

IMS 100 NT

Technical data

FEATURES

- ▶ Prevents accidents
- ▶ Prevents damage to elevator doors
- ▶ Offers double safeguarding when combined with light curtain
- ▶ No need to configure the monitored area
- ▶ Automatic door recognition using TOF technology
- ▶ Extremely reliable object detection using TOF technology
- ▶ Ideal for both new facilities and modernization
- ▶ Entrance area monitoring reduces door-opening time



OPTICAL

Detection height	0.6 ... 2.5 m
Detection area at 2 m	200 mm × 900 mm
Min. object detection at 2.5 m	50 mm

MECHANICAL

Dimensions (l × h × w)	132 × 36 × 34 mm
Housing material	Aluminum, PC
Enclosure rating	IP65
Temperature range	-20°C ... +60°C

ELECTRICAL

Supply voltage U _{sp}	24 VDC ±20%
Typ. current consumption at 24 VDC	200 mA
Output	PNP
Max. output load	120 mA, 100 nF
Output logic	LOW = Object HIGH = No object
Response time	350 ms
Max. recalibration time	1.5 s
Indication LED (red):	LED on Object detected LED off No object detected

CONNECTION CABLE AND ELECTRICAL CONNECTION

Length - sensor cable	0.5 m
Length - connection cable	2.8 m
Diameter	Ø 3.5 mm
Material	PVC, black
Connection	M8, 4-pin
Wires	AWG26
• brown	U _{sp}
• blue	GND (0 V)
• black	Output
• white	Time-out selector (18 s or infinity)

GENERAL

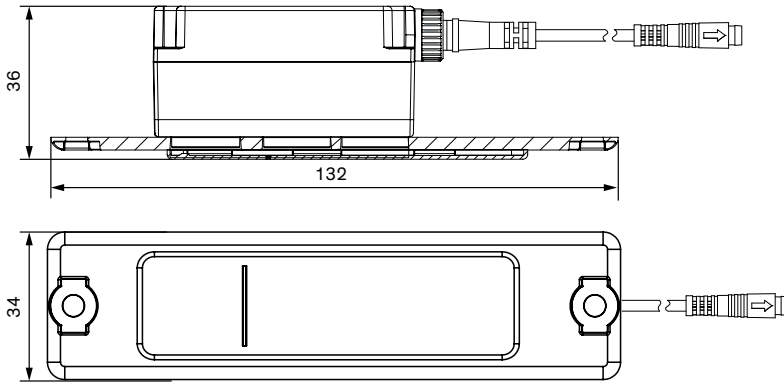
Eye safety	EN 62471:2008
EMC emission	EN 12015:2014
EMC immunity	EN 12016:2013
Vibration	IEC 60068-2-6:2007
Shock	IEC 60068-2-27:2008
Cable durability	IEC 60227-2:2003
RoHS	2011/65/EU
Certificates	CE, CSA



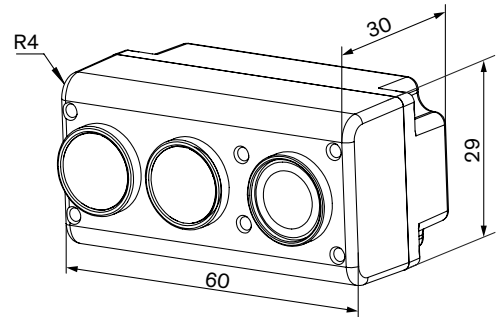
CEDES AG is certified according to ISO 9001: 2015.

