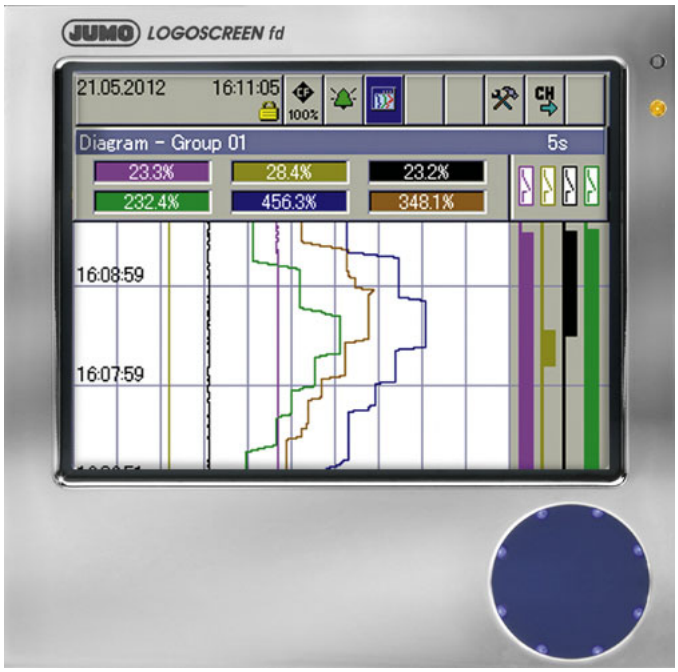
JUMO LOGOSCREEN fd

Secure Data Management and FDA-Compliant Measured Data Recording



B 706585.4.1

Installation Instructions

JUMO

V2.00/EN/00586161

The installation instructions describe paperless recorders that are equipped with extra code 443 (NEMA 4X) and 444 (Ex).

The protection type according to NEMA 4X is only achieved if a paperless recorder with stainless steel front is used, if that paperless recorder is equipped with extra code 443 (special seal), and if that paperless recorder is properly mounted along with the seal.

Contents

Contents

1.1 Preface

Please read these installation instructions before commissioning the device. Keep the manual in a place that is accessible to all users at all times.

Please assist us to improve these installation instructions, where necessary.

Your comments will be appreciated.

If any difficulties should arise during commissioning, you are asked not to carry out any manipulations that could endanger your rights under the device warranty!

Please contact the nearest subsidiary or the head office in such a case.

When returning modules, assemblies or components, the regulations of EN 61340-5-1 and EN 61340-5-2 “Protection of electronic devices from electrostatic phenomena” must be observed. Use only the appropriate **ESD** packaging for transport.

Please note that we cannot accept any liability for damage caused by ESD.

ESD=electrostatic discharge

1 Introduction

1.2 Intended use

The device described in these instructions is intended for recording and displaying physical measurement variables in an industrial environment, as specified in the technical data. The device is suitable for installation in switch cabinets with at least a simplified pressurized enclosure. Under these conditions, use in a potentially explosive atmosphere (max. Zones 1 or 21) is authorized from the front.

Any other use or use that goes beyond that described here - with regard to operation in potentially explosive atmospheres - is regarded as not for the intended purpose.

No liability can be accepted for any damage that may result.

The device is constructed in accordance with current standards and directives and complies with existing safety regulations. Nevertheless, improper use may still cause physical injury or damage to property.

To avoid danger, the device must only be used:

- for its intended purpose
- in a perfectly safe conditions
- in compliance with these Installation Instructions

1.3 Notes on safe use

- When installing a paperless recorder with extra code 443 or 444 in switch cabinets of protection type "px" or "pz" or "py", you must ensure that:
  - the maximum permissible temperature specifications are not exceeded and
  - protection rating IP65, as per the IEC/EN 60529 standard, is achieved (seal mounting).
- In accordance with the ATEX directive Annex I, the paperless recorder with extra code 443 or 444 is a component (Ex component) of equipment group II, category 2G. A separate conformity assessment procedure must be performed for installing these components. Requirements under EN 60079-14 must subsequently be followed for application and installation.
- In accordance with the ATEX directive Annex I, the paperless recorder with extra code 443 or 444 is also a component (Ex component) of equipment group II, category 2D. A separate conformity assessment procedure must be performed for installing these components. Requirements under EN 60079-14 must subsequently be followed for application and installation.
- The permissible (internal and external) ambient temperature range is 0 to +50 °C.
- Under error conditions, the maximum external temperature reached at the front of the paperless recorder with extra code 443 or 444, is 69 °C.

- Batteries are located inside this enclosure. Do not open when an explosive atmosphere is present.
- This pressurized enclosure contains a battery which remains connected after the external power has been isolated. The removal of the battery should be considered if the housing will be unprotected by Ex "p" for a significant amount of time.

1.4 Arrangement of the documentation

The documentation for this device is addressed to equipment manufacturers (OEMs) and users with appropriate technical expertise. It consists of the following parts:

Device documentation in printed form

B 706585.1 Operating Instructions

The operating instructions are an extract from the operating manual and cover the basic operation of the paperless recorder.

B 706585.4(.1) Installation Instructions

The installation instructions describe the installation of the recorder and the connection of the supply and signal cables. The instructions also contain a list of the technical data.

B 706585.4 Installation instructions for recorders with die-cast zinc front

B 706585.4.1 Installation instructions for recorders with stainless steel front

Device documentation in the form of PDF files

The “Device documentation in the form of PDF files” is on the CD that is included in the delivery.

B 706585.0 Operating Manual

It contains information about commissioning, operation, parameterization and configuration on the device.

B 706585.1 Operating Instructions

The operating instructions are an extract from the operating manual and cover the basic operation of the paperless recorder.

B 706585.2.0 Interface Description (serial interfaces)

This provides information on the communication (RS232/RS485) with supervisory systems.

Interface Description (Ethernet interface)

This provides information on the connection of a paperless recorder to a company-internal network. This description is integrated into B 706585.2.0.

B 706585.2.3 **Interface Description (PROFIBUS-DP interface)**

This provides information on the connection of a paperless recorder to a PROFIBUS-DP system.

B 706585.4(.1) **Installation Instructions**

The installation instructions describe the installation of the recorder and the connection of the supply and signal cables. The instructions also contain a list of the technical data.

B 706585.4 Installation instructions for recorders with die-cast zinc front

B 706585.4.1 Installation instructions for recorders with stainless steel front

B 706585.6 **Setup Program**

The manual describes the function of the setup program. The setup program is available as an option.

T 706585 **Data Sheet**

The data sheet contains general information, the order details and the technical data.

B 709701.0 **PC Evaluation software PCA3000**

The operating manual describes the operation and the features of the PC evaluation software.

PCA3000 serves to visualize and evaluate process data (measurement data, batch data, messages, device audit trails, ...). The process data can be read in via the CompactFlash memory card, or made available through the PCC software.

B 709702.0 **PCA Communications software PCC**

The operating manual describes the operation and the features of the PCA Communications software.

PCC is responsible for the data transfer from the recorder to a PC, or to a network.

B 709703.0 **PC Security Manager Software PCS**

The operating manual describes the operation and the features of the PC Security Manager software.

The PCS ensures that only authorized persons can gain access to the system components (device, PC software) and use electronic signatures on electronic documents.

The configuration of the Security Manager can only be performed by the system administrator.

B 709704.0 **PC Audit Trail Manager Software PCAT**

The operating manual describes the operation and the features of the PC audit trail manager software.

PCAT documents actions performed in the PC software components, which lead to modifications of files, user lists (rights files), device lists etc. The different message types are: “Information”, “Warnings” and “Errors”.

Audit trail records cannot be modified.

Device audit trail data are not shown in PCAT, only in PCA3000.

Internet

All documents are available for downloading at www.jumo.net

1 Introduction

1.5 Typographical conventions

Warning signs

The signs for **Danger** and **Caution** are used in this manual under the following conditions:

Danger

This symbol is used when there may be **danger to personnel** if the instructions are ignored or not followed correctly!

