



# *Process Monitor* **User Manual**



**Process Monitor PM 420<sup>Ex</sup>**

Type 17-71MM-1002



## User manual - TRANSLATION

PM 420<sup>ex</sup> Process Monitor  
without backlighting  
Type 17-71MM-1002/....

### ATEX Zone 1

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Anlage: Erklärung der Konformität



# 1 Basic Safety Instructions

## 1.1 Notes on this User Manual



**Please read carefully before commissioning the devices.**

The user manual is a constituent part of the product. It must be kept in the direct vicinity of the device and accessible at all times to installation, operating and maintenance personnel.

It contains important notes, safety instructions and test certificates which are necessary for perfect functioning when the devices are being operated and handled.

The user manual is written for all people who carry out assembly, installation, commissioning and maintenance work on the product, whereby the directives and standards applicable to areas with a gas or dust atmosphere (99/92/EC, EN 60079-17, EN 60079-19, IEC 60079-17, IEC 60079-19) must be observed when doing such work.

Familiarity with and strict adherence to the safety instructions and warnings in this manual are essential for safe installation and commissioning. Careful handling and consistent observation of these instructions can prevent accidents, personal injuries and damage to property.

The illustrations in these operating instructions serve to make the information and descriptions more clear. They are not necessarily true to scale and may deviate slightly from the actual construction of the device.

Safety instructions and warnings are specially highlighted in this manual and marked by symbols.

### **DANGER**

**DANGER** indicates a hazardous situation which, if not avoided, will result in death or serious injury.

### **WARNING**

**WARNING** indicates a hazardous situation which, if not avoided, could result in death or serious injury.

### **CAUTION**

**CAUTION** indicates a hazardous situation which, if not avoided, could result in minor or moderate injury.

### **ATTENTION**

**ATTENTION** identifies a potentially damaging situation which, if not avoided, could damage the equipment or something in its environment.



Important instructions and information on effective, economical and environmentally compatible handling.

### 1.1.1 Languages

The original user manual is written in German. All other available languages are translations of the original user manual.

The user manual is available in German and English. If you require any other languages, please ask BARTEC or request them when placing the order.

### 1.1.2 Changes to the document

BARTEC reserves the right to alter the contents of this document without notice. No guarantee is given for the correctness of the information. In case of doubt, the German safety instructions shall apply because it is not possible to rule out errors in translation or in printing. In the event of a legal dispute, the "General Terms and Conditions" of the BARTEC group shall apply in addition.

The respective up-to-date versions of data sheets, manuals, certificates, EC Declaration of Conformity may be downloaded at [www.bartec-group.com](http://www.bartec-group.com) under products and solutions in the area "Automatic Technology" or ordered directly from BARTEC GmbH.

## 1.2 Handling the Product

The product described in these user manual has been tested and left the factory in perfect condition as regards meeting safety requirements. To maintain this condition and ensure that this product operates perfectly and safely, it may be used only in the manner described by the manufacturer. Appropriate transportation, suitable storage and careful operation are also essential for the perfect and safe operation of this product. The Process Monitor must be installed properly and securely if it is to work perfectly and correctly.

The safe and perfect mounting of the Process Monitor is a precondition for faultless and correct operation.

## 1.3 Use in Accordance with the Intended Purpose

### 1.3.1 Exclusive Purpose

The Process Monitor is exclusively intended for displaying a 4 ... 20 mA current signal. It is used exclusively in combination with operating equipment that conforms to the requirements set for the overvoltage category I.

The Process Monitor was modified specially for use in hazardous areas in Zone 1.

### 1.3.2 Improper Use

Any other use is not in accordance with the intended purpose and can cause damage and accidents. The manufacturer will not be liable for any use beyond that of its exclusive intended purpose.



## 1.4 Owner's/Managing Operator's Obligations

The owner/managing operator undertakes to restrict permission to work with the barcode hand scanner to people who:

- ▶ are familiar with the basic regulations on safety and accident prevention and have been instructed in the use of the barcode hand scanner;
- ▶ have read and understood the documentation and the chapter on safety and the warnings.

The owner/managing operator must check that the safety regulations and accident prevention rules valid for the respective application are being observed.

## 1.5 Safety Instructions

### 1.5.1 General Safety Instructions

- ▶ Take the device out of the hazardous area before wiping it with a dry cloth or cleaning it!
- ▶ Do not open devices in a hazardous area.
- ▶ The general statutory regulations or directives relating to safety at work, accident prevention and environmental protection legislation must be observed, e.g. the German industrial health and safety ordinance (BetrSichV) or the applicable national ordinances.
- ▶ In view of the risk of dangerous electrostatic charging, wear appropriate clothing and footwear.
- ▶ Avoid the influence of heat that is higher or lower than the specified temperature range.
- ▶ Protect the device from external influences! Do not expose the device to any caustic/aggressive liquids, vapours or mist! In the event of malfunctioning or damage to the enclosure, take the device out of the potentially explosive area immediately and bring it to a safe place.

## 1.6 Safety Instructions for Operation

For electrical systems the relevant installation and operating regulations must be complied with (e.g. Directive 99/92/EC, Directive 94/9/EC and the national applicable ordinances IEC 60079-14 and the DIN VDE 0100 series)!

The disposal of this equipment must comply with the national regulations on the disposal of waste.