Dimensions

All dimensions in mm
Proportions not to scale



Preassembled IMS 100 NT sensor

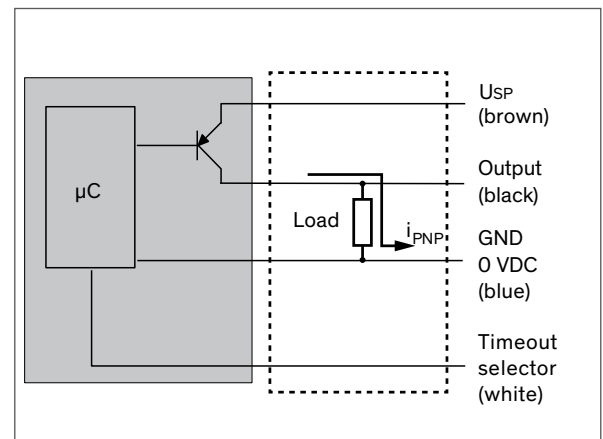


IMS 100 NT sensor body

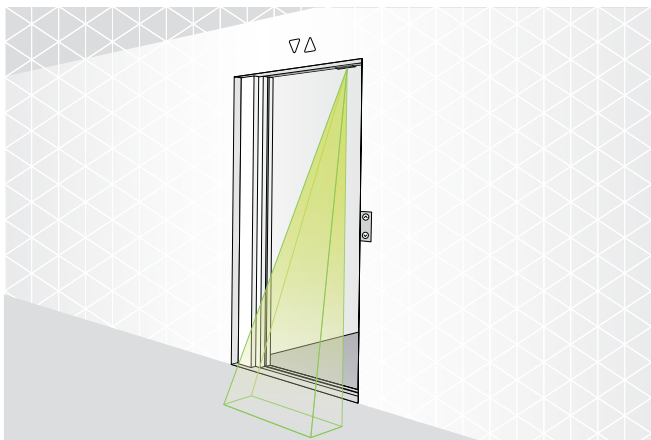
Output logic

Output	USP			
	0 V			
Status	No object	Object detected	Door mode	
Output	24 VDC HIGH	0 VDC LOW	24 VDC HIGH	
Red LED	OFF	ON	Blinking	

Electrical connection



Applications



IMS 100 NT - corner-mounted for side-opening doors



IMS 100 NT - center-mounted for center-opening doors

TOF/Start for escalators

Technical data

PRELIMINARY

FEATURES

- ▶ Excellent detection capability, independent of reflectance
- ▶ Ignores cross-traffic via intelligent direction recognition
- ▶ Individual setting of the detection area
- ▶ Detection area operates with all types of background
- ▶ Insensitive to ambient light



OPTICAL

Detection area	
- Length	0 ... 2,000 mm
- Width	Min. 0 ... 600 mm Max. 0 ... 1,400 mm

MECHANICAL

Dimensions (w × h × l)	57 × 34 × 44.5 mm
Housing material	Polycarbonate
Housing color	Black
Enclosure rating	IP65
Temperature range	-20°C ... +65°C

ELECTRICAL

Supply voltage U_{sp}	24 VDC ±20%
Current consumption at 24 VDC	50 mA (peak max. 0.5 A)
Output	PNP/NPN (push-pull)
Max. response time	
- TOF/Start Basic	200 ms
- TOF/Start Advanced	
Area without cross-traffic < 1 m	200 ms
Area with cross-traffic > 1 m	400 ms
Min. switching time	200 ms
Power-on time	1 s

GENERAL

Eye safety	EN 62471:2008
EMC emission	EN 61000-6-3:2007 EN 12015:2014
EMC immunity	EN 61000-6-2:2005 EN 12016:2013
Vibration	IEC 60068-2-6:2007
Shock	IEC 60068-2-27:2008
RoHS	2011/65/EU
Certificate	CE

CONNECTION CABLE AND ELECTRICAL CONNECTION

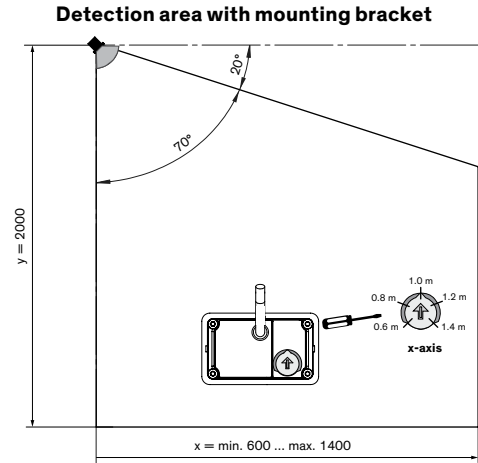
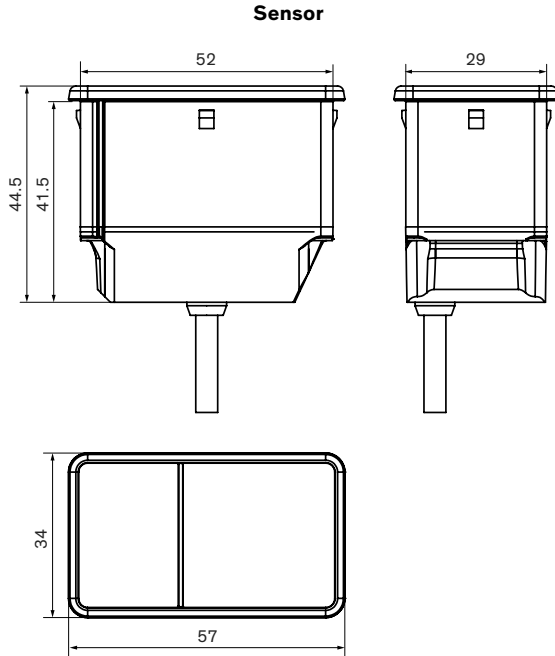
Sensor	
Length	0.25 m
Connection	M8, 6-pin
Diameter	Ø 4.2 mm
Material	PVC, black
Plug color	Blue
Connection cable	
Length	2 m (other lengths on request)
Connection	M8, 6-pin
Diameter	Ø 4.2 mm
Material	PVC, black
Plug color	Blue
Wires	AWG26
• brown	U_{sp}
• blue	GND (0 V)
• black	Output
• white	Not connected
• gray	Selectable output logic
• green	Not connected



