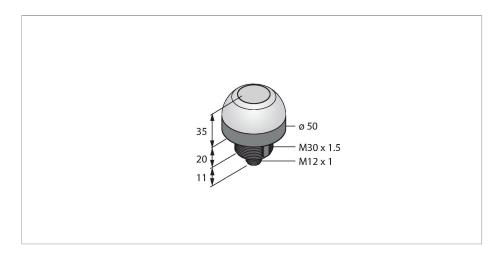


# K50APT2GREQ Pick-to-Light – Placement Sensor Capacitive Sensor





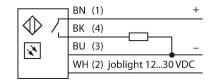
ID 3096696  Signal and display data  Purpose Pick-to-Light  Function Touch Button  Light type Green Red  Switch Function Momentary  Features of color 1 Green, Permanently on, 29 Im  Features of color 2 Red, 13 Im  Special features I/O module-compatible Wash down  Electrical data  Operating voltage Us 1230 VDC  DC rated operating current Is ≤ 150 mA  Max. current consumption per color 75 mA  Output function NO contact, PNP  Input type PNP  Response time typical < 50 ms  Mechanical data  Design Dome, K50  Dimensions Ø 50 x 66 mm  Housing material Plastic, PC, Black  Window material Polycarbonate, diffuse  Electrical connection Connector, M12 × 1, PVC  Number of cores 5	Туре	K50APT2GREQ	
Purpose Pick-to-Light Function Touch Button  Light type Green Red  Switch Function Momentary  Features of color 1 Green, Permanently on, 29 Im  Features of color 2 Red, 13 Im  Special features I/O module-compatible Wash down  Electrical data  Operating voltage U <sub>e</sub> 1230 VDC  DC rated operating current I <sub>e</sub> ≤ 150 mA  Max. current consumption per color 75 mA  Output function NO contact, PNP  Input type PNP  Response time typical < 50 ms  Mechanical data  Design Dome, K50  Dimensions Ø 50 x 66 mm  Housing material Plastic, PC, Black  Window material Polycarbonate, diffuse  Electrical connection Connector, M12 × 1, PVC	ID	3096696	
Function  Light type  Green Red  Switch Function  Momentary  Features of color 1  Features of color 2  Red, 13 Im  Features of color 2  Red, 13 Im  Special features  I/O module-compatible Wash down  Electrical data  Operating voltage U₀  DC rated operating current I₀  Max. current consumption per color  Output function  NO contact, PNP  Input type  PNP  Response time typical  Mechanical data  Design  Dome, K50  Dimensions  Ø 50 x 66 mm  Housing material  Plastic, PC, Black  Window material  Electrical connection  Connector, M12 × 1, PVC	Signal and display data		
Light type  Green Red  Switch Function  Momentary  Features of color 1  Green, Permanently on, 29 Im  Features of color 2  Red, 13 Im  Special features  I/O module-compatible Wash down  Electrical data  Operating voltage U <sub>8</sub> 1230 VDC  DC rated operating current I <sub>8</sub> ≤ 150 mA  Max. current consumption per color  75 mA  Output function  NO contact, PNP  Input type  PNP  Response time typical  Vertical data  Design  Dome, K50  Dimensions  Ø 50 x 66 mm  Housing material  Plastic, PC, Black  Window material  Polycarbonate, diffuse  Electrical connection  Connector, M12 x 1, PVC	Purpose	Pick-to-Light	
Switch Function Momentary   Features of color 1 Green, Permanently on, 29 Im   Features of color 2 Red, 13 Im   Special features I/O module-compatible Wash down   Electrical data I/O module-compatible Wash down   Derating voltage U <sub>B</sub> 1230 VDC   DC rated operating current I <sub>B</sub> ≤ 150 mA   Max. current consumption per color 75 mA   Output function NO contact, PNP   Input type PNP   Response time typical < 50 ms	Function	Touch Button	
Features of color 1  Features of color 2  Red, 13 Im  Special features  I/O module-compatible Wash down  Electrical data  Operating voltage U <sub>8</sub> DC rated operating current I <sub>e</sub> Max. current consumption per color  Output function  Input type  Response time typical  Design  Dome, K50  Dimensions  Ø 50 x 66 mm  Housing material  Polycarbonate, diffuse  Electrical connection  Green, Permanently on, 29 Im  Red, 13 Im  I/O module-compatible Wash down  I/O modul	Light type		
Features of color 2  Red, 13 Im  Special features  I/O module-compatible Wash down  Electrical data  Operating voltage U <sub>B</sub> DC rated operating current I <sub>C</sub> Max. current consumption per color  Output function  NO contact, PNP  Input type  PNP  Response time typical  Pesign  Dome, K50  Dimensions  Ø 50 x 66 mm  Housing material  Polycarbonate, diffuse  Electrical connection  Red, 13 Im  Red, 13 Im  Sed, 13 Im  I/O module-compatible Wash down  1230 VDC  5 mA  1230 VDC  5 mA  75 mA  Output function  NO contact, PNP  PNP  Response time typical  < 50 ms  Mechanical data  Design  Dome, K50  Dimensions  Ø 50 x 66 mm  Housing material  Polycarbonate, diffuse  Electrical connection  Connector, M12 × 1, PVC	Switch Function	Momentary	
Special features  I/O module-compatible Wash down  Electrical data  Operating voltage U <sub>B</sub> 1230 VDC  DC rated operating current I <sub>C</sub> Max. current consumption per color  Output function  NO contact, PNP  Input type  PNP  Response time typical  Vechanical data  Design  Dome, K50  Dimensions  Ø 50 x 66 mm  Housing material  Polycarbonate, diffuse  Electrical connection  I/O module-compatible Wash down  1230 VDC  S 150 mA  1230 VDC  S 150 mA  Polycarbonate, diffuse  Electrical connection  Connector, M12 × 1, PVC	Features of color 1	Green, Permanently on, 29 Im	
Electrical data  Operating voltage U <sub>B</sub> 1230 VDC  DC rated operating current I <sub>B</sub> Max. current consumption per color  Output function  NO contact, PNP  Input type  PNP  Response time typical  Mechanical data  Design  Dome, K50  Dimensions  Ø 50 x 66 mm  Housing material  Plastic, PC, Black  Window material  Polycarbonate, diffuse  Electrical connection  Connector, M12 × 1, PVC	Features of color 2	Red, 13 Im	
Operating voltage Us       1230 VDC         DC rated operating current Is       ≤ 150 mA         Max. current consumption per color       75 mA         Output function       NO contact, PNP         Input type       PNP         Response time typical       < 50 ms	Special features		
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Mechanical data         Design       Dome, K50         Dimensions       Ø 50 x 66 mm         Housing material       Plastic, PC, Black         Window material       Polycarbonate, diffuse         Electrical connection       Connector, M12 x 1, PVC	Input type	PNP	
DesignDome, K50DimensionsØ 50 x 66 mmHousing materialPlastic, PC, BlackWindow materialPolycarbonate, diffuseElectrical connectionConnector, M12 x 1, PVC	Response time typical	< 50 ms	
Dimensions Ø 50 x 66 mm  Housing material Plastic, PC, Black  Window material Polycarbonate, diffuse  Electrical connection Connector, M12 × 1, PVC	Mechanical data		
Housing material Plastic, PC, Black Window material Polycarbonate, diffuse Electrical connection Connector, M12 × 1, PVC	Design	Dome, K50	
Window material Polycarbonate, diffuse  Electrical connection Connector, M12 × 1, PVC	Dimensions	Ø 50 x 66 mm	
Electrical connection Connector, M12 × 1, PVC	Housing material	Plastic, PC, Black	
	Window material	Polycarbonate, diffuse	
Number of cores 5	Electrical connection	Connector, M12 × 1, PVC	
	Number of cores	5	