Caution

This symbol is used when there may be **damage to equipment or data** if the instructions are ignored or not followed correctly!

Caution

This symbol is used where special care is required when handling **components liable to damage through electrostatic discharge**.

Note signs

Note

This symbol is used when your **special attention** is drawn to a remark.

Reference

This symbol refers to **further information** in other manuals, chapters or sections.

Action instruction

* This symbol indicates that an **action to be performed** is described.

The individual steps are marked by this asterisk, e.g.

* Move your finger on the touchpad clockwise

* Press touchpad in the middle

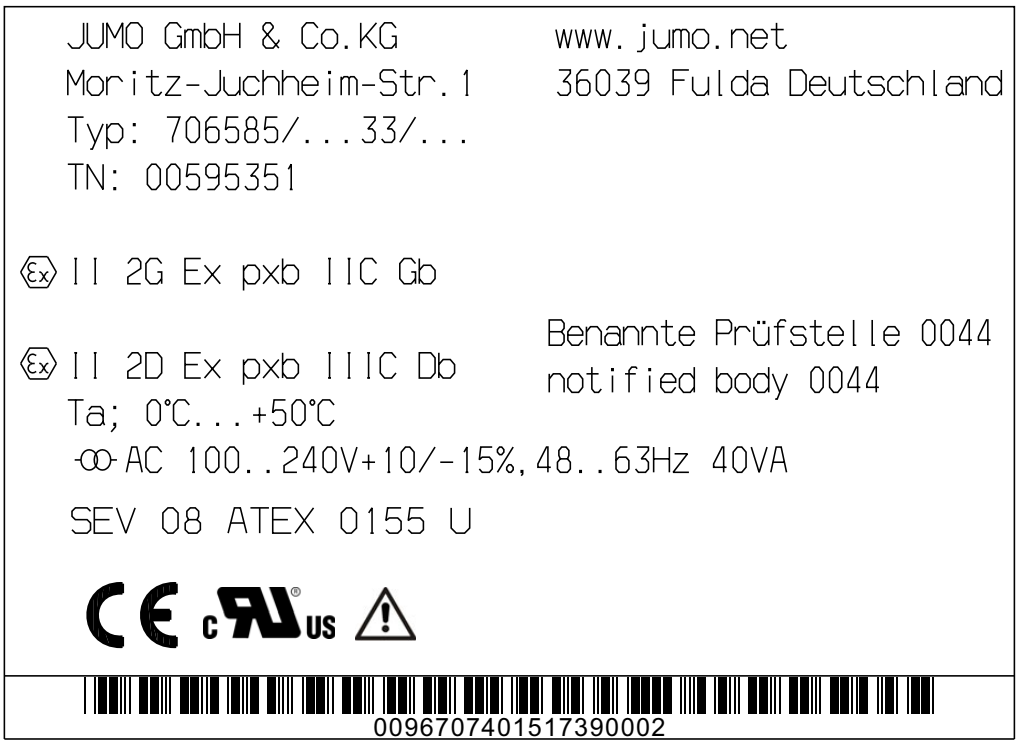
Disposal

At the end of its service life, the device and any batteries present do not belong in the trash! Please ensure that they are disposed of properly and in an environmentally friendly manner.

2.1 Nameplate

Position The nameplate is glued onto the paperless recorder.

Illustration The following illustration shows a typical nameplate:



Contents It contains important information, such as:

Description	Designation on the nameplate	Example
Device type	Typ	706585/18-321-33/020,444
Part number	TN	00595351
Supply voltage	⌁	AC 100 — 240 V +10/-15 %, 48 — 63 Hz
Serial number		0096707401517390002

Device type Please check the type supplied against your order document. Refer to Chapter 2.2 “Order details” for identification of the type.

Part number The part number (TN) provides an unambiguous definition of an article from the catalog. It is used in communication between the sales department and the customer.

Serial number The serial number – visible below the barcode – indicates the production date (year/week). The figures concerned are in positions 12, 13, 14, 15.

Example: 009670740151**739**0002

This shows that the paperless recorder was manufactured in 2017, week 39.

2 Identifying the device version

Ex identification marking

Paperless recorders with authorization for potentially explosive atmospheres, carry the following mark on the nameplate.

⟨Ex⟩ II 2G Ex pxb IIC Gb
⟨Ex⟩ II 2D Ex pxb IIIC Db

2.2 Order details

	(1)	**Basic type**
706585		LOGOSCREEN fd
	(2)	**Basic type extension**
0		Without software package
1		With software package (setup program, PCA3000, PCC, PCS, PCAT, USB cable)
	(3)	**Language / Setup**
8		Factory setting (German/English)
9		Set to customer specification
	(4)	**Module slot 1**
0		Not used
2		3 analog inputs and 8 digital inputs/outputs
3		6 analog inputs
	(5)	**Module slot 2**
0		Not used
2		3 analog inputs and 8 digital inputs/outputs
3		6 analog inputs
	(6)	**Module slot 3**
0		Not used
1		6 relay outputs
2		3 analog inputs and 8 digital inputs/outputs
3		6 analog inputs
	(7)	**Voltage supply**
25		AC/DC 20 to 30 V, 48 to 63 Hz
33		AC 100 to 240 V +10/-15 %, 48 to 63 Hz
	(8)	**Extra codes memory**
020		Lithium battery for memory buffering (ex-factory)
021		Storage capacitor (ATEX not possible)
	(9)	**Extra codes**
.		Not used
260		Math and logic module
	(10)	**Extra codes housing**
.		Not used
350		Universal carrying case TG-35[a]
350, 444		Universal carrying case TG-35[a] and stainless steel front with touchpad
443		Stainless steel front with touchpad, NEMA 4X and ⟨Ex⟩
444		Stainless steel front with touchpad ⟨Ex⟩
	(11)	**Extra codes**
.		Without extra codes
267		PROFIBUS-DP interface

879	AMS2750/CQI-9[b]

[a] This extra code is only available in combination with voltage supply AC 100 to 240 V. UL, ATEX and NEMA 4X approvals not applicable. The protection type in the carrying case corresponds to IP20, outside IP20D.

[b] For the calibration certificate the channels to be checked are to be defined with the thermocouple type and the desired measuring points.

Order code	**(1)**		**(2)**	**(3)**		**(4)**	**(5)**	**(6)**		**(7)**		**(8)**		**(9)**		**(10)**		**(11)[a]**
Order example	706585	/			-				-		/		,		,		,	

[a] Multiple entries for position 11 are possible. List extra codes in sequence, separated by commas.

2.3 Standard accessories

- 1 Installation Instructions B 706585.4.1
- 1 Operating Instructions B 706585.1
- 4 mounting brackets
- 1 panel seal
- 1 CD with detailed operating instructions and supplementary documentation (see Chapter 1.4 “Arrangement of the documentation”)

2.4 Accessories

- Software package (setup program, PCA3000, PCC, PCS, PCAT)
- CompactFlash memory cards
- USB memory sticks
- USB cable

2 Identifying the device version

3.1 Installation site and climatic conditions

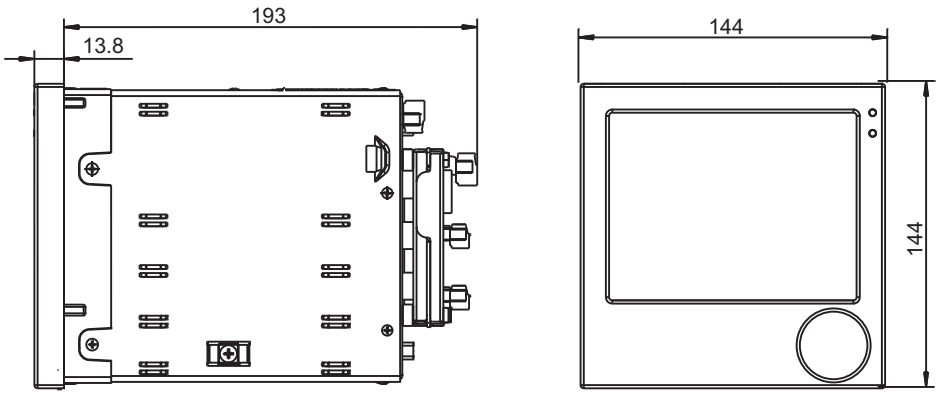
The installation site should be as free as possible from vibration. Electromagnetic fields, such as those caused by motors, transformers etc. should be avoided as far as possible.

