

Manual

Version: 02.10.2015

Oil on Water Monitor Model IRmat (IR 21)

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Transportation Damages!



Please inspect the instrument immediately after receiving for potential shipping damages. For any claims to the transportation insurance or warranty repair, it is absolutely required to notify transportation damages immediately after receiving the instrument. In case of obvious damages of the outer packaging, the carrier must give a receipt for this damage to make demands for the insurance. In case of a delayed announcement the insurance will not pay for damages and Chemtronic Waltemode GmbH will not assume liability for these damages.



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There are no further reaching warranty claims to take because of the content of existing document.

Non-warranty

Chemtronic Waltemode GmbH takes no responsibility or warranty for technical or editorial mistakes or omissions in this document. The information in this publication will be provided without warranty for their correctness. Chemtronic Waltemode GmbH reserves all rights to make changes to this document without announcement. Chemtronic Waltemode GmbH is by no means liable for any consequential damages or miscellaneous damages, which occur during the use or storage of the system. Some countries do not allow the limitation of liability, so that this exclusion is possibly not valid for you.

Warranty conditions

The warranty for this product takes place according to the legal provisions. As place of warranty we explicitly name Chemtronic Waltemode GmbH, Niederstr. 14, 40789 Monheim am Rhein, Germany. In case of warranty service at the customer site, we will charge additional expenses e.g. travel expenses, overnight cost, etc. Consumable parts as well as wearing parts e.g. lamps, gaskets, etc. are not covered by warranty. Improper use, gross negligence, use of the system outside of the technical specifications, missing or improper maintenance will cause a loss of the warranty claim.

Please pay attention to our general terms of contract.

Safety instructions

Pay attention to the following general safety instructions during use and operation of the system. Ignoring these instructions or special warnings inside of this manual can damage the sensor, cause inaccurate measurements, and possibly result in unsafe installations. Chemtronic Waltemode GmbH will not take any responsibility for consequences arising from ignoring the safety instructions and warnings.

For ALL chemical liquids

The reagents or standards may be toxic or otherwise harmful to human health. Observe appropriate precautions when handling and disposing the chemicals. Review the appropriate published material safety data sheets regarding the safe handling and disposal of all reagents or standards.

Electrical installation

Qualified technical personnel must perform the installation of the system.

Hazardous area

DO NOT INSTALL the system in hazardous area without the optional Ex-proof equipment. Operation of non Ex- proof systems in hazardous area will cause a high risk.



Using the system in hazardous areas (Ex Zone I / Ex Zone II) will only be safe with the installation of the optional special Ex-proof designs including all required certifications



Electrical safety

Always disconnect the instrument from power during maintenance, replacement of components, installation of additional components or any other operations at the open instrument. Only qualified technical personnel must perform this work.

Operating the instrument with open enclosure

Only qualified technical personnel should operate the instrument when the enclosure is open (e.g. during calibration procedure). Be careful that no moisture enters the enclosure.



Some components inside the instrument are energized with voltages, which can cause lethal shocks in case of contact. Be careful during installation, handling and operation of the instrument.



Improper installation / operation of the system

Warranty is void if the system is installed improperly, handled improperly, used outside of the technical specifications (of the instrument), or damaged by gross negligence.

Storage

Please inspect the instrument immediately after receiving for potential shipping damages.

If the instrument has already been unpacked for inspection or testing, or if the instrument has been removed from the process and it is not to be installed or reinstalled for more than 1 day, the following procedure should be observed:

1. If the instrument has been in service, the wetted portion should be thoroughly cleaned (typically with clean water) and then thoroughly dried.
2. In case the original packing material is not available place the instrument in a sealed heavy plastic bag with a desiccant added to assure clean dry storage.
3. The instrument should then be stored in a protected area until time of installation.

Shipment of the instrument

Please clean the instrument carefully before shipment (e.g. for revision / repair). Please use fixed packaging material to protect the instrument against any shipping damages.

Maintenance

Always disconnect the instrument from power during maintenance, replacement of components, installation of additional components or any other operations at the open instrument.

Only qualified technical personnel must perform this work.

Operating the instrument with open enclosure

Only qualified technical personnel should operate the instrument when the enclosure is open.

Take care that no moisture enters the enclosure.



Some components inside the instrument are energized with voltages, which can cause lethal shocks in case of contact. Be careful during installation, handling and operation of the instrument.



Improper installation / operation of the system

Warranty is void if the system is installed improperly, handled improperly, used outside of the technical specifications (of the instrument), or damaged by gross negligence.

Storage

Please inspect the instrument immediately after receiving for potential shipping damages.

If the instrument has already been unpacked for inspection or testing, or if the instrument has been removed from the process and it is not to be installed or reinstalled for more than 1 day, the following procedure should be observed:

1. If the instrument has been in service, the wetted portion should be thoroughly cleaned (typically with clean water) and then thoroughly dried.
2. Store instrument in a sealed heavy plastic bag with a desiccant added to assure clean dry storage.
3. The instrument should then be stored in a protected area until time of installation.

Transport of the instrument

Please clean the instrument carefully before shipment (e.g. for revision / repair). Please use robust packaging to protect the instrument against any shipping damages.

Installation Guidelines



Please read the additional safety instructions before installation and start-up.



Transmitter

(Take notice: The probe can be used without transmitter)

- Qualified technical personnel must perform installation, repair and maintenance.
- The transmitter should be installed in a dry and dust-free location.
- Avoid direct sunlight.
- The ambient temperature should be in range between -15°C up to +45°C.
- The electronic has to be purged with dry instrument air at temperatures above 45°C.
- Temperature range of the instrument air should be 20°C up to 30°C.
- For installation in Hazardous area use certified equipment with EEx- approval only.
- Supply voltage corresponding to the current IEC regulation.
- Connect specified supply voltage only.
- Do not connect the transmitter to circuits with disturbance sources like motors, pumps, etc pp.
- Follow the wiring diagram in this manual.
- Do not install the measuring- and control cables closer than 0.5 meters to power transmission lines and keep the lines as short as possible.

