

Rectangular CP40



The CP40 detect glass or metal objects with a smooth surface, even with oblique incidence of the sensing beam. They cover a wide sensing range of 5 cm to 180 cm with a beam angle of 60°.

They are available with PNP transistor or Analog output 0...10 VDC / 0...20 mA

Features

- Compact rectangular design, 160 x 40 x 40 mm
- plastic housing
- Protection class IP40
- Ambient temperature 0° C...+70 °C
- Diffuse mode
- Max. range 180 cm
- Beam angle 60°
- Change of beam direction through movable sensor head
- Analog or switching output
- LEDs indicate switching status /object detected
- Operating range adjusted via potentiometer

Type code CP40, M18, M18K, M30, Q12, Q30

RUR	70	M18KS	AP8X	H1141	3GD
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RUR	Series	70	Sensing range	M18KS	Design
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Series

RU	ultrasonic sensor, diffuse mode
RUC	ultrasonic sensor, programmable synchronizable, multiplex function diffuse mode
RUN	ultrasonic sensor, diffuse mode
RUR	ultrasonic sensor, retroreflective mode

Sensing range

70 max. sensing range in cm

Design

CP40	rectangular, plastic 40 x 40 x 160 mm or 40 x 40 x 177.5 mm
EM18	cylinder/thread M18, stainless steel, Ø 18 mm
EM30	cylinder/thread M30 stainless steel, Ø 30 mm
EMT18	cylinder/thread, M18, stainless steel, teflon-coated ultrasonic transducer surface (containing silicone) Ø 18 mm
EMT30	cylinder/thread M30, stainless steel, teflon-coated ultrasonic transducer surface (containing silicone), Ø 30 mm
M18	cylinder/thread, M18, metal, CuZn nickel-plated, Ø 18 mm
M18K	compact design, cylinder/thread M18, metal, CuZn, nickel-plated Ø 18 mm
M18KS	compact design, side emission, cylinder/thread M18, metal, CuZn, nickel-plated, Ø 18 mm
M30	cylinder/thread M30, metal CuZn, nickel-plated, Ø 30 mm
M3047	cylinder/thread M30, metal CuZn, nickel-plated sonic transducer Ø 47 mm
M3065	cylinder/thread M30, metal CuZn nickel-plated sonic transducer Ø 65 mm, Ø 18 mm
MT18	cylinder/thread M18, metal, CuZn, nickel-plated, teflon-coated ultrasonic transducer surface (containing silicone), Ø 18 mm
MT18K	compact design, cylinder/thread M18, metal, CuZn, nickel-plated, teflon-coated ultrasonic transducer surface (containing silicone) Ø 18 mm
MT3047	cylinder/thread M30, metal, CuZn, nickel-plated, teflon-coated ultrasonic transducer surface (containing silicone), ultrasonic transducer Ø 47 mm
Q12	compact, rectangular plastic 31 x 12 x 20 mm
Q30	compact, rectangular plastic, 65 x 30 x 88 mm

AP8X	Electrical version	H1141	Electrical connection
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Electrical version

A	NO
2A	2 x NO
F	frequency output
I	analog output 0 ... 20 mA or 4 ... 20 mA
L	analog
N	NPN
P	PNP
U	analog output 0 ... 10V
X	LED display
X2	2 x LEDs
6	10 ... 30 VDC input current
8	18 ... 35 VDC input current

Electrical connection

H1141	connector, M12 x 1, 4-pole
H1151	connector, M12 x 1, 5-pole
V1141	connector, M8 x 1, 4-pole
blank	cable connection, 2 m, with CP40 = terminal chamber

3GD	Approval
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Approval

3GD	ATEX declaration of conformity 3163M, EX II 3 G EEx nA II T6 X / II 3 D IP65 T 60 °C X (only valid for RUC ... M30 family)
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CP40 – Switching output



General data			
Operating voltage	10...30 VDC	Ambient temperature	0...+70 °C
Display, Object detected	LED	Range	5...180 cm
Type			
Output	—, PNP	Approach speed	1 m/s
Switching frequency	≤ 3 Hz	Converter ring material	plastic
Protection class	IP40	Converter ring quality	PBT
Housing material	plastic, PBT-GF30-V0	Ultrasound frequency	40 kHz

Types and data – selection table

Type	Dimensions	Electrical connection	w	d
RU100-CP40-AP6X2	40 x 40 x 160 mm	terminal chamber	w011	d566
RU100-CP40-AP6X2-H1141	40 x 40 x 177.5 mm	connector, M12 x 1	w001	d567

CP40 – Analog output



Type	RU100-CP40-LIUX	Analog output	0...20 mA, 0...10 V
Operating voltage	15...30 VDC	Load	≥ 4700... ≤ 500 Ω
Power-on, indicator	LED	Response time	150 ms
Display, Object detected	LED	Approach speed	1 m/s
Type			
Dimensions	40 x 40 x 160 mm	Converter ring material	plastic
Protection class	IP40	Converter ring quality	PBT
Housing material	plastic, PBT-GF30-V0	Ultrasound frequency	40 kHz
Electrical connection	terminal chamber	Wiring diagram	w054
Ambient temperature	0...+70 °C	Dimension drawing	d568
Range	5...180 cm		

w Wiring diagrams on page 832 ff

d Dimension drawings on page 842 ff

a Accessories on page 806 ff