### 1.6.1 Maintenance

Regular servicing is not necessary if the equipment is operated correctly in accordance with the installation instructions and environmental conditions. In this context, please refer to Chapter "Maintenance, Inspection, Repair".

### 1.6.2 Inspection

Under IEC 60079-19 and EN 60079-17, the owner/managing operator of electrical installations in hazardous areas is obliged to have these installations checked by a qualified electrician to ensure that they are in a proper condition.

### 1.6.3 Repairs

Repairs on explosion-protected operating equipment may be done only by authorised persons working in accordance with the latest developments in technology and using original spare parts. The applicable regulations must be observed.

### 1.6.4 Commissioning

Before commissioning, check that all components and documents are there.

## 1.7 Ex Protection Type, Certification and Standards

Markings specifying Ex protection and certification are put on the device. For Ex protection markings, see Chapter 3 "Technical Data". The barcode hand scanner series conform to Directive 94/9/EC for devices and protective systems for use to their intended purpose in potentially explosive areas (ATEX Directive). For the standards conformed to, see Chapter 3 "Technical Data".

## 1.8 Warranty

### WARNING

**No changes or conversions may be made without the manufacturer's written consent.**

If components other than those specified are used, explosion protection will no longer be assured. It cannot be guaranteed that parts procured from other suppliers have been designed and manufactured in conformance to safety requirements and with the necessary stress tolerance.

- ▶ Contact the manufacturer and obtain his approval before performing any changes or retrofits. Use only original spare and expendable parts.

Our "General Terms and Conditions of Sale and Delivery" apply as a basic rule. These are made available to the owner/managing operator at the latest on conclusion of the contract. Warranty and liability claims for personal injury and damage to property will be inadmissible if they are attributable to one or more of the following reasons:

- ▶ Incorrect handling, commissioning, operation and maintenance.
- ▶ Non-compliance with the instructions in the User Manual regarding transport, storage, commissioning, operation and maintenance.
- ▶ Unauthorized structural modifications.
- ▶ Inadequate monitoring of parts that are subject to wear.
- ▶ Incorrectly performed repairs.
- ▶ Disasters caused by the effects of foreign substances or events beyond human control.

We guarantee to process monitor a warranty period of one year starting on the date of delivery from the Bad Mergentheim factory. This guarantee covers all parts of the delivery and is restricted to the replacement free of charge or the repair of defective parts in our Bad Mergentheim factory. As far as possible, the delivery packaging should be kept for this purpose. In the event of such a claim, the goods must be returned to us after written arrangement. The customer will not have the right to demand to have the repairs done at the site of installation.

## 2 Product Description

### 2.1 Definition

The PM 420<sup>ex</sup> Process Monitor from BARTEC is a complete system. The Process Monitor was developed specially for use in hazardous areas and it is ATEX-certified.



Figure 1: PM 420<sup>ex</sup> Process Monitor

**PM 420<sup>ex</sup> Process Monitor** Type 17-71MM-1002/.... for **Zone 1** in the intrinsic safety type of protection.

The **PM 420<sup>ex</sup> Process Monitor** is a display unit which exclusively has circuits in the intrinsically safe type of protection.

It is supplied from the field through the intrinsically safe certified standardised electrical signal 4 mA...20 mA; there is no need for any further intrinsically safe supply.

The current standard signal is indicated by a five digit digital transfective LCD graphic display available in 25 technical units, e.g. mA, °C, mm, kg (see table).



The voltage drop across the device is low (3,8 V at 20 mA) so that it can be used for almost every standardised electrical signal 4 mA...20 mA.

Process Monitor with backlighting on request. Separately certified intrinsically safe supply required.

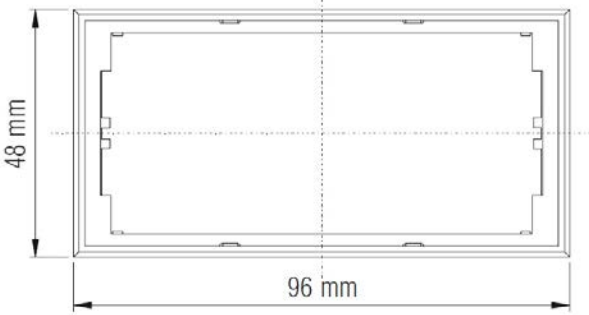
Input mode unit			
Parameter	Unit	Parameter	Unit
0	°C	13	t
1	A	14	pH
2	mA	15	ppm
3	V	16	rpm
4	mV	17	mbar
5	n	18	bar
6	mm	19	kPa
7	cm	20	1/min
8	m	21	µS/cm
9	km	22	mS/cm
10	m <sup>3</sup>	23	m <sup>3</sup> /h
11	%	24	Nm <sup>3</sup> /h
12	kg		

### 3 Technical Data

#### 3.1 Explosion Protection

Type	17-71MM-1002/...
Ex protection type (Zone 1)	 II 2(1)G Ex ib [ia Ga] IIC T5
Produkt marking	 0044
Certification	IBExU09ATEX1095 X
Measuring circuit (4 - 20 mA) Terminal: X2-1, X2-3	$U_i \leq 30 \text{ V DC}$ $I_i \leq 100 \text{ mA}$ $C_i \leq 12 \text{ nF}$ $L_i \leq \text{negligibly small}$
Lighting circuit Terminal: X1-1, X1-2	$U_i \leq 10 \text{ V DC}$ $I_i \leq 125 \text{ mA}$ $P_i \leq 313 \text{ mW}$ $C_i \leq 1 \text{ nF}$ $L_i \leq \text{negligibly small}$
Standards	EN 60079-0:2009 EN 60079-11:2012
Directives	94/9/EG

