

Pick-to-Light Placement Sensor Capacitive Sensor K50APT2RXDQ



Type	K50APT2RXDQ
ID	3801088

Signal and display data	
Purpose	Pick-to-Light
Function	Touch Button
Switch Function	Momentary
Features of color 1	Red, Permanently on, 13 lm
Special features	I/O module-compatible Wash down

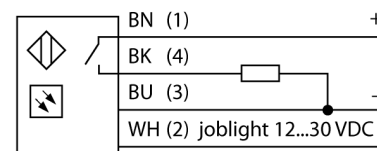
Electrical data	
Operating voltage U_a	12...30 VDC
DC rated operating current I_a	≤ 150 mA
Max. current consumption per color	75 mA
Output function	NO contact, PNP
Input type	PNP
Response time typical	< 50 ms

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
Ambient temperature	-40...+50 °C
Relative humidity	0...90%
Protection class	IP67 IP69

Tests/approvals	
MTTF	146 years acc. to SN 29500 (Ed. 99) 40 °C
Approvals	CE, cULus listed

- Protection class IP67/IP69K
- M12 × 1 connector
- Job light: red
- Misspick: not signalled
- 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



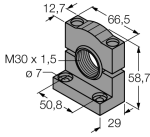
Functional principle

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 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 set.

Accessories

Type code	Ident no.		Dimension drawing
SMB30A	3032723	Mounting bracket, rectangular, stainless steel, for sensors with 30mm thread	 Technical drawing of the SMB30A mounting bracket. It is a rectangular stainless steel bracket for sensors with a 30mm thread. Dimensions shown: overall width 45mm, mounting hole diameter 30.5mm, hole offset 6.3mm from both sides, hole diameter 6.3mm, mounting hole offset 38.5mm from the bottom, bottom hole diameter 6.3mm, bottom hole offset 7.5mm from the left, and a radius R 40mm.
SMB30SC	3052521	Mounting bracket, PBT black, for sensors with 30 mm thread, rotatable	 Technical drawing of the SMB30SC mounting bracket. It is a black PBT rotatable bracket for sensors with a 30mm thread. Dimensions shown: overall width 66.5mm, mounting hole diameter 30mm, hole offset 12.7mm from the top, hole diameter 7mm, mounting hole offset 58.7mm from the bottom, bottom hole diameter 7mm, bottom hole offset 50.8mm from the left, and a radius R 29mm.
SMB30FA	3074005	Montagewinkel; Werkstoff VA 1.4401	 Technical drawing of the SMB30FA mounting bracket. It is a stainless steel (VA 1.4401) rotatable bracket for sensors with a 30mm thread. Dimensions shown: overall width 78.4mm, mounting hole diameter 30.1mm, hole offset 19mm from the top, mounting hole offset 60.3mm from the bottom, bottom hole diameter 30.1mm, bottom hole offset 61.6mm from the left, and a radius R 48mm. The mounting hole is 3/8-16 UNC.