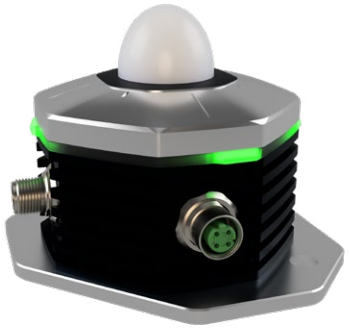
For high-precision distance measurement | RAD78P | PROFINET IO



Distance measurements in the µm range.

Order code
Measuring range 0.10 m ... 6 m

RAD78P	.	006	.	11	1 (a)	5	3	.	CC12
Type									

Opening angle : ±1.5° (3°)
Measurement rate : 500 Hz
Interface : PROFINET
Radar frequency : 119 ... 125 GHz (auswählbar 122 ... 123 GHz)

(a) *Linearity*
1 = ±0.1% of the change in distance relative to the specified zero point

Order code
Measuring range 0.3 m ...40 m

RAD78P	.	040	.	11	1 (a)	5	2	.	CC12
Type									

Opening angle : ±1.5° (3°)
Measurement rate : 500 Hz
Interface : PROFINET
Radar frequency : 122 ... 123 GHz

(a) *Linearity*
1 = ±0.1% of the change in distance relative to the specified zero point

Accessories		Order no.
Starter Kit RAD78x PROFINET	Preconfigured router and power kit for immediate access to the sensor and the integrated web interface—without changing the PC's IP address or admin rights. The kit consists of a mini router and a 24 V sensor power supply.	**8.0010.9000.0025**
Mounting plate for precise angle adjustment 	To ensure that the sensor is correctly aligned perpendicular to the intended target Horizontal angle adjustment ± 2° Vertical angle adjustment ± 1.5° Dimensions: 288 x 175 x 88 mm	**8.0000.7000.0088**

© Fritz Kübler GmbH, subject to errors and changes. 04/2026

For high-precision distance measurement	RAD78P	PROFINET IO

Cables and connectors		Order no.
Preassembled cables	M12 male connector with external thread, 4-pin, D-coded, straight M12 female connector with coupling nut, 4-pin, D-coded, straight 2 m [6.56'] PUR cable	**05.00.6031.4444.002M**
	M12 male connector with external thread, 4-pin, D-coded, angled M12 female connector with coupling nut, 4-pin, D-coded, straight 2 m [6.56'] PUR cable	**05.00.6031.4542.002M**
	M12 male connector with external thread, 4-pin, D-coded, straight RJ45 connector 2 m [6.56'] PUR cable	**05.00.6031.7444.002M**
	M12 female connector with coupling nut, 8-pin, A-coded, straight M12 male connector with external thread, 8-pin, A-coded, straight 2 m [6.56'] PUR cable	**05.00.6051.8284.002M**
Connectors	M12 male connector with external thread, 4-pin, D-coded, straight (metal)	**05.WASCSY4S**
	M12 male connector with external thread, 4-pin, D-coded, angled (metal)	**8.0000.5128.0000**
	M12 female connector with coupling nut, 8-pin, A-coded, straight (metal)	**05.CMB 8181-0**

Further Kübler accessories can be found at: kuebler.com/accessories
Further Kübler cables and connectors can be found at: kuebler.com/connection-technology

1) Lagertypen

© Fritz Kübler GmbH, subject to errors and changes. 04/2026

For high-precision distance measurement	RAD78P	PROFINET IO

Technical data

General data

Measuring range	0.1 ... 6 m 0.3 ... 40 m
Linearity	±0.1 % of the measurement section
Repeatability	±1 µm
Radar frequency (FMCW)	119 ... 125 GHz (selectable 122 ... 123 GHz for measuring range 0.3 ... 40 m)
Radiation power	EIRP < 100 mW
MTTF	> 105 years
Measurement rate	500 Hz
Opening angle	±1.5° (3°)

Electrical characteristics

Power supply		24 V DC
Current consumption		125 mA
Power consumption		3 W
Reverse polarity protection		yes
Analog output		4 ... 20 mA
	power supply	8 ... 40 V
Switching outputs		3 x PNP/NPN
	power supply	10 ... 40 V

Mechanical characteristics

Material	housing	die-cast aluminum, coated
	lens	PTFE
Weight		800 g [28,22 oz]
Protection acc. to EN 60529		IP67
Working temperature range		-40 °C ... +70 °C [-40 °F ... +185 °F]
Storage temperature range		-40 °C ... +85 °C [-40 °F ... +158 °F]
Shock resistance (EN 60068-2-27)		100 g; 11 ms

Approvals

CE compliant in accordance with		
	EMC Directive	2014/30/EU
	RoHS Directive	2011/65/EU
Approvals/Certificates		FCC / CFR-47 part 15 (USA) RSS-210 Issue 10 (Canada) EN 305 550-1 V.1.2.1 (European Union) EN 305 550-2 V.1.2.1 (European Union)