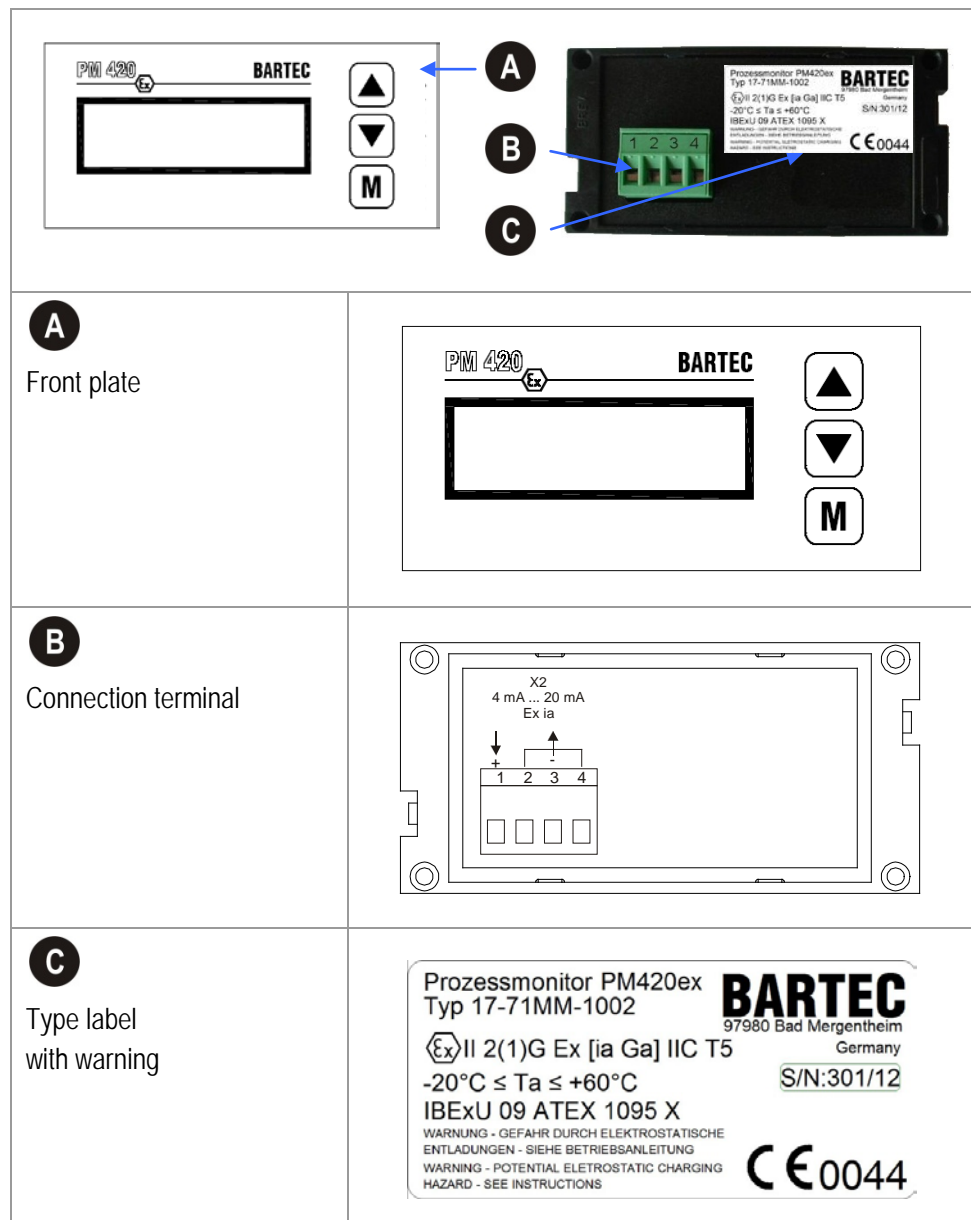
#### 3.2 General Data

Design	front-panel fitting
Enclosure material	high-quality thermoplastic
Protection class	IP 40
front installation terminals	IP 20
Connecting terminals	2.5 mm <sup>2</sup> , fine-stranded
Ambient temperature	-20 °C to +60 °C
Storage temperature	-40 °C to +80 °C
Air humidity	0 % to 95 % (non-condensing)
Dimensions (Length x Height x Depth)	96 x 48 x 82 mm
	
Wall cut-out	91 x 44 + 0.5 mm
Weight	approx. 120 g

### 3.3 Electrical Data

Intrinsically safe circuit	can be brought into Zone 0
Measuring range	4 to 20 mA
Measured variable	current
Measuring resolution	800 Digit, 20µA pro Digit
Measurement deviation	< 0.1 % of the display range
Temperature drift	< 0,01 %/K

### 3.4 Product Marking



## 4 Transport, Storage and Scope

### 4.1 Transport



Report any transport damage or incomplete deliveries in writing to the forwarding company and to BARTEC GmbH immediately on receipt of the deliveries.

Any damage caused by incorrect storage will not be covered by BARTEC GmbH's guarantee provisions.

