Instruction Manual

1. Marking

VisuNet IND 900: industrial monitors, monitor workstations

DM/KM/RM/FCS**-V3/AA-**
ATEX certificate: CML 18 ATEX 4156 X
ATEX marking: Ex ib II 3G Ex ia IIC T4 Gc
IECEx certificate: IECEx CML 18.0084X
IECEx marking: Ex ia nA IIC T4 Gc

VisuNet IND 500: industrial monitors

DMS**-A0/N0-V3-**
ATEX certificate: DEMKO T4 ATEX 19/9X
ATEX marking: Ex ia II 3G Ex ia IIC T4 Gc
IECEx certificate: IECEx UL 14.0090X
IECEx marking: Ex ia nA IIC T4 Gc

DMS**-T0/T4/TH-V3-**
ATEX certificate: DEMKO T4 ATEX 19/9X
ATEX marking: Ex ia II 3G Ex ia IIC T4 Gc
IECEx certificate: IECEx UL 14.0090X
IECEx marking: Ex ia nA IIC T4 Gc

VisuNet IND 8200: panel mount monitors

DM/KM/RM/PC82**-R/T-V3-***-DC-**
ATEX certificate: DEMKO T2 ATEX 1107/369 X
ATEX marking: Ex ia II 3G Ex ia IIC Gb/Gc
IECEx certificate: IECEx UL 12.0028X
IECEx marking: Ex ia nA IIC T4 Gc

DM/KM/RM/PC82**-A3-V3-***-DC-**
ATEX certificate: DEMKO T2 ATEX 1107/369 X
ATEX marking: Ex ia II 3G Ex ia IIC T4 Gc
IECEx certificate: IECEx UL 12.0028X
IECEx marking: Ex ia nA IIC T4 Gc

VisuNet IND 900: industrial monitors

DM/KM/RM/FCS**-V3/AA-**
ATEX certificate: CML 18 ATEX 4156 X
ATEX marking: Ex ib II 3G Ex ia IIC T4 Gc
IECEx certificate: IECEx CML 18.0084X
IECEx marking: Ex ia nA IIC T4 Gc

The “-marked letters of the type code are placeholders for versions of the device.
For details of on the actual type of protection applied, refer to the
nameplate of the device.
Refer to the corresponding technical data of the installed components for
the actual type of protection or any possible restrictions.

2. Validity

Specific processes and instructions in this instruction manual require
special provisions to guarantee the safety of the operating personnel.

3. Target Group, Personnel

Responsibility for planning, assembly, commissioning, operation,
maintenance, and dismounting lies with the plant operator.
The personnel must be appropriately trained and qualified in order to carry
out mounting, installation, commissioning, operation, maintenance, and
dismounting of the device. The trained and qualified personnel must have
read and understood the instruction manual.

4. Reference to Further Documentation

Observe laws, standards, and directives applicable to the intended use
and the operating location. Observe Directive 1999/92/EC in relation to
hazardous areas.
Observe laws, standards, and directives applicable to the intended use
and the operating location.
The corresponding datasheets, manuals, declarations of conformity,
EU-type examination certificates, certificates, and control drawings if
applicable (see datasheet) are an integral part of this document. You can
find this information under www.pepperl-fuchs.com.
Refer to the relevant certificate to see the relationship between the
connected circuit type, the maximum permitted ambient temperature, the
temperature class, and the effective inner reactances.
Due to constant revisions, documentation is subject to permanent change.
Please refer only to the most up-to-date version, which can be found under

5. Intended Use

The device is only approved for appropriate and intended use. Ignoring
these instructions will void any warranty and absolve the manufacturer from
any liability.
The VisuNet IND product portfolio extends from simple direct monitors,
remote monitor systems with Ethernet connection to a host, to complete
PCs available with single or dual monitor systems and various mounting
options. Models with 19 inch, 21.5 inch (FHD) or 22 inch display (with
optional touch screen) are available.
The stainless steel housings have an IP66 degree of protection.
Remote monitors and PCs are equipped with Ethernet, USB and RS232
interfaces, optional with TTY interface.
The device must only be operated in the specified ambient temperature
range and at the specified relative humidity without condensation.
Use the device only within the specified ambient and operating conditions.
Take the intended use of the connected devices from the corresponding
documentation.
The device is an electrical apparatus for hazardous areas.
The device is not suitable for separating hazardous areas.
Devices for which specific conditions of use apply have the X marking at the
end of the certificate number.

