

# Counting module **MATRIX**

## 3D Time-of-Flight (TOF) Sensor

### Description

The infra red 3D sensors with time-of-flight (TOF) technology allow precise (98%) passenger counting, even in environment with for example adverse lighting conditions, high humidity or high amount of dust.

The sensors identify the physical presence, height (adults or children) and movement (entering or alighting) of passengers in the range of vision with high reliability.

### Article Number

VZM300122	Counting module MATRIX (Flush mount B)
VZM300123	Counting module MATRIX (Surface mount B)
VZM300199	Counting module: MATRIX (Flush mount, B, PoE)
VZM300200	Counting module: MATRIX (Flush mount, B, PoE, door contact)
VZG300025	Mounting frame MATRIX (Flush mount)
VZG300023	Mounting frame MATRIX (Surface mount)
SN0300025	Software: APCS Sensor MATRIX – Activation of function "Door Clear"
SN0300026	Software: APCS Sensor MATRIX – Activation of function "Bike Counting"
SN0300027	Software: APCS Sensor MATRIX – Activation of function "Wheelchair Counting"



### Main features

- Infrared 3D Sensor for the Automatic Passenger Counting System
- Time-of-Flight (TOF) technology
- Available as PoE version with or without door contact
- Certified for use in rail and road vehicles

<b>Housing</b>	Diecast aluminum housing Optical element made of macrolon 2450 Ingress Protection: IP65 (IP67 on demand)
<b>Interfaces</b>	Sensor connector Ethernet: 100 Mbit/s (M12 female connector) / CAN bus: max. 125 kbit/s (M12 male connector) Gateway to IBIS, RS232, RS485, J1708
<b>Power supply</b>	VZM300122, VZM300123: 24 VDC (16.8 ...30 VDC) VZM300199, VZM300200: PoE 48 VDC
<b>Power consumption</b>	max. 9 W
<b>Environment</b>	Operation temperature: -25°C to +70°C Storage temperature: -40°C to +80°C Humidity: <95% (non condensing)
<b>Dimensions</b>	VZM300122, VZM300199, VZM300200: 188 x 22 x 58 mm (W x H x D) VZM300123: 165.5 x 22 x 53 mm (W x H x D)
<b>Weight</b>	VZM300122, VZM300199, VZM300200: approx. 340 g VZM300123: approx. 260 g
<b>Conformity &amp; Certifications</b>	EN 50155: 2007, IEC 60068-2-1, IEC 60068-2-2, IEC 61373 2010, IEC 60068-2-6: 2007, IEC 60068-2-64: 2008, IEC 60068-2-27: 2008, IEC 60721-3-5: 1997, IEC 60529: 1989 + A1: 1999, EN 62471: 2008, DIN 5510-2: 2009-05, UN ECE R10, UN ECE R118

Information refers to the current states and may be subject to unannounced changes.

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