### 4.2 Storage

#### ATTENTION

**Damage to property due to incorrect storage!**

- ▶ Store the device in its original packaging
- ▶ Observe storage temperatures.
- ▶ Keep the hand scanners away from moisture.

### 4.3 Scope of delivery

- 1 x PM 420<sup>ex</sup> Process Monitor
- 2 x Mounting clamps
- 1 x User Manual

## 5 Assembly

Before assembling the device, make sure you have all components and documents.

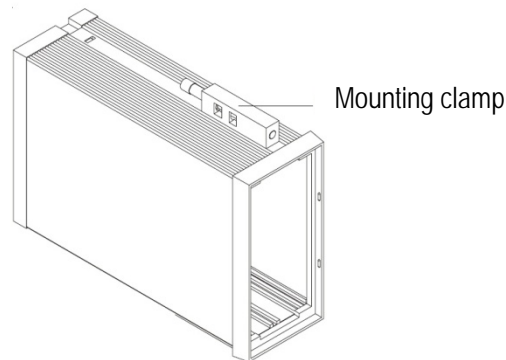
### **⚠ DANGER**

The device is sealed in the factory.

The device loses its explosion protection if opened!

- ▶ Do not open device!

The process monitor is designed to enable simple fitting in a front panel



#### Required tools:

- |                 |                         |
|-----------------|-------------------------|
| Mounting clamps | 1 x hex key 3 mm        |
|                 | 1 x slotted screwdriver |

### 5.1 Installation guidelines



Only qualified personnel, i.e. trained electricians will have the required specialised knowledge to be able to do all the electrical work.

Familiarity with and the technically perfect implementation of the safety instructions described in this manual are preconditions for safe installation and commissioning.

### **⚠ DANGER**

Electrostatic discharge.

**Danger to life in potentially explosive atmosphere!**

- ▶ Install the process monitor in a metallic earthed environment
- ▶ Connect the measuring current circuit to the earth potential using resistance less than 106 ohm

1. The user may only carry out wiring to accessible terminals.
2. Dismantling work on the device may only be carried out by the manufacturer or by persons authorised accordingly by the manufacturer. The device is sealed in the factory and should not be opened under any circumstances!
3. The applicable safety and accident prevention regulations in each individual case must be complied with.
4. The supply voltage must correspond to the information in this user manual.
5. Malfunctions cannot be ruled out if the specified tolerances are exceeded or not met.

## 5.2 Connection Assignment

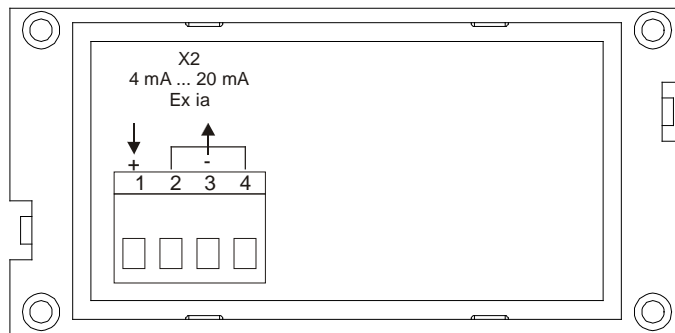


Figure 2: Rear of the PM 420<sup>ex</sup> Process Monitor with 4-pole terminal strip