Probe

- The probe has to be installed in vertical position to the water surface.
- The distance between probe and water surface has to be 120 mm (±5mm).
- Distance to water surface with optional level compensation 150 mm (±75mm).
- Avoid a location with direct sunlight or any other light sources.
- The background of the measuring place must be dark and non-reflecting.
- Operating temperature should be between -15 °C to +45 °C.
- Make sure that the water will not freeze (Ice may damage probe or pontoons).
- The water surface has to be flat without waves.
- The water-flow must be as slow as possible (max.0,5 m/s).
- Avoid swimming material like wood, plastic, paper, etc. in the detection area.
- Avoid permanent oil contamination within the detection area.
- Connect air jets in case of haze formation over the water surface, for example fog.
- The probe can be cleaned by using a mild cleaning agent.
- Make sure that the probe window or the optical system does not become dirty. Avoid water drops or condensation (use purge jets).
- Choose the cable length of the probe in that way that you have enough length available to move the probe for calibration and maintenance.

Principle of measurement

- The instrument detects the difference of refractive index between oil and water at a wavelength of 880nm (IR-reflection). The probe can compensate some ambient light by using modulated IR- sources, but make sure that the measurement location is a shaded place.

Infra red rays will be emitted to the water surface. Water will absorb this IR- energy. An oil film on the water surface will reflect part of these IR- rays. The probe detects this reflected energy and converts it to a detection result.

Interpretation of the detection values

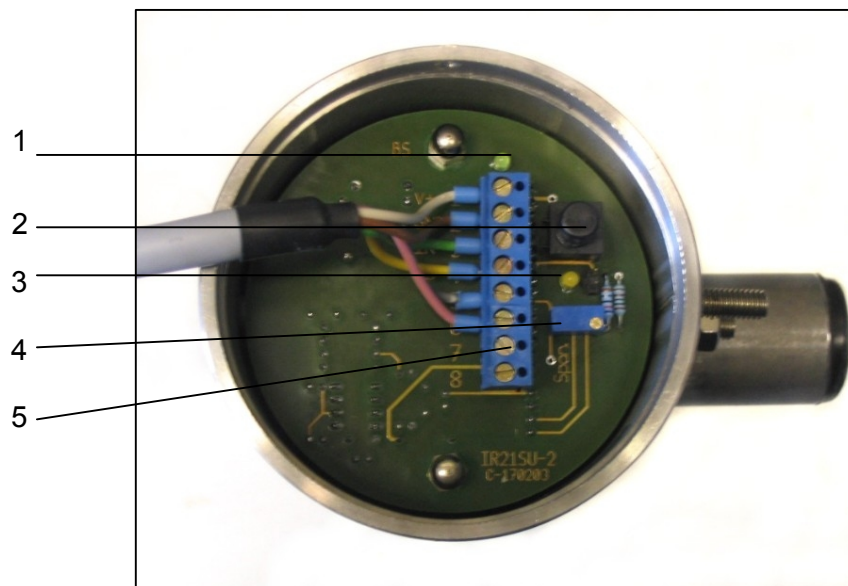
The system detects oil layers at the surface only. The thickness of the oil layer does not affect the instrument reading. The quantity of oil under the water surface is unknown. Therefore it is not possible to detect the absolute quantity of oil in mg/l or ppm.

The instrument is designed to detect low level oil contaminations of 10ml/m² water surface and more. There is no change in reading anymore if the water surface is completely covered by oil.

The use of the optional bypass container with controlled flow rate guarantees a constant sample volume; therefore we can calibrate in mg/l or ppm under this conditions.

Take notice that the sensitivity will be reduced in case oil produces only drops on the water surface due to a high cohesion or in case the process conditions are not OK.

Probe model IRmat (IR 21-S)



Position:

- | | |
|-----------------|--|
| 1 LED Red | displays the supply voltage |
| 2 Button S1 | button to calibrate / configure the probe |
| 3 LED yellow | displays the configuration mode |
| 4 Potentiometer | comparison potentiometer for factory calibration |
| 5 Terminals | terminals for cable connection |

Calibration procedure (Probe as stand alone Unit)

Factory Calibration

The instrument will be shipped with a factory calibration. The factory calibration has been done by using specific oil with an average IR- reflection. This calibration is permanently stored in the memory of the probe.

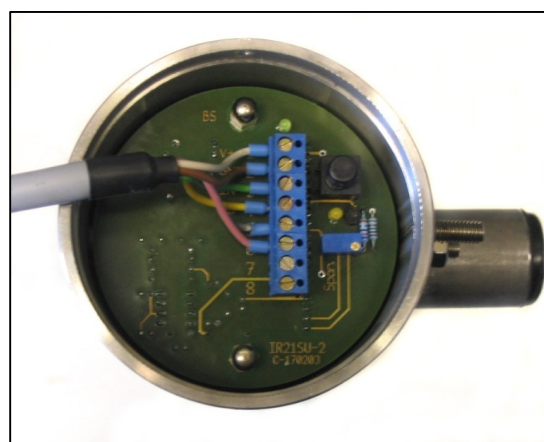
Application specific calibration (probe in stand alone mode)

There is no need to recalibrate the system for most applications.

Procedure in case the application requires a specific calibration.

Take notice, the instrument is set to provide a reading of 15% of range at oil free water (live zero).

- Pay attention to Chapter "before installation and startup"
- Connect the system acc. to wiring diagram
- Prepare sample 1 oil free water (15% of range).
- Prepare sample 2 with maximum oil quantity. (100% of range).
- Open the lid of the probe.
- Switch supply power on.
- Put a 30cm x 30cm black colored container in the detection area of the probe.
- Fill sample 1 (oil free water) into the container
- Make sure that the distance between probe and water surface is 150mm.



