

**Operating manual: CVG-CWG-EOD-NO
Cognex Camera for Explosive Atmospheres**



IECEX SEV 21.0013X

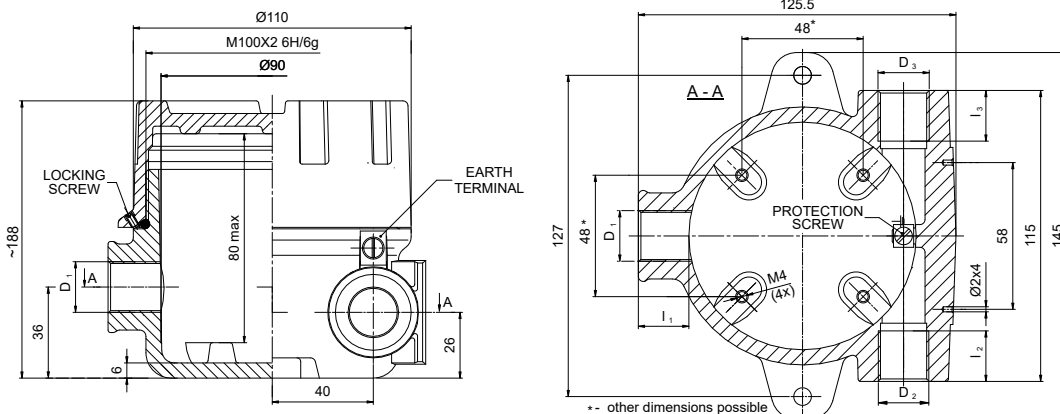


Ex db IIC T4 Gb
Ex tb IIIC T135°C Db

- GigE Vision & GenICam
- Global Shutter
- Trigger over Ethernet (ToE) Action Commands
- IEEE 1588 Precision Time Protocol (PTP)

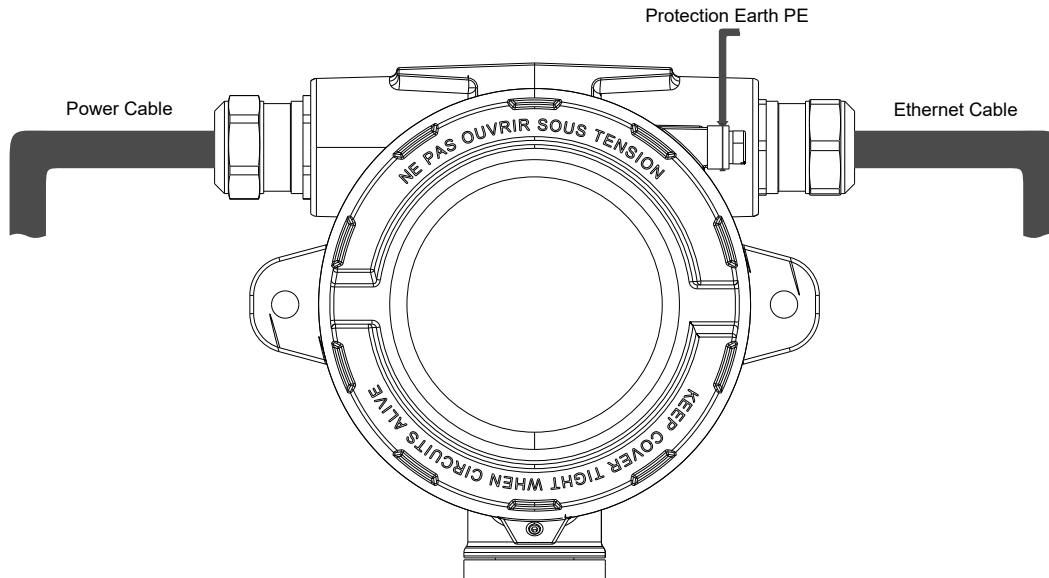
Type	CVG-CWG-EOD-NO
Technical Data	
Gas Ex protection designation	II 2G Ex db IIC T4 Gb
Dust Ex protection designation	II 2D Ex tb IIIC T135°C Db
For use in Ex Zones	Zones 1, 2, 21, 22
Camera Type	CAM-CIC-5000-24-G
Image sensor	Sony IMX264, 2/3", 3.45µm×3.45µm
Resolution	2464 (H) × 2056 (V)
Power supply type	12V to 24V±10% AUX or 802.3at Type 1 PoE
Maximum power dissipation	2.3 W at 12 VDC; 2.4 W PoE
Melting Fuse	250mA / time-lag
Network Interface	IEEE 802.3 1000BASE-T, IEEE 802.3af (PoE)
Configuration and control interface	GigE Vision & GenICam
Housing	Die-cast aluminum housing
Enclosure rating	IP65
Weight	3.345kg
Ambient working temperature range, T _{amb}	+5°C up to +38°C
Storage temperature range	+5°C up to +45°C
Relative humidity	15% to 90%
Connection cable	Ethernet Cable Length: 10m, Cat.5e industrial Ethernet cable type LEONI MegaLine D1-20 S/U superflex 4P 11Y, drag chain suitable (≈5 million bending cycles with bending radius R _{min} ≥ 20mm), chemical resistant Power Cable Length: 10m shielded 2 pol TPU cable
Wiring and Connection	Ethernet Cable 1) yellow: DA+ 5) grey: DB- 2) green: DA- 6) red: DC- 3) black: DB+ 7) blue: DD+ 4) orange: DC+ 8) brown: DD- Power Cable 1) 24V 2) 0V Connect shield ⚬ to protection earth
Ex related markings	CE 1258 Ex designation according to 2014/34/EU ATEX certification number: IECEx certification number: T _{amb} Date of construction: Electrical data according to the table "Technical data"