#### **Features**

- Protection class IP67/IP69K
- ■M12 × 1 connector
- ■Job light: green
- Mispick: red
- Actuation: not signalled
- Operating voltage 12...30 VDC
- ■PNP switching
- ■NO contact
- Capacitive sensor of the second generation
- High immunity to false actuation by splashing, detergents, oils and other contaminants

# Wiring diagram



# Functional principle

The K50 pick-and-place sensor is suitable for many mounting and component placement applications. The green work light or other signal lights are reflected perfectly by the entire dome (depending on the version). The transistor output can be easily connected to a system control, which is programmed for a special task sequence. The work light of the sensor is located in or next to every bin at the operator's workstation and indicates: 1. The bins with the components to be picked up for a particular work step and 2. the sequence in which the components have to be picked up. If the operator removes a part from the bin, the K50 detects the hand in the bin and sends a signal to the control unit. The system then checks if the

#### Technical data

Ambient temperature	-40+50 °C
Relative humidity	090 %
Protection class	IP67 IP69
Tests/approvals	
MTTF	146 years acc. to SN 29500 (Ed. 99) 40 °C

correct component has been picked up and - depending on the configuration - switches the corresponding work light off and the next one on, according to the assembly sequence. The work sequence control leads to increased efficiency, improved quality control and reduces rework and testing expenses. The term work light therefore refers to the visual indicator of the bin from which a part should be removed next. The actuation indicator confirms the removal with a different color. The mispick indicator illuminates if a bin was reached into when the work light was not

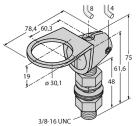
#### Accessories

SMB30A	3032723	SMB30SC	3052521
	Mounting bracket, rectangular, stainless steel, for sensors with 30mm thread		Mounting bracket, PBT black, for sensors with 30 mm thread, rotatable





SMB30FA 3074005 Montagewinkel; Werkstoff VA 1.4401



# Accessories

Dimension drawing	Туре	ID	
M12x1 o 15	RKC4.4T-2/TEL	6625013	Connection cable, M12 female connector, straight, 4-pin, cable length: 2 m, jacket material: PVC, black; cULus approval
0 15 M12x1 26.5 32	WKC4.4T-2/TEL	6625025	Connection cable, M12 female connector, angled, 4-pin, cable length: 2 m, jacket material: PVC, black; cULus approval