- Press button S1 until the yellow LED switches on.
- Release button and press again to confirm.

The signal caused by the oil free sample is now set to a value of 15 % of range.

The yellow LED starts flashing after confirmation of sample 1 wait until LED stops flashing.

- Remove sample 1 (oil free water) and fill sample 2 with maximum oil content into the container (100% of range) and make sure, that the oil is well distributed on the water surface.

Press button S1 until the yellow LED switches on. Release button and wait until the LED starts flashing. Press the button again to confirm.

The signal caused by the oil sample is now set to a value of 100 % of range (20mA).

Wait, until the LED stops flashing.

- Close the lid of the probe.

Take notice, press button S1 for about 20 seconds (until LED stops flashing) to reset probe to factory calibration.

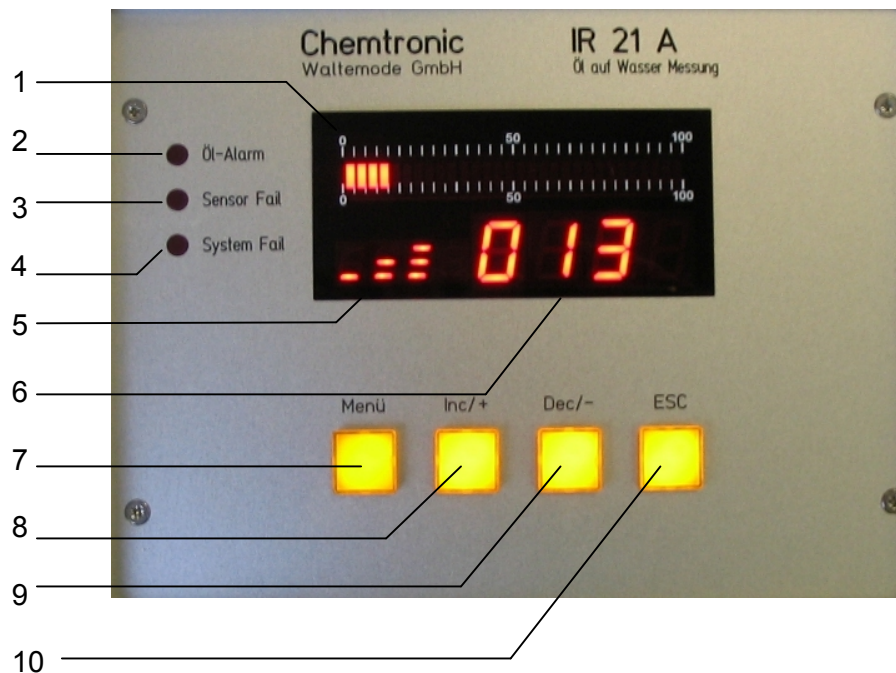
Fault messages IRmat (Probe model IR 21-S as stand alone Unit)

1.) System fail signal provided by NPN, transistor open collector, maximum 24 V DC, 40mA.

The system fail indicates a defective IR- source

2.) Sensor fail signal provided by NPN, transistor open collector, maximum 24 V DC, 40mA. The sensor fail (with optional level compensation only) indicates that the distance between probe and water surface is out of tolerance.

Transmitter model IRmat (IR 21-A)



Pos.

- | | | |
|----|-----------------|--|
| 1 | LED-bar graph | Monitoring value (in % of range) |
| 2 | Oil alarm | The "oil alarm" LED indicates if the oil value is above the set point value. |
| 3 | Sensor fail | The "sensor fail" LED (with optional level compensation only) indicates that the distance between probe and water surface is out of tolerance. |
| 4 | System fail | The "system fail" LED indicates a defective IR- source. |
| 5 | Menu display | The "menu display" indicates the various sub menus |
| 6 | Digital display | The digital display indicates oil values, the set point in %, or the response delay time, in seconds. |
| 7 | Menu button | Use menu button to access the different sub menus |
| 8 | Inc / + button | button + |
| 9 | Inc / + button | button – |
| 10 | ESC button | Use ESC button to go back to measurement mode |

Calibration procedure (Probe & Transmitter)

Factory Calibration

The instrument will be shipped with a factory calibration. The factory calibration has been done by using specific oil with an average IR- reflection. This calibration is permanently stored in the memory of the probe.

Application specific calibration (probe with transmitter)

There is no need to recalibrate the system for most applications.

Procedure in case the application requires a specific calibration.

Take notice, the instrument should be set to provide a reading of 15% of range at oil free water (live zero).

1. Zero adjustment

- Pay attention to Chapter "before installation and startup"
- Connect the system acc. to wiring diagram
- Prepare sample 1 oil free water (15% of range).
- Prepare sample 2, the maximum oil quantity (100% of range).

Switch supply power on.

Put a 30cm x 30cm black colored

container in the detection area of the probe.

Fill sample 1 (oil free water) into the container

Make sure that the distance between probe

and water surface is 150mm.



Sub- Menu „Zero“

Call up the "zero menu" by pressing the "menu button" once.

The sub- menu will be displayed at the left side of the display.

Adjust the reading of the instrument to 15% (live zero) by using the $\pm$ buttons.

Keep button pressed, until you receive a reading of 15%.

Leave the "zero menu" by using the ESC button.

2. Span adjustment

Remove sample 1 (oil free water) and fill sample 2 with maximum oil content into the container (100% of range) and make sure, that the oil is well distributed on the water surface.

Call up the "span menu" by pressing the "menu button" twice.

The sub- menu will be displayed at the left side of the display.

Adjust reading of the instrument to 100% by using the $\pm$ buttons.

Keep button pressed, until you receive a reading of 100%.

Leave the "span menu" by using the ESC button.