The ambient temperature at the site can be 0 to 50 °C, at a relative humidity of ≤ 75 %, no condensation.

⇨ Chapter 4.1 “Installation notes”

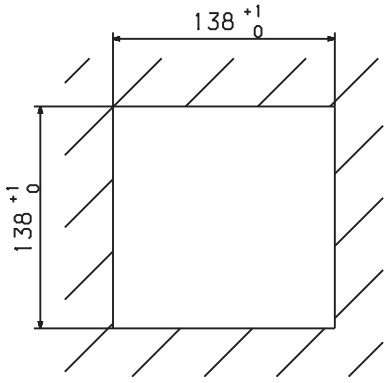
3.2 Dimensions

Recorder with stainless steel front



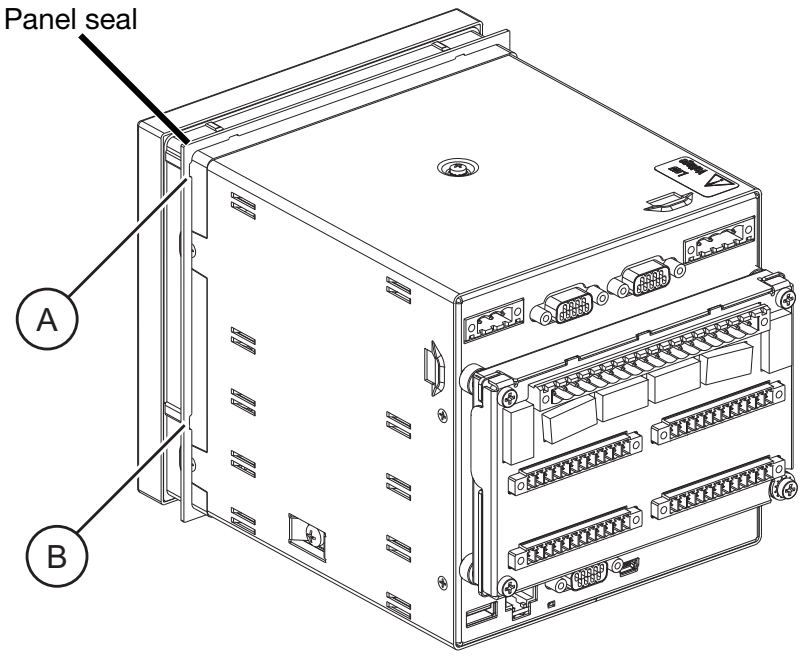
Panel cut-out

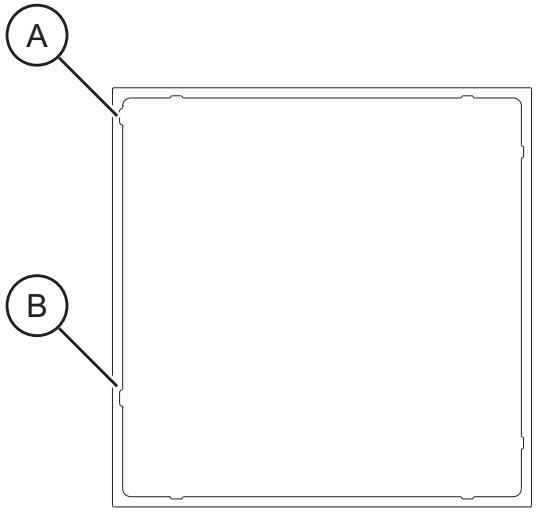
It is essential to keep to these dimensions for the panel cut-out. If the panel is less than 2 mm thick, a stiffener must be provided.



3.3 Mounting in a panel (extra code 443)

* Fit panel seal.

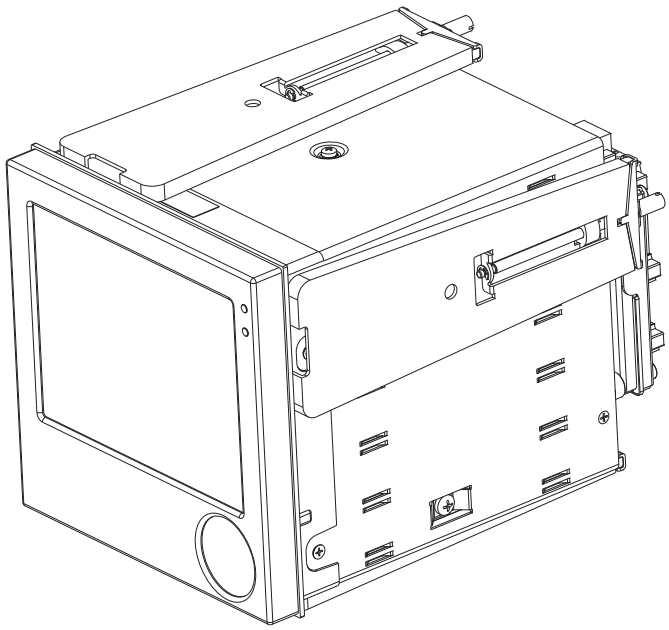




The surface of the panel must be smooth and flat to provide good seating for the panel seal. Check that the seal is evenly and exactly positioned to the front.

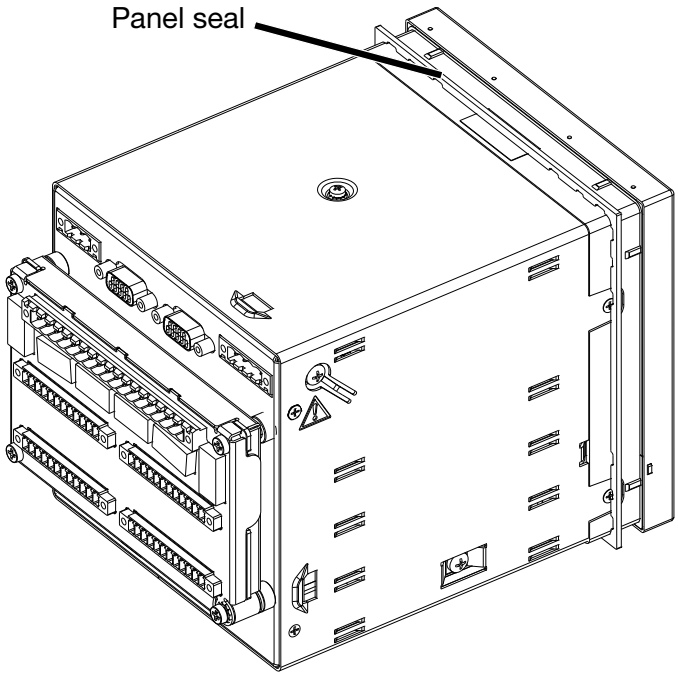
* Insert the paperless recorder from the front into the panel cut-out.

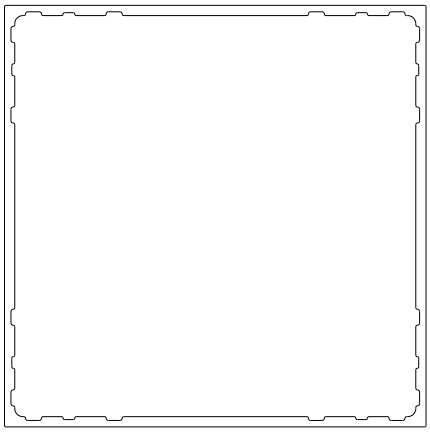
* From the back of the panel, put the four mounting brackets into the side indentations in the housing and evenly tighten them against the back of the panel at a torque of 50 Ncm.



