

SICK

8026393 0121 COMAT

W100 Laser

Australia Phone +61 (3) 9457 0600 1800 33 48 02 -	Netherlands Phone +31 (0) 30 229 25 44
Austria Phone +43 (0) 2236 62288-0	New Zealand Phone +64 9 415 0459 0800 222 278 - tollfree
Belgium/Luxembourg Phone +32 (0) 2 466 55 66	Norway Phone +47 67 81 50 00
Brazil Phone +55 11 3215-4900	Poland Phone +48 22 539 41 00
Canada Phone +1 905.771.1444	Romania Phone +40 356-17 11 20
Czech Republic Phone +420 234 719 500	Russia Phone +7 495 283 09 90
Chile Phone +56 (2) 2274 7430	Singapore Phone +65 6744 3732
China Phone +86 20 2882 3600	Slovakia Phone +421 482 901 201
Denmark Phone +45 45 82 64 00	Slovenia Phone +386 591 78849
Finland Phone +358-9-25 15 800	South Africa Phone +27 10 060 0550
France Phone +33 1 64 62 35 00	South Korea Phone +82 2 786 6321/4
Germany Phone +49 (0) 2 11 53 010	Spain Phone +34 93 480 31 00
Greece Phone +30 210 6825100	Sweden Phone +46 10 110 10 00
Hong Kong Phone +852 2153 6300	Switzerland Phone +41 41 619 29 39
Hungary Phone +36 1 371 2680	Taiwan Phone +886-2-2375-6288
India Phone +91-22-6119 8900	Thailand Phone +66 2 645 0009
Israel Phone +972 97110 11	Turkey Phone +90 (216) 528 50 00
Italy Phone +39 02 27 43 41	United Arab Emirates Phone +971 (0) 4 88 65 878
Japan Phone +81 3 5309 2112	United Kingdom Phone +44 (0)17278 31121
Malaysia Phone +603-8080 7425	USA Phone +1 800.325.7425
Mexico Phone +52 (472) 748 9451	Vietnam Phone +65 6744 3732

SICK AG, Erwin-Sick-Strasse 1, D-79183 Waldkirch
Detailed addresses and further locations at www.sick.com