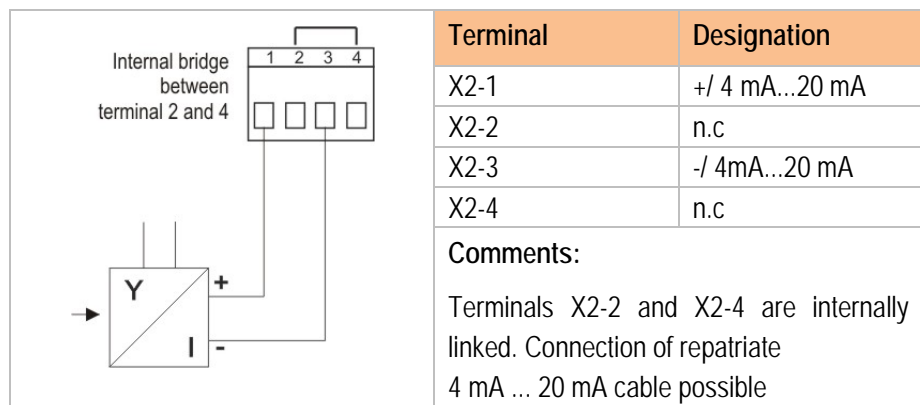
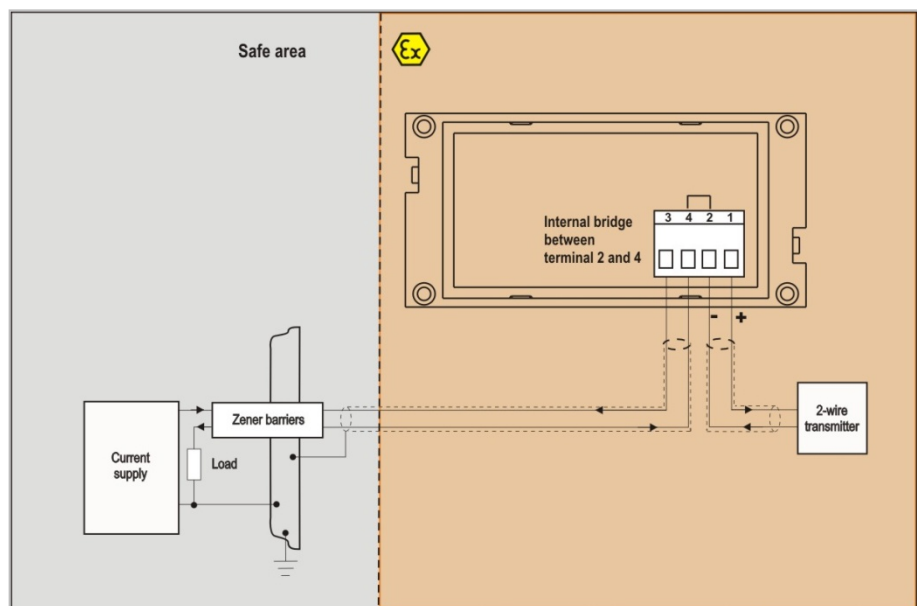
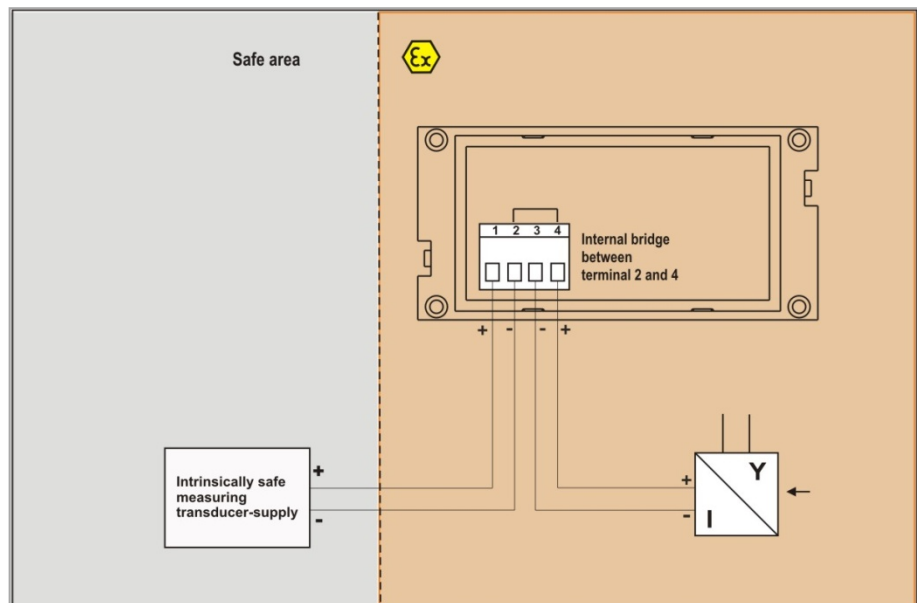


Figure 3: Electrical connections with 4-pole terminal strip



### 5.3 Connection examples



## 6 Commissioning

For electrical systems the relevant installation and operating specifications (e.g. Directives 99/92/EC and 94/9/EC, BetrSichV and the applicable national ordinances, EN 60079-14, IEC 60079-14 and the DIN VDE 0100 series) must be observed.

The operator of an electrical system in a hazardous environment must keep the operating equipment in an orderly condition, operate it correctly, monitor it and do the required maintenance and repairs.

Before commissioning the devices, check that all components and documents are there.

### 6.1 Final Inspection

Check the following requirements before commissioning the device:

- ▶ The device may not be damaged in any way.
- ▶ Evidence must be furnished on the reliability of the interconnection of the devices with all other operating equipment.
- ▶ It must be ensured that the device is configured to suit the connected periphery.

### 6.2 Basic Setting of Parameters

Parameter	Value	Comments
Measuring range min.	400	4 mA
Measuring range max.	2000	20 mA
Decimal point	3	3 <sup>rd</sup> place in the display
Resolution	1	
Unit	2	mA
Bar graph	No	Standard display without bar graph
Code	No	Query switched off
Access code	0000	
Language	English	

Table 1: Basic settings for Parameter

## 7 Operation

Every time a 4 mA... 20 mA current signal is applied to the Process Monitor, the device performs initialisation, whereby the following sequence is run through in the display:

- ▶ Software name and version number
- ▶ Display test showing 8.8.8.8.8.8.
- ▶ Display of input current using the stored settings



