

# Options for photoelectric sensors

QS-A 05.51 EDM-No. TDOCT-0857MENG

71. Edition: 11/2011

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| <p><b>/1</b> Chassis construction</p> <p><b>/2</b> Protection category IP54. without illuminated switch</p> <p><b>/3</b> Sheet steel housing</p> <p><b>/4</b> Protection category IP66. sheet steel housing without mains switch or pilot lamp</p> <p><b>/5</b> Edge connector for time delay module</p> <p><b>/6</b> Edge connector. with bridge board. for time delay module</p> <p><b>/7</b> DC operation<br/>a) 12 V DC<br/>b) 24V DC<br/>c) 10 –30 V DC<br/>d) Special voltages of all types</p> <p><b>/8</b> Drop out time delay. adjustable<br/>a) 0.1-3 s<br/>b) 0.6-6 s<br/>c) 0.1-10 s<br/>d) 3-30 s</p> <p><b>/9</b> Dynamic drop out time delay. adjustable<br/>a) 0.1-3 s<br/>b) 0.6-6 s<br/>c) 0.1-10 s<br/>d) 3-30 s</p> <p><b>/10</b> Pull in time delay. adjustable<br/>a) 0.1-3 s<br/>b) 0.6-6 s<br/>c) 0.1-10 s<br/>d) 3-30 s</p> <p><b>/11</b> Dynamic pull in and drop time delay. adjustable<br/>a) 0.1-3 s<br/>b) 0.6-6 s<br/>c) 0.1-10 s<br/>d) 3-30 s</p> <p><b>/12</b> Pull in and drop out time delay. adjustable<br/>a) 0.1-3 s<br/>b) 0.6-6 s<br/>c) 0.1-10 s<br/>d) 3-30 s</p> <p><b>/13</b> Control unit for 2 photoelectric in "or" function</p> <p><b>/14</b> Control unit for 2 photoelectric in "and" function</p> <p><b>/15</b> Light source intensity control</p> <p><b>/16</b> Sensitivity control</p> <p><b>/17</b> Filament lamp monitor</p> <p><b>/18</b> Automatic latching<br/>a) with reset button</p> | <p>b) with external reset contact<br/>c) with a and b combined</p> <p><b>/19</b> Gating from external contact</p> <p><b>/20</b> 2 PNP Outputs. Independently</p> <p><b>/21</b> 2 NPN Outputs. Independently</p> <p><b>/23</b> Triac output 1 A/24-240 V AC</p> <p><b>/24</b> On /off pulse suppression</p> <p><b>/25</b> Light switching</p> <p><b>/26</b> 2 PG9 glands instead of 1 PG11</p> <p><b>/27</b> Protection category IP65</p> <p><b>/28</b> 2 NPN complementary outputs. not short-circuit proof. open collectors. 0.2 A/30 V DC<br/>a) 0.05 A/30 V DC</p> <p><b>/30</b> 1 NPN output. short circuit proof. open collector. 0.2 A/30 V DC</p> <p><b>/31</b> SPDT relay output instead of transistor output</p> <p><b>/32</b> 1 PNP output. short circuit proof. open collector. 0.2 A/30 V DC</p> <p><b>/33</b> Non standard cable length - preferred lengths 5 m and 10 m (16 ft and 32 ft)</p> <p><b>/34</b> Output voltage 24 V DC</p> <p><b>/35</b> Different sensing range from standard (R=...)