA)		(Hz)	*				
PNP	NPN												
FR 10 RL PSE4	FR 10 RL NSE4	2,5	.	L	10 - 30 DC	50	NO NC	1000	F10	M5			
FR 10 RL PSK4	FR 10 RL NSK4	2,5	.	L	10 - 30 DC	50	NO NC	1000	F10		•		PUR
FR 10 RL PSKM4	FR 10 RL NSKM4	2,5	.	L	10 - 30 DC	50	NO NC	1000	F10	M8 <sup>10)</sup>			
FR 55 R PSL4	FR 55 R NSL4	12 <sup>11)</sup>	.	R	10 - 30 DC	100	NO NC	600	F55	M12			
FR 55 R PSK4	FR 55 R NSK4	12 <sup>11)</sup>	.	R	10 - 30 DC	100	NO NC	600	F55		•		ABS
FR 55 RL PSL4	FR 55 RL NSL4	12 <sup>11)</sup>	.	L	10 - 30 DC	100	NO NC	2000	F55	M12			
FR 55 RL PSK4	FR 55 RL NSK4	12 <sup>11)</sup>	.	L	10 - 30 DC	100	NO NC	2000	F55		•		
FR 55 RM PSL4 <sup>9)</sup>	FR 55 RM NSL4 <sup>9)</sup>	11 <sup>11)</sup>	.	R	10 - 30 DC	100	NO NC	600	F55	M12			

<sup>10)</sup> 20 cm

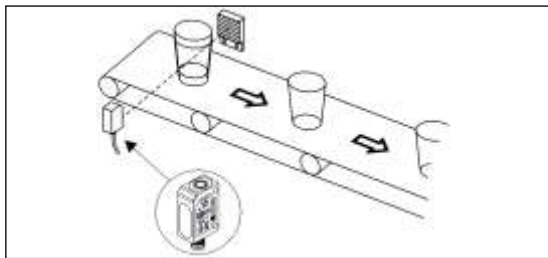
M8/4pin, <sup>11)</sup>

R10

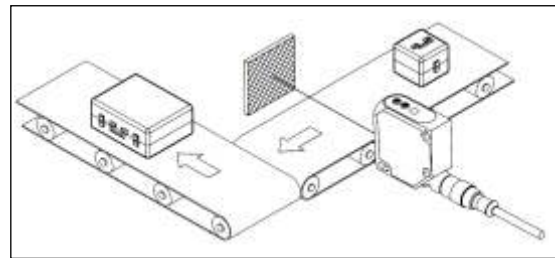
<sup>9)</sup> IP69K,



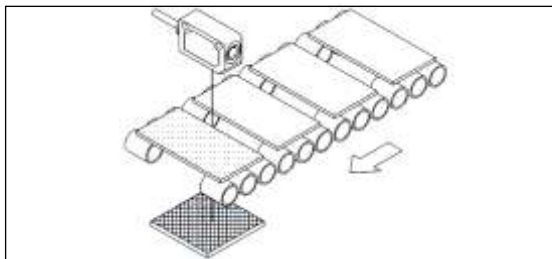
### FR 20 RG



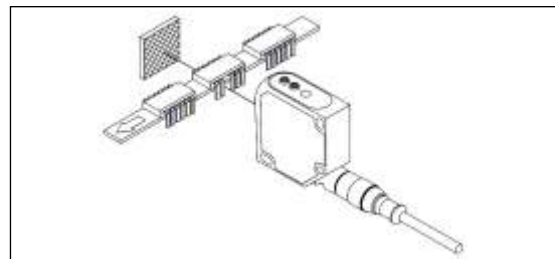
### FR 50 R



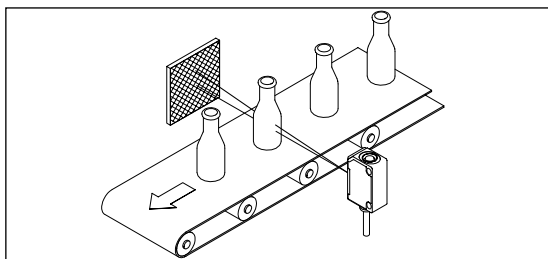
### FR 20 RG1



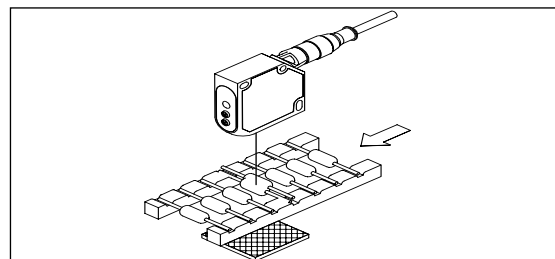
### FR 50 RL

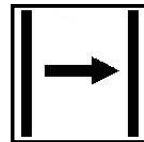


### FR 20 RG



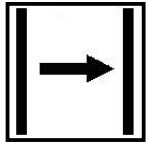
### FR 50 RL





( )														
		ÖZ	U (V)										L (mm)	G (mm)
PNP	NPN	ÖZ	U (V)				(mA)		(Hz)	*			L (mm)	G (mm)
FS 18 R L3		N	20	-	R	10-30 DC	-	-	-	M18/B	M12		63,5	50
FS 18 R K3		N	20	-	R	10-30 DC	-	-	-	M18/A		•	50	50
FE 18 R PAL3	FE 18 R NAL3	O	20	-	R	10-30 DC	200	NO NC	1000	M18/B	M12		63,5	50
FE 18 R PAK3	FE 18 R NAK3	O	20	-	R	10-30 DC	200	NO NC	1000	M18/A		•	50	50
SCOB 15 ZRP	SCOB 15 ZRN	N O	15		IR	10-30 DC	100	NO NC	250	M18/A		•	77	43
SCOB 15 ZRPK	SCOB 15 ZRNK	N O	15		IR	10-30 DC	100	NO NC	250	M18/B	M12		82	43
SCOB 20 ZRP	SCOB 20 ZRN	N O	20		IR	10-30 DC	100	NO NC	250	M18/A		•	64	43
SCOB 20 ZRPK	SCOB 20 ZRNK	N O	20		IR	10-30 DC	100	NO NC	250	M18/B	M12		63	43
FS 12 R L3		N	10	-	R	10-30 DC	-	-	-	M12/B	M12		60	41
FS 12 R K3		N	10	-	R	10-30 DC	-	-	-	M12/A		•	50	50
FE 12 R PSL3	FE 12 R NSL3	O	10		-	10-30 DC	200	NO	1000	M12/B	M12		60	41
FE 12 R PSK3	FE 12 R NSK3	O	10		-	10-30 DC	200	NO	1000	M12/A		•	50	50
FS 12 RL-L4		N	5	-	L	10-30 DC	-	-	-	M12/B	M12		58	26
FE 12 RL PSL4	FE 12 RL NSL4	O	5	Pin.	-	10-30 DC	100	NO	10000	M12/B	M12		58	26
FS 18 RL L4		N	50	-	L	10-30 DC	-	-	-	M18/B	M12		59	29
FE 18 RL PSL4	FE 18 RL NSL4	O	50	Pin.	-	10-30 DC	100	NO	10000	M18/B	M12		59	29
FLS 18 L4 <sup>1)</sup>		N	50	-	L	10-30 DC	-	-	-	M18/B	M12		74	37
FLS 18W L4 <sup>1)</sup>		N	50	-	L	10-30 DC	-	-	-	M18/J	M12		85	26,6
FLE 18 L4 <sup>1)</sup>		O	50		-	10-30 DC	200	NO NC	6000	M18/B	M12		85	48
FLE 18 L4 15 <sup>1)</sup>		O	50		-	10-30 DC	200	NO	• 6000	M18/B	M12		85	48
FLE 18 W L4 <sup>1)</sup>		O	50		-	10-30 DC	200	NO NC	6000	M18/J	M12		85	26,6
FLE 18 W L4 15 <sup>1)</sup>		O	50		-	10-30 DC	200	NO	• 6000	M18/J	M12		85	26,6
FS 20 R M4		N	8	-	R	10-30 DC	-	-	-	F20	M8			
FS 20 R K4		N	8	-	R	10-30 DC	-	-	-	F20		•		
FE 20 R PSM4	FE 20 R NSM4	O	8		-	10-30 DC	100	NO NC	1000	F20	M8			
FE 20 R PSK4	FE 20 R NSK4	O	8		-	10-30 DC	100	NO NC	1000	F20		•		
FS 23 R M4		N	4	-	R	10-30 DC	-	-	-	F20	M8			
FE 23 R PSM4		O	4		-	10-30 DC	100	NO NC	1000	F20	M8			
FS 50 I L4		N	15	-	IR	10-30 DC	-	-	-	F50	M12			
FS 50 I K4		N	15	-	IR	10-30 DC	-	-	-	F50		•		
FE 50 I PAL4		O	15		-	10-30 DC	200	NO NC	1000	F50	M12			
FE 50 I PAK4		O	15		-	10-30 DC	200	NO NC	1000	F50		•		
FE 50 I PSVL4		O	15		-	10-30 DC	200	NO	• 1000	F50	M12			
FE 50 I PSVK4		O	15		-	10-30 DC	200	NO	• 1000	F50		•		
FS 88 R L5		N	30	-	R	10-30 DC	-	-	-	F88	M12 <sup>4)</sup>			
FE 88 R PAV L5	FE 88 R NAV L5	O	30		-	10-30 DC	200	NO NC	• 1000	F88	M12 <sup>4)</sup>			
FS 88 R PM		N	65	-	R	AC / DC <sup>3)</sup>	-	-	-	F88	M16x1.5 <sup>5)</sup>			
FE 88 R RAT PM <sup>2)</sup>		O	65		-	AC / DC <sup>3)</sup>	2000	NO NC	25	F88	M16x1.5 <sup>5)</sup>			

: SCOB - PBT; FS/FE 12, FS/FE 18, FLS/FLE 18 - í è î â í í ; FS/FE 20, 50, 55, 88 - ABS;  
 IR - í ô í é 880 nm, R - 660 nm, L - 670 nm;  
 - PVC 2 m;  
 1) : 2) :  
 3) : 12...240 V AC/DC<sup>4)</sup> M12/5 pin,  
 5) : M16x1.5  
 IP67 ( FLS/FLE - IP65).