Sub- Menu „Span“

Repeat step 1 (zero adjustment) and step 2 (span adjustment) to complete calibration.

Take notice, press button Menu & ESC to reset system to factory calibration.

3. Set point relay "oil alarm"

The menu "Set point" allows to adjust an oil alarm between 0 – 100% of range.

Call up the "Set point menu" by pressing the "menu button" 3 times.
The sub- menu will be displayed at the left side of the display.
Adjust your set point by using the $\pm$ buttons.
Keep button pressed, until you receive your alarm value.
Leave the "Set point menu" by using the ESC button.



Sub- Menu „Set point“

4. Delay time for alarm relay

The menu "Delay time" allows set a time frame between 0 und 255 seconds.
The relay "oil alarm" switches only, In case the oil value exceeds the set point for a longer period as defined.

Call up the "delay time menu" by pressing the "menu button" 4 times.
The sub- menu will be displayed at the left side of the display.
Adjust your delay time by using the $\pm$ buttons.
Keep button pressed, until you receive time frame.
Leave the "delay time menu" by using the ESC button.



Sub- Menu „Set point“

5. Oil alarm

In factory preset the alarm will not reset automatically in case the oil value falls below the set point value.
The user has to confirm the alarm message by using the ESC button.
Press ESC and Dec/- buttons for 3 seconds to deactivate the confirmation function.
The alarm will reset automatically in case the oil value falls below the set point value if the confirmation has been deactivated. Press ESC and Inc/+ buttons for 3 seconds to reactivate the confirmation function. The numbers in the display will blink for a few seconds to confirm activation / deactivation.

Fault Messages IRmat (Probe & Transmitter)

Over range:	Display flashes	The measuring values (6) flash in measurement mode.
Sensor fail:	LED (3) "red" on	Signalizes sensor fail, if the sensor distance to water is out of the compensation range of 75 to 225mm. Only instrument with optional ultrasonic level compensation).
System fail:	LED (4) "red" on	Signalizes a defective sensor, a break of the sensor cable, or a missing / not connected sensor.
	LED (3&4) "red" on	Signalizes Sensor fail & System fail.

The Relays "system fail / sensor fail" can transfer the signals to a control room.



High voltage peaks can occur, during switching of inductive loads (e.g. relay coils / solenoid valves). This may lead to disturbances of the system. Disturbances caused by capacitive- or inductive loads must be suppressed by an appropriate filter combination to ensure switching of the load without disturbing the system.



Technical Data Model IRmat (Probe IR 21-S)



Oil on Water Monitor Model IRmat-S

In a variety of industries such as production facilities, power plants, sewage treatment plants, sea-, inland- or airports, represents the contamination of water with oil, problems for process and environment. The oil monitor model IRmat offers a reliable and cost-effective method for the early detection of oil in water. Even very small amounts of oil will be detected. This allows an immediate action in case of oil leakages.



- **Low Maintenance**
- **High Sensitivity**
- **Non Contact Monitoring**
- **Large Detection Area of approx. 8000mm²**
- **Automatic Self Diagnostic**
- **Application Specific 2 Point Calibration**
- **Analog Output: 4 – 20mA**
- **Set Point-, System Fail- & Sensor Fail Relays**
- **Optional Level Compensation +/- 75mm**
- **Optional Bypass Container**
- **Optional Floating Device (Pontoons)**

Oil on Water Monitor Model IRmat

An oil film on the water surface causes a very good visibility to the human eye. This is due to the optical interferences caused by floating oil layers. The oil monitor model IRmat uses this effect and scans the water surface with modulated infrared light. The detection of the optical interferences at the oil/water borderline allows the monitoring of very low amounts of oil. The instrument allows detecting oil films starting at about 5-10 microns thickness. The detection of this thin layer is even more sensitive than the visibility by the human eye.

The sensor was developed for non- contact real time detection of oil in water and is free of maintenance. The modulation of the projected IR- light ensures for a nearly 100% DC-light compensation, so that ambient light does not affect the measured values.

Monitoring Results

The measurement of the absolute oil amount in mg/l or ppm is not really possible, using the known inline & online measuring systems. The reasoning for this statement is, that oil is not homogeneous distributed in the water. So it often happens that there is no oil detected in a depth of 30cm, but you can see an oil film on the water surface. The systems capture only a fraction of the total water quantity, therefore it is absolutely necessary to ensure, that a monitoring system discovers any oil, which may leak into the process or environment.

Almost all types of oil or at least their components are lighter than water and therefore they float. Due to this property we can expect to get the highest oil concentration at the water surface. The surface scanning method of model IRmat uses these floating characteristic of oil to ensure that any oil leakage will be detected immediately.

Typical use:

- **Chemical Industry**
- **Petrochemical Industry**
- **Production Plants**
- **Power Station**
- **Automotive**
- **Water Treatment**

Typical applications:

- **Retention Basins**
- **Oil separation**
- **Water Reservoirs**
- **Operating Wastewater**
- **Cooling Water**
- **Demulsification**

Technical Data Sensor Model IRmat-S (IR21-S)

Enclosure:	Stainless Steel (316SS / 1,4571)
Protection class:	IP65 / Nema 4x
Dimension:	Ø approx. 60 mm, length ca. 200 mm
Connection:	Cable, 7G 0,5 shielded
Temperature range:	-15°C to +45°C (ice-free)
Humidity:	85% RH

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Technical Data Model IRmat (Transmitter IR 21-A)

Oil on Water Monitor Model IRmat

Model IRmat (Transmitter)

The microprocessor controlled transmitter will be connected to the probe model IRmat. The transmitter supplies the probe with 24 VDC and converts the detector signals into utilizable measuring results. A 3 1/2 digit LED display and a 0/4-20mA isolated analog output are used to show or transfer the measurement values. Set point and system fail relays can provide alarm messages to the control room.