</p> <p><b>/36</b> 1 NPN output. short-circuit proof. open collector. 0.3 A/30 V DC</p> <p><b>/37</b> 1 PNP output. short-circuit proof. open collector. 0.3 A/30 V DC</p> <p><b>/38</b> Low current relay output.<br/>Imax. 1A;<br/>Umax. 60 V AC/75 V DC;<br/>Pmax. 30 W/50 V A</p> <p><b>/38a</b> Low current relay output.<br/>Imax. 1A;<br/>Umax. 55 V AC /24 V DC;<br/>Pmax. 24 W/55 V A</p> <p><b>/39</b> Reed relay instead of standard output<br/>a) normally open: Umax. 100 V DC;<br/>Imax. 0.5 A; Pmax. 10 W<br/>b) normally closed: Umax. 28 V DC;<br/>Imax. 0.25 A; P max. 3 W</p> <p><b>/40</b> Light/Dark selector switch<br/>a) ...mechanical<br/>b) ...electrical</p> <p><b>/41</b> Function reserve indicator</p> | <p><b>/42</b> Tropicalisation</p> <p><b>/43</b> 2 PNP complementary outputs. not short-circuit-proof. open collectors. 0.2 A/30 V DC<br/>a) 0.05 A/30 V DC</p> <p><b>/44</b> Severe vibration protection</p> <p><b>/45</b> 1 NPN output. not short-circuit-proof. open collector. 0.2 A/30 V DC</p> <p><b>/46</b> 1 PNP output. not short-circuit-proof. open collector. 0.2 A/30 V DC</p> <p><b>/47</b> 2 PNP complementary outputs. short-circuits-proof. open collector. 0.2 A /30 V DC</p> <p><b>/48</b> 2 NPN complementary outputs. short-circuits-proof. open collector. 0.2 A / 30 V DC</p> <p><b>/49</b> 1 PNP and NPN simultaneous outputs. short-circuit-proof. open collectors. 0.2 A/30 V DC</p> <p><b>/50</b> Push and Pull output. not short-circuit-proof. 0.1 A / 30 V DC</p> <p><b>/51</b> 1 PNP and NPN simultaneous outputs. not short-circuit-proof. open collectors. 0.2 A / 30 V DC</p> <p><b>/52</b> 1 PNP and NPN simultaneous outputs. short-circuit-proof. open collectors. 0.6 A/30 V DC</p> <p><b>/53</b> 1 PNP output. not short-circuit-proof. open collector. 0.5 A/30 V DC</p> <p><b>/56</b> 3 pin plug connector with angled socket without cable</p> <p><b>/57</b> 5 pin plug connector with angled socket without cable</p> <p><b>/58</b> NPN opt coupler output. not short-circuit-proof. 0.02 A/30 V DC</p> <p><b>/59</b> Dark switching</p> <p><b>/60</b> plastic connector M26. 6 pole + protection pole. with angled socket without cable</p> <p><b>/61</b> Triac output 0.3 A/24-240 V AC</p> <p><b>/62</b> 1 NPN output. not short-circuit-proof. open collector. 0.5 A/30 V DC</p> <p><b>/63</b> 1 PNP and NPN simultaneous outputs. short-circuit-proof. open collectors. PNP: 0.2 A/ 24 V DC; NPN: 0.1 A/ 150 V DC</p> |
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Word colour black = up-to-date options