### 7.1 Display

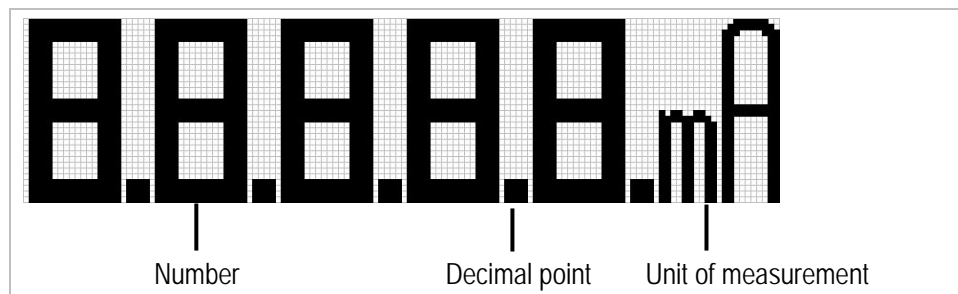


Figure 4: Measuring mode - Display without bar graph

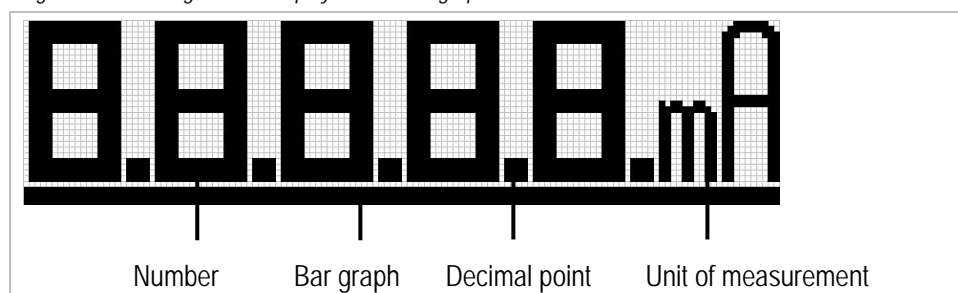


Figure 5: Measuring mode - Display with bar graph

### 7.2 Keyboard Functions

#### 7.2.1 Measuring Mod

▲	Change to the presentation without bar graph.
▼	Change to the presentation with bar graph.
M	If pressed for longer than 2 seconds, the mode changes to input mode.

## 7.2.2 Input Mode



Increment selected digit position.



Decrement selected digit position.



Select number, change input parameters and save parameters.

## 7.3 Menu Structure

Press the "M" key for longer than 2 seconds to enter the input mode. The structure of the menu is explained in the following. Changes made to the parameters are permanently stored in the display if the "M" button is pressed for longer than 2 seconds. The changes are discarded if there is no action on the screen for about 30 seconds. In both processes there is a change to the measuring mode again.

## 7.3.1 Input Mode - Access Code Query

The display shows the text "CODE ??" on the top line and "0000" on the bottom line. The "0000" is partially obscured by a greyed-out area.

At this point the access code for the input mode is queried. The display does not appear until the "CODE" parameter is set to "YES" in the input mode. The parameter's values range between 0000...9999.

The parameter is changed by briefly pressing the "up arrow" or the "down arrow" key. The first digit position in the parameter now flashes at regular intervals. This digit position is incremented by pressing the "up arrow" key or decremented by pressing the "down arrow" key. The next digit position is selected by pressing the "M" key. Once all digit positions have been selected, the flashing ends and the next parameter is shown when the "M" button is pressed again.

## 7.3.2 Input Mode - Span minimum

The display shows the text "SPAN MIN" on the top line and "00400" on the bottom line. The "00400" is partially obscured by a greyed-out area.

The "SPAN MIN" parameter is used to decide the lower level (4 mA) for the measuring range. After first commissioning, the parameter is at a level of 400, which corresponds to the measuring level of 4.00 in the measuring mode. The values for the parameter range between -9999 and 99999.

The parameter is changed by briefly pressing the "up arrow" or the "down arrow" key. The first digit position in the parameter flashes now at regular intervals. This digit position is incremented by pressing the "up arrow" key or decremented by pressing the "down arrow" key. The next digit position is selected by pressing the "M" key. Once all digit positions have been selected, the flashing ends and the next parameter is shown when the "M" button is pressed again.

### 7.3.3 Input Mode - Span Maximum

The image shows a monochrome LCD display with a grid background. The text 'SPAN MAX' is displayed in a large, bold, sans-serif font across the top two lines. Below it, the value '02000' is displayed in a similar font across the next two lines.

The "SPAN MAX" parameter is used to decide the upper level (20 mA) of the measuring range. After first commissioning, the parameter is at a level of 2000, which corresponds to the measuring level of 20.00 in the measuring mode. The values for the parameter range between -9999... 99999.

The parameter is changed by briefly pressing the "up arrow" or the "down arrow" key. The first digit position in the parameter flashes now at regular intervals. This digit position is incremented by pressing the "up arrow" key or decremented by pressing the "down arrow" key. The next digit position is selected by pressing the "M" key. Once all digit positions have been selected, the flashing ends and the next parameter is shown when the "M" key is pressed again.

### 7.3.4 Input Mode - Decimal Point

The image shows a monochrome LCD display with a grid background. The text 'DEC. POINT' is displayed in a large, bold, sans-serif font across the top two lines. Below it, the value '3' is displayed in a similar font across the next two lines.

The "DEC. POINT" parameter decides the place in which the decimal point is to be shown. After first commissioning, the parameter is at level 3, which means that the decimal point will be shown at the 3<sup>rd</sup> place from left. The values for the parameter range between 0... 5. At level 0 no decimal point is shown.

The parameter is changed by briefly pressing the "up arrow" or the "down arrow" key. The digit position in the parameter flashes now at regular intervals. This digit position is incremented by pressing the "up arrow" key or decremented by pressing the "down arrow" key. The flashing ends when the "M" button is pressed and the next parameter is shown when the "M" button is pressed again.

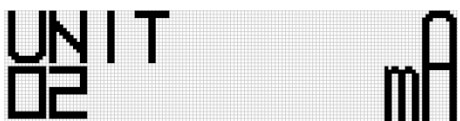
### 7.3.5 Input Mode - Resolution

The image shows a monochrome LCD display with a grid background. The text 'RESOLUTION' is displayed in a large, bold, sans-serif font across the top two lines. Below it, the value '001' is displayed in a similar font across the next two lines.

