Process observation and visual control system

lumiglas®

VISULEX ⬡Ex Camera System

Insight with far-sight: control and remote monitoring of operations in explosion-hazardous and non-explosive environments

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Lumiglas VISULEX ⟨Ex⟩-camera system `insight with far-sight´

For inspection and remote observation of process operations, particularly in explosive environmentsand for monitoring objects that are not normally accessible via remote control.

Ex-cameras have a stainless steel housing, making them ideal for use in sterile room technology.

Greater safety, less down-time:
the continuous availability of visual process data in a central control room saves considerable costs as well as work and travel time.

On-site inspections of critical production areas or external facilities are no longer necessary – a significant contribution to accident prevention!

The Lumiglas VISULEX Ex-camera system meets these requirements with optimum cost effectiveness.

Visual process data is displayed for control and evaluation purposes and is also available for further image processing using on-screen or PC technology.

This enables, for instance, the digital storage of the entire process sequence for traceability purposes.

Supplementary to this, **Lumiglas Ex-luminaires** provide ideal lighting conditions to illuminate the object to be observed.

Ex-camera variants with zoom lens can also be operated by remote control from a control room in a non-ex area. The observer can thus adjust the camera settings to meet specific requirements.

Particular advantages are offered by the `Lumicam´ system and control software developed by Lumiglas VISULEX, which is included in the price of the camera.

This Lumicam software package (with Windows interface) provides the user with the following functions for controlling the installed Ex-camera via either a PC or a notebook:

Precision adjustment of:
- Zoom
- Focus
- Aperture, shutter, gain
- Date and time
- Preset functions

Image processing and storage

Image transmission in real time:
- Company-wide via LAN
- Worldwide via Internet/Videowebserver

via Internet

Observer at PC screen e.g. in U.S.A.　　　Object mit camera in e.g. Europe

All the advantages at a glance:
- Compact size of Ex-camera
- Simple installation and operation
- Minimal space requirement
- Data transfer in the Ex environment up to 500 m via video cable or worldwide via web
- Image presentation on screen or PC
- Storage option for single images or video sequences
- Presentation facility for large viewer groups
- Ideal combined with Lumiglas Ex-luminaires or fibre optic technology
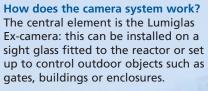
Single-source solutions:
- Lumiglas offers complete, project specific services, tailored to the technical requirements of the plant operator. These include installation, commissioning, and PC link-up with all the necessary components. The costing in these cases is on an individual project basis. A performance specification is drawn up on the basis of a checklist.

Lumiglas VISULEX Ex-camera with fixed lens, type K 06-Ex, aluminium

Lumiglas VISULEX camera (non Ex) with fixed lens, type K 15, stainless steel

Lumiglas VISULEX Ex-camera with zoom lens, type K 25-Ex, stainless steel

How does the camera system work?
The central element is the Lumiglas
Ex-camera: this can be installed on a
sight glass fitted to the reactor or set
up to control outdoor objects such as
gates, buildings or enclosures.

*The combination that
warrants consistently
good viewing: Ex-camera,
Ex-sight glass luminaire, wiper
mechanism and spray device.*

The images recorded by the camera
in the ex-hazardous area are trans-
mitted via cable to the control room
and shown either on the screen
of a PC (enabling further image
processing) or a standard monitor.

A control unit wired into the circuit
provides power for the camera and
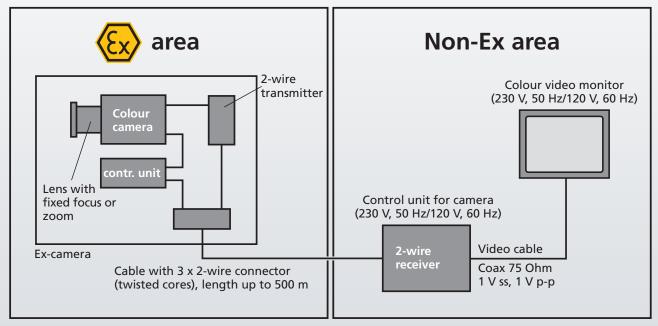for controlling the data transfer and
zoom lens.

*Lumiglas VISULEX Ex-camera with
zoom lens, type K 07-Ex, aluminium*

Block wiring diagram Lumiglas VISULEX Ex-camera system:

Ex area

Colour camera

2-wire transmitter

contr. unit

Lens with fixed focus or zoom

Ex-camera

Cable with 3 x 2-wire connector (twisted cores), length up to 500 m

Non-Ex area

Colour video monitor
(230 V, 50 Hz/120 V, 60 Hz)

Control unit for camera
(230 V, 50 Hz/120 V, 60 Hz)

2-wire receiver

Video cable

Coax 75 Ohm
1 V ss, 1 V p-p

Connecting the Ex-camera to a monitor and/or PC:

Monitor:
Any type of standard industrial monitor can be connected, provided it complies with the following specifications:
- Power supply: 230 V, 50 Hz or
                  120 V, 60 Hz
- Receive signal: 75 Ohm 1 V ss
- 75 Ohm BNC coaxial cable required

PC system requirements for LumiCam software:
- Mains connection, Ethernet 1000
- Windows 2000, XP-SP3, Win 7 and Win 8
- Screen resolution: at least 800 x 600 pixel
- Intel Pentium 4 processor or higher

The main functions of the Ex-camera can be accessed via the PC or the control unit.

Please ask for detailed technical data sheets for all Ex-camera versions including control unit!

We will be happy to arrange a personal meeting with you and provide a practical demonstration.

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Subject to change without prior notice.
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