Word colour grey = old options. not using for new series. For variations from released series these can be used furthermore.

# Options for photoelectric sensors

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**/64** Input for photoelectric with PNP outputs

**/65** Adjustable scanning range for background suppression scanners  
a) mechanical  
b) electrical

**/66** 1 PNP output. short-circuit-proof. open collector. 0.03 A/30 V DC

**/67** Protection category IP 67

**/69.** Anti-condensation Lens barrier

**/70** Metal connector type 712 . 5pole.  
a) with connecting socket and 2 m cable  
b) without socket and cable

**/71** Metal connector. type 711. 4 pole.  
a) with connecting socket and 2 m cable  
b) without connector and cable

**/72** Metal connector type 712. 4 pole with connecting socket and 2 m cable

**/73** Plastic connector type ELST 412. 4pole  
a) with angled socket and 2 m cable  
b) with connecting socket and 2 m cable  
c) without connector and cable

**/74** Plastic connector type 714. 4 pole  
a) Euro-Norm connection  
b) VISOLUX-Norm connection

**/75** Blue and red transmitter light colours. selectable

**/76** With connection for test input  
a) +24 V DC  
b) 0 V DC  
c) + 24 V DC or open input

**/77** 1 PNP and NPN simultaneous outputs. short-circuit-proof. open collectors. 0.2 A/50 V DC

**/78** Metal connector type 712. 5 pole with angled socket and 2 m cable

**/79** Analogue output increasing  
a) 0 ... 10 V  
b) 0.3 ... 10 mA (RL> 600 Ohm)  
c) 1 – 5 V DC  
d) 0 – 5 V DC

**/80** Control output decreasing  
a) 10 ... 0 V DC  
b) 10 ... 0.3 mA (RL> 600 Ohm)

**/81** Control unit in MLV 40 metal housing

**/82** Function reserve output PNP  
a) output active when function reserve too low  
b) output inactive when function reserve too low

c) without time delay. output active when function reserve too low  
d) without time delay. output inactive when function reserve too low  
e) time delay < 1.5 s output inactive when function reserve too low  
f) Dynamical pre-fault indicator (alarm)  
g) Dynamical Output dependent on degree of pollution

**/83** 5 pin flange plug type 580 with unwired 90° angled socket type 682.

**/84** SSI interface

**/85** 20 mA current loop interface

**/86** RS 232 interface

**/87** RS 422 interface  
a) RS 422/485 interface. full duplex. ENABLE output. OV = high impedance output. input and output use different cables  
b) RS 485 standard interface. half duplex. selectable direction. HIGH = receive. input and output use different cables  
c) RS 485 standard interface. half duplex. selectable direction. LOW = receive. input and output use different cables

**/88** RS 485 interface

**/89** Baud rate 0 to 19.200 (/35 reduced operating range)

**/90** 25 pin D sub miniature plug  
a) without connecting socket  
b) with unwired connecting socket

**/91** Output relay. 2 x SPDT potential free instead of standard output

**/92** Metal connector M12 .4 pole. according to the Euro norm

**/93** Metal connector M12 .4 pole. according to the Euro norm with 90° angled socket RKW 4-07/2 m. with 2 m connecting cable

**/94** 4 pin flange plug. series 719. with connecting socket and 2 m cable

**/95** Metal connector M8 .4 pole

**/96** Metal connector M8 .4 pole.  
a) with connecting socket and 2.5 m cable  
b) with 90° angled socket and 2.5 m cable

**/97** 4 pin flange plug type 719. with connecting socket and 6 m cable

**/98** Metal connector M8. 3 pole  
a) without connecting socket  
b) with connecting socket and 2.5 cable

c) with 90° angled socket and 2.5 m cable

**/99** Pulse input for multiplexes M2-16

**/100** 7 valvet connector (plastic) . pin 1 - UB+. pin 2 -UB-. pin 4 -light output. pin 5 -dark output. with unwired cable socket for operating voltages up to  
a) 50 V AC/DC with cable socket  
b) 150 V AC/DC with cable socket  
c) 50 V AC/DC without cable socket  
d) 250 V AC/DC without cable socket

**/101** 1 PNP- und NPN simultaneous outputs. short-circuit-proof. open collector. 0.2 A / 48 V DC

**/102** 1 NPN output. short-circuit-proof. open collector. 0.1 A/30 V DC  
a) 0.1A/12...24 V DC

**/103** 1 PNP output. short-circuit-proof. open collector. 0.1 A/30 V DC  
a) 0.1A/12...24 V DC

**/104** Multi sensor array. devices do not influence each other

**/105** Plastic connector M12. 5 pin flange plug M 12. without cable

**/106** heated front lens

**/107** Cable connection. 2 m cable. 4-pin. according to the Euro norm

**/108** Synthetics material lens

**/109** Norelearn

**/110** Push-pull output; short-circuit-proof. 0.1 A / 30 V DC

**/111** 2 Push-pull outputs; short-circuit-proof. 02 A / 30 V DC

**/112** Plastic Connector M12. adjustable by 90°

**/113** preset of recording-area  
e) left detection field  
f) right detection field  
g) detection field-middle

**/114** centric gradations of the recording-area  
a) 12 light beams together  
b) 8 middle light beams  
c) 6 middle light beams  
d) 4 middle light beams

**/115** Fixed cable  
a) Fixed cable with M8-connector  
b) Fixed cable with M12-connector  
c) Fixed cable with AC Micro-style connector  
d) Fixed cable with valve connector. 7-pin  
e) Fixed cable with flat plug connector