Take notice:

The optional ultrasonic level compensation allows compensating level changes up to a maximum of $\pm 75\text{mm}$ by using this transmitter.

- Microprocessor based signal-converter
- 3 1/2 digit LED display / bar graph
- Analogue output: 0/4 – 20mA
- Adjustable set point
- System fail relay
- Probe defective relay
- IP65 wall mount enclosure
- Optional stainless steel enclosure (IP54)

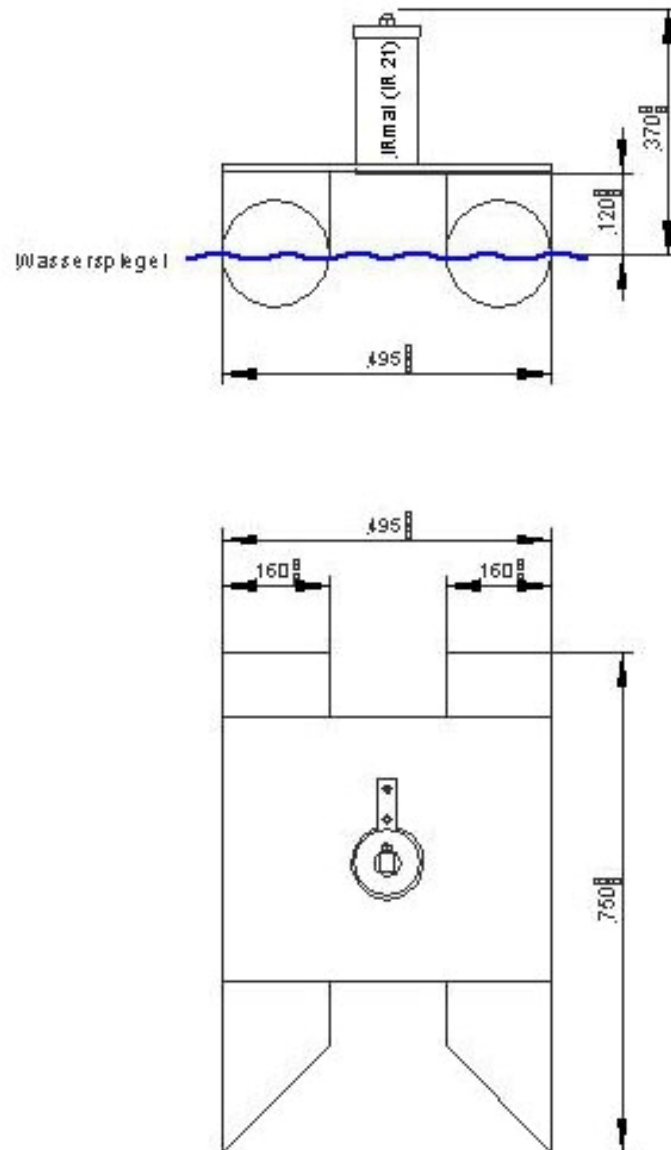


- | | | |
|-------------------------|-----------------|-----------------|
| • Water reservoirs | • Cooling water | • Process water |
| • Rainwater catchment's | • Oil separator | |

Technical Data IRmat (Transmitter)

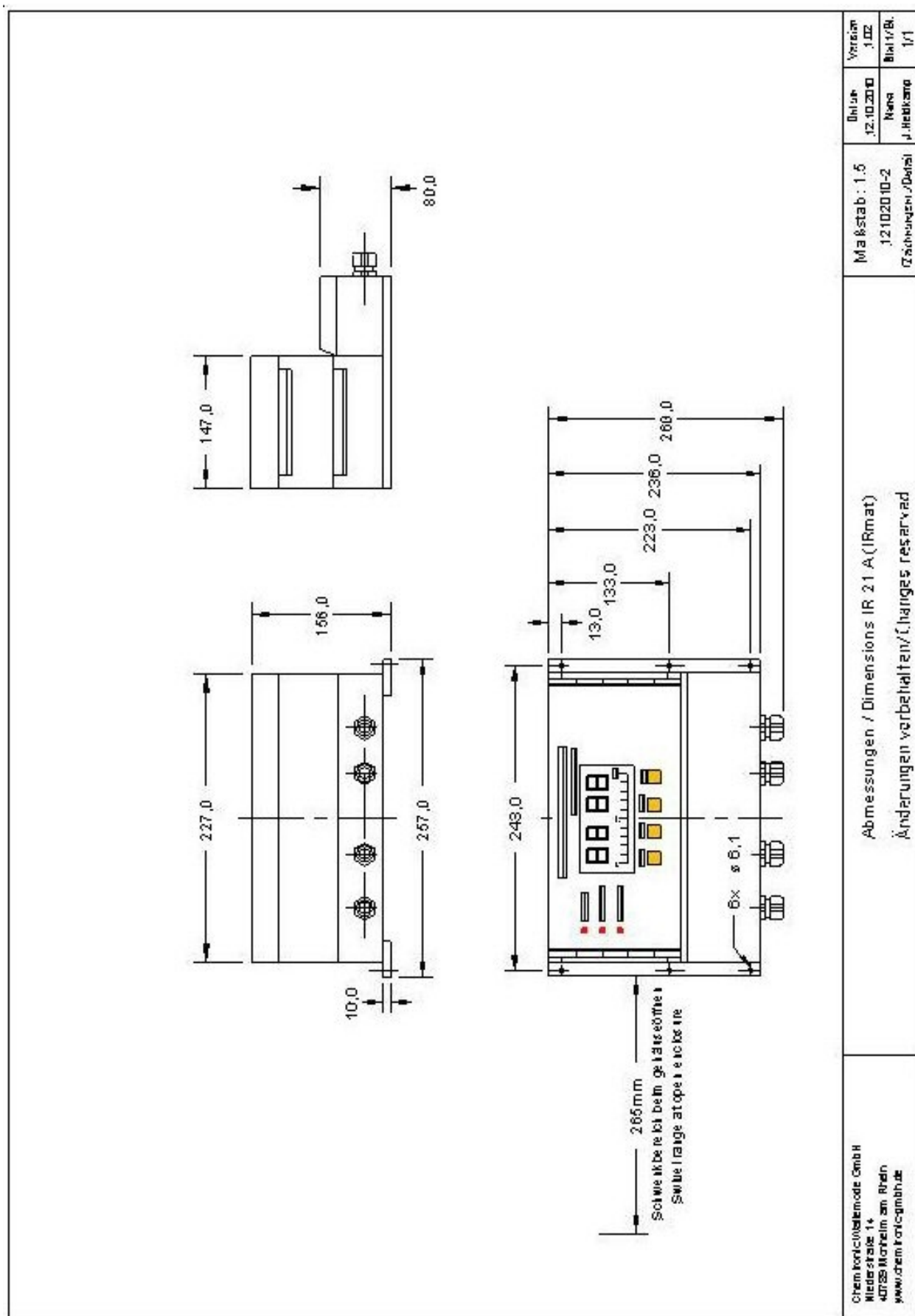
Supply voltage:	115, 230 VAC, 50-60 Hz 30VA (optional: 24V AC/DC)	Temperature range:	-15°C to +45°C
Sensitivity:	Programmable according to application	Enclosure:	PVC with front window, IP65
Display:	3 1/2 digit LED and bar graph	Dimensions:	B=258mm, H=237mm, T=148mm
Analogue output:	0/4 - 20mA, isolated, max load 500 Ohm	Menu :	4 digit 7 segment LED display
Relay output:	Oil alarm / System fail / Probe fail	Relay capacity:	30 V DC, 1 A

