DEX CAM

DEX

DEX21
Explosionproof camera housing for hazardous and extreme environments

DEXTER
SYSTEM SOLUTIONS BV

ATEX and IECEX Certified

DEX21
Explosionproof Camera Housing

EXPLOSION PROOF HOUSING
Different versions available to satisfy the different specs required by different hazardous environments

USER FRIENDLY
All the professional installers can easily install on-site the Ex housing and camera.

FOR EXTREMELY HARSH ENVIRONMENTS
Temperature range from –50 °C to +50 °C, protection rate IP66 and IP67, constructed of extruded and anodized anti-corodal aluminium alloy, possibility to install a glass protection grid.

AVAILABLE WITH Hi-PoE MKII SPLITTER
Video data and feeding power are brought in through one single CAT5e or higher cable.New Punch Down Terminal fast connection

Alarm   **Signal**   **Control**   **Communications**

Technology Highlights

DEX21 (Anticorodal Aluminium) / DEX21 (Stainless Steel AISI 316L)

General Description:

Explosion proof housing to be installed in zone where the forming of potentially explosive atmosphere is possible due to the presence of Group IIB-IIC gasses, fumes, smokes and powders even mixed among them. It can be installed in hazardous locations, indoor or outdoor, classified 1-21, 2-22 in which the environment temperature has to be included between –20 and +50 °C or between –50 and +50°C.

Constructed of anticorodal aluminium for sites with potentially explosive atmosphere where electrical constructions of Group II, cathegory 2, are foreseen.

On request, it can be constructed of Bronze B14 or Stainless Steel and in this case it can be used on firedamping mines, where electrical constructions of Group I, cathegory M2, are foreseen. It is also available a special version with Germanium filter and protection grid for thermal cameras.

The anodic oxidation treatment assures an extremely high resistance against corrosion from atmospheres agents, salty fog or polluting elements of the air. On the back side, two ½" or ¾" cable glands allow to feed the devices inside the housing in high or low voltage. On request, cable glands of different brands and different kind can be provided. As a consequence of the zone where the housing has to be installed, there will be used cable glands with seal rubber (suitable for zone with presence of Group IIB gases) or barrier cable glands with connection cables sealed (suitable for zone with presence of Group IIC gases). All this in conformity with the electrical plants laws in force. Available also the power supply in two working voltages: 230V~/12VDC, 230V~/24V~.

Internal devices:

On its inner, the housing is provided of a heating system with one or three PTC to avoid the condensation on the glass. These heating elements are working with 12 to 24V and with 100 to 240V voltages and are driven by a thermostat positioned on the circuit board which allows the electrical connection of all the feeded elements with the main voltage. Depending on the model required, the housing can be equipped also with a factory installed power supply, useful to correctly feed the devices in case that their feeding voltage is different than the mail voltage. The power supply can be supplied with three different voltages: 230V~/12VDC, 230V~/24V~, 115V~/24V~, 24 Vac/12VDC

High Power over Ethernet:

The Hi-PoE MKII splitter for IP Cameras or the Hi-PoE MKII PLUS for IP PoE cameras are available. Video data and feeding power are brought in through one single CAT5e cable with a Punch Down Terminal for a fast connection of the cable.

Laser devices:

It is well known that laser devices, radiation class 1 and 2, do find many applications for civil as well as industrial use.
In particular, they are utilized to monitor industrial processes, to measure levels and distances, to control moving objects, to check the position of objects (i.e. vessels, cars, etc). In these applications it is often required to the laser device to be explosion proof, being the installation in one of those areas defined as potentially explosives. The Atex certification covers laser devices radiation class 1 and 2, making the DEX21 enclosure the proper answer for these applications.

Installation:

the installer has to open the housing to internally install the devices, excluding those already supplied by the manufacturer. Specifically, for the CCTV there will be the use of analog cameras to reproduce the video image through a coax cable, or digital through Ethernet. At present, the market of those systems offer a wide range of brands for such devices. The installer shall choose the best camera for the particular installation. This operation requires the dismount of the back closing flange which is equipped with cable glands and it is fixed to the housing body by six screws. Three additional screws with a smaller diameter are supplied: these screws, set at 120° one to the other, can make the job even much easier. Actually, screwing these additional screws one turn at the time, after having unscrewed the other six screws, the flange comes out smoothly. For the correct positioning of the devices the housing is equipped with an internal slide on which they can be fixed by means of screws. During the installation it is important to have the right adjustment height of the camera respect to its leaning level. So that the image will be balanced on the frontal window. This operation is possible due to the provided adjusting height kit which works also as insulator from the internal slide. At the end of all the operations it is necessary to close the housing using the six screws that were unscrewed at the beginning of the operation. On demand the housing can be equipped with sunshield, frontal glass protection grid, bracket with swivel for wall or ceiling fixing. The accessories are sold spare, their assembling is done by the installer.