3.4 Mounting in a panel (extra code 444)

* Fit panel seal (IP65 seal).





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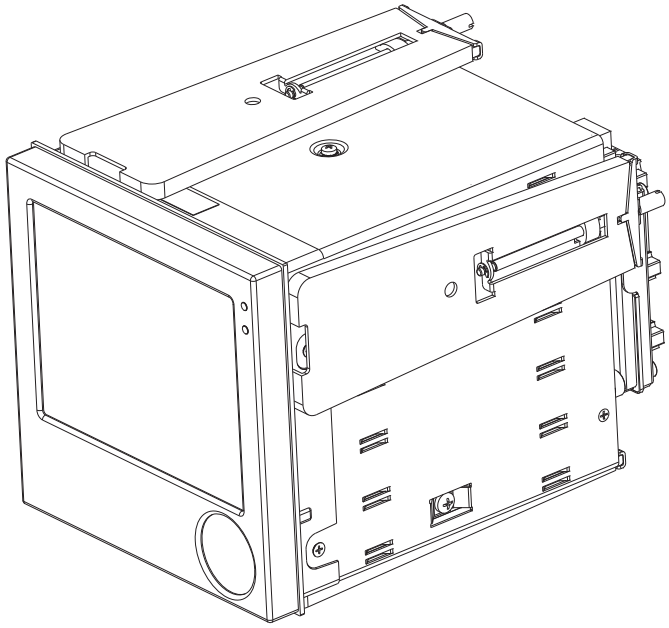


3 Installation

4.1 Installation notes

It is essential to follow the installation notes.

- The device is suitable for installation in switch cabinets with at least a simplified pressurized enclosure. External fuse protection and shut-off must be provided for the device. The fuse must not exceed 20 A.

  A device fuse is already built into the device itself (depending on the device design).
  20 — 30 V AC/DC, 48 — 63 Hz : fuse 2.5 A slow-blow
  100 — 240 V AC +10/-15 %, 48 — 63 Hz : fuse 1.25 A slow-blow
- The pressure in the switch cabinet must be at least 0.5 mbar higher than the pressure outside the switch cabinet.
- The choice of cable, the installation and the electrical connection must conform to the requirements of VDE 0100 “Regulations on the Installation of Power Circuits with Nominal Voltages below 1000 V” or the appropriate local regulations.
  In addition to this, the applicable standards for potentially explosive atmospheres (gas and dust) must be taken into account.
- Suitable isolation (such as a zener barrier or an Ex transmitter) must be provided when signal circuits from a potentially explosive atmosphere are connected to the device.
- Equipment for potentially explosive areas which contain hybrid mixtures has to be especially checked for this use. Hybrid mixtures are potentially explosive mixtures out of combustible gases, vapors, or mists with combustible dust. The operator bears the responsibility of checking if the equipment is suitable for such uses.
- Work inside the device must only be carried out to the extent described and, like the electrical connection, only by qualified personnel.
- For service and repair work, the device must be disconnected from the power supply (all poles) and the atmosphere must be free from the risk of explosion.
- To generate the operating voltage of 20 ... 30 V for Extra Low Voltage (ELV), the maximum nominal voltage of an external power supply must not exceed 240 V (line-to-line and line-to-neutral). If the external nominal voltage is greater than 240 V, an Safety Extra Low Voltage (SELV) power supply must be used. For line-to-line supply of the external power supply, the power supply must have all-pole fuse protection. The fuse must shut off both connections.
- Run input, output and supply cables separately and not parallel to one another.

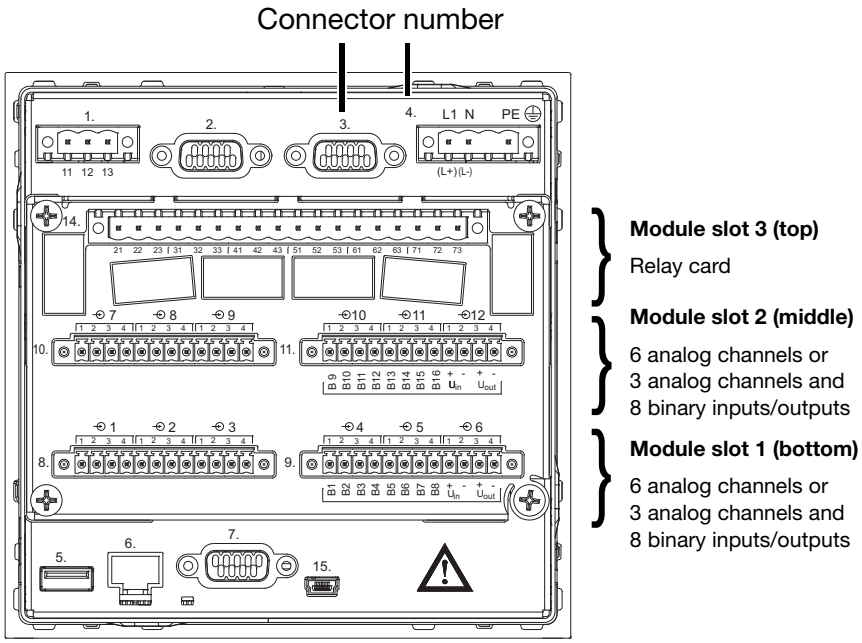
- In EMC disturbed environments, all input and output cables without connection to the mains supply must be arranged as twisted and screened cables. Earth the screen on the device side to the earth potential.
- Ground the device via the PE terminal of the power supply connector. The cross-section of this cable must be the same as that of the supply cable.
- Do not connect any additional loads to the supply terminals of the device.
- Electromagnetic compatibility (EMC) conforms to the standards and regulations cited in the technical data.

  ⇨ Chapter 6 “Technical data”
- Inductive loads close to the device, such as contactors or solenoid valves, should have RC modules fitted for interference suppression.

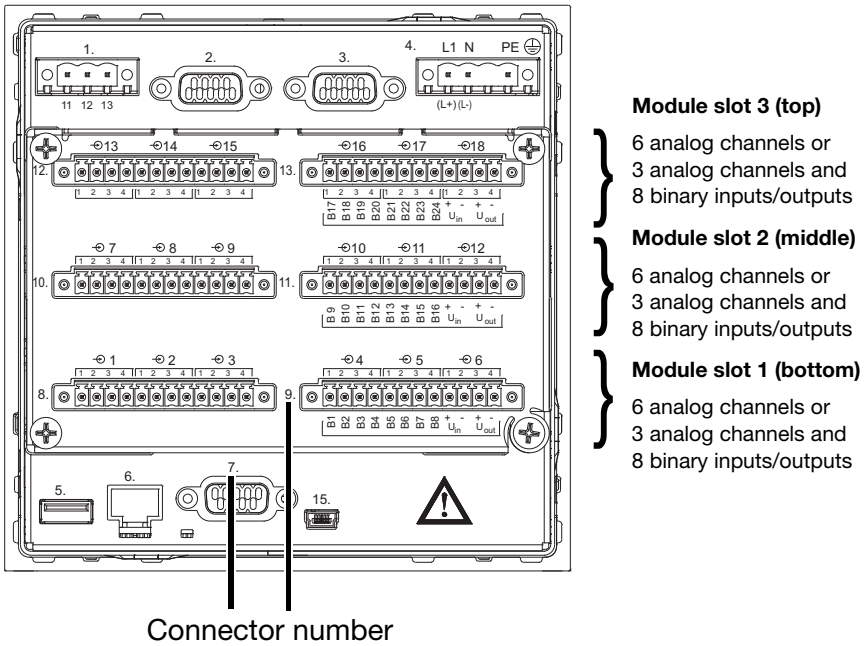
4.2 Procedure

* Make the electrical connection as per Chapter 4.4 “Connection diagram”.
* Apply strain relief for the connecting cables, if necessary.