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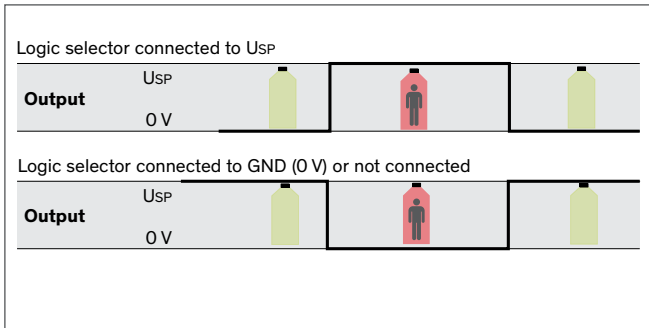
Dimensions

All dimensions in mm
Proportions not to scale

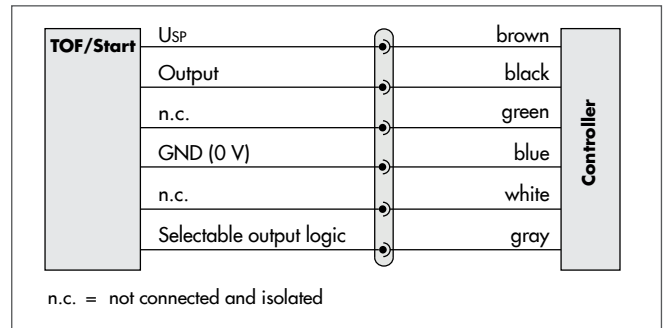


Parameter	Value
Operating range x-axis	Min.: 0 ... 600 mm Max.: 0 ... 1,400 mm
Operating range y-axis	2,000 mm
Aperture angle	70°

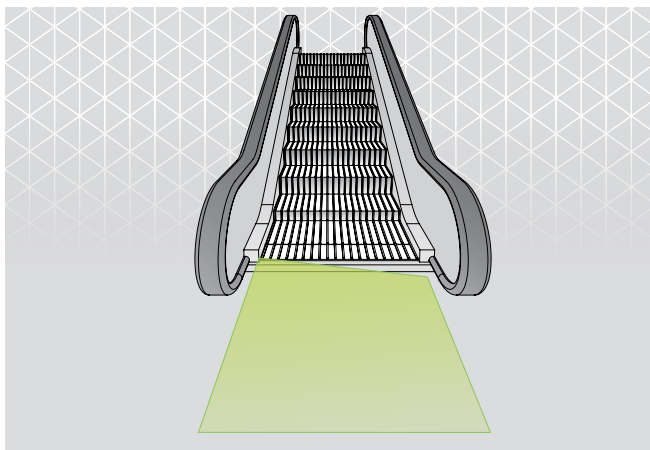
Selectable output logic



Connection diagram



Application



Escalators

TOF/Start detects intending passengers approaching an escalator

TOF/Spot

Standard version

Technical data

Optical

Operating range	
- P, C, T and A types	0.2 ... 6 m
- N type	0.2 ... 3 m
Active light spot at 2 m distance	40 mm × 40 mm
Offset	
- C and T types	0.15 m
Measurement precision	±5% at 2 m ±10 cm over the whole range
Max. ambient light	100,000 Lux