Models

ORDER CODE	II 2GD Ex d IIB T6 Ex tD A21 IP66 T85℃ with Cable Glands for gas group IIA (Propane) and IIB (ethylene)	II 2GD Ex d IIC T6 Ex tD A21 IP66 T85℃ only with Cable Glands for gas group IIC (acetylene, hydrogen)	I M2 Ex d I for Mines Only made of AISI 316L Stainless Steel or B14 Bronze	Cable Glands Size ½"and on demand ¾"	Temperature -20℃/+50℃ (with single Heater HT)	Temperature -50℃/+50℃ (only with triple heater HTTT)	IP RATE	Germanium Window	Grid
DEX21- IIB	•			•	•		IP66/67		
DEX21- IIB G	•			•	•		IP66/67	•	•
DEX21- IIC		•		•	•		IP66/67		
DEX21- IIC G		•		•	•		IP66/67	•	•
DEX21- IIB (-50℃)	•	•		•		•	IP66/67	n.a.	n.a.
DEX21- IIC (-50℃)		•		•		•	IP66/67	n.a.	n.a.
DEX21- M			•	•	•		IP66/67	n.a.	n.a.
DEX21- M (-50℃)			•	•		•	IP66/67	n.a.	n.a.

DEX21- FIT	The DEX-21-FIT option must be ordered for each additional part which should be installed in the housing by Dexter.
DEX21- CERT	Dexter cannot supply ATEX IIB or IIC Equipment Certificates unless the DEX21-CERT option is ordered with each housing.

DEX21 + Sunshield

DEX21 + Germanium filter

DEX21 HiPoE MKII
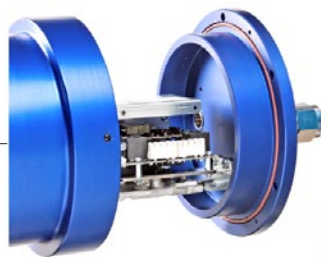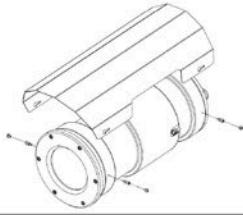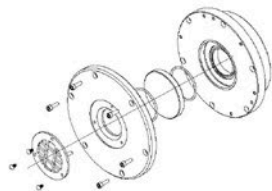
Marking data

Accessories

HT	Heater with thermostat*	
HTTT	Triple heater with thermostat*	
AL/12 AL/24	Power Supply Unit: 400mA, 230Vac/12Vdc or 230Vac/24Vac*	
EL	Camera adjusting height kit	
BWX	Stainless Steel AISI 316L wall bracket with swivel	
SSXEP	Stainless Steel AISI 316L sunshield	
G	Germanium window with protection grid*	

*Accessories available only factory installed

Hi-PoE MKII Accessories

| PLUS	Dedicated PoE camera module for digital cameras that only allow PoE feed. (HiPoE MKII PLUS)*	
INJECTOR	Single Channel Hi-PoE Injector	

*Accessories available only factory installed

Related Products

PAX	Stainless Steel Pole Mount adapter	
CMX	Stainless Steel corner adapter	
CBX	Stainless Steel ceiling adapter	

