



Proximity switch, optical, long range 10cm, 4L, 10-30VDC, NPN, M8

**Part no.** E71-FFDN-M8  
**Article no.** 100511  
**Catalog No.** E71-FFDN-M8

## Delivery program

Basic function			Optical sensors
Product range			E71 NanoView Series
For connection of:			Plug-in connection M8 x 1
Design (outer dimensions)		mm	Rectangular (20 x 12 x 32)
Rated operational voltage	$U_e$		10 - 30 V DC
Rated switching distance	$S_n$	mm	100
Description			Beam: focused, forward viewing
Connection			4-wire
Function			Reflected-light beam
Type of light			Visible red
Material			Insulated material
Switching type			NPN
Switching principle			Adjustable bright/dark switching

### Information relevant for export to North America

Product Standards UL 508; CSA-C22.2 No. 14; IEC60947-5-2; CE marking

UL File No. E166051

UL Category Control No. NRKH, NRKH7

CSA File No. UL report applies to both Canada and US

North America Certification UL listed, certified by UL for use in Canada

Max. Voltage Rating 30 V DC

Degree of Protection IEC: IP67; UL/CSA Type: -

## Technical data

### General

Ambient temperature			-25 - +55
Operation	$\theta$	°C	-25 - +55
Storage	$\theta$	°C	-25 - +70
Mechanical shock resistance		g	30 Shock duration 11 ms
Degree of Protection			IP67
Vibration			Amplitude 0.5 mm: 10 - 55 Hz. IEC/EN 60068-2-6

### Characteristics

Rated switching distance			
Rated switching distance	$S_n$	mm	100
Rated operational voltage	$U_e$		10 - 30 V DC
Maximum load current	$I_e$	mA	< 100
Switching Frequency		Hz	500
Response time		ms	1
Switching state display		LED	Yellow
Operating voltage display		LED	Green
Protective functions			Short-circuit protective device Protection against polarity reversal
Connection			4-wire
Style			
Design (outer dimensions)		mm	Rectangular (20 x 12 x 32)

For connection of:		Plug-in connection M8 x 1
Material		Insulated material

## Design verification as per IEC/EN 61439

Technical data for design verification		
Operating ambient temperature min.	°C	-25
Operating ambient temperature max.	°C	55

