

# Specifications

## Eaton 13104AQD07

Eaton Moeller® series Diffuse reflective sensor, Sn=50mm, 4L, 10-30VDC, PNP, NPN, M18, insulated material, M12, Beam: straight



### General specifications

<b>PRODUCT NAME</b>	Eaton Moeller® series E58 Diffuse reflective sensor
<b>CATALOG NUMBER</b>	13104AQD07
<b>MODEL CODE</b>	13104AQD07
<b>UPC</b>	782113843643
<b>EAN</b>	4015081323982
<b>PRODUCT LENGTH/DEPTH</b>	127 mm
<b>PRODUCT HEIGHT</b>	50.8 mm
<b>PRODUCT WIDTH</b>	152.4 mm
<b>PRODUCT WEIGHT</b>	0.094 kg
<b>WARRANTY</b>	3 year
<b>CERTIFICATIONS</b>	cUL Recognized UL Recognized UL 508 CSA Class No.: 3211-07 UL CSA-C22.2 No. 14 UL Category Control No.: NRKH, NRKH7 UL File No.: E117028 IEC/EN 60947-5-2 CSA CE CSA File No.: 50513

## Product specifications

<b>TYPE</b>	Optical sensors
<b>CONTACT RATING</b>	100 mA PNP, 250 mA NPN at 10-30 Vdc
<b>FEATURES</b>	Straight beam
<b>ELECTRIC CONNECTION TYPE</b>	Connector M12
<b>FITTED WITH:</b>	Background suppression (Perfect Prox)
<b>ENCLOSURE MATERIAL</b>	Polyurethane foam (RIM) Plastic
<b>ENCLOSURE TYPE</b>	Cylinder, screw-thread
<b>OPERATING MODE</b>	Switching principle: Adjustable bright/dark switching
<b>CONNECTION</b>	M12
<b>CONTACT CONFIGURATION</b>	NPN and PNP open collector
<b>SERIES</b>	Comet
<b>EXPLOSION SAFETY CATEGORY FOR DUST</b>	None
<b>SENSOR TYPE</b>	Back ground suppression
<b>EXPLOSION SAFETY CATEGORY FOR GAS</b>	None
<b>FUNCTIONS</b>	Protection against polarity reversal Short-circuit protection Reflected-light beam
<b>VOLTAGE TYPE</b>	DC
<b>WIRE SIZE</b>	22
<b>CONNECTION TYPE</b>	4-wire Plug-in connection M12 x 1
<b>INPUT VOLTAGE</b>	10-30 Vdc
<b>CABLE SHEATH MATERIAL</b>	Other
<b>LIGHT TYPE</b>	Polarity free red light
<b>DEGREE OF PROTECTION</b>	NEMA 6 IP67
<b>INTERFACE TYPE</b>	Other
<b>LED INDICATOR</b>	Output ON Status indication of Switching state: Red LED
<b>SWITCH FUNCTION TYPE</b>	Programmable/configurable
<b>LOAD CURRENT</b>	Max. 100 mA (Ie, PNP) Max. 250 mA (Ie, NPN, 120 > 50°C)
<b>LASER PROTECTION CLASS</b>	None
<b>OPERATION AGENT-SAFETY CLASS</b>	Safety class 2
<b>SHOCK RESISTANCE</b>	100 g, Mechanical, Shock duration 3 ms
<b>OPTICAL SURFACE MATERIAL</b>	Plastic
<b>OUTPUT CURRENT (MA) -</b>	250 mA