Dimensions

Max Size DEX21/380: Ø114xh 91.9x230mm
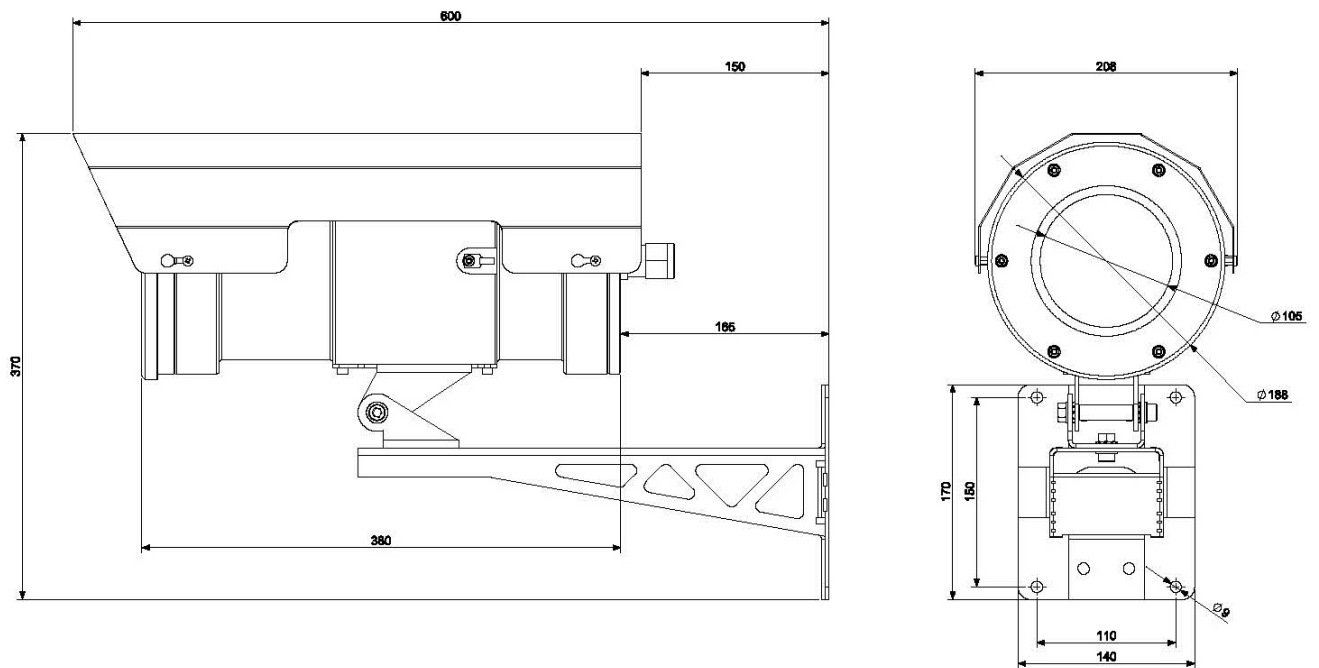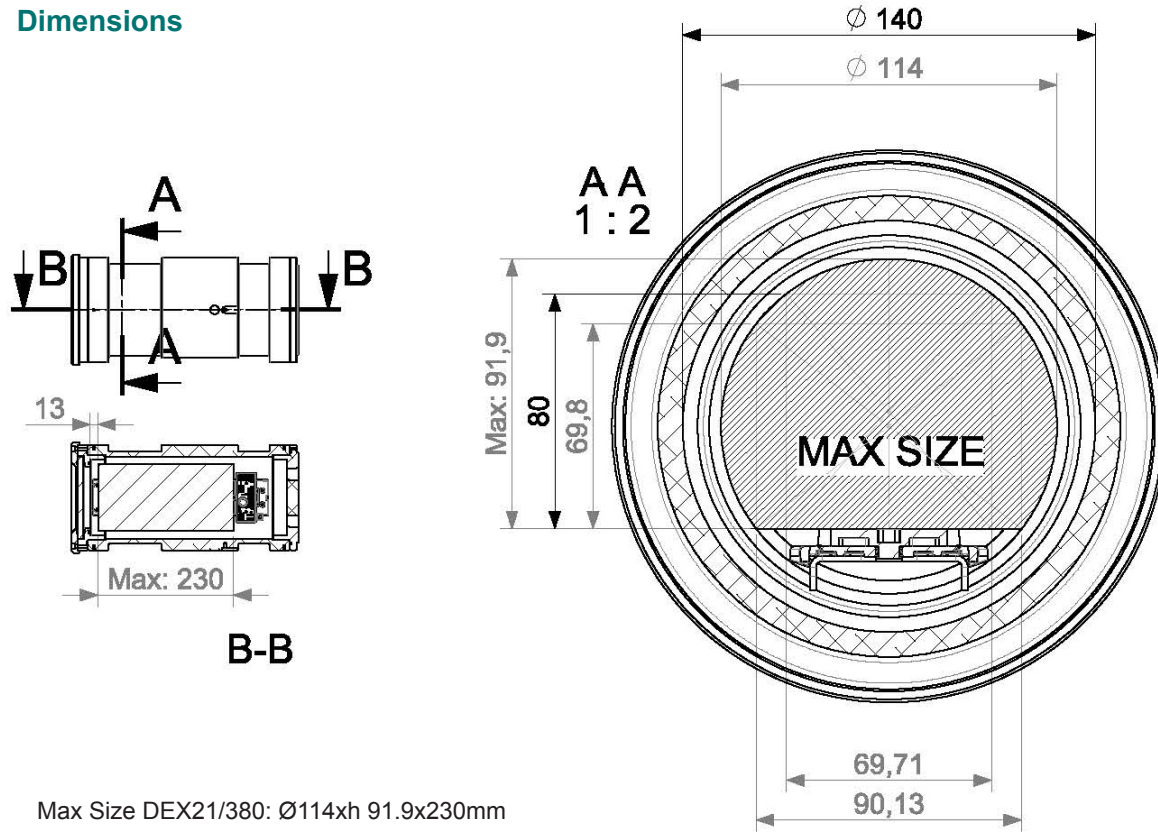
Technical Data