Dimensional drawing Pontoons IRmat

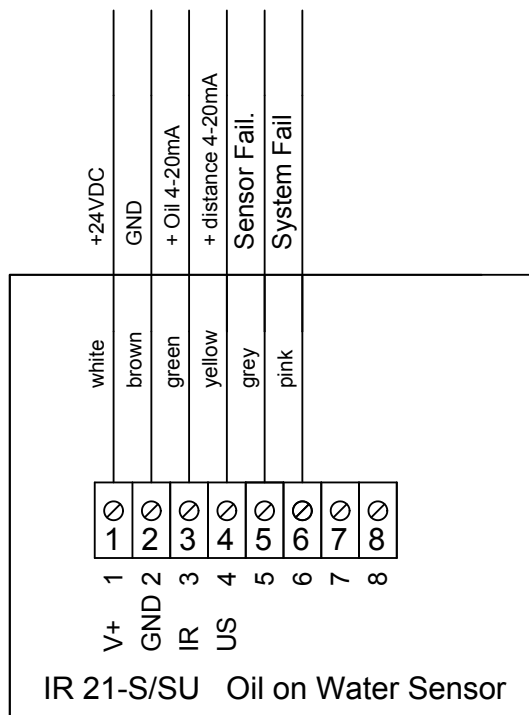


		11.03.05	G. Waltemode	Maßstab :	Datei : SW750-PE
				Projekt : IRmat (IR21)	
				Benennung:	Blatt : 1
				Schwimmer / Pontoon SW750-PE	
Zust. :	Änderung :	Datum :	Name :	Chemtronic Waltemode GmbH	Niederstraße 14 40789 Monheim am Rhein

Dimensional drawing IRmat (Transmitter IR 21-A)



Wiring diagram IRmat (Probe as stand alone Unit)

