

## Structure

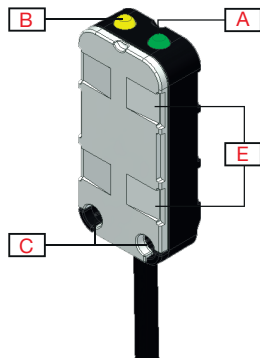


Fig. 1 Cable

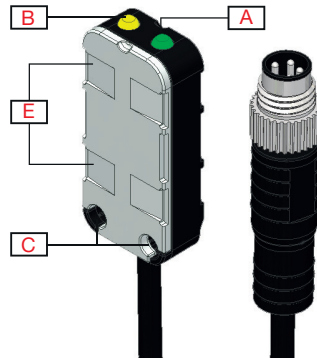


Fig. 2 Pigtail

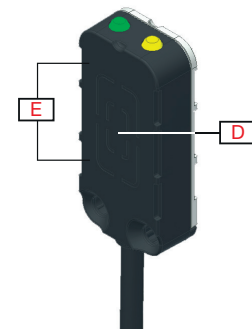


Fig. 3 Sensing surface

Element	Component	Function
A	LED	Green LED: Power ON
B	LED	Yellow LED: Output
C	2 M3	Fixing holes for sensor mounting
D	Sensing surface	
E	Recessed area for cable strips, max. 5 mm wide	

## Sensing

### Accuracy

Temperature drift	Factory settings	$\leq 20\%$ (-25°C... +80°C)
	Manual teach	$\leq 20\%$ (-25°C... +60°C)
Detection	Pipes diameter	Min. $\varnothing$ 8 mm
	Out of the box: wall thickness	Plastic 0.5 - 6 mm (non-conductive plastic wall)
		Glass 0.5 - 4 mm (non-conductive glass wall)
	With manual setup: wall thickness	Up to 10 mm plastic wall (best case)
Up to 10 mm glass wall (best case)		
Detection liquids	Water-based liquids such as water, milk, syrup, honey, milkshakes, lubricates, acids, alkaline fluids, body fluids and other high-conductive liquids (up to 50 mS)	

## Features

### Power Supply

Rated operational voltage ( $U_B$ )	10 ... 30 VDC (ripple included)
Ripple ( $U_{rpp}$ )	$\leq 10\%$
No load supply current ( $I_o$ )	$\leq 13$ mA
Power-ON delay ( $t_v$ )	< 300 ms

### Outputs

Output functions	NPN or PNP by sensor type	
Output switching function	N.O. and N.C by sensor type	
Rated operational current ( $I_o$ )	$\leq 100$ mA	
OFF-state current( $I_o$ ) PNP and NPN	50 $\mu$ A	
Voltage drop ( $U_d$ )	< 1.5 V	
Protection	Short circuit, reverse polarity and transients	
Utilization category	DC-1	Control of resistive loads and solid-state loads with optical isolation
	DC-13	Control of electromagnets
Load capacitance max at ( $U_o$ )	330 nF	

### Operation diagram

$T_v$  = Power-ON delay

power supply	ON	
Target	Present	
Break output (N.C.)	ON	
Make output (N.O.)	ON	

### Response times

Operating frequency (f)	$\leq 10$ Hz	
Response times	$\leq 50$ ms	OFF-ON ( $t_{ON}$ )
	$\leq 50$ ms	ON-OFF ( $t_{OFF}$ )