

# FGL... -IK

## Infrared 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		Functions	
Fork width	30 ... 120 mm (see Selection Table)	Indicator LED, green	Operating voltage indicator
Type of light	Infrared, 880 nm	Indicator LED, yellow	Switching output indicator
Smallest detectable part	(See table)	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		Mechanical data	
Operating voltage, +U <sub>B</sub>	10 ... 30V DC <sup>1</sup>	Dimensions	(See plug connection)
No-load current, I <sub>0</sub>	≤ 32 mA	Enclosure rating	IP 67 <sup>3</sup>
Output current, I <sub>e</sub>	100 mA	Material, housing	Polycarbonate
Voltage drop, U <sub>D</sub>	≤ 2.4V	Type of connection	See Selection Table
Protective circuits	Reverse polarity protection, U <sub>B</sub> / Short-circuit protection (Q)	Ambient temperature: operation	-20 ... +60 °C
Protection Class	2	Ambient temperature: storage	-20 ... +80 °C
Switching output, Q	PNP / NPN (see Selection Table)	Weight	See Selection Table
Output function	N.O. / N.C.	Vibration and impact resistance	EN 60947-5-2
Switching frequency, f (ti/tp 1:1)	2000 Hz		
Response time	250 μs		
Control input, ET <sup>2</sup>	+U <sub>B</sub> = Teach-in, -U <sub>B</sub> = button locked Open = normal operation		

<sup>1</sup> Max. 10 % ripple, within U<sub>B</sub>    <sup>2</sup> Only 4-pin design    <sup>3</sup> 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-IK-30-PS-M3	832-11016
30 mm	NPN	Metal plug, M8x1, 3-pin	20 g	FGL 30-IK-30-NS-M3	832-11017
30 mm	PNP	Metal plug, M8x1, 4-pin	20 g	FGL 30-IK-30-PS-M4	832-11018
30 mm	NPN	Metal plug, M8x1, 4-pin	20 g	FGL 30-IK-30-NS-M4	832-11019
50 mm	PNP	Metal plug, M8x1, 3-pin	30 g	FGL 50-IK-50-PS-M3	832-11020
50 mm	NPN	Metal plug, M8x1, 3-pin	30 g	FGL 50-IK-50-NS-M3	832-11021
50 mm	PNP	Metal plug, M8x1, 4-pin	30 g	FGL 50-IK-50-PS-M4	832-11022
50 mm	NPN	Metal plug, M8x1, 4-pin	30 g	FGL 50-IK-50-NS-M4	832-11023

Fork width	Switching output	Type of connection	Weight	Part number	Article number
80 mm	PNP	Metal plug, M8x1, 3-pin	35 g	FGL 80-IK-50-PS-M3	832-11024
80 mm	NPN	Metal plug, M8x1, 3-pin	35 g	FGL 80-IK-50-NS-M3	832-11025
80 mm	PNP	Metal plug, M8x1, 4-pin	35 g	FGL 80-IK-50-PS-M4	832-11026
80 mm	NPN	Metal plug, M8x1, 4-pin	35 g	FGL 80-IK-50-NS-M4	832-11027
120 mm	PNP	Metal plug, M8x1, 3-pin	40 g	FGL 120-IK-50-PS-M3	832-11028
120 mm	NPN	Metal plug, M8x1, 3-pin	40 g	FGL 120-IK-50-NS-M3	832-11029
120 mm	PNP	Metal plug, M8x1, 4-pin	40 g	FGL 120-IK-50-PS-M4	832-11030
120 mm	NPN	Metal plug, M8x1, 4-pin	40 g	FGL 120-IK-50-NS-M4	832-11031

### Plug connection

Typ / Type	A	B	C	D	E	F	G	H	I	②
FGL 30-IK-30-xx-xx	30	50	30	34	59,5	20	-	62,2	71,7	1x
FGL 50-IK-50-xx-xx	50	70	50	54	79,5	20	28	82,2	91,7	2x
FGL 80-IK-50-xx-xx	80	100	80	54	79,5	20	2x28	112,2	91,7	3x
FGL 120-IK-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 Gewindeinsatz M4, Einschraubtiefe max. 6 mm  
 Threaded insert M4, max. screw-in depth 6 mm  
 Insert filetage M4, profondeur vis max 6 mm

153-00697

### 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