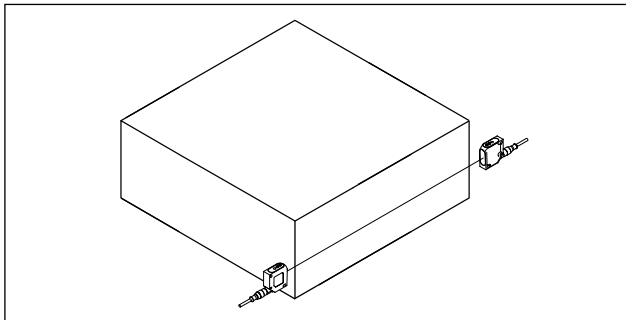


( )											
		~	(E)							*	
PNP	NPN	ÖZ		Σ	(mA)		(Hz)				
FS 10 RL E4		N	3	L	10 - 30 DC	-	-	-	F10	M5	
FS 10 RL K4		N	3	L	10 - 30 DC	-	-	-	F10		•
FS 10 RL KM4		N	3	L	10 - 30 DC	-	-	-	F10	M8 <sup>7)</sup>	
FE 10 RL PSE4	FE 10 RL NSE4	O	3	-	10 - 30 DC	50	NO	NC	4200	F10	M5
FE 10 RL PSK4	FE 10 RL NSK4	O	3	-	10 - 30 DC	50	NO	NC	4200	F10	•
FE 10 RL PSKM4	FE 10 RL NSKM4	O	3	-	10 - 30 DC	50	NO	NC	4200	F10	M8 <sup>7)</sup>
FS 55 R L4		N	20	R	10 - 30 DC	-	-	-	F55	M12	
FS 55 R K4		N	20	R	10 - 30 DC	-	-	-	F55		•
FE 55 R PSL4	FE 55 R NSL4	O	20	-	10 - 30 DC	100	NO	NC	500	F55	M12
FE 55 R PSK4	FE 55 R NSK4	O	20	-	10 - 30 DC	100	NO	NC	500	F55	•
FS 55 RL L4		N	25	L	10 - 30 DC	-	-	-	F55	M12	
FS 55 RL K4		N	25	L	10 - 30 DC	-	-	-	F55		•
FE 55 RL PSL4	FE 55 RL NSL4	O	25	-	10 - 30 DC	100	NO	NC	3500	F55	M12
FE 55 RL PSK4	FE 55 RL NSK4	O	25	-	10 - 30 DC	100	NO	NC	3500	F55	•
FS 55 RM L4 <sup>6)</sup>		N	15	R	10 - 30 DC	-	-	-	F55	M12	
FE 55 RM PSL4 <sup>6)</sup>	FE 55 RM NSL4 <sup>6)</sup>	O	15	-	10 - 30 DC	100	NO	NC	500	F55	M12

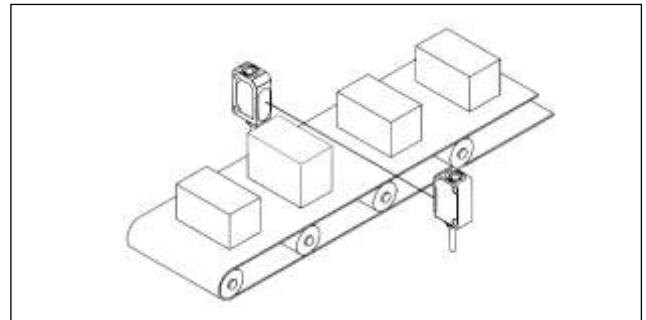
<sup>7)</sup> 20 M8/4pin

<sup>6)</sup> IP69K **ECOLAB**

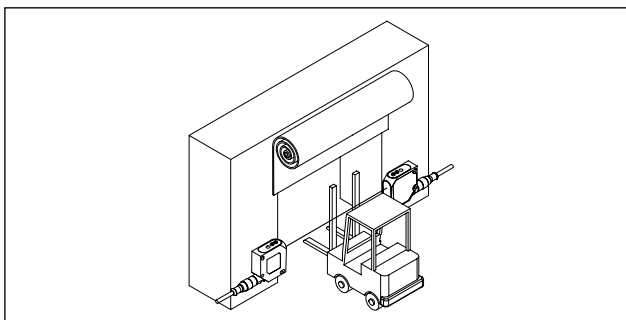
▶ **FS / FE 50**



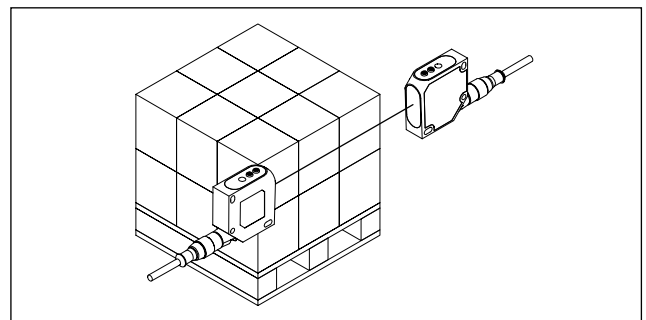
▶ **FS / FE 20**

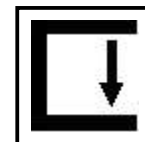


▶ **FS / FE 50 I**



▶ **FS / FE 50 I**



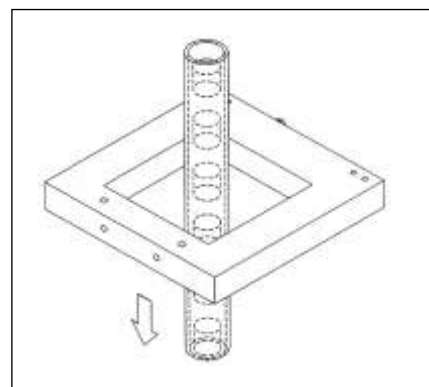


									(mm)	*		L	G	
					(V)	(mA)			(Hz)			(mm)	(mm)	
PNP	NPN													
FGL 30 RK 30 PSM4	FGL 30 RK 30 NSM4	1	.	R	10 - 30 DC	200	NO	NC	0,2	2000	FGL	M8/4pin <sup>1)</sup>	30	34
FGL 50 RK 50 PSM4	FGL 50 RK 50 NSM4	1	.	R	10 - 30 DC	200	NO	NC	0,2	2000	FGL	M8/4pin <sup>1)</sup>	50	54
FGL 80 RK 50 PSM4	FGL 80 RK 50 NSM4	1	.	R	10 - 30 DC	200	NO	NC	0,2	2000	FGL	M8/4pin <sup>1)</sup>	80	54
FGL 120 RK 50 PSM4	FGL 120 RK 50 NSM4	1	.	R	10 - 30 DC	200	NO	NC	0,4	2000	FGL	M8/4pin <sup>1)</sup>	120	54
FGL 30 IK 30 PSM4	FGL 30 IK 30 NSM4	1	.	IR	10 - 30 DC	200	NO	NC	0,2	2000	FGL	M8/4pin <sup>1)</sup>	30	34
FGL 50 IK 50 PSM4	FGL 50 IK 50 NSM4	1	.	IR	10 - 30 DC	200	NO	NC	0,2	2000	FGL	M8/4pin <sup>1)</sup>	50	54
FGL 80 IK 50 PSM4	FGL 80 IK 50 NSM4	1	.	IR	10 - 30 DC	200	NO	NC	0,2	2000	FGL	M8/4pin <sup>1)</sup>	80	54
FGL 120 IK 50 PSM4	FGL 120 IK 50 NSM4	1	.	IR	10 - 30 DC	200	NO	NC	0,4	2000	FGL	M8/4pin <sup>1)</sup>	120	54
- ABS; IP 67 R - 640 nm, IR - í ó í é 880 nm; . - 1) M8/3 pin ; FGL ...M3 -														
FGL 5 R PSM3	FGL 5 R NSM3	1	.	R	10 - 30 DC	200	NO	NC	0,3	3000	FGL	M8 / 3pin	5	17
FGL 10 R PSM3	FGL 10 R NSM3	1	.	R	10 - 30 DC	200	NO	NC	0,3	3000	FGL	M8 / 3pin	10	17
FGL 20 R PSM3	FGL 20 R NSM3	1	.	R	10 - 30 DC	200	NO	NC	0,3	1500	FGL	M8 / 3pin	20	24
FGL 30 R PSM3	FGL 30 R NSM3	1	.	R	10 - 30 DC	200	NO	NC	0,3	1500	FGL	M8 / 3pin	30	34
FGL 50 R PSM3	FGL 50 R NSM3	1	.	R	10 - 30 DC	200	NO	NC	0,5	1500	FGL	M8 / 3pin	50	54
FGL 80 R PSM3	FGL 80 R NSM3	1	.	R	10 - 30 DC	200	NO	NC	0,5	1500	FGL	M8 / 3pin	80	54
FGL 120 R PSM3	FGL 120 R NSM3	1	.	R	10 - 30 DC	200	NO	NC	0,8	1500	FGL	M8 / 3pin	120	54
FGL 180 R PSM3	FGL 180 R NSM3	1	.	R	10 - 30 DC	200	NO	NC	0,8	1500	FGL	M8 / 3pin	180	114
FGL 220 R PSM3	FGL 220 R NSM3	1	.	R	10 - 30 DC	200	NO	NC	0,8	1500	FGL	M8 / 3pin	220	114
FG 40 I PSM3			.	IR	10 - 30 DC	200	NO		0,8	100	FG	M8 / 3pin	40	80
FG 80 I PSM3			.	IR	10 - 30 DC	200	NO		1,0	100	FG	M8 / 3pin	80	80
FG 120 I PSM3			.	IR	10 - 30 DC	200	NO		1,5	100	FG	M8 / 3pin	120	80
; IP 65, IR - 880 nm, R - 640 nm,														

► FGL

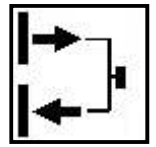


► FG







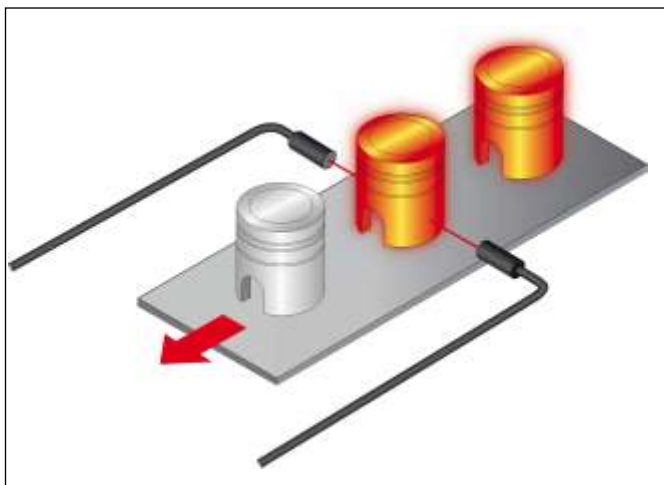


		(mm) <sup>1)</sup>			~	(mA)			(Hz)	*			LED	0 - 10 VDC
PNP	NPN													
FL 20 R PSM4	FL 20 R NSM4	80 / 150	.	R	10 - 30 DC	100	NO	NC	1000	F20	M8			
FL 20 R PSK4	FL 20 R NSK4	80 / 150	.	R	10 - 30 DC	100	NO	NC	1000	F20		•		
FL 70 R PSM4	FL 70 R NSM4	100 / 250	.	R	10 - 30 DC	100	NO	NC	1500	F70	M8			
FL 70 R PSK4	FL 70 R NSK4	100 / 250	.	R	10 - 30 DC	100	NO	NC	1500	F70		•		
FL 70 R PSD M4	FL 70 R NSD M4	100 / 250	.	R	10 - 30 DC	100	NO	NC	8000	F70	M8		•	
FL 70 RA PSD K5	FL 70 RA NSD K5	100 / 250	.	R	10 - 30 DC	100	NO	NC	8000	F70		•	•	•