Subject to change without notice
예고 없이 변경 가능

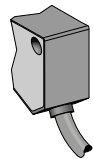


WT100L-F1141
WT100L-E1141
WL100L-F1131
WL100L-E1131
WE100L-F1131
WE100L-E1131

WS100L-D1131



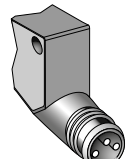
← brn L+
← blu M
→ blk Q



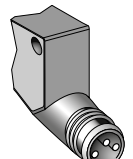
← brn L+
← blu M

WT100L-F2141
WT100L-E2141
WL100L-F2131
WL100L-E2131
WE100L-F2131
WE100L-E2131

WS100L-D2131



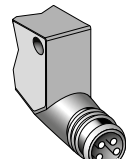
← brn L+
← blu M
← blk Q



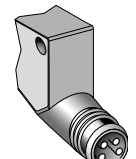
← brn L+
← blu M
← blk NC

WT100L-F2241
WT100L-E2241
WL100L-F2231
WL100L-E2231
WE100L-F2231
WE100L-E2231

WS100L-D2231



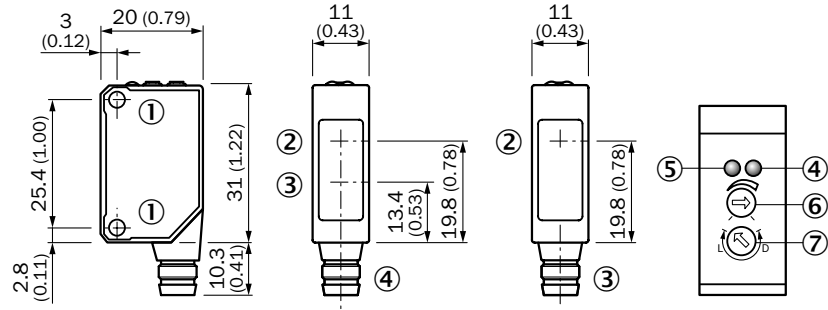
← brn L+
← blu M
→ blk Q
← wht NC



← brn L+
← blu M
→ blk NC
← wht NC

WT100L-Xxxxx
WL100L-Xxxxx

WS100L-Xxxxx
WE100L-Xxxxx



- ① M3Mounting hole M3 / 고정 나사산
- ② Centre of optical axis, receiver / 광축 중심, 수신기
- ③ Centre of optical axis, sender Mitte / 광축, 송신기
- ④ Connection / 연결부
- ⑤ LED indicator orange: switching output
Lights up if the light receiver lies above the switching threshold /
주황색 LED 표시부: 스위칭 출력
광 수신기 스위칭 임계값을 넘으면 켜짐
- ⑥ LED indicator green: operating reserve
Lights up with light reception with operating reserve >1.1 and <0.9 /
초록색 LED 표시부: 운영 예비력
운영 예비력 >1.1 및 <0.9M 으로 광 수신 시 켜짐
- ⑦ Operating distance adjustment 270° /
스위칭 거리 조절기 270°
- ⑧ Light / dark rotary switch:
L: light-switching, D: dark-switching /
라이트/다크 스위치:
L: 라이트 스위칭, D: 다크 스위칭

EB int49

WT100L / WL100L WS / WE100L

LASER CLASS 1	LASER CLASS 1
EN/IEC 60825-1:2014 IEC60825-1:2007	EN/IEC 60825-1:2014 IEC60825-1:2007
Maximum pulse power: 3 mW Puls length: 1 µs Wavelength: 655 nm	Maximum pulse power: 0.6 mW Puls length: 1.2 µs Wavelength: 655 nm
Complies with 21 CFR 1040.10 and 1040.11 except for deviations pursuant to Laser Notice No. 50, dated June 24, 2007	Complies with 21 CFR 1040.10 and 1040.11 except for deviations pursuant to Laser Notice No. 50, dated June 24, 2007

Safety specifications

- Read the operating instructions before starting operation.
- Connection, assembly, and settings only by competent technicians.
- Protect the device against moisture and soiling when operating.
- No safety component in accordance with EU machine guidelines.
- CAUTION: Use of controls or adjustments or performance of procedures other than those specified herein may result in hazardous radiation exposure.

Proper use

The W100L photoelectric proximity switch is an optoelectronic sensor and is used for detection of optical, non-contact detection of objects and animals.

WT100L

- Check the application conditions such as size and reflectance capacity of the object as well as background influences and compare with the sensitivity characteristic curve of the WT type.
- Direct scanner onto the object to be probed. In the horizontal / vertical direction determine the on / off switching point of the signal strenght indicator and select central position.
- Remove object and set sensitivity to "max.".
- Signal strength indicator does not light up: setting is completed.
- Signal strenght indicator lights up: reduce sensitivity until signal strength indicator goes out. Position object.
- Signal strength indicator must light up otherwise turn sensitivity control in the direction of "max." until the signal strength indicator lights up.
- Remove object. Signal strength indicator goes out. Setting completed.
- Signal strength indicator lights up: background influence to strong. Check setting and application.

WL100L

- Align photoelectric switch and reflector to one another (reflector P250F included in scope of supply). The red light spot is visible on the reflector.
- In the horizontal / vertical direction determine on / off switching points of the signal strength indicator and select central position. The signal strength indicator must light up.

WS / WE100L

- Align sender and receiver to one another.
- In the horizontal / vertical direction determine the on / off switching points of the signal strength indicator and select central position.