The "RESOLUTION" parameter is used to decide the resolution at the last places in the measuring display. After first commissioning, the parameter is at level 1, which corresponds to a one-digit resolution in the measuring mode. The values for the parameter range between 1... 999. Efficient settings are 1, 5, 10, 25, 50, 100, 250, 500.

The parameter is changed by briefly pressing the "up arrow" or the "down arrow" key. The first digit position in the parameter now flashes at regular intervals. This digit position is incremented by pressing the "up arrow" key or decremented by pressing the "down arrow" key. The next digit position is selected by pressing the "M" key. Once all digit positions have been selected, the flashing ends and the next parameter is shown when the "M" key is pressed again.

7.3.6 Input mode - Unit



The "Unit" parameter is used to decide the unit to be displayed. After first commissioning, the parameter is at level 2, which corresponds to the "mA" (milliamperes) unit. The values for the parameter range between 0 and 24.

The parameter is changed by briefly pressing the "up arrow" or the "down arrow" key. The first digit position in the parameter now flashes at regular intervals. This digit position is incremented by pressing the "up arrow" key or decremented by pressing the "down arrow" key. The next digit position is selected by pressing the "M" key. Once all digit positions have been selected, the flashing ends and the next parameter is shown when the "M" key is pressed again.

Parameter	Unit	Parameter	Unit
0	°C	13	t
1	A	14	pH
2	mA	15	ppm
3	V	16	rpm
4	mV	17	mbar
5	N	18	bar
6	mm	19	kPa
7	cm	20	1/min
8	m	21	µS/cm
9	km	22	mS/cm
10	m <sup>3</sup>	23	m <sup>3</sup> /h
11	%	24	Nm <sup>3</sup> /h
12	kg		


7.3.7 Input Mode - BarGraph



The "BARGRAPH" parameter is used to decide whether or not the measuring display should show a bar graph when starting up. After first commissioning, the parameter is at the "NO" level, which corresponds to the presentation without bar graph. The parameter levels are "YES" or "NO".

The parameter is changed by briefly pressing the "up arrow" or the "down arrow" key. The first digit position in the parameter now flashes at regular intervals. This digit position is changed by pressing the "up arrow" key or the "down arrow" key. The flashing ends when the "M" button is pressed and the next parameter is shown when the "M" button is pressed again.

### 7.3.8 Input Mode - Code



Mit dem Parameter ‚CODE‘ wird bestimmt, ob der Eingabemodus durch einen Zugangscode geschützt ist. Nach der ersten Inbetriebnahme steht der Parameter auf dem Wert ‚NEIN‘, dies entspricht dem Zugang zum Eingabemodus ohne Zugangscode. Die Werte des Parameters sind ‚JA‘ oder ‚NEIN‘.

Der Parameter wird verändert durch kurzes Betätigen der ‚Pfeil auf‘- oder ‚Pfeil ab‘-Taste. Die erste Ziffernstelle des Parameters blinkt nun in regelmäßigen Abständen. Der Parameter wird durch das Betätigen der ‚Pfeil auf‘-Taste oder ‚Pfeil ab‘-Taste verändert. Nach Betätigen der ‚M‘-Taste wird das Blinken beendet und durch nochmaliges Betätigen der ‚M‘-Taste wird der nächste Parameter angezeigt.

### 7.3.9 Input Mode - Access Code



The “CODE” parameter is used to decide whether or not the input mode should be protected by an access code. After first commissioning, the parameter is at the “NO” level, which corresponds to access to the input mode without access code. The parameter levels are “YES” or “NO”.

The parameter is changed by briefly pressing the “up arrow” or the “down arrow” key. The first digit position in the parameter now flashes at regular intervals. This parameter is changed by pressing the “up arrow” key or the “down arrow” key. The flashing ends when the “M” button is pressed and the next parameter is shown when the “M” button is pressed again.

### 7.3.10 Input Modus - Language



The “LANGUAGE” parameter is used to set the input mode language. After first commissioning, the parameter is at “ENGLISH”. The parameter possibilities are “DEUTSCH” “ENGLISH” or “FRANCAIS”.

The parameter is changed by briefly pressing the “up arrow” or the “down arrow” key. The first digit position in the parameter flashes now at regular intervals. The parameter is changed by pressing the “up arrow” key or “down arrow” key. The flashing ends when the “M” key is pressed and the next parameter is shown when the “M” key is pressed again.

## 8 Troubleshooting

### 8.1 During Commissioning

If malfunctioning occurs while the Process Monitor is being commissioned, try to eliminate the fault with the aid of the following table:

	Cause of the fault	Solution
no display	incorrect wiring	There should be approx. 3 V between terminals 1 and 3; Plus at terminal 1.
no display, 0 V between terminals 1 and 3	incorrect wiring or no power supply	Check if current is flowing in the loop.
	Voltage in the loop is too low for operating the process monitor	Check the supply voltage and the drop in voltage at every component in the loop.
Indicated value is not stable	The 4 mA...20 mA signal is impaired.	Check the supply voltage in the loop.
Access to the input mode is denied.	Incorrect access code inputted.	Input the correct access code.