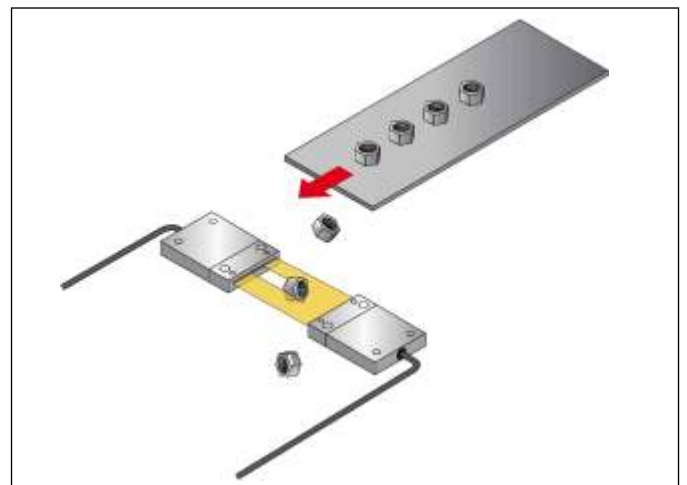
- ABS; IP 65, FL 20R - IP 67;<sup>1)</sup> / ( ) ; - PVC 2 m

R - 660 nm; . - . -

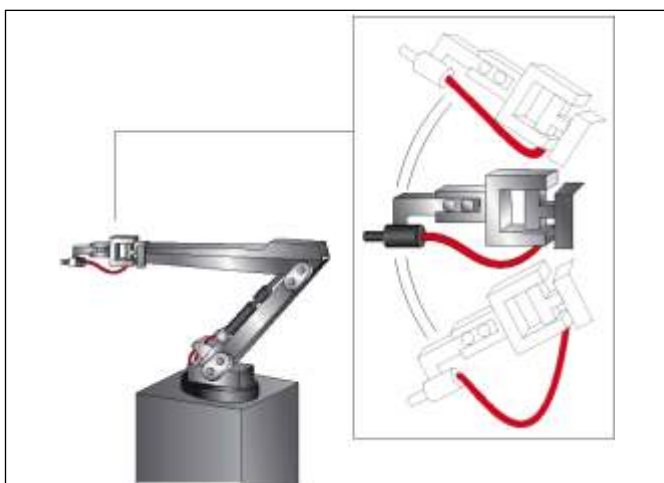
### ▶ 33 L1/500 MSC



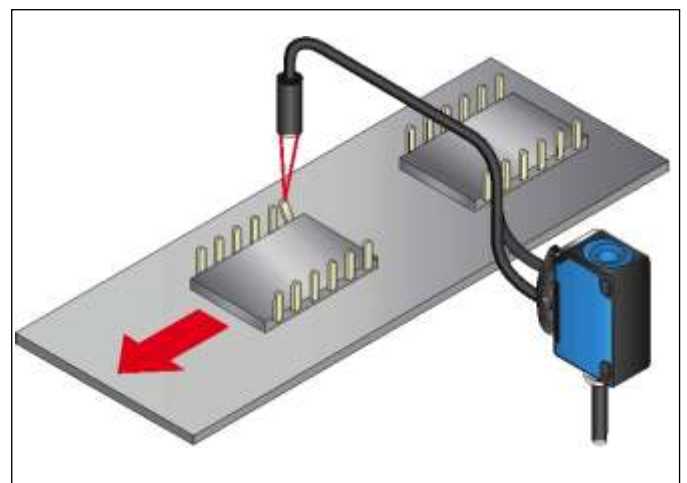
### ▶ K2Q-12



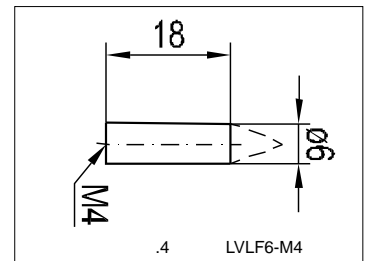
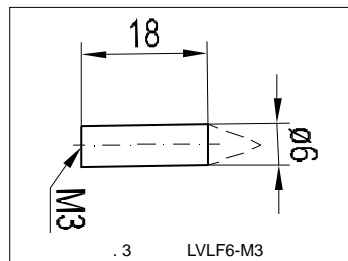
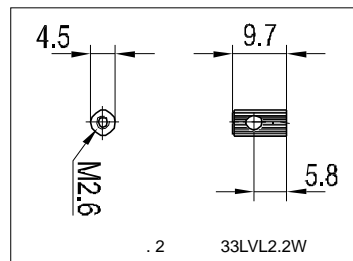
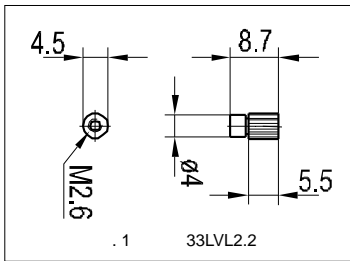
### ▶ LLK 1 RKM3-PE-1m



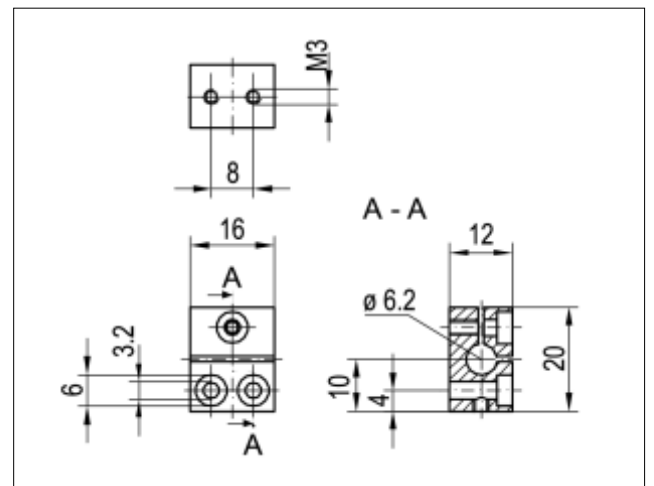
### ▶ LLK 1RVV6-PE-1m



33LVL2.2	( 2,2 mm) M 2,6 ( . 1)		
33LVL2.2 W	(90°) ( , 2,2 mm) M 2,6 ( . 2)		
LVL6-M3	f= 6 mm, M3 ( . 3)		ALU-eloxiert
LVL6-M4	f= 6 mm, M4 ( . 4)		ALU-eloxiert



MB6	6 mm		
Simplex 2,2 mm	1x1mm 1x1,22 mm		PMMA / PE
Duplex 2,2 mm	2x1 mm 2x2,2 mm		PMMA / PE
LMS1,0-S2,2	1,0 mm		ABS
LMS1,3-S2,3	1,3 mm		ABS
724-50799			ABS

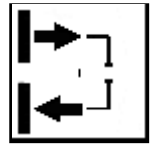
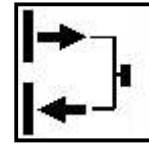


► MB6

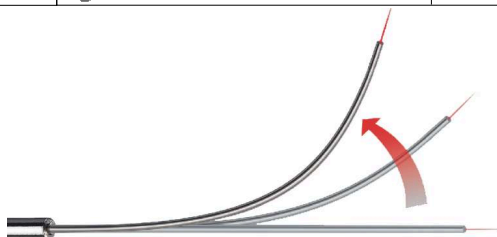
\*

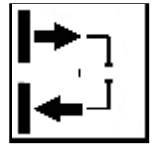
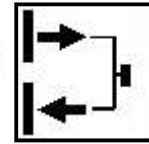
\* -

3,5 mm, 4,5 mm, 7 mm, 8 mm, 10 mm, 12 mm.



				[mm] :			
				FL 20	FL 70 :		
	K1R-101		LVLF-M3		60	25	95
	K2R-102			80	150	85	295
	K1R-103				60	20	105
	K2R-100			70	140	70	290
	K2R-6			50	100	55	265
	K2R-67	85		60	120	70	295
	LLK1RM3-PE-1m		LVLF-M3		50	20	55
	LLK2RM6-PE-1m			80	150	90	280

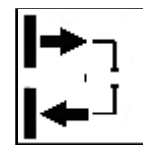
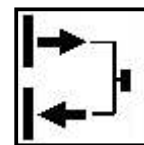


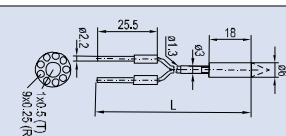
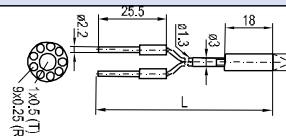
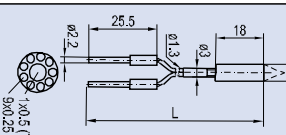
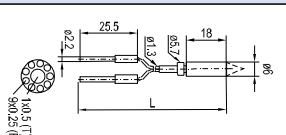
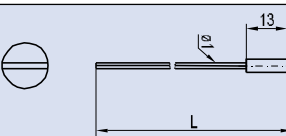
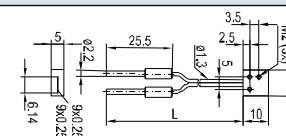
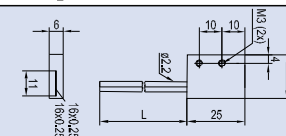
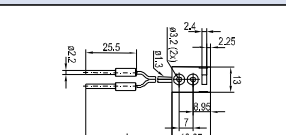


				[mm]			
				FL 20	FL 70		
		K1R-68	LVLf-M4	50	100	40	200
		33R1/500-MS 1 m, 0.5 m 160°C.		50	100	55	210
COAXIAL		K2R-35	LVLf-M4		50	20	80
		K2R-25		70	130	60	240
		LLK1RKM3-PE-1m	LVLf-M3		70	35	150
		LLK2RKM6-PE-1m		80	150	80	310
		K1RZ-31 90°.			20	10	30
		LLK2RZ (LS=10) 90°.		100	200	50	300



## COAXIAL



COAXIAL	[mm]	[mm]			
		FL 20	FL 70		
	LLK1RD8V6-PE-1m 8 mm, 0,6 mm.		8	8	8
	LLK1RD12V6-PE-1m 12 mm, 0,7 mm.		12	12	12
	LLK1RD20V6-PE-1m 16 mm, 1,3 mm.		16	16	16
	LLK1RVV6-PE-1m 8-20 mm, 0,6 1,3 mm.		8-20	8-20	8-20
	K1R-104		80	45	205
	LLK1QRR10x10-PE-2m 6,14 mm.	1-15	1-15	1-15	1-15
	LLK2QRR19x25-PE-2m 11 mm.	1-15	1-15	1-15	1-15
	LLK1VRF5-PE-2m	4	4	4	4



▶ **LLK2QRR10x10-PE2m**  
**LLK2QRR19x25-PE-m**

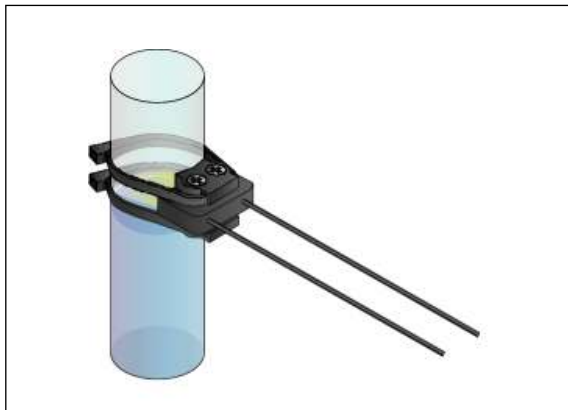




			[mm]		
			FL 20	FL 70	
	LLK1VRR22x15-PE-2m	6-26 mm.	4-20	4-20	
	LLK1VRF17x18-PE-2m			7	
	LLK2PR2-PE-2m				