**/116** screw terminals in a terminal box

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*/117 Quality test ref. QS-VA-14.05 for elimination of early failures*

**/118** Plug Vario-Quick. 4-pole

**/119** 1PNP output. over voltage protected. short-circuit-proof. open collector. 0.1 A/ 48 V DC  
a) 0.2 A/ 48V DC

**/120** 2 PNP complementary outputs. short-circuits-proof. open collector. 0.1 A/30 V DC  
a) 0.2A / 48V DC  
b) 0.1 A / 12 ... 24 V DC

*/121 increased sensitivity*

**/122** Analogue output . 4 ... 20mA

**/123** External TEACH

**/124** Metal connector M12 .5pole. according to the Euro norm

**/125** 2 PNP-transistors complementary; 1 NPN transistor. short-circuit-proof. open collector. 0.2A/30V DC

**/126** Function reserve output NPN  
a) output active when function reserve too low  
b) output inactive when function reserve too low  
c) without time delay. output active when function reserve too low  
d) without time delay. output inactive when function reserve too low  
e) time delay < 1.5 s output inactive when function reserve too low  
f) Dynamical pre-fault indicator (alarm)  
g) Dynamical Output dependent on Degree of pollution

**/127** 2 NPN complementary outputs. short-circuits-proof. open collector. 0.1 A/30 V DC  
b) 0.1 A / 12 ... 24 V DC

**/128** Push-pull output; short-circuit-proof. 0.2 A / 30 V DC

**/129** with relay monitor

**/130** reduced response time

**/131 special option for USA:** Micro AC connector. 1/2" (inch) diameter. 3 pin. dual-key

**/132 special option for USA:** 2-wire AC/DC solid state output. 200mA maximum

**/133** Ex-Zone 2

**/134** scratch resistant glass pane  
a) plastic pane

**/135** special option for USA: 5-pin male Mini-style connector. metal connector with 7/8 inch thread  
a) pin 3 not connected

**/136** 2 Push-pull outputs; short-circuit-proof. 0.1 A/ 30 V DC

**/137** Adjustable potentiometer secured (determined with Loctite)

**/138** 2 displays for switching state

**/139** Separate outputs for high level. PNP. 0.2 mA; short-circuit-proof

**/140b** manual focus adjustments by laser light beam switches

**/141** special option for USA: 3-pin male Mini-style connector. metal connector with 7/8 inch thread

**/142** AC Thyristor output  
a) 0.1 A  
b) 0.2 A

**/143** Plastic connector M8. 4-pole

**/144** Switch able Background suppression / Background analysis

**/145** 3 Push-pull outputs; short-circuit-proof. 0.1 A/ 30 V DC

**/146** extended temperature range

**/147** 1 NPN and PNP output. short-circuit proof . max.0.15 A. 30V DC

**/148** 1 NPN output. not short-circuit proof

**/149** 1 PNP output. not short-circuit proof

**/150** 1 PNP- und NPN simultaneous outputs. short-circuit-proof. open collector.0.1 A / 30 V DC

**/151** Connector M12. 8-pole

**/152** Muting lamp LED. 24 ... 28 V DC

**/153** special option for Singapur: 1x NPN Phototransistor output. not short-circuit proof

**/154** special option for USA: Tamper-proof. without external adjustments

**/155** Flat pin connector. 4-pole

**/156** Plastic connector M8. 3-pole

**/157** Bidirectional Input/Output

**/158** Interface CAN-Bus

**/159** connector. M12. 3-pole (compatible with M12. 4-pole)

**/160** connector M16. 12-pole

**/161** NPN FET Output (NPN field effect transistor)

**/162** Non standard light spot

**/163** Voltage output

**/164** Frequency output PNP

**/165** Connection spring terminals

**/166** Micro AC connector. 1/2" (inch) diameter. 4 pin

**/167** Function reserve output Push-pull

**/168** special option for USA: 4-pin male Mini-style connector. metal connector with 7/8 inch thread

**/169** Reliable version for harsh environments

**/170** switchable outputs: PNP, NPN or Push-Pull selectable

**/171** special option for USA: 2 – wire interface 8-40 VDC, switching current = 50mA