Device variant 1

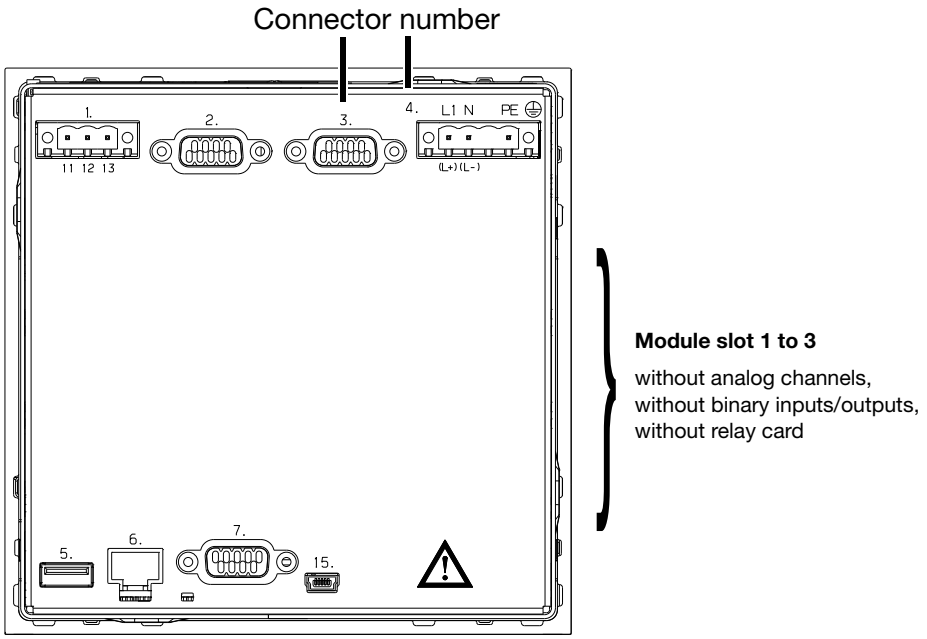


Device variant 2



4 Electrical connection

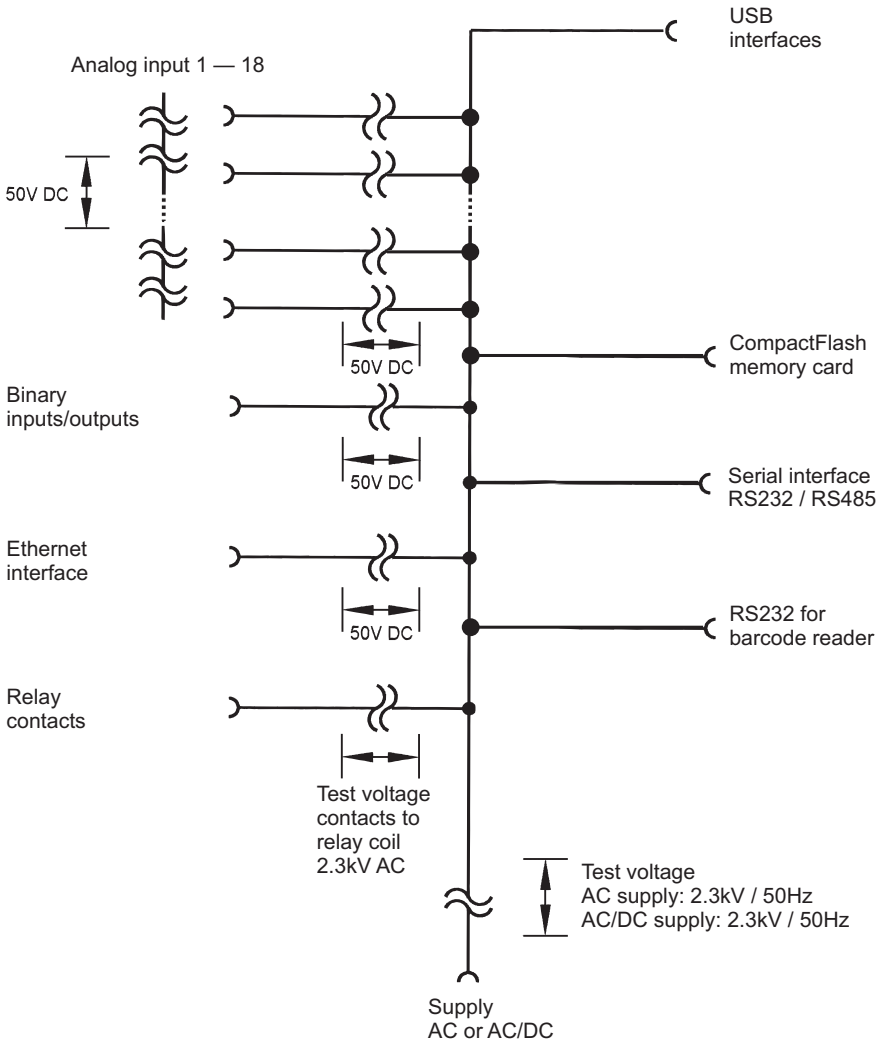
Device variant 3



Connector summary

Connector/slot	Function
1	Relay output
2	RS232 for barcode reader
3	PROFIBUS-DP
4	Supply voltage
5	USB host interface
6	Ethernet
7	RS232 and RS485
8	Analog input
9	Analog input or binary inputs/outputs
10	Analog input
11	Analog input or binary inputs/outputs
12	Analog input
13	Analog input or binary inputs/outputs
14	Relay card (for device variant 1)
15	USB device interface

4.3 Overview of the electrical isolation



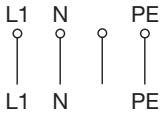
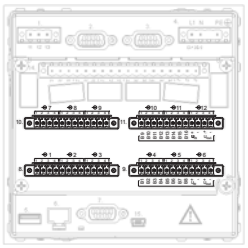
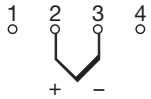
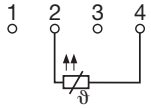
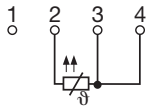
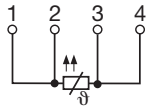
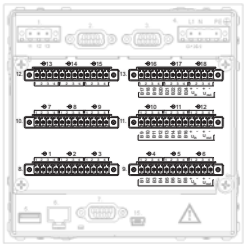
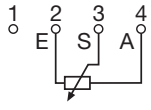
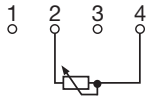
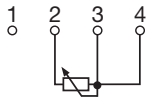
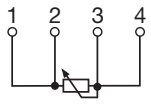
4 Electrical connection

4.4 Connection diagram

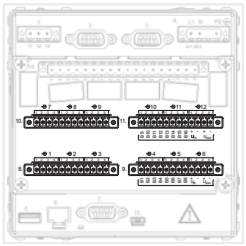
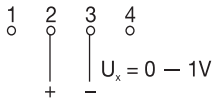
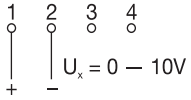
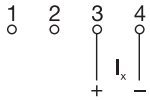
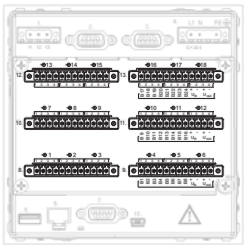
The electrical connection must only be carried out by specialist personnel.