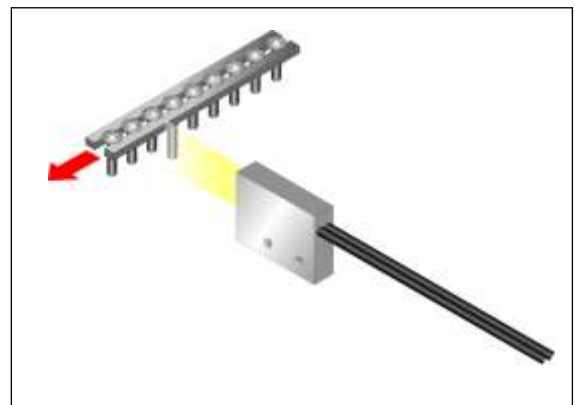
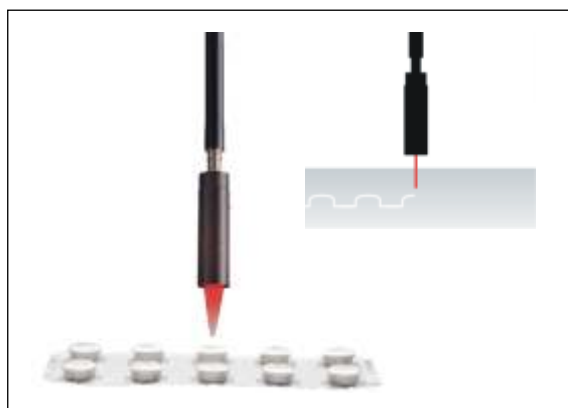
▶ LLK1VRR22x15-PE-2m

▶ LLK1GL10-PE-2m

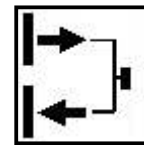


▶ LLK1RVV6-PE-1m

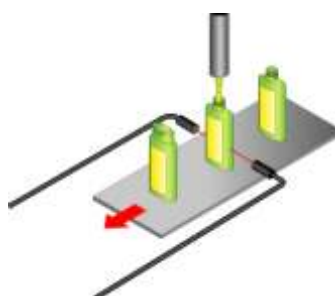
▶ LLK2QRR19x25-PE-2m



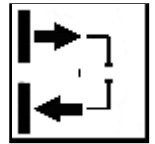
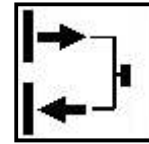




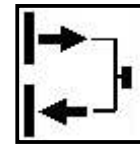
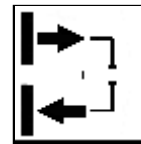
				[mm] :			
				FL 20	FL 70 :		
	K2L-202	LVLf-M4 33LVL2.2 33LVL2.2W		180	350	200	800
	K2L-201	LVLf-M3			120	60	200
	K2L-204			180	350	195	720
	K2L-7	LVLf-M3		180	350	220	810
	K2L-77	LVLf-M3	85°C.	140	270	145	550
	K2L-203				120	60	190
	LLK2LM3-PE-1m	LVLf-M3		80	150	60	240
	LLK2LM4-PE-1m	LVLf-M4 33LVL2.2 33LVL2.2W		200	400	240	780



► LLK2LM4-PE-1m



				[mm] :			
				FL 20	FL 70 :		
	K1L-78	LVLf-M3	100	200	120	405	
	33L1/500-MSc 500 mm, 160°C.	LVLf-M4 33LVL2.2 33LVL2.2W	140	270	165	550	
	LLK2LV6-PE-1m		1000	2000	2000	2000	
	LLK2LZ (LS=10)		150	300	150	600	
	K2L-34		50	100	35	150	
	K2Q-12 5,25 mm.		130	250	155	550	
	LLK2SLR10-PE-2m 15 mm			600...1500	0...600	1500...2000	
	LLK1GL10-PE-2m		10	10	10	10	
	LLK1GL5-PE-2m		5	5	5	5	
	LLK1L10x10-PE-2m			120	50	220	



	. 39					(mm)	
						FMS 18	FMS 30
18/30 R 0,4/...-Si	1	Si	-20°C...+160°C	R	0,4	1	1
18/30 R 0,5/...-Si	2	Si	-20°C...+160°C	R	0,5	1	1
18/30 R 1/...-PVC	3	PVC	-20°C...+80°C	R	1	1	15
18/30 R 1/...-...	4	MSC, Si	-20°C...+160°C	R, RZ			
18/30 RZ 1/...-..., Ls=...	5						
18/30 R 1,5/...-Si	6	Si	-20°C...+160°C	R	1,5	5	15
18/30 R 2/...-PVC	7	PVC	-20°C...+80°C	R, RZ	2	50	60
18/30 RZ 2/...-PVC, Ls=...	9						
18/30 R 2/...-...	8	MSC, Si	-20°C...+160°C	R, RZ			
18/30 RZ 2/...-..., Ls=...	10						
18/30 R 3/...-PVC	11	PVC	-20°C...+80°C	R, RZ	3	160	200
18/30 RZ 3/...-PVC, Ls=...	14						
18/30 R 3/...-...	13	MSC, Si	-20°C...+160°C	R, RZ			
18/30 RZ 3/...-..., Ls=...	16						
30 R 4/...-...	17	MSC, Si	-20°C...+160°C	R, RZ	4		400
30 RZ 4/...-..., Ls=...	18						
30 R 12/...-...	19	MSC, Si	-20°C...+160°C	R, RZ	12		800
30 RZ 12/...-..., Ls=...	21						

	. 39					(mm)	
						FMS 18	FMS 30
18/30 L 0,4/...-Si	1	Si	-20°C...+160°C	L	0,4	10	20
18/30 L 0,5/...-Si	2	Si	-20°C...+160°C	L	0,5	10	20
18/30 L 1/...-PVC	3	PVC	-20°C...+80°C	L	1	80	100
18/30 L 1/...-...	4	MSC, Si	-20°C...+160°C	L, LZ			
18/30 LZ 1/...-..., Ls=...	5						
18/30 L 1,5/...-Si	6	Si	-20°C...+160°C	L	1,5	80	100
18/30 L 2/...-PVC	7	PVC	-20°C...+80°C	L, LZ	2	360	400
18/30 LZ 2/...-PVC, Ls=...	9						
18/30 L 2/...-...	8	MSC, Si	-20°C...+160°C	L, LZ			
18/30 LZ 2/...-..., Ls=...	10						
18/30 L 3/...-PVC	12	PVC	-20°C...+80°C	L, LZ	3	700	1000
18/30 LZ 3/...-PVC, Ls=...	15						
18/30 L 3/...-...	13	MSC, Si	-20°C...+160°C	L, LZ			
18/30 LZ 3/...-..., Ls=...	16						
30 L 4/...-...	17	MSC, Si	-20°C...+160°C	L, LZ	4		3000
30 LZ 4/...-..., Ls=...	18						
30 L 12/...-...	20	MSC, Si	-20°C...+160°C	L, LZ	12		4800
30 LZ 12/...-..., Ls=...	22						

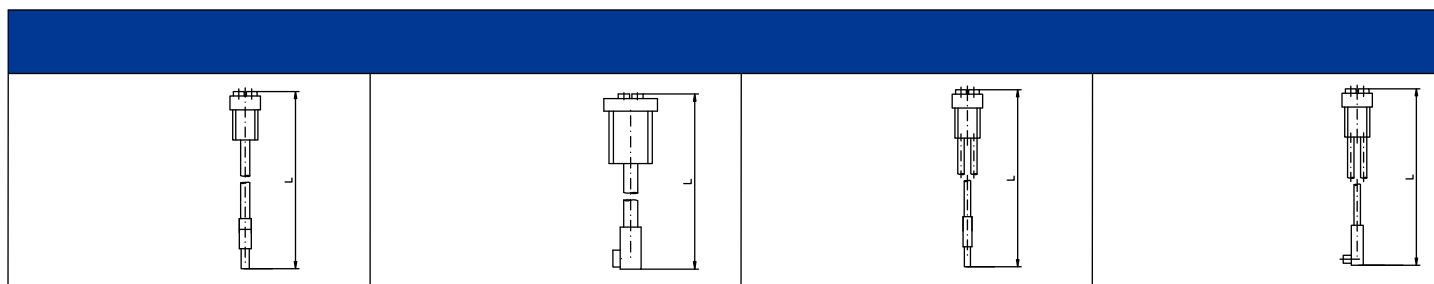
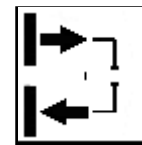
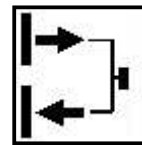
KOD OZNACZE WIATŁOWODÓW

					mm		mm
-	18/30:	L:	Z:	0,4; 0,5; 1; 1,5;	250; 500; 1000; 1500; 2000;	PVC: PVC	
-	FMS 18	R:	P:	2; 3; 4; 12		MSC:	
-	FMS 30	QL:	a1.a2.a3:			Si:	Ls=10; 14; 16 20
V	30:	VR:					
	FMS 30						

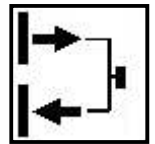
30 L Z 4 / 2000 MSC Ls=16  
18/30 R P 2 / 750 Si



SELS limited partnership, 02-641 Warsaw, 5a Malawskiego Str.  
Phone: (+4822) 848 08 42, 848 52 81, Fax (+4822) 848 16 48  
e-mail: sels@sels.pl, http://www.sels.pl



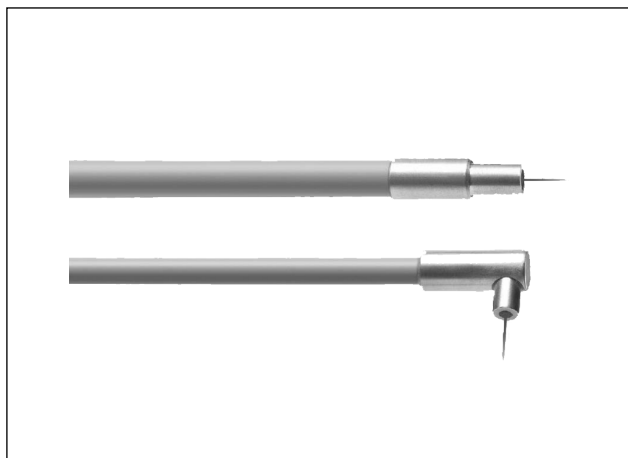
. 1  R/L 0,4	. 2  R/L 0,5				
. 3  R/L 1 PVC	. 4  R/L 1 MSC/Si	. 5  RZ/LZ 1 MSC/Si	. 6  R/L 1,5 Si		
. 7  R/L 2 PVC	. 8  R/L 2 MSC/Si	. 9  RZ/LZ 2 PVC	. 10  RZ/LZ 2 MSC/Si		
. 11  R 3 PVC	. 12  L 3 PVC	. 13  R/L 3 MSC/Si	. 14  RZ 3 PVC	. 15  LZ 3 PVC	. 16  RZ/LZ 3 MSC/Si
. 17  R/L 4 MSC/Si	. 18  RZ/LZ 4 MSC/Si				
. 19  R 12 MSC/Si	. 20  L 12 MSC/Si	. 21  RZ 12 MSC/Si	. 22  LZ 12 MSC/Si		