Dimensions in mm



CVG-CWG-EOD-NO_e6/2022-05-05/MP

Wiring Diagram



Operating Manual / EC-/EU-declaration of conformity

Intended Use

This product is installed with a vision & control mono camera from Cognex. The camera lens captures an area of 33cm x 40cm at a distance of 1.7m.

Installation prescriptions for Ex hazardous locations

The valid rules and installation regulations regarding explosion protection in compliance with the standard 60079-14 must be adhered to the operator. The maximum permissible connection values must not be exceeded. Potential equalization must exist in the entire area of the installation. The PE connection is firmly connected to the housing. The cable end must be laid inside the Ex area in certified Ex boxes or outside the Ex area. Both cable shields are electrically connected and are always connected to earth on both sides if possible. In case of high potential differences with equalizing currents across the shield, the shield is capacitively connected on one side, with a capacitance <math><10\text{nF}</math>. The cables must be laid and/or protected in such a way that they cannot be damaged. The cable glands are only intended for permanently installed cables and lines. For flexible use, the cable glands must be protected against tension or load.

General Installation Prescriptions

The camera can be powered either via the external power supply line or via PoE over LAN. However, the PoE capability can only be used to a limited extent. For applications in zone 1/21, the camera may only be powered via the designated power supply line. Powering via PoE is only allowed for zone 2/22 applications. Consequently, the operator must ensure that no PoE-capable LAN connections are established in zone 1/21 applications. Only the power supply line is protected by a slow-blow fuse.

General safety instructions

The sensor is to be used in such a way that in the event of malfunction or total failure of the sensor, no people endangered or machinery damaged. The relevant EU and national regulations and guidelines must be observed during assembly, operation and maintenance. The sensors comply with the following standards: EN 61000-6-2, EN 61000-6-3, EN 61326-1.

Function

The camera can be configured with any software that is compatible with GiGe-Vision or GeniCam. However, it is recommended to work with the image processing software from Cognex. Due to the narrow aperture angle of the lens, the object to be imaged must be well illuminated. Extraneous light reflections via a sight glass can lead to image distortions.

General, disposal

We reserve the right to make technical changes. The sensors are built to be as environmentally friendly as possible. Irreparable or no longer used devices must be disposed of in accordance with the applicable regulations.

Maintenance

The sensor is maintenance-free. If it becomes dirty, the light passage must be cleaned carefully. No aggressive cleaning agents may be used. Repairs may only be carried out by the manufacturer.

EU-Declaration of Conformity

The product meets the requirements of the following standards and directives: EN IEC 60079-0: 2018, EN IEC 60079-1: 2014, EN IEC 60079-14: 2014, EN IEC 60079-31: 2014, EN 60529, EN 61000-4-2 - EN 61000-4-6, EN 61000-6-1/-2, EN 61000-6-4, Machine directive 2006/42/EC, EMC directive 2004/108/EG, RoHS directive 2011/65/EU

ATEX/IECEx-Designation:

Gas: II 2G Ex db IIC T4 Gb

Dust: II 2D Ex tb IIIIC T135°C Db

ATEX EU-type examination certificate No.: SEV 21 ATEX 0540 X

IECEx CoC No.: IECEx SEV 21.0013X

Ex CB IECEx: Eurofins Electric & Electronic Product Testing AG, Luppenstrasse 3, CH-8320 Fehraltorf.

ATEX certification of quality management system, type production of Ex devices, in accordance to the directive 2014/34/EU:

Certification No.: SEV 21 ATEX 4580, QAR No.: CH/SEV/QAR21.0009/00,

CB: Eurofins Electric & Electronic Product Testing AG, Luppenstrasse 3, CH-8320 Fehraltorf. CE 1258 Ident. Number: 1258

Pablo Ledergerber, Matrix Elektronik AG, is authorized to generation of documentation.

The conformity of the devices with all used standards and directives and the EC-type examination certificate and the observation of the Quality Management System ISO 9001:2015, declares:

Ehrendingen, 5.5.2022

Pablo Ledergerber, Matrix Elektronik AG