WT100L / WL100L WS / WE100L

LASER CLASS 1	LASER CLASS 1
EN/IEC 60825-1:2014 IEC60825-1:2007	EN/IEC 60825-1:2014 IEC60825-1:2007
Maximum pulse power: 3 mW Puls length: 1 µs Wavelength: 655 nm	Maximum pulse power: 0.6 mW Puls length: 1.2 µs Wavelength: 655 nm
Complies with 21 CFR 1040.10 and 1040.11 except for deviations pursuant to Laser Notice No. 50, dated June 24, 2007	Complies with 21 CFR 1040.10 and 1040.11 except for deviations pursuant to Laser Notice No. 50, dated June 24, 2007

안전상 주의사항

- 커미셔닝 전에 먼저 작동 지침서를 읽으십시오.
- 연결, 마운팅, 설정 작업은 반드시 전문 인력이 실시해야 합니다.
- 커미셔닝 시 장치를 습기와 오염으로부터 보호하십시오.
- EU 기계류 지침에 따른 안전 부품이 아닙니다.

규정에 맞는 사용

광전 근접 센서 W100L은 광전 센서이며 사람과 동물의 광학 비접촉식 감지에 사용됩니다.

WT100L

- 물체의 크기 및 반사 능력과 배경의 영향 같은 사용 조건을 점검하고 WT 유형의 감도 특성곡선과 비교하십시오.
- 근접 센서를 목표물에 맞춰 정렬하십시오. 수평/수직방향에서 수신 표시부의 켜짐/꺼짐 지점을 알아내고 중간 위치를 선택하십시오.
- 물체를 제거하고 감도를 "max."로 설정하십시오.
- 수신 표시부가 켜지지 않음: 설정이 끝남.
- 수신 표시부가 켜짐: 수신 표시부가 꺼질 때까지 감도를 낮추십시오. 물체를 위치시키십시오.
- 수신 표시부가 켜지지 않는 경우, 수신 표시부가 켜질 때까지 회전 노브를 "max." 방향으로 돌리십시오.
- 물체를 제거하십시오. 수신 표시부가 꺼집니다. 설정이 끝남.
- 수신 표시부가 켜짐: 배경의 영향이 너무 강함. 애플리케이션과 설정을 점검하십시오.

WL100L

- 광전 센서와 리플렉터를 서로 정렬하십시오(리플렉터 P250F가 공급 범위에 포함됨). 빨간색 광점이 리플렉터에 보입니다.
- 수평/수직방향에서 수신 표시부의 켜짐/꺼짐 지점을 알아내고 중간 위치를 선택하십시오. 수신 표시부가 켜져야 합니다.

WS / WE100L

- 송신기와 수신기를 서로 정렬하십시오.
- 수평 / 수직방향에서 수신 표시부의 켜짐/꺼짐 지점을 알아내고 중간 위치를 선택하십시오.

Technical data / 기술 데이터		WT100L P / N	WL100L P / N	WS / WE100L P / N
SR sensing range	스위칭 거리	400 mm ¹⁾	10 m ²⁾	30 m
Light spot diameter / distance	광점 직경 / 거리	2 mm / 400 mm	12 mm / 10 m	30 mm / 30 m
Supply voltage U _s	공급 전압 U _s	10 ... 30 V DC ³⁾	10 ... 30 V DC ³⁾	10 ... 30 V DC ³⁾
Output current I _{max}	출력 전류 I _{max}	100 mA	100 mA	100 mA
Signal sequence min.	최소 신호 시퀀스	2000 / s	2000 / s	2000 / s
Response time	반응 시간	0.25 ms	0.25 ms	0.25 ms
Enclosure rating	IP 보호 등급	IP 65	IP 65	IP 65
Protection class	보호 등급			
Circuit protection ⁴⁾	보호 회로	A, B, D	A, B, D	A, B, D
Ambient operating temperature	작동 시 주변 온도	- 10 ... + 50 °C	- 10 ... + 50 °C	- 10 ... + 50 °C

- ¹⁾ Object 90 % reflection according DIN 5033

²⁾ With reflector P250F

³⁾ Limits

Residual ripple max. ± 10 %

⁴⁾ A = U_s connections reverse polarity protected

B = inputs / outputs reverse polarity protected

D = outputs protected against excess current and short circuits
- ¹⁾ DIN 5033에 따른 상대 반사율이 90% 인 물체