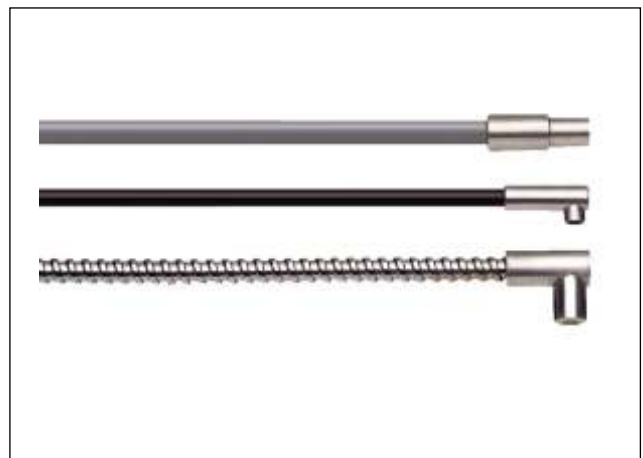
		(mm) <sup>1)</sup>			~	(mA)			(Hz)	*		L (mm)	Ø (mm)
PNP	NPN												
	FMS 18 34 U	1000		IR	10 - 30 DC	200	NO	NC	1000	M18/A	•	90,5	52
	FMS 18 34 UL4	1000		IR	10 - 30 DC	200	NO	NC	1000	M18/B	M12	89	52
	FMS 18 34 U 60	500		IR	10 - 30 DC	200	NO	NC	5000	M18/A	•	90,5	52
	FMS 18 34 UL4 60	500		IR	10 - 30 DC	200	NO	NC	5000	M18/B	M12	89	52
	FMS 18 34 U 52	250		R	10 - 30 DC	200	NO	NC	1000	M18/A	•	90,5	52
	FMS 18 34 UL4 52	250		R	10 - 30 DC	200	NO	NC	1000	M18/B	M12	89	52
	FMS 18 34 U 54	500		IR	10 - 30 DC	200	NO	NC	1000	M18/A	•	90,5	52
	FMS 18 34 UL4 54	500		IR	10 - 30 DC	200	NO	NC	1000	M18/B	M12	89	52
	FMS 30 34 U	2000		IR	10 - 30 DC	200	NO	NC	100	M30/A	•	90,5	52
	FMS 30 34 UL4	2000		IR	10 - 30 DC	200	NO	NC	100	M30/B	M12	89	52
	FMS 30 34 U 55	1500		IR	10 - 30 DC	200	NO	NC	300	M30/A	•	90,5	52
	FMS 30 34 UL4 55	1500		IR	10 - 30 DC	200	NO	NC	300	M30/B	M12	89	52
	FMS 30 35 U <sup>1)</sup>	2000		IR	10 - 30 DC	200	NO	NC	100	M30/A	•	90,5	52
	FMS 30 35 UL5 <sup>1)</sup>	2000		IR	10 - 30 DC	200	NO	NC	100	M30/B	M12	89	52
	FMS 30 44 U 56	1000		IR	10 - 30 DC	200	NO	NC	1000	M30/A	•	90,5	52
	FMS 30 44 UL4 56	1000		IR	10 - 30 DC	200	NO	NC	1000	M30/B	M12	89	52
	FMS 30 44 U 60	500		IR	10 - 30 DC	200	NO	NC	5000	M30/A	•	90,5	52
	FMS 30 44 UL4 60	500		IR	10 - 30 DC	200	NO	NC	5000	M30/B	M12	89	52
	FMS 30 34 U 52	2000		R	10 - 30 DC	200	NO	NC	100	M30/A	•	90,5	52
	FMS 30 34 UL4 52	2000		R	10 - 30 DC	200	NO	NC	100	M30/B	M12	89	52

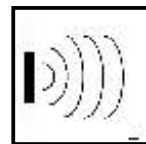
- ; IP 65  
 IR - í ô í é 880nm, R - 660 nm; . - ;  
 - PVC 2 m  
 1) -

- (AXIAL)  
 - (RADIAL)



- PVC  
 - MSC





		(mm)	• •	V	(mm)	(mm)	(mm)	(Hz)	(mA)			*	
PNP	NPN												
UT 12 370 PSL4		30 - 400	• •	10 - 30 DC	0,20	± 0,1%	4	8	100	NO	NC	M12	M12/4pin
UT 18 270 PSL4		30 - 300	• •	10 - 30 DC	0,20	± 0,1%	3	13	100	NO	NC	M18	M12/4pin
UT 18 750 PSL4		50 - 800	• •	10 - 30 DC	0,20	± 0,1%	8	4	100	NO	NC	M18	M12/4pin
UT 20 150 PSM4	UT 20 150 NSM4	20 - 150	• •	20 - 30 DC	0,20	± 0,15%	2	25	200	NO	NC	F20	M8/4pin
UT 20 240 PSM4	UT 20 240 NSM4	50 - 240	• •	20 - 30 DC	0,20	± 0,15%	2	25	200	NO	NC	F20	M8/4pin
UT 20 700 PSM4	UT 20 700 NSM4	120 - 700	• •	20 - 30 DC	0,20	± 0,15%	2	14	200	NO	NC	F20	M8/4pin
UM 18 60/250 CDHP		30-60/30-250	•	12 - 30 DC	0,36	< 1	2	30	200	NO		M18	M12/4pin
UM 30 300 P HP		60 - 350	•	12 - 30 DC	1	± 1	5	8	200	NO	NC	M30	M12/5pin
UM 30 300 PP HP		60 - 350	•	12 - 30 DC	1	± 1	5	8	200	NO	NC	M30	M12/5pin
UM 30 1000 P HP		200 - 1300	•	12 - 30 DC	1	± 2	20	7	200	NO	NC	M30	M12/5pin
UM 30 1000 PP HP		200 - 1300	•	12 - 30 DC	1	± 2	20	7	200	NO	NC	M30	M12/5pin
UM 30 3000 P HP		350 - 3400	•	12 - 30 DC	1	± 3	50	4	200	NO	NC	M30	M12/5pin
UM 30 3000 PP HP		350 - 3400	•	12 - 30 DC	1	± 3	50	4	200	NO	NC	M30	M12/5pin
UM 30 6000 P HP		800 - 6000	•	12 - 30 DC	1	± 4	100	2	200	NO	NC	M30	M12/5pin
UM 30 6000 PP HP		800 - 6000	•	12 - 30 DC	1	± 4	100	2	200	NO	NC	M30	M12/5pin

	(mm)	(ms)	V	(mm)	(mm)	(mA)		*	
UT 12 370 AIL4	30 - 400	50	10 - 30 DC	0,40	± 0,5%	30	4-20mA / 20-4mA	M12	M12/4pin
UT 18 270 AIL4	30 - 300	30	10 - 30 DC	0,40	± 0,5%	20	4-20mA / 20-4mA	M18	M12/4pin
UT 18 750 AIL4	50 - 800	100	10 - 30 DC	0,40	± 0,5%	20	4-20mA / 20-4mA	M18	M12/4pin
UT 20 150 AIM4	20 - 150	30	20 - 30 DC	0,20	± 0,15%	35	4-20mA / 20-4mA	F20	M8/4pin
UT 20 150 AUM4	20 - 150	30	20 - 30 DC	0,20	± 0,15%	35	0-10V / 10-0V	F20	M8/4pin
UT 20 240 AIM4	50 - 240	30	20 - 30 DC	0,20	± 0,15%	35	4-20mA / 20-4mA	F20	M8/4pin
UT 20 240 AUM4	50 - 240	30	20 - 30 DC	0,20	± 0,15%	35	0-10V / 10-0V	F20	M8/4pin
UT 20 700 AIM4	120 - 700	30	20 - 30 DC	0,20	± 0,15%	35	4-20mA / 20-4mA	F20	M8/4pin
UT 20 700 AUM4	120 - 700	30	20 - 30 DC	0,20	± 0,15%	35	0-10V / 10-0V	F20	M8/4pin
UM 30 300 A HP	60 - 350	55	12 - 30 DC	1	± 1	70	4-20mA / 20-4mA / 0-10V / 10-0V	M30	M12/5pin
UM 30 1000 A HP	200 - 1300	70	12 - 30 DC	1	± 2	70	4-20mA / 20-4mA / 0-10V / 10-0V	M30	M12/5pin
UM 30 3000 A HP	350 - 3400	130	12 - 30 DC	1	± 3	70	4-20mA / 20-4mA / 0-10V / 10-0V	M30	M12/5pin
UM 30 6000 A HP	800 - 6000	225	12 - 30 DC	1	± 4	70	4-20mA / 20-4mA / 0-10V / 10-0V	M30	M12/5pin

: UT 20... - ABS; UM... - í ë î â í í  
 : UT 20... - IP 67; UM, UT12, UT18 - IP 65. . 5.



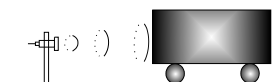
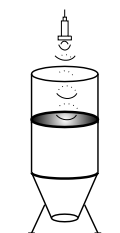
- UT 20.

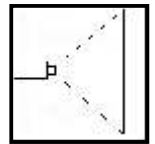


- UM 30

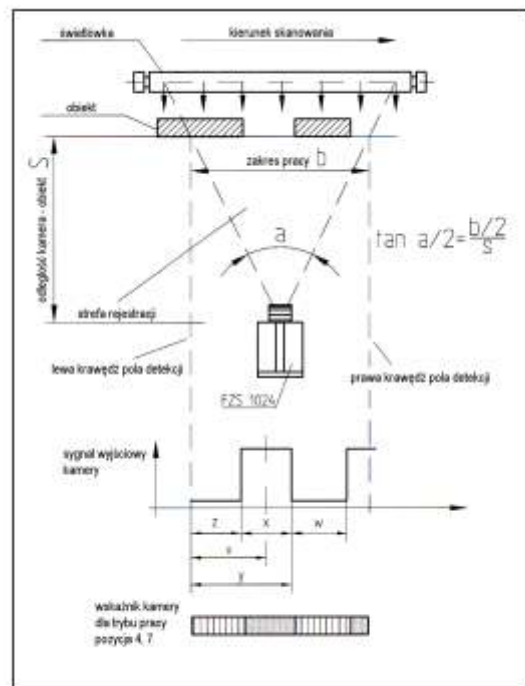
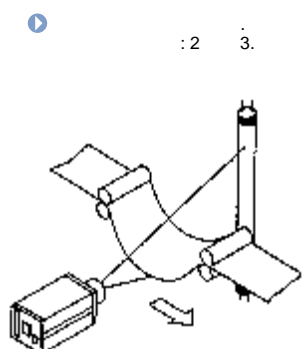
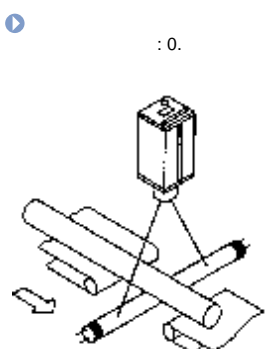
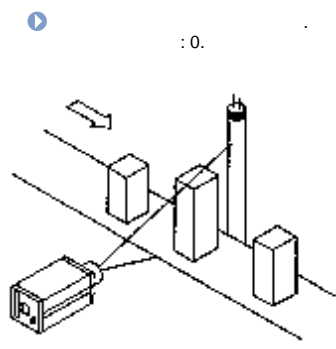
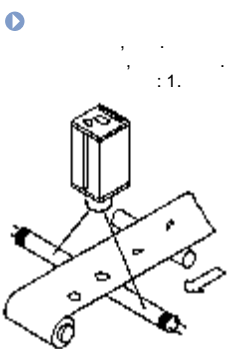
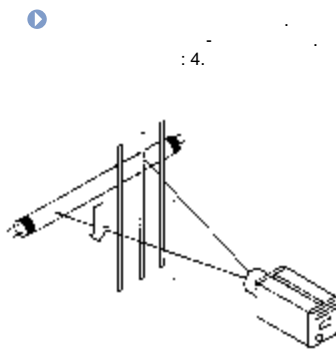
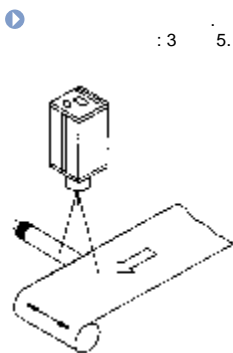