## Resources

<b>CATALOGS</b>	<a href="#">Product Range Catalog Sensors – products, basic information, applications</a>
<b>DECLARATIONS OF CONFORMITY</b>	<a href="#">DA-DC-00004652.pdf</a> <a href="#">DA-DC-00004657.pdf</a> <a href="#">1360DIM-188</a> <a href="#">eaton-proximity-switches-dimensions-002.eps</a> <a href="#">eaton-proximity-switches-dimensions-007.eps</a>
<b>DRAWINGS</b>	<a href="#">1360DIM-193</a> <a href="#">eaton-proximity-switches-3d-drawing-004.eps</a> <a href="#">1360DRW-32</a>
<b>INSTALLATION INSTRUCTIONS</b>	<a href="#">IL05305002Z</a> <a href="#">DA-CS-90 28267 110</a> <a href="#">eaton-cadenas-side view-90 28267 110 side.pra</a> <a href="#">eaton-cadenas-front view-90 28267 110 front.pra</a> <a href="#">eaton-cadenas-path-sensoren-assemblies-90 28267 110 asmtpl.prj</a>
<b>MCAD MODEL</b>	<a href="#">DA-CD-90 28267 110</a>
<b>SPECIFICATIONS AND DATASHEETS</b>	<a href="#">Eaton Specification Sheet - 13104AQD07</a>

<b>MAX</b>	
<b>OUTPUT CURRENT AT PROTECTED OUTPUT - MAX</b>	0 mA
<b>RATED CONTROL SUPPLY VOLTAGE (US) AT AC, 50 HZ - MAX</b>	0 V
<b>RATED CONTROL SUPPLY VOLTAGE (US) AT AC, 50 HZ - MIN</b>	0 V
<b>RATED CONTROL SUPPLY VOLTAGE (US) AT AC, 60 HZ - MAX</b>	0 V
<b>RATED CONTROL SUPPLY VOLTAGE (US) AT AC, 60 HZ - MIN</b>	0 V
<b>RATED CONTROL SUPPLY VOLTAGE (US) AT DC - MAX</b>	30 V
<b>RATED CONTROL SUPPLY VOLTAGE (US) AT DC - MIN</b>	10 V
<b>RATED SWITCHING DISTANCE (SN)</b>	50 mm
<b>REFLECTOR DISTANCE - MIN</b>	0 mm
<b>SENSOR HEIGHT</b>	0 mm
<b>SENSOR LENGTH</b>	66 mm
<b>SWITCHING DISTANCE - MAX</b>	50 mm
<b>SWITCHING VOLTAGE OF OSSD AT STATE HIGH</b>	30 V
<b>TRANSMISSION RANGE OF THE SAFETY FIELD</b>	0 m
<b>VOLTAGE RATING - MAX</b>	30 V
<b>SAFETY TYPE (IEC 61496-1)</b>	1
<b>SWITCHING FREQUENCY</b>	500 Hz
<b>SENSING MODE</b>	Light-/dark switching
<b>SWITCHING OUTPUT TYPE</b>	PNP/NPN
<b>SENSOR MATERIAL</b>	Insulated material
<b>TRIANGULATION</b>	Background fade-out
<b>WAVELENGTH OF THE SENSOR</b>	0 nm
<b>WIDTH SENSOR</b>	0 mm
<b>PRODUCT CATEGORY</b>	Comet Series
<b>NUMBER OF PINS</b>	4
<b>PROTECTION</b>	Auto reset short circuit
<b>RESPONSE TIME</b>	1 ms
<b>MAXIMUM DC CURRENT</b>	100 mA PNP, 250 mA NPN
<b>ADJUSTMENT RANGE - MAX</b>	0 mm
<b>ADJUSTMENT RANGE - MIN</b>	0 mm

<b>AMBIENT OPERATING TEMPERATURE - MAX</b>	70 °C
<b>AMBIENT OPERATING TEMPERATURE - MIN</b>	-40 °C
<b>DIAMETER SENSOR</b>	18 mm
<b>LIGHT DOT SIZE</b>	0 mm <sup>2</sup>
<b>NUMBER OF CONTACT ENERGIZED OUTPUTS WITH SIGNALLING FUNCTION</b>	0
<b>NUMBER OF OUTPUTS (PROTECTED CONTACT ENERGIZED)</b>	0
<b>NUMBER OF OUTPUTS (PROTECTED SEMICONDUCTOR)</b>	0
<b>NUMBER OF OUTPUTS (SEMICONDUCTOR WITH SIGNALING FUNCTION)</b>	2
<b>OPERATING DISTANCE - MAX</b>	0 mm
<b>OPERATING DISTANCE - MIN</b>	0 mm
<b>OPERATING TEMPERATURE - MAX</b>	158 °F
<b>OPERATING TEMPERATURE - MIN</b>	-40 °F
<b>OPERATIONAL CURRENT (IB) IN THE SWITCHED STATE AT 24 V DC</b>	30 A
<b>ENVIRONMENTAL RATING</b>	NEMA 1, NEMA 3, NEMA 4, NEMA 4X, NEMA 6, NEMA 12, NEMA 13, IP69K
<b>ADJUSTMENT TYPE</b>	Other