Interface characteristics PROFINET

General information

Communication interface	Profinet RT
Cycle time	1 ms
Data transfer	100 MBit/s
Line length	100 m
Classifications	RT Class 1 Conformance Class B Netload Class III

Adjustable parameters

- IP address
- Device name
- I&M 0…3 Parameter

PROFINET characteristics

- I&M 0 ... 3
- MRP
- LLDP
- PDEV
- SNMP

Process data

- Distance
- Peak
- Ramp Count

© Fritz Kübler GmbH, subject to errors and changes. 04/2026

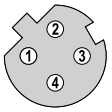
For high-precision distance measurement | **RAD78P** | **PROFINET IO**

Anschlussbelegung

Function	M12 connector, 8-pin, A-coded									
Power supply Analog output Switching outputs	Signal:	A	+V	CL	OUT 2	OUT 1	B	0 V	OUT 3	⏚
	Pin:	1	2	3	4	5	6	7	8	PH



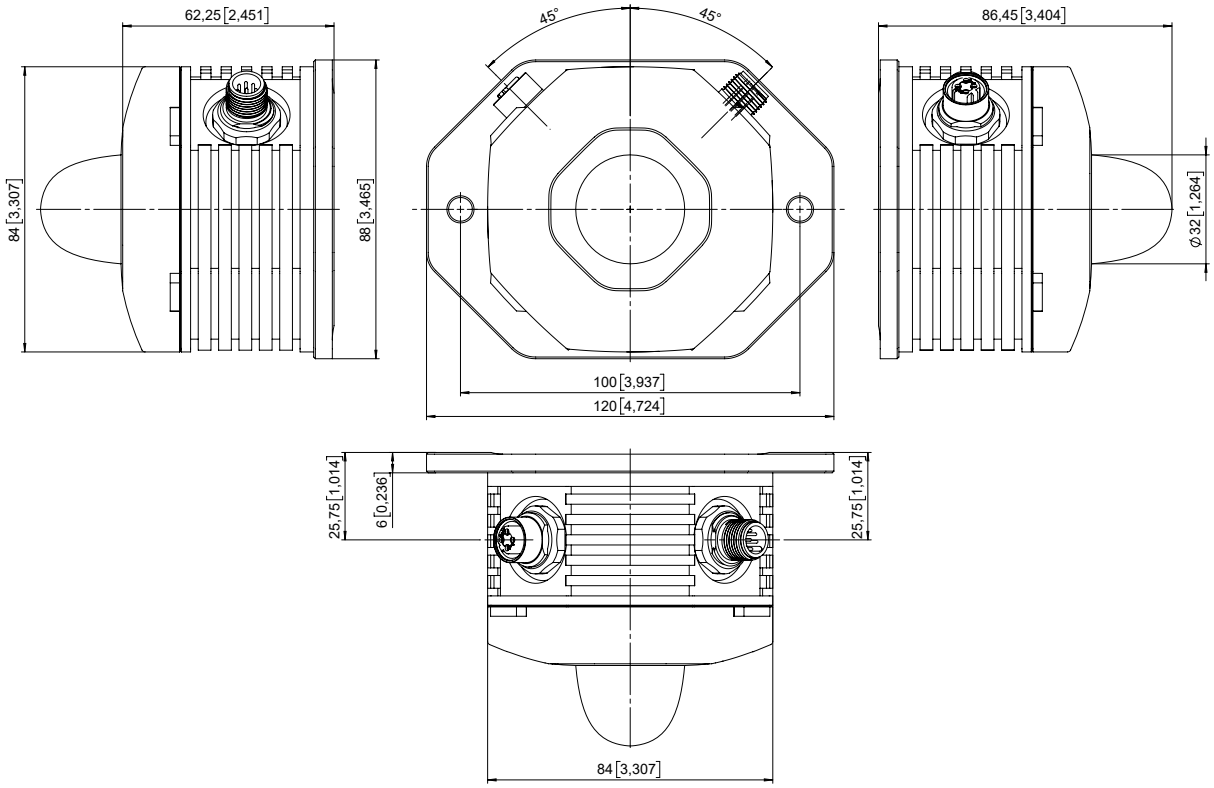
Function	M12 connector, 4-pin, D-coded				
Profinet communication	Signal:	RxD+	RxD-	TxD+	TxD+
	Abbreviation:	Receive data+	Receive data-	Transmit data+	Transmit data-
	Pin:	2	4	1	3



+V: supply voltage sensor +V DC
0 V: ground sensor GND (0V)
A, B: RS485 communication
CL: analog output (4 ... 20 mA)
OUT 1, 2, 3: switching outputs
PH ⏚: connector housing (shield)

Dimensions

Dimensions in mm



© Fritz Kübler GmbH, subject to errors and changes. 04/2026