- UM 30



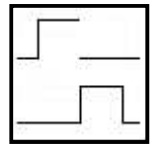


	FZS 1024 U	FZS 1024 I
	0 - 10 V	4 - 20 mA
	100 mA	500
	2,4 V	2,4 V
	+	-
	-	+
	20 - 28 V DC	20 - 28 V DC
	7 Pin	7 Pin
	2 - 30 ms	2 - 30 ms
	1,1 ms	1,1 ms
1 Pixela	14µm x 14µm	14µm x 14µm
	. 16 mm	. 16 mm
	500 g	500 g
	IP 65	IP 65
	0 - 50°C	0 - 50°C
	2xT-slot	2xT-slot



0	w	
1	x	
2	y	
3	z	
4		
5	v	
6		
7		f-stop: f-stop ( ) LED





MFF 12 PP4; MFF 12 NN4		MFC 12 PP4; MFC 12 NN4	
PNP	NPN.	PNP NC	NPN. NO.
:	0,015 Hz - 1 kHz	:	10 kHz
:	0,1 ms	-	1
:	400 mA	-	65535
:	5%	:	400 mA

MFT 12 PP4; MFT 12 NN4		MFI 12 PN4; MFI 12 NP4	
PNP	NPN.	PNP NC	NPN. NO.
:	10 kHz	:	10 kHz
:	1 ms	:	400 mA
:	65535 ms		
:	400 mA		



MFW 12 PP4; MFW 12 NN4	
PNP	NPN.
:	10 kHz
:	1 ms
:	65535 ms
:	400 mA

MFU 12 P4; MFU 12 N4		PNP	NPN.
MFT, MFC, MFI, MFF	IR	CUSB--RS232-2m	
:	:	:	8000 Hz
:	:	:	400 mA
:	:	:	PNP NPN

!

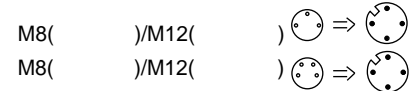
[www.sels.pl](http://www.sels.pl)



	*		- PIN		[m.]
		-			
SAC-3P-1,5-PUR/M8FR		•	3	M8	1,5
SAC-3P-3,0-PUR/M8FR		•	3	M8	3
SAC-3P-5,0-PUR/M8FR		•	3	M8	5
SAC-3P-1,5-PUR/M8FS	•		3	M8	1,5
SAC-3P-3,0-PUR/M8FS	•		3	M8	3
SAC-3P-5,0-PUR/M8FS	•		3	M8	5
SAC-4P-1,5-PUR/M8FR		•	4	M8	1,5
SAC-4P-3,0-PUR/M8FR		•	4	M8	3
SAC-4P-5,0-PUR/M8FR		•	4	M8	5
SAC-4P-1,5-PUR/M8FS	•		4	M8	1,5
SAC-4P-3,0-PUR/M8FS	•		4	M8	3
SAC-4P-5,0-PUR/M8FS	•		4	M8	5
SAC-3P-1,5-PUR/M12FR		•	3	M12	1,5
SAC-3P-3,0-PUR/M12FR		•	3	M12	3
SAC-3P-5,0-PUR/M12FR		•	3	M12	5
SAC-3P-1,5-PUR/M12FS	•		3	M12	1,5
SAC-3P-3,0-PUR/M12FS	•		3	M12	3
SAC-3P-5,0-PUR/M12FS	•		3	M12	5
SAC-4P-3,0-PUR/M12FR3L ( LED)		•	4	M12	3
SAC-4P-5,0-PUR/M12FR3L ( LED)		•	4	M12	5
SAC-4P-1,5-PUR/M12FR		•	4	M12	1,5
SAC-4P-3,0-PUR/M12FR		•	4	M12	3
SAC-4P-5,0-PUR/M12FR		•	4	M12	5
SAC-4P-1,5-PUR/M12FS	•		4	M12	1,5
SAC-4P-3,0-PUR/M12FS	•		4	M12	3
SAC-4P-5,0-PUR/M12FS	•		4	M12	5
RKWTH8-187/5M		•	8	M12	5
RKWTS8-157/5M	•		8	M12	5
SAC-3P-M12MS/0,6-PUR/M 8FS	•		3	M8/M12	0,6
SAC-4P-M12MS/0,6-PUR/M 8FS	•		4	M8/M12	0,6
RKM3/06/2M	•		3	M8	2
RKMW3/06/2M		•	3	M8	2



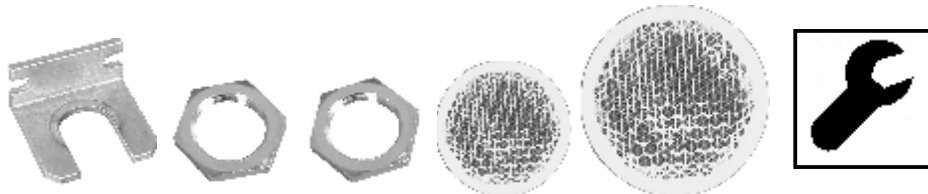
PUR M8.  
PIN 3 PVC. 4.  
M12.  
PUR PVC. 8.  
PIN 3, 4



\* ( ).

	*		- PIN		
		-			
SACC-M8 FS-3CON-M	•		3	M8	
SACC-M8 FS-4CON-M	•		4	M8	
SACC-M12 FR-4CON-PG7		•	4	M12	
SACC-M12 FS-4CON-PG7	•		4	M12	
SACC-M8 MS-3CON-M	•		3	M8	
SACC-M8 MS-4CON-M	•		4	M8	
SACC-M12 MR-4CON-PG7		•	4	M12	
SACC-M12 MR-5CON-PG7		•	5	M12	
SACC-M12 MS-4CON-PG7	•		4	M12	
SACC-M12 MS-5CON-PG7	•		5	M12	

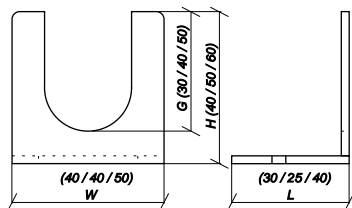




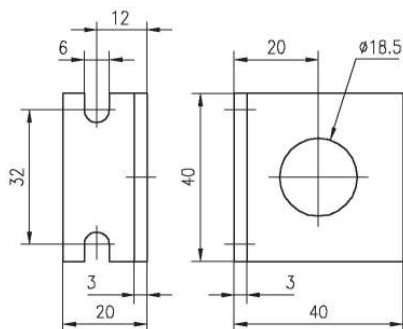
R 1	19 x 73	▶
R 1 L	10 x 62	
RD 2	21	
RD 4	42	
RD 46	50	
R 5	51 x 61	
R 5 L	51 x 61	
RD 8	83	
R 10	10 x 10	
RF 10	100 x 100	
RF 10 L	100 x 100	

M12	M12
M18	M18
MA18	M18
MA18A-1	U M18
M30	M30
MA30	M30
MS F 20	F 20
MSP F20-1	F 20
MSP F20-2	F 20
MS F 50	F 50
MSP F50	F 50
MSP F 55	F 55
MS F 80	F 80