²⁾ 리플렉터 P250F 사용

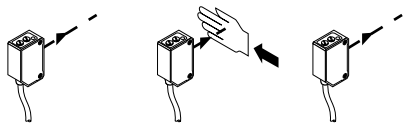
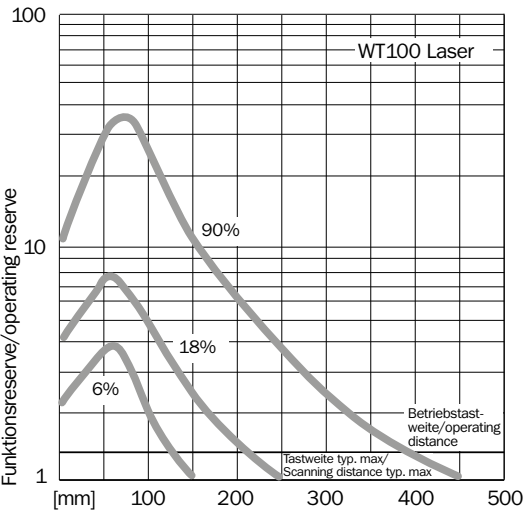
³⁾ 잔류 리플 한계값 최대 ± 10%

⁴⁾ A = U_s 연결 역극성 보호

B = 입/출력 역극성 보호

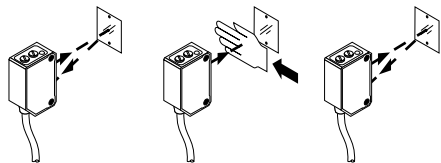
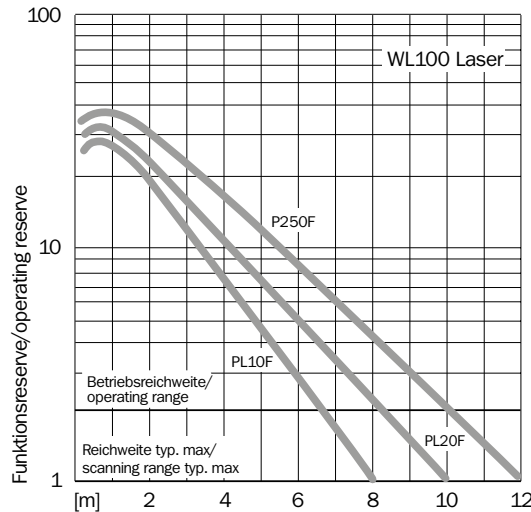
D = 출력 과전류 및 단락 보호

WT100L



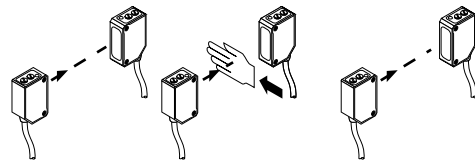
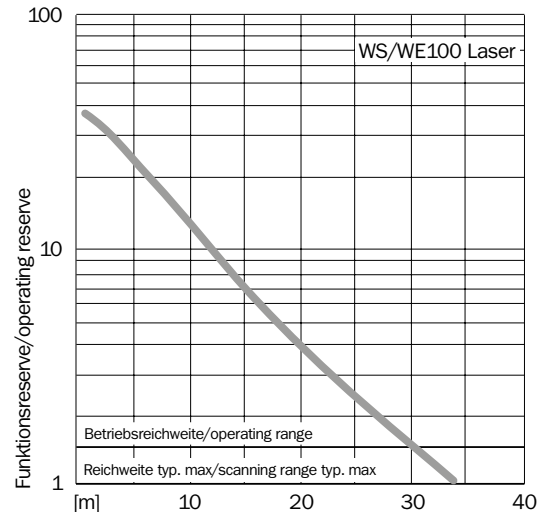
Q (PNP)		
L	1	0
D	1	0
Q (NPN)		
L	1	0
D	1	0

WL100L



Q (PNP)		
L	1	0
D	1	0
Q (NPN)		
L	1	0
D	1	0

WS / WE100L



Q (PNP)		
L	1	0
D	1	0
Q (NPN)		
L	1	0
D	1	0