Mechanical

Dimensions	Ø 29.5 mm × 35.8 mm
Housing material	Polycarbonate
Housing color	Black
Enclosure rating	IP65
Temperature range	-40 °C ... +60 °C
Relative humidity (non-condensing)	0 ... 95%

Electrical

Supply voltage U_{sp}	10 ... 30 VDC / 12 ... 24 VAC
Current consumption at 24 VDC	50 mA
Peak current consumption during power up at 24 VDC	500 mA
Output	Solid-state relay, analog
Max. switching voltage	60 V
Max. switching current	150 mA
Max. power-up time	1 s
Max. response time	60 ms
Test response time	5 ms

P = Preset, C = Automatic calibration, N = Potentiometer, A = Analog,
T = Teach-in button

Connection cable and electrical connection

Length	2 m
Diameter	Ø 3.4 mm
Material	PVC, black
Wires	AWG26
• brown	+U _{SP}
• black	Output A / Analog output
• green	Output B / Analog GND
• blue	GND (0 V) / -U _{SP}
• white	Test input
• gray	Logic selector

General

EMC emission	EN 61000-6-3:2007
EMC immunity	EN 61000-6-2:2005
Vibration	EN 60068-2-6:2007
Shock	EN 60068-2-27:2008
RoHS	2011/65/EU
Certificate	CE



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Features

- Time-of-Flight (TOF) sensor
- Exact distance setting, independent from background
- Excellent detection capability
- Solid-state relay or analog output
- Small and sleek design
- Operating range from 0.2 m up to 6 m
- Easy mounting
- Insensitive to ambient light up to 100,000 Lux



Output connections

Solid state relay output (DC supply)

TOF/Spot	U _{SP} (10 ... 30 VDC)	brown	Controller
	Output A	black	
	Output B	green	
	GND (0 V)	blue	
	Test input*	white	
	Logic selector	gray	

Output A = Output B
 * = If test input not used - connect with U_{SP} or GND

Solid state relay output (AC supply)

TOF/Spot	~V _{CC} (12 ... 24 VAC)	brown	Controller
	Output A	black	
	Output B	green	
	~V _{CC} (12 ... 24 VAC)	blue	
	n.c.	white	
	n.c.	gray	

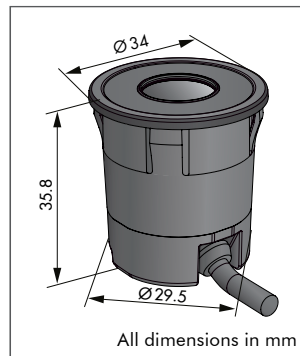
Output A = Output B
 n.c. = not connected and isolated

Analog output (DC supply)

TOF/Spot	U _{SP} (10 ... 30 VDC)	brown	Controller
	Analog output (4 ... 20 mA)	black	
	Analog GND	green	
	GND (0 V)	blue	
	Test input*	white	
	n.c.	gray	

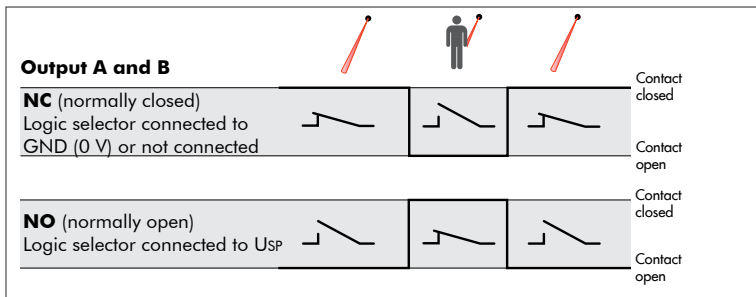
* = If test input not used - connect with U_{SP} or GND
 n.c. = not connected and isolated

Dimensions

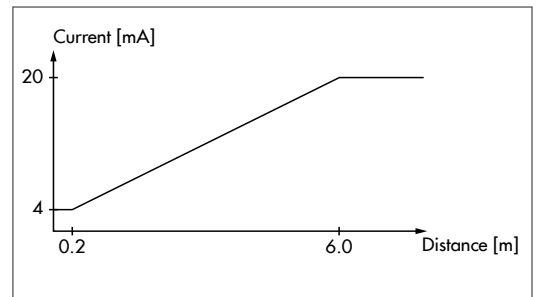


Output description

Solid state relay output



Analog output



Application examples