General

- Construction: made of Anticorodal aluminium
- Internal useful volume WxHxL: Please refer to drawings
- External dimensions: Please refer to drawings
- Protection rate IP66 and IP67

ATEX marking:
II 2GD Ex d IIB/IIC T6 Ex tD A21 IP 66/67 T85°C
I M2 Ex d I
IECEx marking:
Ex d IIC T6 or Ex d IIB T6
Ex tD A21 IP66 T85°C or Ex tD A21 IP67 T85°C
Ex d I

Marking rating plate laser incision

Accessories
- Sunshield
- Front glass protection grid
- Bracket with swivel for wall or ceiling mount.

Special versions
- Housing with germanium filter for thermal cameras
- Housing for mines

Laser devices
- ATEX/IECEx certification covers laser devices radiation class 1 and 2

Mechanical

- Dimensions : please refer to the drawings
- Cable glands : n. 2 cable glands ½" or ¾"
- On request are available different brand and model of cable glands.
- Housing weight : 11,00 Kg
- Accessories weight : 2,90 Kg (BWXHX bracket)

Electrical

Thermostat: Ton 15°C (59°F) ± 5°C Toff 22°C (71.6°F) ± 4°C

Heater:
- Single with thermostat for temperatures from – 20°C to + 50°C (12-24Vac/Vdc or 100-240Vac)
- Triple with thermostat for temperatures from – 50°C to + 50°C (12-24Vac/Vdc or 100-240Vac)

Heater PTC (HT12-24) 12-24V~ 20W
Heater PTC (HT230): 100-240V~ 40W

Camera power supply (AL):
- Vin 230V~ 50Hz Vout 12VDC 400mA;
- Vin 230V~ 50Hz Vout 24V~ 400mA;

IMPORTANT: TOTAL POWER ABSORBED BY VIDEO SURVEILLANCE EQUIPMENT INSTALLED IN THE CHEP EXPLOSIONPROOF CAMERA HOUSING MUST NOT EXCEED 20 W.
IF THE CAMERA HOUSING IS INCLUDING ANY POWER SUPPLY INSTALLED BY MANUFACTURER, THE VIDEO SURVEILLANCE EQUIPMENT INSTALLED BY THE END USER MUST NOT EXCEED 10 W.

DEX21 HiPoE Working temperature range from -20°C to +50°C°

HiPoE MKII 12VDC 24W splitter with integrated heater and blower thermostats:
- Punch Down Terminal fast connection
- Gigabit compatible
- Compliant with IEEE802.3at
- **Warning:**
  - The camera housing is compatible only with camera with output selectable 12Vdc or 14,5Vdc voltage feeding
  - The splitter Ethernet Output is not PoE

HiPoE MKII PLUS
- Dedicated PoE injector IEEE 802.3af compliant built in for digital cameras that only allow PoE feed.
- The two terminal blocks marked +POWER- will be not used

Environment

- Indoor and outdoor application
- IP rate (EN60529) : IP66 and IP67
- Temperature range : -20°C / +50°C or -50°C / +50°C
- ATEX, IECEx, CE, RoHS compliant

DEXTER
SYSTEM SOLUTIONS BV