Back panel ⇨ Chapter 4.2 “Procedure”

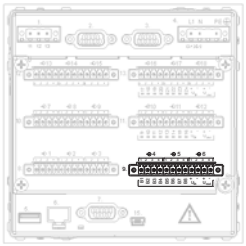
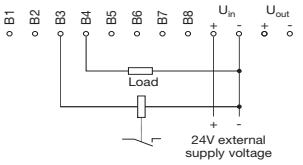
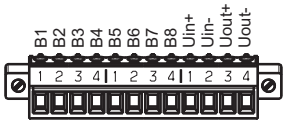
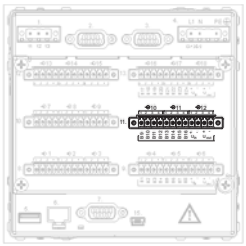
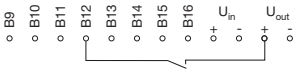
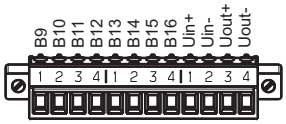
Connections

	Terminal assignment	Connector	Diagram
Supply voltage	Supply voltage as on nameplate	Connector 4 L1 (L+) N (L-) PE 	
Analog inputs	Thermocouple	Connectors 8 to 11 (input 1 — 12) for device variant 1 	
	RTD temperature probe 2-wire circuit		
	RTD temperature probe 3-wire circuit		
	RTD temperature probe 4-wire circuit		
	Resistance transmitter E = end S = slider A = start	or connectors 8 to 13 (input 1 — 18) for device variant 2 	
	Potentiometer in 2-wire circuit		
	Potentiometer in 3-wire circuit		
	Potentiometer in 4-wire circuit		

Analog inputs

Terminal assignment	Connector	Diagram
Voltage input 0 — 1 V	Connectors 8 to 11 (input 1 — 12) for device variant 1 	
Voltage input 0 — 10 V		
Current input		
	or connectors 8 to 13 (input 1—18) for device variant 2 	

Binary inputs/ outputs

Terminal assignment	Connector	Diagram
The configuration in the device or in the setup program defines whether it is a binary input or binary output.		
B1 ... B8 voltage-controlled LOW = -3 to +5 V DC HIGH = 12 to 30 V DC B1 Binary input/output 1 B2 Binary input/output 2 B3 Binary input/output 3 B4 Binary input/output 4 B5 Binary input/output 5 B6 Binary input/output 6 B7 Binary input/output 7 B8 Binary input/output 8 U_{in}+ external supply voltage U_{in}- ground U_{out}+ +24 V (60 mA) internal supply voltage U_{out}- ground	Connector 9 only for modules with 3 analog inputs 	 Example: Connecting a load to binary output 4 (B4) and a solid-state relay to binary output 3 (B3) requires an external supply voltage. Diagram of the connector: 
B9 ... B16 voltage-controlled LOW = -3 to +5 V DC HIGH = 12 to 30 V DC B9 Binary input/output 9 B10 Binary input/output 10 B11 Binary input/output 11 B12 Binary input/output 12 B13 Binary input/output 13 B14 Binary input/output 14 B15 Binary input/output 15 B16 Binary input/output 16 U_{in}+ external supply voltage U_{in}- ground U_{out}+ +24 V (60 mA) internal supply voltage U_{out}- ground	Connector 11 only for modules with 3 analog inputs 	 Example: Binary input 12 (B12) is operated from the internal supply voltage. Diagram of the connector: 

<table>
<tr><th></th><th>Terminal assignment</th><th>Connector</th><th>Diagram</th></tr>
<tr><td>Binary inputs/ outputs</td><td>B17 ... B24

voltage-controlled
LOW = -3 to +5 V DC
HIGH = 12 to 30 V DC

B17 Binary input/output 17
B18 Binary input/output 18
B19 Binary input/output 19
B20 Binary input/output 20
B21 Binary input/output 21
B22 Binary input/output 22
B23 Binary input/output 23
B24 Binary input/output 24

U_{in}+ external supply voltage
U_{in}- ground
U_{out}+ +24 V (60 mA) internal supply voltage
U_{out}- ground</td><td>Connector 13

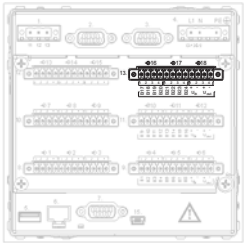
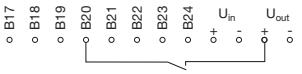
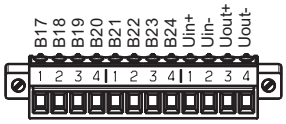
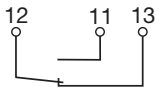
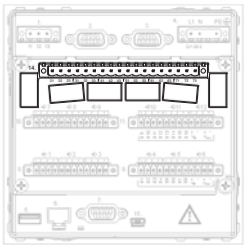
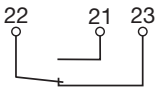
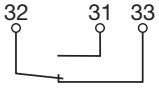
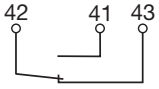
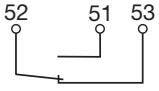
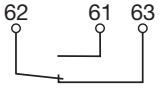
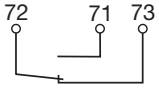
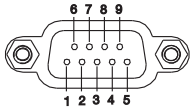
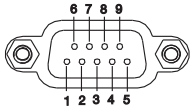
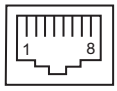
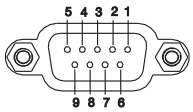
only for device variant 2 and on modules with 3 analog inputs
  </td><td> 
Example:
Binary input 20 (B20) is operated from the internal supply voltage.

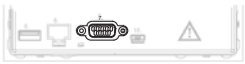
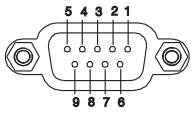
Diagram of the connector:
  </td></tr>
<tr><td>Relay outputs</td><td>Relay 1 - alarm changeover (SPDT)</td><td>Connector 1
  </td><td>  </td></tr>
<tr><td></td><td>Relay 2 changeover (SPDT)</td><td rowspan="6">Connector 14

only for device variant 1
  </td><td>  </td></tr>
<tr><td></td><td>Relay 3 changeover (SPDT)</td><td>  </td></tr>
<tr><td></td><td>Relay 4 changeover (SPDT)</td><td>  </td></tr>
<tr><td></td><td>Relay 5 changeover (SPDT)</td><td>  </td></tr>
<tr><td></td><td>Relay 6 changeover (SPDT)</td><td>  </td></tr>
<tr><td></td><td>Relay 7 changeover (SPDT)</td><td>  </td></tr>
</table>

4 Electrical connection

Interfaces

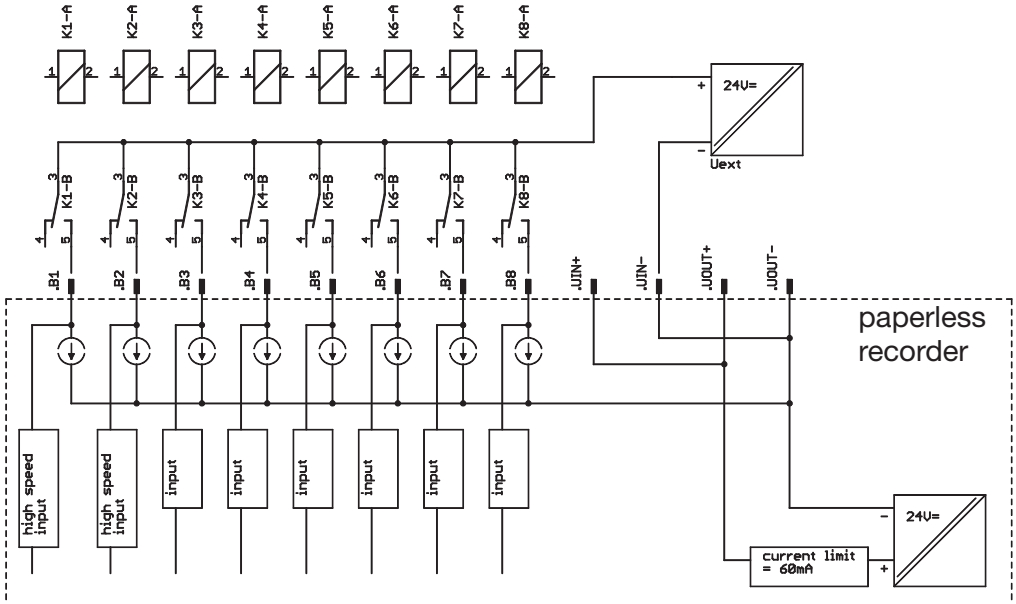
Terminal assignment	Connector	Diagram
RS232C for barcode reader 9-pin SUB-D socket connector 2 RxD receive data 3 TxD transmit data 5 GND ground	Connector 2 	
PROFIBUS-DP 9-pin SUB-D socket connector (extra code) 3 RxD/TxD-P B conductor Receive/transmit data positive 5 DGND Data transmission ground 6 VP voltage supply positive 8 RxD/TxD-N A conductor Receive/transmit data negative	Connector 3 	
USB host interface for memory sticks The recorder without stainless steel front also has a USB host interface on the front panel, connected in parallel. The two interfaces cannot both be operated at the same time.	Connector 5 	
Ethernet RJ45 socket connector 1 TX+ transmit data + 2 TX- transmit data - 3 RX+ receive data + 6 RX+ receive data -	Connector 6 	
RS232C 9-pin SUB-D socket connector (switchable to RS485) 2 RxD receive data 3 TxD transmit data 5 GND ground	Connector 7 	