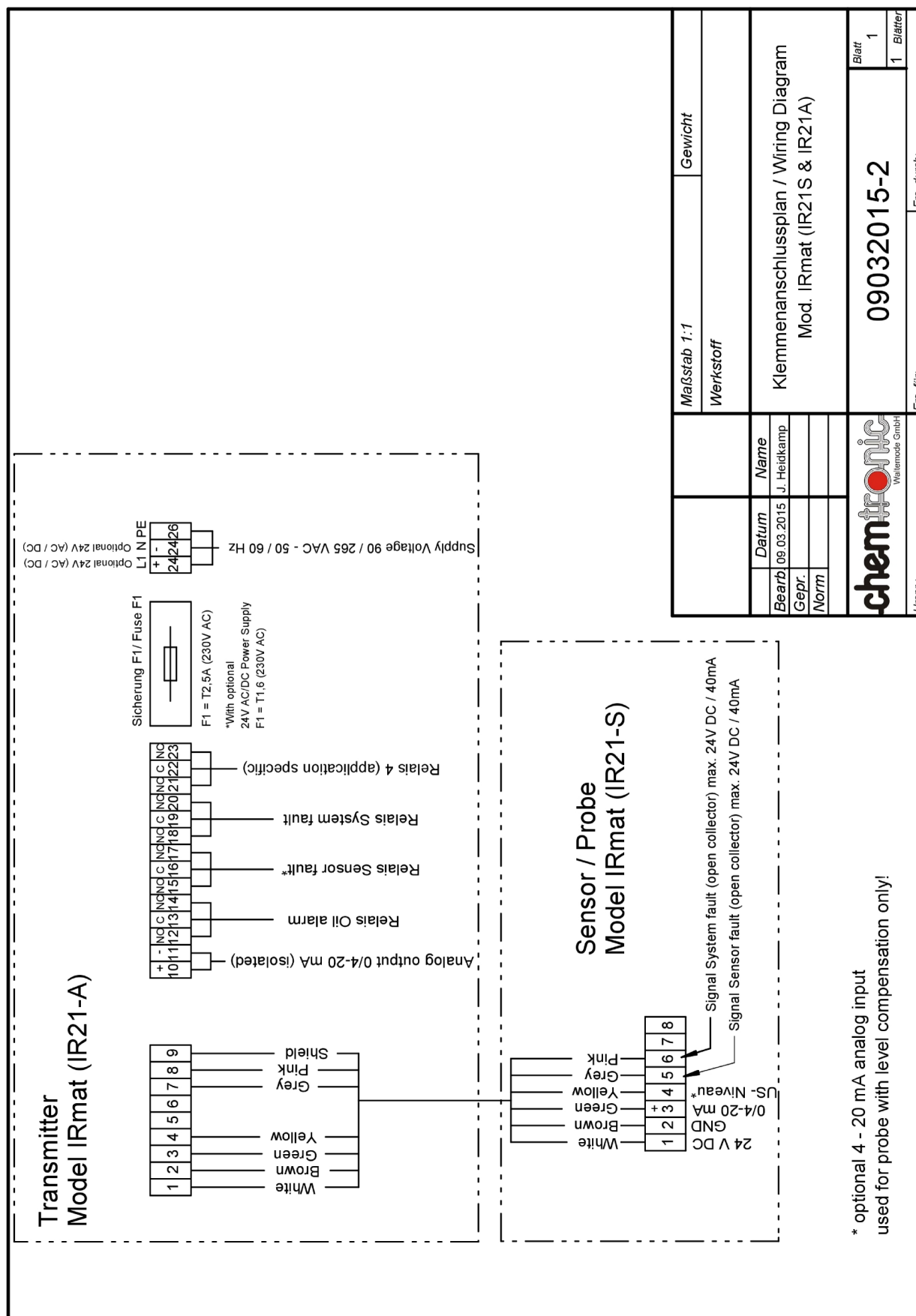


Terminal 4 (with optional level compensation only):
Connect yellow wire to GND, in case of use without transmitter model IR21-A.

Terminal 5 Sensor Fail: NPN Transistor Open Collector max. 24VDC 40mA (only IR21-SU)

Terminal 6 System Fail: NPN Transistor Open Collector max. 24VDC 40mA

Wiring diagram (Probe & Transmitter)



Additional Options

Pre- heated purge system

The air purge IR21-HZ is used to protect the instrument against mist in the detection area and condensation at the probe surface.

The purge system is divided in two components.

Supply unit IR21-HZ

Control lamp

Fuse 24 V AC F2=M1A

Fuse 230 V AC F1=M125mA

Switch on/off



Heating system IR21-HZP

Oil on water probe IRmat

Pre heated purge system

Pontoon





EU- Konformitätserklärung

gemäß Richtlinie 2004/108/EG

EU- Declaration of Conformity

according to directive 2004/108/EC

Für das folgend bezeichnete Erzeugnis:

For the following named product:

Modell IRmat / IR-21 (ÖL auf Wasser Monitor) / Model IRmat / IR-21 (Oil on Water Monitor)

wird hiermit bestätigt, dass es den Schutzanforderungen entspricht, die in der Richtlinie des Rates zur Angleichung der Rechtsvorschriften der Mitgliedstaaten über die elektromagnetische Verträglichkeit festgelegt sind.

Zur Beurteilung des Erzeugnisses hinsichtlich elektromagnetischer Verträglichkeit wurden folgende Normen herangezogen:

Herewith it is certified, that it corresponds to the protection requirements laid down in the guidelines of the board for equivalence of legal regulations of the member states about the electromagnetic compatibility.

For the judgment of the product regarding electromagnetic compatibility following standard were consulted:

EN61000-6-1 (2007)

EN61000-6-3 (2011)

EN61000-3-2 (2006)

EN61000-3-3 (2009)+A1 Flicker

Störfestigkeit / interference immunity

Emission

Oberwellen / harmonic waves

Diese Erklärung wird, verantwortlich für den Hersteller / Importeur

This declaration is given, in responsibility for the producer / importer

Chemtronic Waltemode GmbH
Niederstr. 14
D-40789 Monheim am Rhein

abgegeben durch Herrn

by Mr.

G. Waltemode

Monheim den 25.10.2014

Appendix → Optional Ex- Design for Model IRmat (IR21)

General

Please take notice:



The safe operation within hazardous areas (Ex Zone I & II) requires the optional Ex p- purge system (pressurized enclosure) including Ex- approvals and certificates.



The explosion protection is defined by technical solutions, such as types of protection and zoning. The protection principles are described with standards (e.g. IEC or EN) and based on legal provisions, such as the ATEX Directives of the European Union. The model IRmat (IR21) is equipped with a pressurized enclosure (Ex p) for safe operation in hazardous areas. The Ex p- pressurization system model F850S of Gönnheimer guarantees the safe operation of model IRmat in hazardous areas of Zone 1, 21, 2 and 22. The protection type 'pressurization' is based on the principle of maintaining a constant air pressure inside of the enclosure. In the first step the enclosure becomes purged with air and then the housing keeps a small but constant overpressure of air. The Ex p- system controls the purge cycle and the pressure. This prevents for the infiltration of combustible gases or dusts into the enclosure.

The required quantity of dry instrument air is approximately 30 litres per minute within the first 5 minutes after switching on (cleaning cycle), then the system switches to pressure keeping and reduces air consumption to an average of 0,5 - 3 litres per minute, depending on the tightness of the housing. The Ex p - system compensates the losses caused by leakages. The device switches off automatically in case the air pressure inside the housing becomes to low (e.g. by interrupting the air supply or by opening the enclosure door).

Versions

Sensor in hazardous area and Transmitter in safe area (e. g. control room)

The most used and most recommended method, since the measuring system can be remote controlled from the safe environment without additional safety requirements.

Sensor and Transmitter in hazardous area

Recommended in case of large distances between the location of the sensor and safe environment. The maximum cable length between sensor and transmitter should not exceed 100 meter.