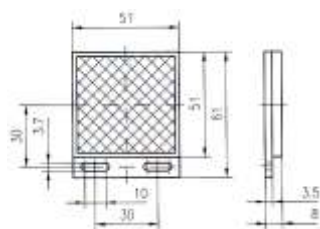
▶ M12, M18, M30



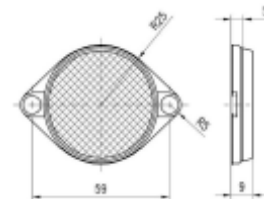
▶ MA 18



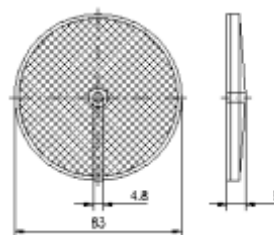
▶ R 5



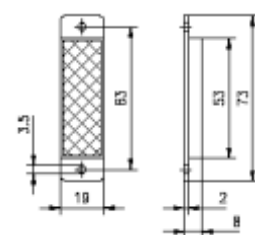
▶ RD46



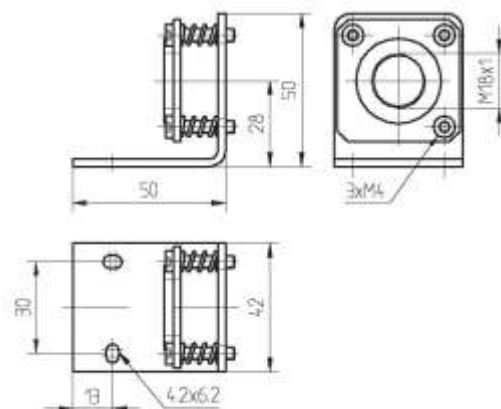
▶ RD8



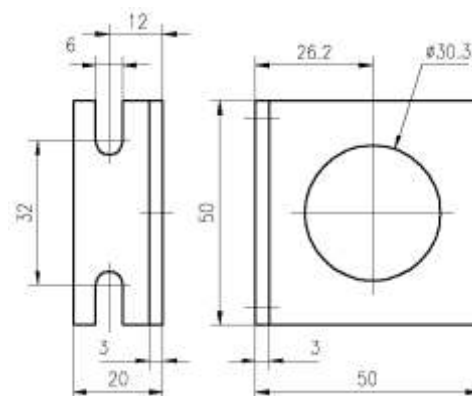
▶ R1



▶ MA 18A-1

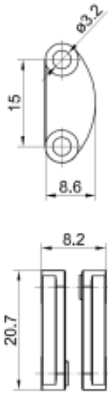


▶ MA 30

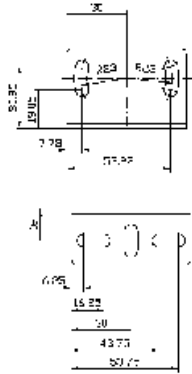




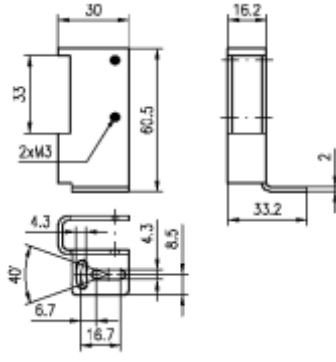
▶ MBD F 10



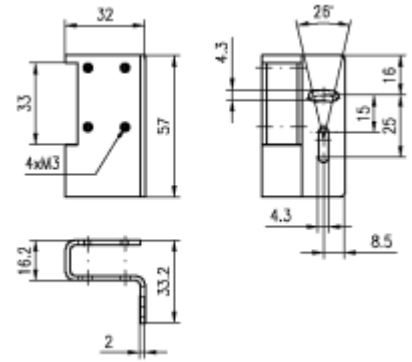
▶ MS F 20



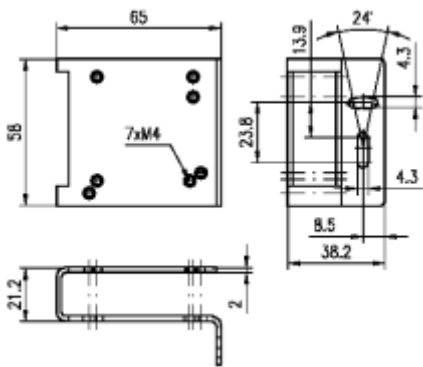
▶ MSP F20-1



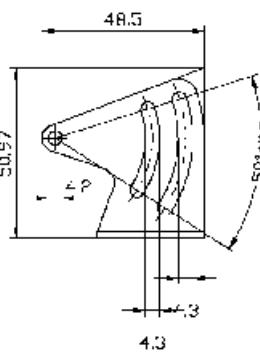
▶ MSP F20-2



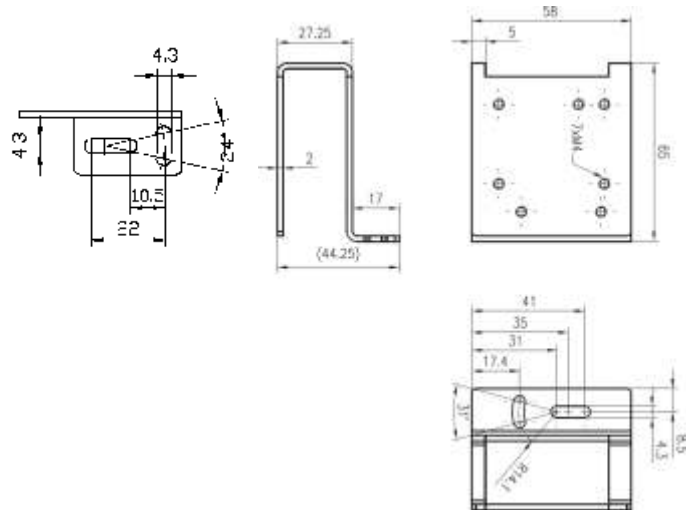
▶ MSP F50



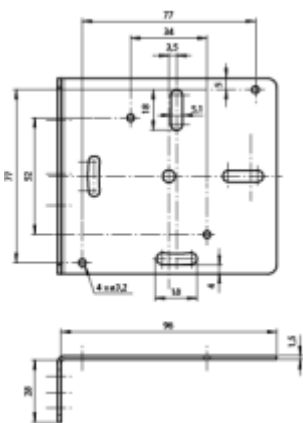
▶ MS F 50



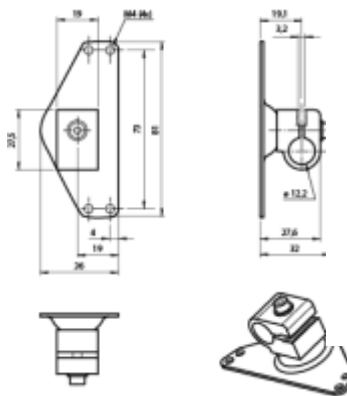
▶ MSP F 55



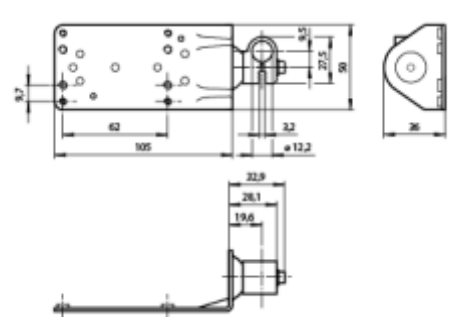
▶ MSF88-1



▶ MSF88-2



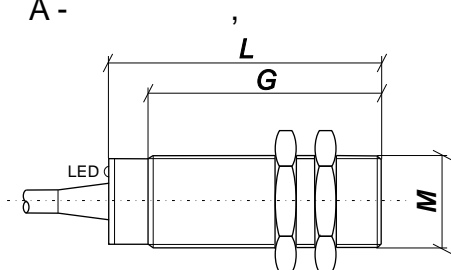
▶ MSF88-3



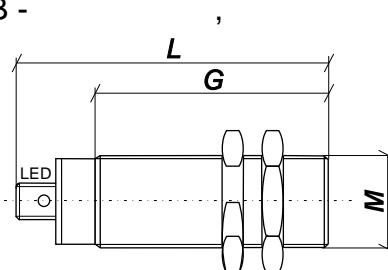


M4 x 0,5 ; M5 x 0,5 ; M8 x 1 ; M12 x 1 ; M18 x 1 ; M30 x 1,5

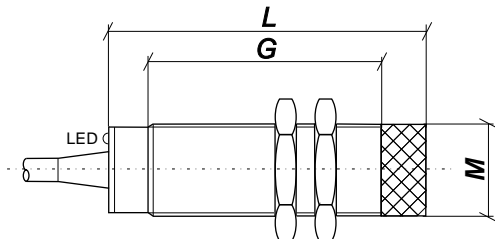
▶ A -



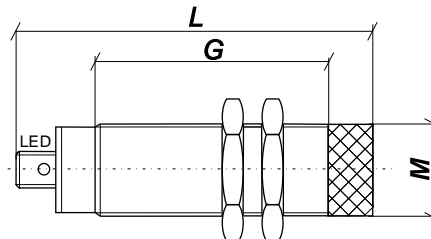
▶ B -



▶ C -

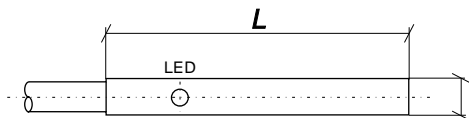


▶ D -

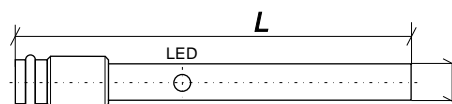


3, 4, 6,5

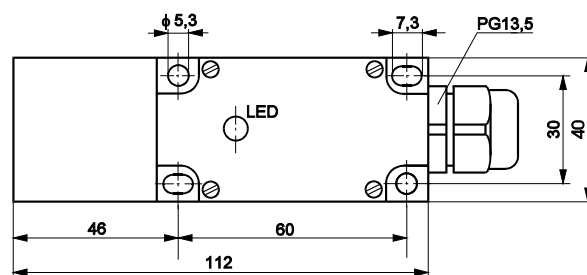
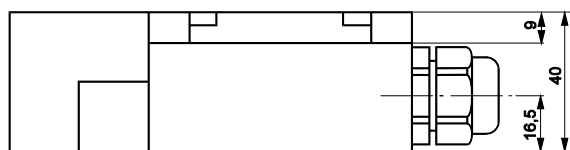
▶ E -



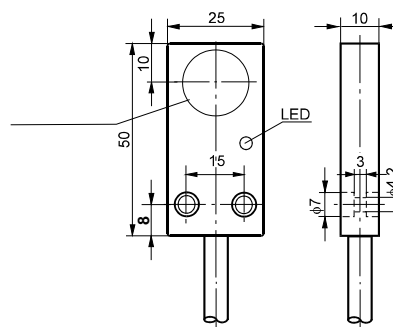
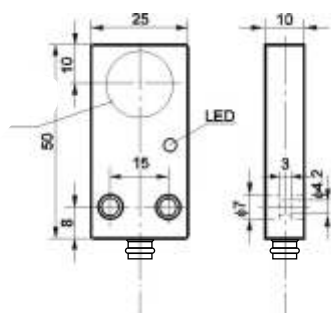
▶ F -