Table 2: Fault during commissioning

### 8.2 After Commissioning

If malfunctioning occurs after the successful operation of a Process Monitor, try to eliminate the fault with the aid of the following table:

	Cause of the fault	Solution
No display, 0 V between terminal 1 and 3	Now power supply	Check if there is current flowing in the loop
Indicated value is not stable	4 mA...20 mA signal is impaired	Check the supply voltage in the loop.

Table 3: Fault after commissioning



## 9 Maintenance, Inspection, Repair

Only trained and qualified personnel may commission and do maintenance work on the PM 420<sup>ex</sup> Process Monitor! Trained qualified personnel are people who are familiar with the installation, assembly, commissioning and operation of the PM 420<sup>ex</sup> Process Monitor, have been instructed about the risks and have the appropriate qualifications by virtue of the work they do.

### 9.1 Maintenance intervals

The mechanical status of the devices should be checked at regular intervals. The length of the maintenance intervals depends on the ambient conditions. We recommend checking at least once a year. Regular maintenance is not necessary if operated appropriately in conformance with the installation instructions and with due consideration to the ambient conditions.

### 9.2 Inspection

Under EN 60079-17, EN 60079-19, IEC 60079-17 and IEC 60079-19, the owner/managing operator of electrical installations in hazardous areas is obliged to have these installations checked by a qualified electrician to ensure that they are in a proper condition.

### 9.3 Maintenance and Repair Work

Adhere to the applicable regulations under Directive 99/92/EC, EN 60079-17, EN 60079-19, IEC 60079-17 and IEC 60079-19 when servicing, doing maintenance work on and testing associated operating equipment!

#### 9.3.1 Instructions for Repairs

If you wish to send in a defective device for repair, please read the RMA procedure guidance first. Then fill in and sign the RMA (Return Merchandise Authorisation) form and send it to our "Retouren Center".

E-mail: [services@bartec.de](mailto:services@bartec.de)

Fax: +49 7931 597-119

We cannot guarantee any contractually agreed processing times for devices that are sent in without an RMA number.

The RMA guide and the RMA form are available on our homepage for downloading.

<http://www.bartec.de> > Quality and culture  
> RMA form

Have you any questions? Write us an e-mail or call us.

E-mail: [services@bartec.de](mailto:services@bartec.de)

Phone: +49 7931 597-444

## 10 Disposal

The Process Monitor contains metal parts, plastic parts and electronic components.



Our devices are intended as professional electric devices for business use only, referred to as B2B devices under the WEEE-Directive. The WEEE directive sets the framework for waste electric and electronic equipment handling procedures which are to apply throughout the EU. This means that you are not permitted to dispose of this equipment in normal household refuse. It should not be given to the collection sites set up by the public waste management authorities either but instead it should be disposed of in a separate collection in an environmentally sound manner.

Any product we supply can be returned by our customers to us when the time has come to dispose of it. We will ensure that it is disposed of in accordance with the respective applicable statutory regulations.

The sender pays the costs of the dispatch/packaging.

## 11 Dispatch and Packaging Instructions

### ATTENTION

**Sensitive devices! Damage to property due to incorrect packaging!**

► Use the original packaging for transport.

Declaration of Conformity

Erklärung der Konformität Declaration of Conformity Attestation de conformité		 BARTEC GmbH Max-Eyth-Straße 16 97980 Bad Mergentheim Germany	
N° 11-71MM-7C0001_A			
Wir		We	
		<b>BARTEC GmbH,</b>	
erklären in alleiniger Verantwortung, dass das Produkt		declare under our sole responsibility that the product	
<b>Prozessmonitor PM420<sup>ex</sup></b>		<b>Process monitor PM420<sup>ex</sup></b>	
		<b>Moniteur de process PM420<sup>ex</sup></b>	
<b>Typenbezeichnung : Typ 17-71MM-100*/****</b>			
auf das sich diese Erklärung bezieht den Anforderungen der folgenden <b>Richtlinien (RL)</b> entspricht		to which this declaration relates is in accordance with the provision of the following <b>directives (D)</b>	
<b>ATEX-Richtlinie 94/9/EG</b>		<b>ATEX-Directive 94/9/EC</b>	
<b>EMV-Richtlinie 2004/108/EG</b>		<b>EMC-Directive 2004/108/EC</b>	
und mit folgenden Normen oder normativen Dokumenten übereinstimmt		and is in conformity with the following standards or other normative documents	
<b>EN 60079-0:2009</b>		<b>EN 60079-11 :2012</b>	
<b>EN 61326-1 :2013</b>			
<b>Kennzeichnung</b>		<b>Marking</b>	
⊕ II 2 (1) G Ex ib [ia Ga] IIC T5 Gb			
<b>Verfahren der EG-Baumusterprüfung / Benannte Stelle</b>		<b>Procedure of EC-Type Examination / Notified Body</b>	
<b>IBExU 09 ATEX 1095 X</b> 0637 IBExU, Fuchsmühlenweg 7, 09599 Freiberg, D		<b>Procédure d'examen CE de type / Organisme Notifié</b>	
<b>CE 0044</b>			
Bad Mergentheim, den 10.09.2013  ppa. Ewald Warmuth Geschäftsleitung / General Manager			
03-0383-0289			

BARTEC protects  
people and  
the environment  
by the safety

of components,  
systems  
and plants.