6. Improper Use

Protection of the personnel and the plant is not ensured if the device is not
used according to its intended use.
The device is not suitable to separate intrinsically safe circuits from non-
intrinsically safe circuits.

7. Mounting and Installation

Prior to mounting, installation, and commissioning of the device you should
make yourself familiar with the device and carefully read the
instruction manual.
Use mounting materials which are suitable to secure the device safely.
Use only accessories specified by the manufacturer.
Safety-relevant markings are found on the nameplate supplied. Ensure
that the nameplate is present and legible. Take the ambient conditions into
account.
Ensure that the terminals are in good condition and are not damaged or
corroded.
Mount the device in a weatherproof location.
Ensure that the operating location has a sufficient floor load capacity.
If mounting the enclosure on concrete use expansion anchors. When
mounting the enclosure to a steel framework use vibration resistant
mounting material.
Ensure that all fasteners are present.
Observe the tightening torque of the screws.
Protect the device against long-term or excessive mechanical vibrations.
The device is heavy. In order to avoid personal injuries or property
damage, make appropriate provisions for the mounting procedure.
Observe the installation instructions according to IEC/EN 60079-14.
Observe the installation instructions according to IEC/EN 60079-25.
When connecting intrinsically safe devices with intrinsically safe circuits of
associated apparatus, observe the maximum peak values with regard to
explosion protection (verification of intrinsic safety). Observe the
standards IEC/EN 60079-14 or IEC/EN 60079-25.
The device may be installed in gas group IIC.
Only connect a device that is in accordance with IEC/EN 60950-1 and is
designed as safety extra-low protective voltage (SELV) system.
Only remove the cover in the absence of a potentially explosive
atmosphere.
The device must be disconnected from the power supply prior to
installation and maintenance. The power supply may be activated only
after all the circuits required for operation have been fully assembled and
connected.
If circuits with type of protection Ex i are operated with non-intrinsically
safe circuits, they must no longer be used as circuits with type of
protection Ex i.
Observe the respective peak values of the field device and the associated
apparatus with regard to explosion protection when connecting intrinsically
safe field devices with intrinsically safe circuits of associated apparatus
(verification of intrinsic safety). Also observe IEC/EN 60079-14 and
IEC/EN 60079-25.
Observe the maximum values of the device, when connecting the device to
intrinsically safe apparatus.
Keep the separation distances between all non-intrinsically safe circuits and
intrinsically safe circuits according to IEC/EN 60079-14.
Observe the compliance of the separation distances between two
adjacent intrinsically safe circuits according to IEC/EN 60079-14.
Circuits of intrinsically safe apparatus can be led into hazardous areas, whereby special attention must be paid to maintaining separation distances to all non-intrinsically safe circuits according to the requirements in IEC/EN 60079-14. Observe the grounding requirements for type of protection Ex i according to IEC/EN 60079-14.

For intrinsically safe circuits, the dielectric strength of the insulation against other intrinsically safe circuits and against the shield must be at least 500 V according to IEC/EN 60079-14. The metal housing parts are coated. If you require a conductive connection, bypass this coating in an appropriate way.

Connect all bare non-energized metal parts to the protective conductor. Ensure that external ground connections exist, are in good condition, and are not damaged or corroded. Equipotential bonding must be achieved along the intrinsically safe circuits.

The housing has a ground connection. Connect to this ground connection an equipotential bonding conductor with a minimum cross section of 4 mm².

Requirements for Cable Glands
Use only one connection line per opening. Use only one conductor per terminal. Adjust the sealing element of the cable gland to the diameter of the cables and connection lines used. Install the cables and the cable glands in accordance with IEC/EN 61241-0. Ensure that all cable glands are in good condition and are securely tightened. Only use cable glands with a temperature range appropriate to the application.