X

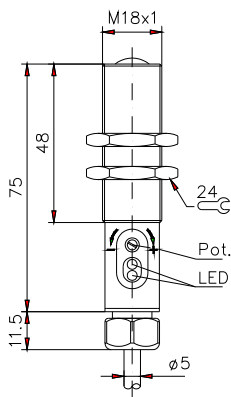


F

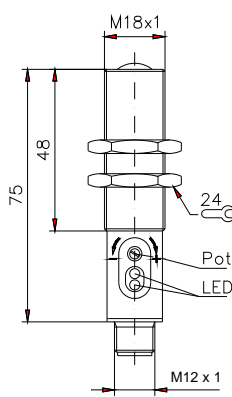




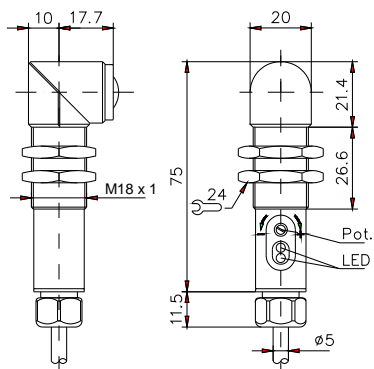
■ G -



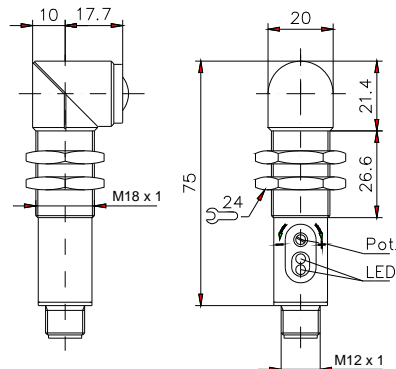
■ H -



■ I -

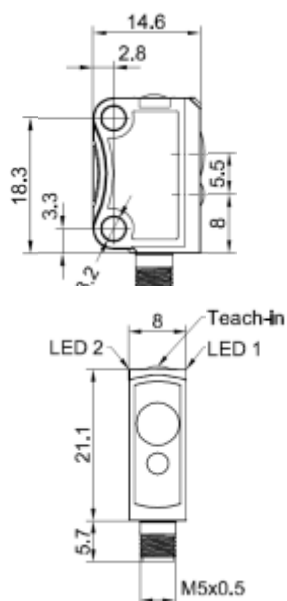


■ J -



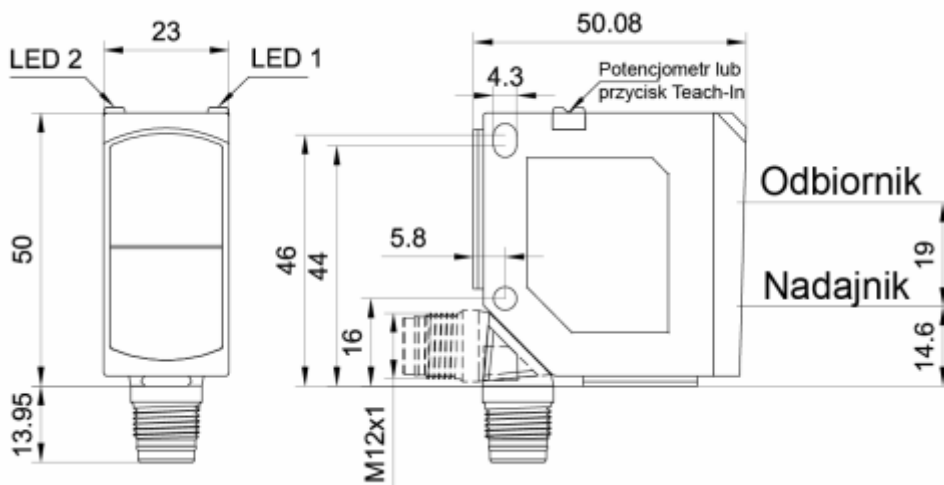
■

F10



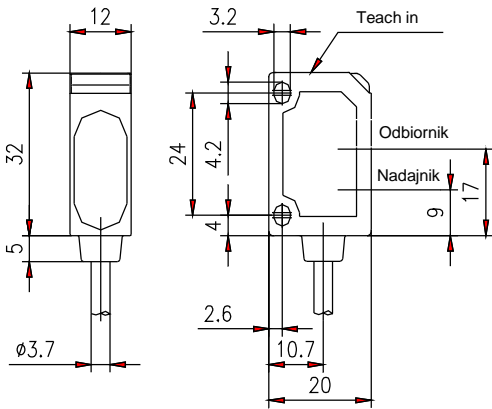
■

F55

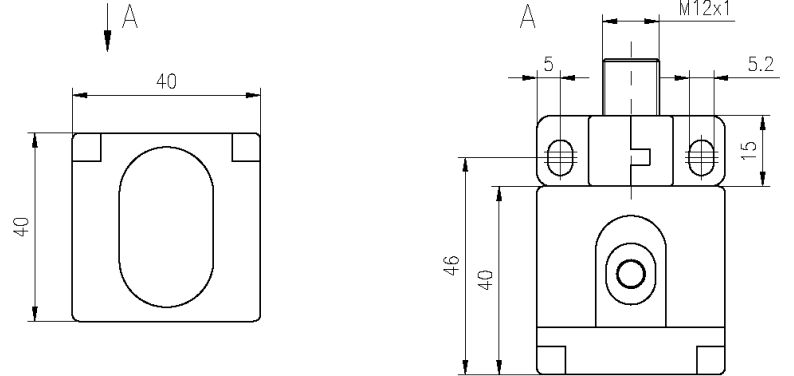




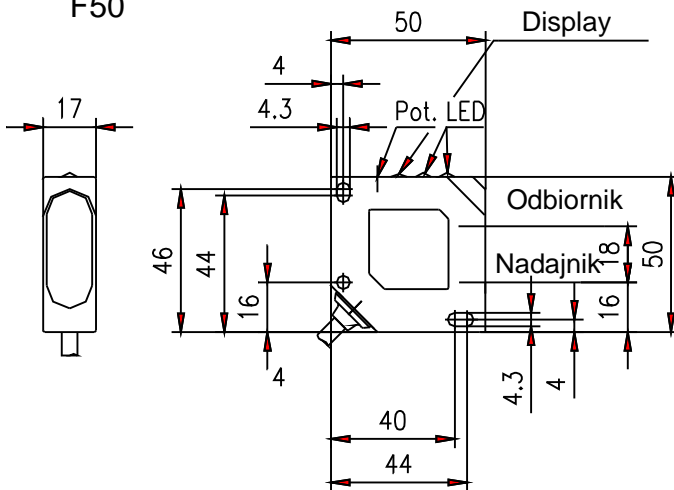
### F20



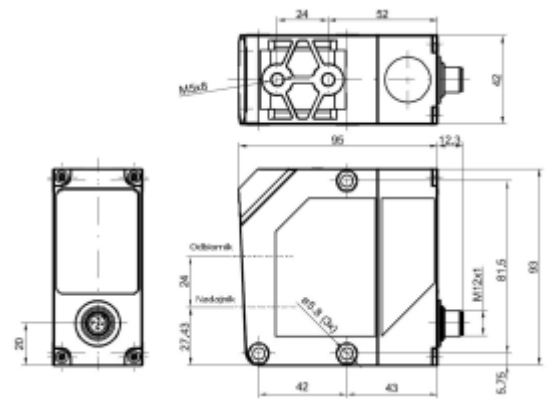
### F40



### F50

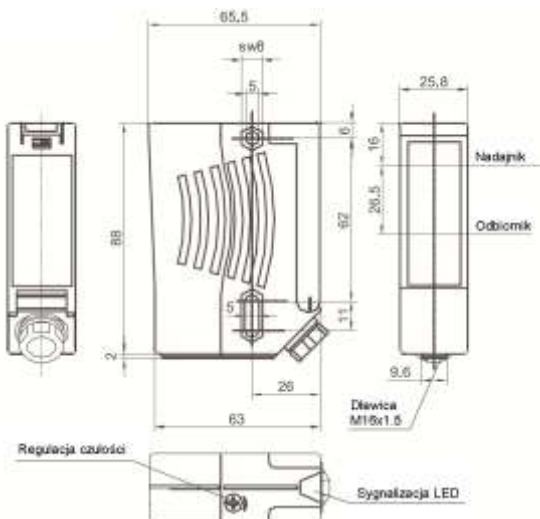


### F92



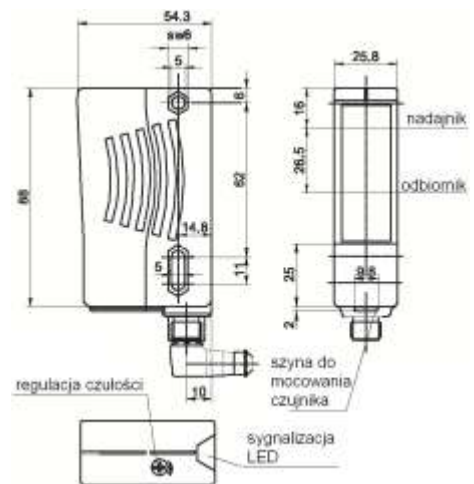
### F88

M16x1.5



### F88

M12

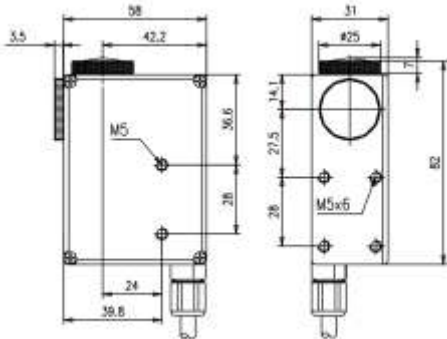




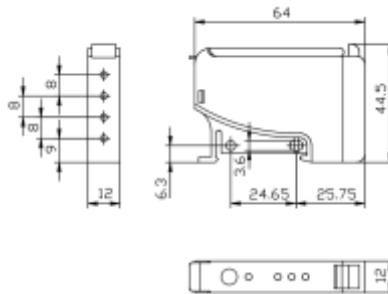


## : FT 82, FL 64, FZS, FGL, FG, FSEG

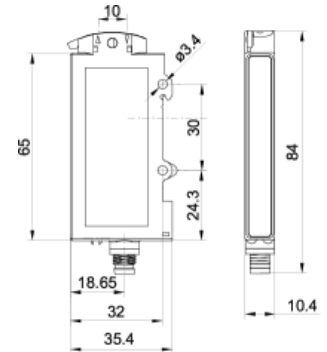
FT 82 RG



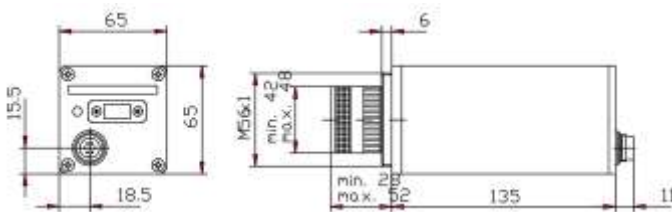
FL 64



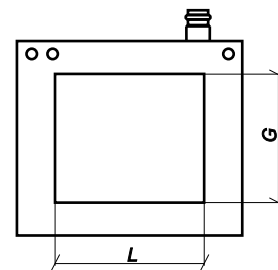
FL 70



FZS 1024 U, FZS 1024 I

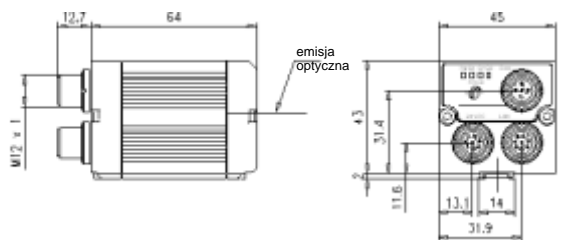
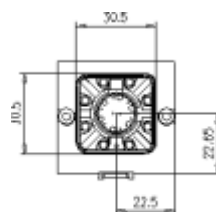


FG



FGL...RK...

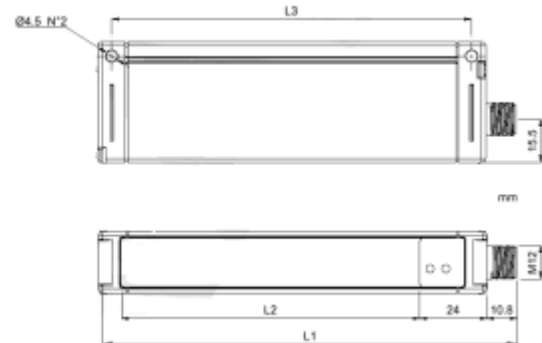
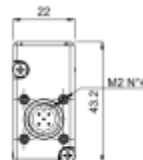
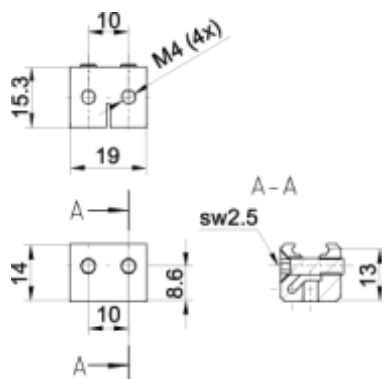
FA 45

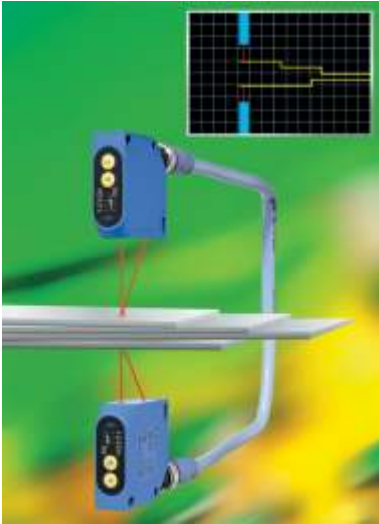


MBD-S94

FGL

FCP





250 m



**ECOLAB** *IP 69K*



**F10**



**F 18-1... -**





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