FGL… -RK

Fork sensors



PRODUCT HIGHLIGHTS

- Fork widths: 30 … 120 mm
- Small part detection from 0.2 mm
- Robust metal plug connection
- Sensor adjustment via teach-in and control input
- Versatile mounting possibilities
- N.O./N.C. switchable

Optical data	
Fork width	30 … 120 mm (see Selection Table)
Type of light	LED, red, 640 nm
Smallest detectable part	(See table)

Functions	
Indicator LED, green	Operating voltage indicator
Indicator LED, yellow	Switching output indicator
Sensitivity adjustment	Via Teach-in button and control input
Teach-in modes	Mode 1: during running process Mode 2: process at standstill
Adjustment possibilities	N.O./N.C. via Teach-in button and control input Button lock via control input Default: via Teach-in button and control input
Default setting	Maximum stability (max. immunity to contamination)

Electrical data	
Operating voltage, $+U_B$	10 … 30 V DC[1]
No-load current, I_0	≤ 30 mA
Output current, Ie	≤ 100 mA
Voltage drop, U_D	≤ 2.4 V
Protective circuits	Reverse polarity protection, U_B / Short-circuit protection (Q)
Protection Class	2
Switching output, Q	PNP / NPN (see Selection Table)
Output function	N.O. / N.C.
Switching frequency, f (ti/tp 1:1)	≤ 2000 Hz
Response time	250 µs
Control input, ET[2]	$+U_B$ = Teach-in, $-U_B$ = button locked Open = normal operation

Mechanical data	
Dimensions	(See plug connection)
Enclosure rating	IP 67[3]
Material, housing	Polycarbonate
Type of connection	See Selection Table
Ambient temperature: operation	-20 … +60 °C
Ambient temperature: storage	-20 … +80 °C
Weight	See Selection Table
Vibration and impact resistance	EN 60947-5-2

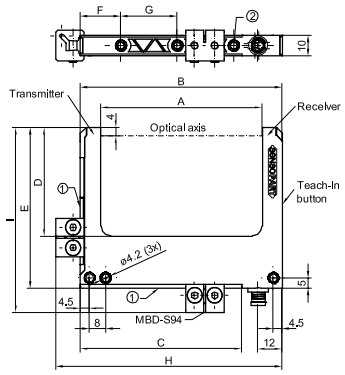
[1] Max. 10 % ripple, within U_B [2] Only 4-pin design [3] With connected IP 67 plug

Fork width	Switching output	Type of connection	Weight	Part number	Article number
30 mm	PNP	Metal plug, M8x1, 3-pin	20 g	FGL 30-RK-30-PS-M3	832-11000
30 mm	NPN	Metal plug, M8x1, 3-pin	20 g	FGL 30-RK-30-NS-M3	832-11001
30 mm	PNP	Metal plug, M8x1, 4-pin	20 g	FGL 30-RK-30-PS-M4	832-11002
30 mm	NPN	Metal plug, M8x1, 4-pin	20 g	FGL 30-RK-30-NS-M4	832-11003
50 mm	PNP	Metal plug, M8x1, 3-pin	30 g	FGL 50-RK-50-PS-M3	832-11004
50 mm	NPN	Metal plug, M8x1, 3-pin	30 g	FGL 50-RK-50-NS-M3	832-11005
50 mm	PNP	Metal plug, M8x1, 4-pin	30 g	FGL 50-RK-50-PS-M4	832-11006
50 mm	NPN	Metal plug, M8x1, 4-pin	30 g	FGL 50-RK-50-NS-M4	832-11007

Version: 07/2016. Subject to changes; diagrams similar

Fork width	Switching output	Type of connection	Weight	Part number	Article number
80 mm	PNP	Metal plug, M8x1, 3-pin	35 g	FGL 80-RK-50-PS-M3	832-11008
80 mm	NPN	Metal plug, M8x1, 3-pin	35 g	FGL 80-RK-50-NS-M3	832-11009
80 mm	PNP	Metal plug, M8x1, 4-pin	35 g	FGL 80-RK-50-PS-M4	832-11010
80 mm	NPN	Metal plug, M8x1, 4-pin	35 g	FGL 80-RK-50-NS-M4	832-11011
120 mm	PNP	Metal plug, M8x1, 3-pin	40 g	FGL 120-RK-50-PS-M3	832-11012
120 mm	NPN	Metal plug, M8x1, 3-pin	40 g	FGL 120-RK-50-NS-M3	832-11013
120 mm	PNP	Metal plug, M8x1, 4-pin	40 g	FGL 120-RK-50-PS-M4	832-11014
120 mm	NPN	Metal plug, M8x1, 4-pin	40 g	FGL 120-RK-50-NS-M4	832-11015

Plug connection



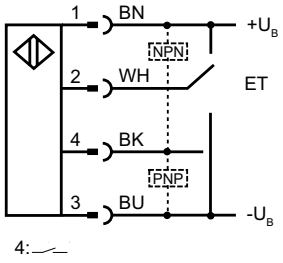
153-00543

Typ / Type	A	B	C	D	E	F	G	H	I	②
FGL 30-RK-30-xx-xx	30	50	30	34	59,5	20	-	62,2	71,7	1x
FGL 50-RK-50-xx-xx	50	70	50	54	79,5	20	28	82,2	91,7	2x
FGL 80-RK-50-xx-xx	80	100	80	54	79,5	20	2x28	112,2	91,7	3x
FGL 120-RK-50-xx-xx	120	140	120	54	79,5	20	3x28	152,2	91,7	4x

Angaben in mm / Specifications are in mm / Données en mm

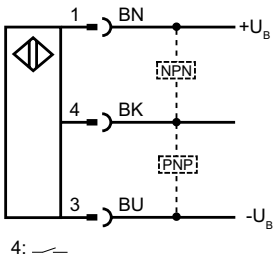
① Schwalbenschwanz / Dovetail / Pince à queue d'aronde
② Gewindeeinsatz M4, Einschraubtiefe max. 6 mm
Threaded insert M4, max. screw-in depth 6 mm
Insert filetage M4, profondeur vis max 6 mm

Connection, 4-pin



154-00148

Connection, 3-pin



154-00163

Smallest detectable part

Type	FGL 30	FGL 50	FGL 80	FGL 120
Part size	0.2 mm	0.2 mm	0.2 mm	0.4 mm

Accessories

Connection cables	From Page A-38
Brackets	From Page A-4