## Technical data ETIM 6.0

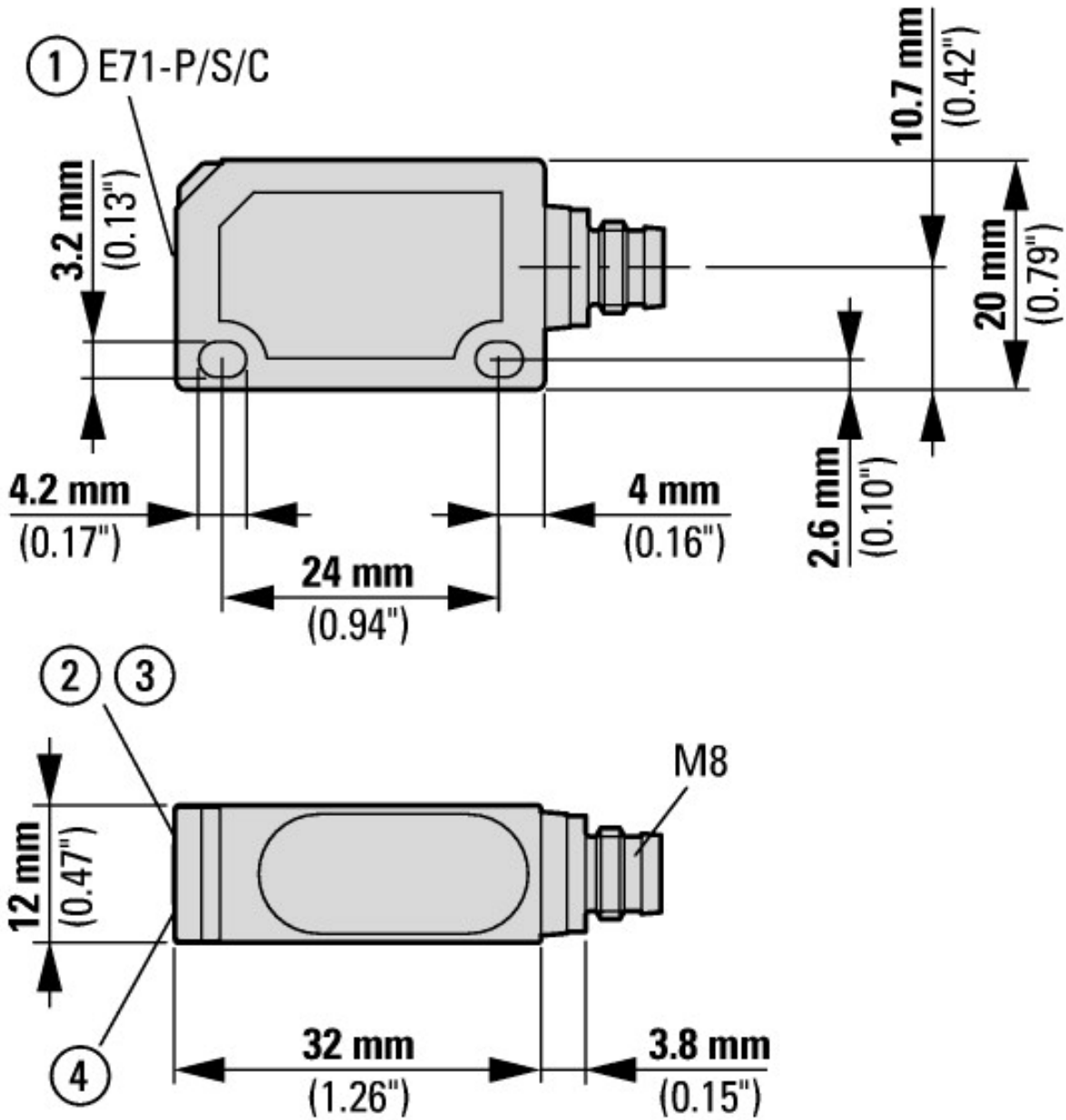
Sensors (EG000026) / Light scanner, energetic (EC001821)		
Electric engineering, automation, process control engineering / Binary sensor technology, safety-related sensor technology / Optoelectronic sensor / Light scanner, energetic (ec@ss8.1-27-27-09-03 [AKP252010])		
Operating distance	mm	0 - 100
Pre failure notice		No
With time function		No
Max. switching distance	mm	100
Max. output current	mA	100
Reflector included		No
Analogue output 0 V ... 10 V		No
Analogue output 0 mA ... 20 mA		No
Analogue output 4 mA ... 20 mA		No
Analogue output -10 V ... +10 V		No
With other analog output		No
Setting procedure		-
With communication interface analog		No
With communication interface AS-Interface		No
With communication interface CANOpen		No
With communication interface DeviceNet		No
With communication interface Ethernet		No
With communication interface INTERBUS		No
With communication interface PROFIBUS		No
With communication interface RS-232		No
With communication interface RS-422		No
With communication interface RS-485		No
With communication interface SSD		No
With communication interface SSI		No
Number of semiconductor outputs with signalling function		1
Number of contact energized outputs with signalling function		0
Number of protected semiconductor outputs		0
Number of protected contact energized outputs		0
Type of interface for safety communication		-
Type of electric connection		Connector M8
Type of switching output		NPN
Type of switch function		-
Operation agent-safety class		-
Explosion safety category for gas		None
Explosion safety category for dust		None
Construction type housing		Cuboid
Width sensor	mm	12
Diameter sensor	mm	0
Height of sensor	mm	32
Length of sensor	mm	20
Switch function		Light-/dark switching
Material of optical surface		Plastic
Material housing		Plastic
Max. output current at protected output	mA	0

Min. reflector distance	mm	0
Time of reaction	ms	1
Transmission range of the safety field	m	0
Switching frequency	Hz	500
Type of safety acc. IEC 61496-1		-
Switching voltage of OSSD at state "high"	V	30
Voltage type		DC
With monitoring function downstream switching devices		No
Laser protection class		-
Wavelength of the sensor	nm	660
Type of light		Polarity free red light
Light dot	mm <sup>2</sup>	0
AWG-number		0
Material of cable sheath		-
With restart blockage		No
Suitable for safety functions		No
Degree of protection (IP)		IP67
Ambient temperature	°C	-25 - 55
Rated control supply voltage Us at AC 50HZ	V	0 - 0
Rated control supply voltage Us at AC 60HZ	V	0 - 0
Rated control supply voltage Us at DC	V	10 - 30

## Approvals

Product Standards		UL 508; CSA-C22.2 No. 14; IEC60947-5-2; CE marking
UL File No.		E166051
UL Category Control No.		NRKH, NRKH7
CSA File No.		UL report applies to both Canada and US
North America Certification		UL listed, certified by UL for use in Canada
Max. Voltage Rating		30 V DC
Degree of Protection		IEC: IP67; UL/CSA Type: -

## Dimensions



- ① Sensitivity potentiometer
- ② Stability LED
- ③ Power On LED
- ④ Output LED

## Additional product information (links)

IL05305006Z NanoView Optical Sensors

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[ftp://ftp.moeller.net/DOCUMENTATION/AWA\\_INSTRUCTIONS/IL05305006Z2016\\_07.pdf](ftp://ftp.moeller.net/DOCUMENTATION/AWA_INSTRUCTIONS/IL05305006Z2016_07.pdf)