Technical Modifications of explosion proofed IRmat sensors

Enclosure gasket of IRmat Sensor

An improved sealing the sensor housing ensures for low leakage, increases the reliability of the measurement system and minimizes the quantity of instrument air.

Technical Modifications of explosion proofed FLUCOmat Transmitter

Enclosure IRmat Transmitter

The standard plastic housing of the amplifier is not approved for use in hazardous areas. The transmitter must be equipped with an optional conductive housing, for use in hazardous area.

Enclosure gasket of IRmat Transmitter

An improved sealing the transmitter housing ensures for low leakage, increases the reliability of the measurement system and minimizes the quantity of instrument air.

Individual components of the Gönzheimer Ex-P system model F850S



Please observe the separately supplied documentation (manual, safety instructions, certificates, etc.) for the Ex p- pressurized enclosure system model Gönzheimer F850S.



- a. F850S control unit, with pressure and flow sensor for installation in hazardous areas. Used to control the purge cycle, monitor the internal housing pressure and controlling the proportional valve.
- b. SPV.x proportional valve for installation in hazardous area. Used for controlling and regulation of the air supply to the housing of the measuring system.
- c. SR852x Ex-interface relays with 8 contacts for installation in hazardous area. The interface relay interrupts all control wires (analog output / relay) leading into the device, so that in case of shut down no energy can flow into the measuring system.

Accessories and Components for use in hazardous Area



Please take notice:

Passive accessories such as floats, bypass container, etc., has to be suitable for operation in hazardous area. The parts must be either made of anti-static, electrically conductive plastic material or stainless steel. Use original accessory only!

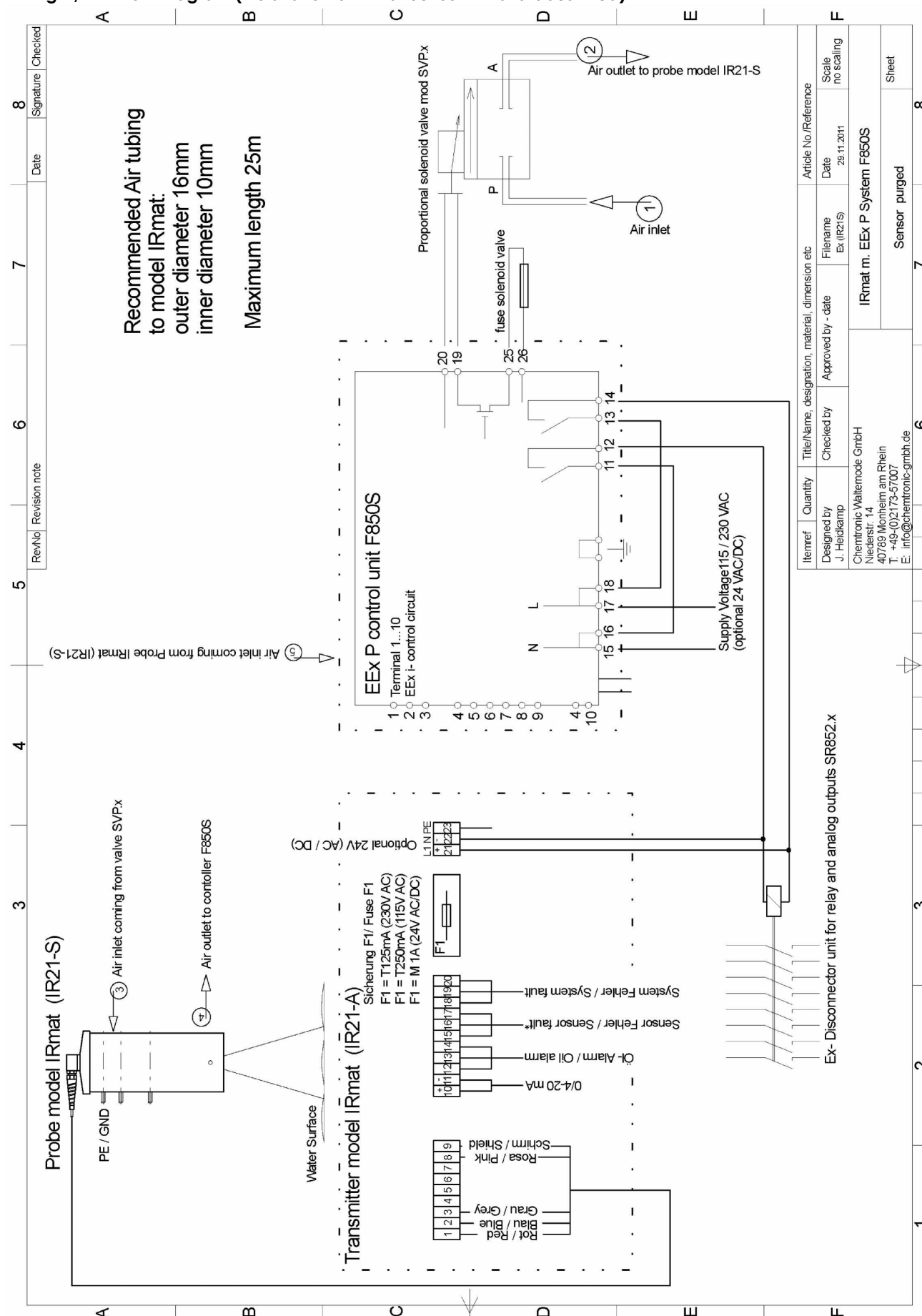


Please take notice:

Active accessories such as electric pumps, cranes or motor controllers always require a separate approval & certification to guarantee the safe use in hazardous area! Please contact the manufacturer!



Wiring- / Air- flow Diagram (Installation of IRmat Sensor in hazardous Area)



Wiring- / Air- flow Diagram (IRmat Sensor & Transmitter in hazardous Area)