Requirements for Cables and Connection Lines
Observe the maximum permissible length of cables and connection lines. The dielectric strength of the insulation must be at least 500 V according to IEC/EN 60079-14. Observe the permissible core cross section of the conductor. The insulation stripping length must be considered. When installing the conductors the insulation must reach up to the terminal. When using stranded conductors, crimp wire end ferrules on the conductor ends. Observe the minimum bending radius of the conductors. The nominal core cross section of a connected conductor is 2.5 mm² (solid, finely stranded, and stranded). Unused cables and connection lines must be either connected to terminals or securely tied down and isolated. Install the cables and connection lines in such a way that they are protected from ultraviolet radiation. Install cables and cable glands in a way that they are not exposed to mechanical hazards.

Requirements in Relation to Electrostatics
Avoid electrostatic charges which could result in electrostatic discharges while installing, operating, or maintaining the device. Avoid inadmissibly high electrostatic charge of the cables and connection lines. Include the metal housing components in the equipotential bonding. An electrostatic charge poses an ignition hazard in case of discharge.

Requirements for Equipment Protection Levels Ge, Dc
The device must be installed and operated only in a controlled environment that ensures a pollution degree 2 (or better) according to IEC/EN 60664-1.

8. Surrounding Enclosure
In IEC/EN 60079-14

If additional surrounding enclosures are required, the following points must be considered during installation:
- Degree of protection according to IEC/EN 60529
- Resistance to light according to IEC/EN 60079-0
- Resistance to impact according to IEC/EN 60079-0
- Resistance to chemical agents according to IEC/EN 60079-0
- Thermal endurance according to IEC/EN 60079-0
- Electrostatics according to IEC/EN 60079-0

When mounting the surrounding enclosure in hazardous areas, the surrounding enclosure must meet the requirements of a type of protection listed in IEC/EN 60079-0. Mount the surrounding enclosure in a way that all housing outlets, e.g., cable glands and breather drains face downwards. When the cover is fitted, ensure that all fasteners are fully tightened. Mount the device so that it complies with the specified degree of protection according to IEC/EN 60529.

To ensure the degree of protection, consider the following points:

Ensure that the surrounding enclosure is not damaged, distorted, or corroded.
Ensure that all seals are clean, undamaged, and correctly fitted. Tighten all screws of the surrounding enclosure/surrounding enclosure cover with the appropriate torque. For cable glands only use incoming cable diameters of the appropriate size. Tighten all cable glands with the appropriate torque. Close all unused cable glands with the appropriate sealing plugs. Close all unused enclosure holes with the appropriate stopping plugs.

9. Operation, Maintenance, Repair
Prior to using the product make yourself familiar with it. Read the instruction manual carefully. Observe IEC/EN 60079-17 for maintenance and inspection.

Only operate the device with a closed Ex e terminal compartment. Retrieve the temperature class dependant temperature ranges from the EU-type examination certificate.
Do not repair, modify, or manipulate the device. Do not use a damaged or polluted device. If there is a defect, always replace the device with an original device. If there is a defect, the device must be repaired by Pepperl+Fuchs. If the device is installed in potentially explosive dust atmosphere, remove dust layers which exceed 5 mm in regular intervals. Observe the warning markings. Do not remove the warning markings. Disconnect the device, before you plug or unplug the terminals. Only remove the cover in the absence of a potentially explosive atmosphere. After de-energizing the device, a specified delay before opening the cover has to be maintained. Remove the dust before opening the surrounding enclosure. If cleaning is necessary while the device is located in a hazardous area, in order to avoid electrostatic charging only use a clean damp cloth.

10. Delivery, Transport, Disposal
Check the packaging and contents for damage. Check if you have received every item and if the items received are the ones you ordered. Keep the original packaging. Always store and transport the device in the original packaging. Store the device in a clean and dry environment. The permitted ambient conditions must be considered, see datasheet. The device, built-in components, packaging, and any batteries contained within must be disposed in compliance with the applicable laws and guidelines of the respective country.