**PROJECT NAME:**

**PROJECT NUMBER:**

**PREPARED BY:**

**DATE:**



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<b>FEATURES</b>	Straight beam
<b>ELECTRIC CONNECTION TYPE</b>	Connector M12
<b>FITTED WITH:</b>	Background suppression (Perfect Prox)
<b>ENCLOSURE MATERIAL</b>	Polyurethane foam (RIM) Plastic
<b>ENCLOSURE TYPE</b>	Cylinder, screw-thread
<b>OPERATING MODE</b>	Switching principle: Adjustable bright/dark switching
<b>CONNECTION</b>	M12
<b>CONTACT CONFIGURATION</b>	NPN and PNP open collector
<b>SERIES</b>	Comet
<b>EXPLOSION SAFETY CATEGORY FOR DUST</b>	None
<b>SENSOR TYPE</b>	Back ground suppression
<b>EXPLOSION SAFETY CATEGORY FOR GAS</b>	None
<b>FUNCTIONS</b>	Protection against polarity reversal Short-circuit protection Reflected-light beam
<b>VOLTAGE TYPE</b>	DC
<b>WIRE SIZE</b>	22
<b>CONNECTION TYPE</b>	4-wire Plug-in connection M12 x 1
<b>INPUT VOLTAGE</b>	10-30 Vdc
<b>CABLE SHEATH MATERIAL</b>	Other
<b>LIGHT TYPE</b>	Polarity free red light
<b>DEGREE OF PROTECTION</b>	NEMA 6 IP67
<b>INTERFACE TYPE</b>	Other
<b>LED INDICATOR</b>	Output ON Status indication of Switching state: Red LED
<b>SWITCH FUNCTION TYPE</b>	Programmable/configurable
<b>LOAD CURRENT</b>	Max. 100 mA (Ie, PNP) Max. 250 mA (Ie, NPN, 120 > 50°C)
<b>LASER PROTECTION CLASS</b>	None
<b>OPERATION AGENT-SAFETY CLASS</b>	Safety class 2
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<b>RATED CONTROL SUPPLY VOLTAGE (US) AT AC, 50 HZ - MIN</b>	0 V
<b>RATED CONTROL SUPPLY VOLTAGE (US) AT AC, 60 HZ - MAX</b>	0 V
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<b>SENSOR MATERIAL</b>	Insulated material
<b>TRIANGULATION</b>	Background fade-out
<b>WAVELENGTH OF THE SENSOR</b>	0 nm
<b>WIDTH SENSOR</b>	0 mm
<b>PRODUCT CATEGORY</b>	Comet Series
<b>NUMBER OF PINS</b>	4
<b>PROTECTION</b>	Auto reset short circuit
<b>RESPONSE TIME</b>	1 ms
<b>MAXIMUM DC CURRENT</b>	100 mA PNP, 250 mA NPN
<b>ADJUSTMENT RANGE - MAX</b>	0 mm
<b>ADJUSTMENT RANGE - MIN</b>	0 mm



<b>AMBIENT OPERATING TEMPERATURE - MAX</b>	70 °C
<b>AMBIENT OPERATING TEMPERATURE - MIN</b>	-40 °C
<b>DIAMETER SENSOR</b>	18 mm
<b>LIGHT DOT SIZE</b>	0 mm <sup>2</sup>
<b>NUMBER OF CONTACT ENERGIZED OUTPUTS WITH SIGNALLING FUNCTION</b>	0
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<b>NUMBER OF OUTPUTS (PROTECTED SEMICONDUCTOR)</b>	0
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<b>ADJUSTMENT TYPE</b>	Other

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