Terminal assignment	Connector	Diagram
RS485 9-pin SUB-D socket connector (switchable to RS232) 3 TxD+/RxD+ Transmit/receive data + 5 GND ground 8 TxD-/RxD- Transmit/receive data -	Connector 7 	
USB device interface for connecting a PC The recorder without stainless steel front also has a USB device interface on the front panel, connected in parallel. The two interfaces cannot both be operated at the same time.	Connector 15 	

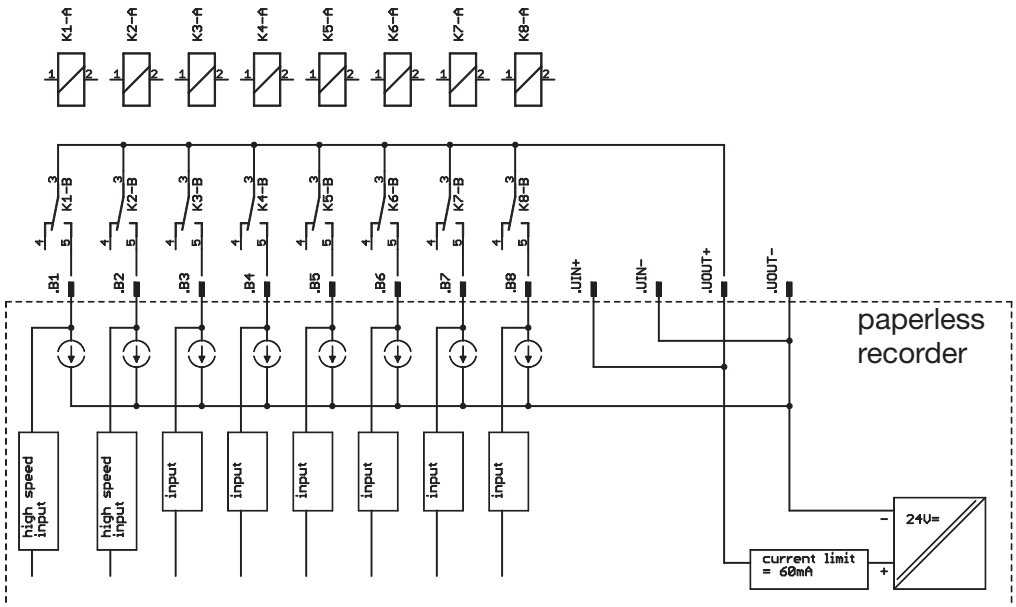
4 Electrical connection

4.5 Connection examples concerning binary inputs/outputs

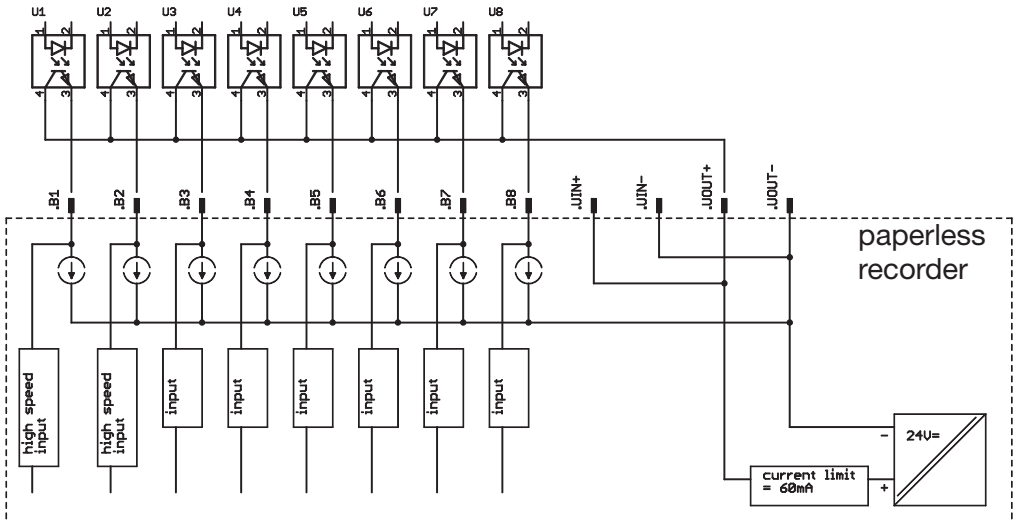
Binary inputs Triggering via external relays and external supply voltage:



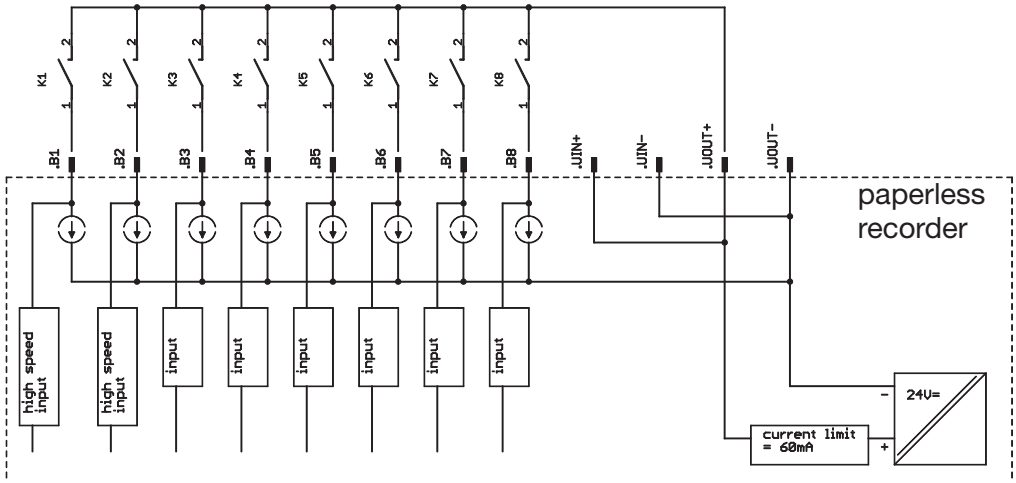
Triggering via external relays and internal supply voltage:



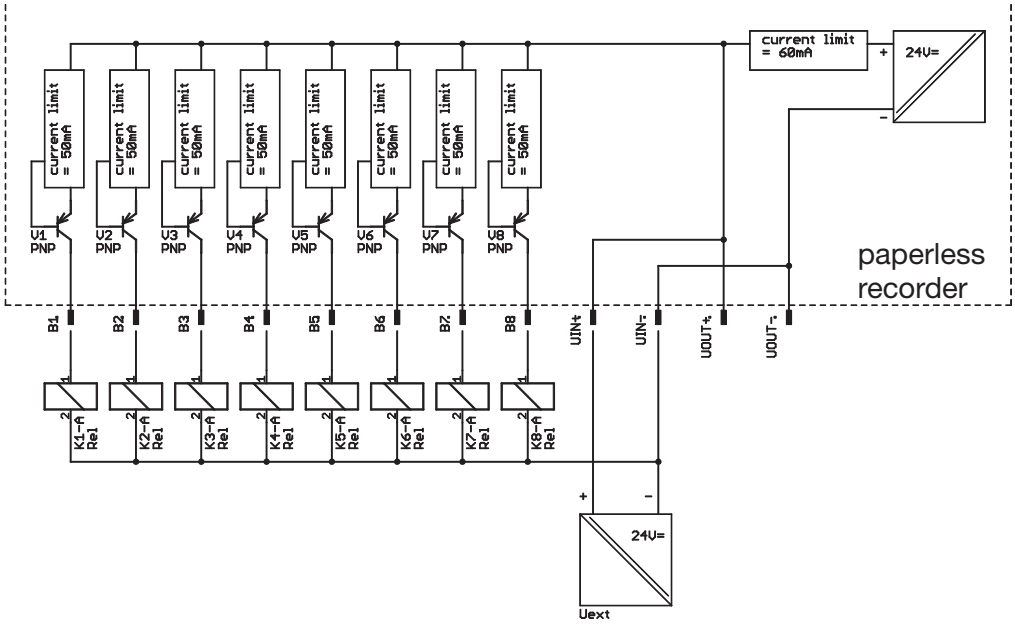
Triggering via external opto-coupler and internal supply voltage:



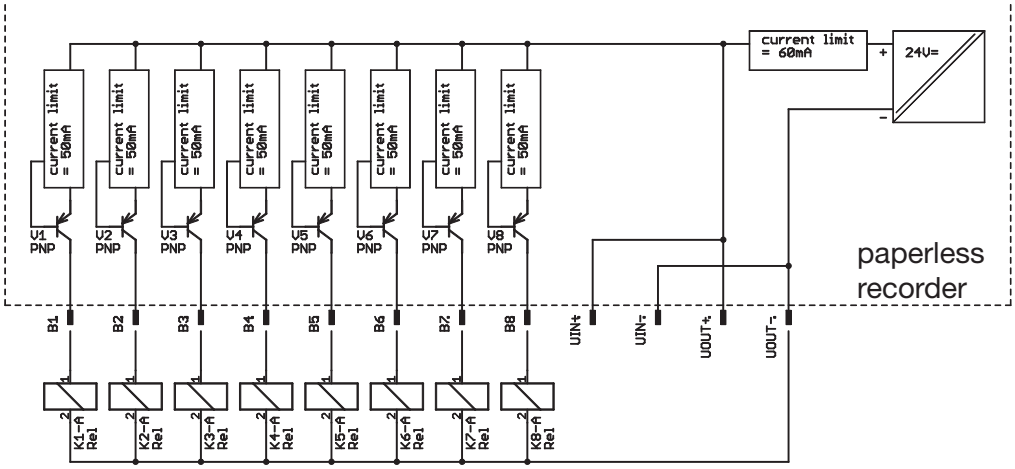
Triggering via external switches (potential-free) and internal supply voltage:



Binary outputs Triggering of external relays via external supply voltage:



Triggering of external relays via internal supply voltage:

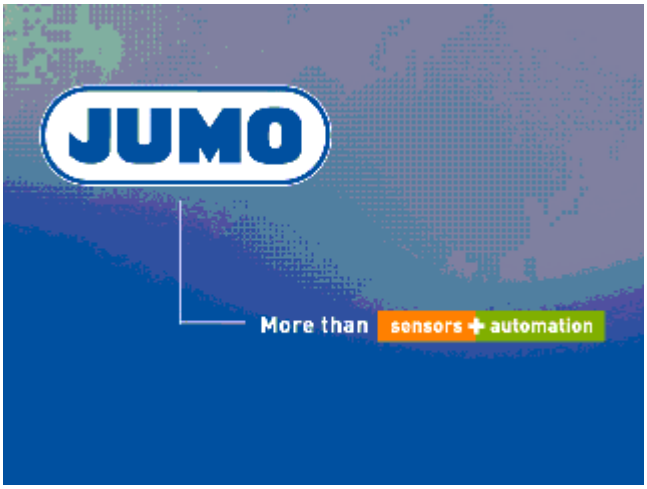


☞ By triggering the external relays via the internal supply voltage the total current must not exceed 60 mA.

Prior to each switch on of the voltage supply the user must ensure that no flammable dust accumulation has entered the interior of the paperless recorder.

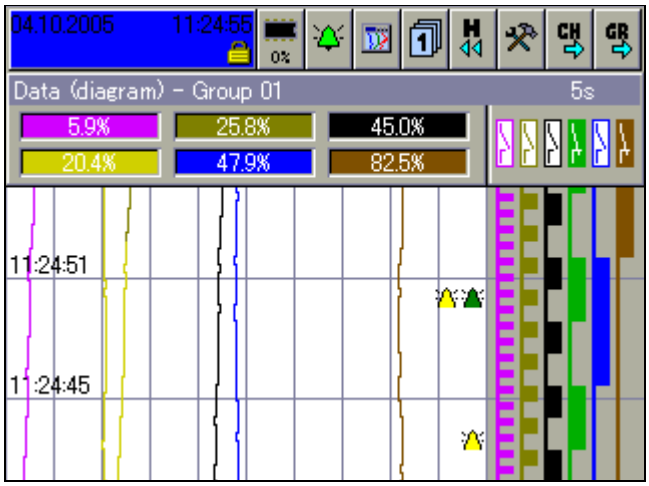
After the paperless recorder has been installed and wired up, it can be commissioned. After applying or switching on the voltage supply, the start-up screen will appear for a short time.

Start-up screen



The visualization will start automatically after the initialization phase.

Visualization



The paperless recorder is now in the recording phase.

5 Functional test

Further steps

The recorder can be configured by an authorized person, either by using the touchpad (turn and touch with one finger) or with the help of the PC setup program.

Further information about configuration can be found in the operating manual B 706585.0.

Finally, make another check that the connection, configuration and function of the recorder are all correct.

6.1 Analog inputs

Thermocouple

Designation	Measuring range	Accuracy[a]
Fe-CuNi L DIN 43710	-200 to +900 °C	±0.1 %
Fe-CuNi J EN 60584	-200 to +1200 °C	±0.1 % from -100 °C
Cu-CuNi U DIN 43710	-200 to +600 °C	±0.1 % from -150 °C
Cu-CuNi T EN 60584	-270 to +400 °C	±0.1 % from -150 °C
NiCr-Ni K EN 60584	-200 to +1372 °C	±0.1 % from -80 °C
NiCr-CuNi E EN 60584	-200 to +1000 °C	±0.1 % from -80 °C
NiCrSi-NiSi N EN 60584	-100 to +1300 °C	±0.1 % from -80 °C
Pt10Rh-Pt S EN 60584	0 to 1768 °C	±0.15 %
Pt13Rh-Pt R EN 60584	0 to 1768 °C	±0.15 %
Pt30Rh-Pt6Rh B EN 60584	0 to 1820 °C	±0.15 % from 400 °C
W3Re/W25Re D	0 to 2495 °C	±0.15 % from 500 °C
W5Re/W26Re C	0 to 2320 °C	±0.15 % from 500 °C
W3Re/W26Re	0 to 2400 °C	±0.15 % from 500 °C
Chromel-copel GOST R 8.585-2001	-200 to +800 °C	±0.15 % from -80 °C
Chromel-alumel GOST R 8.585-2001	-200 to +1372 °C	±0.1 % from -80 °C
PLII (Platinel II)	0 to 1395 °C	±0.15 %
Shortest span	Type L, J, U, T, K, E, N, chromel-alumel, PLII: 100 °C Type S, R, B, D, C, W3Re/W26Re, chromel-copel: 500 °C	
Range start/end	freely programmable within the limits, in 0.1 °C steps	
Cold junction	Pt100 internal or thermostat external constant	
Cold junction accuracy (internal)	±1 °C	
Cold junction temperature (external)	-50 to +150 °C adjustable	
Sampling cycle	Channel 1 to 18: 125 ms in total	
Input filter	2nd order digital filter; filter constant adjustable from 0 to 10.0 sec	
Electrical isolation	see “Electrical data” on page 41 and “Overview of the electrical isolation” on page 25	
Resolution	dynamic resolution up to 16 bit	
Features	also programmable in °F	

[a] The linearization accuracy refers to the maximum measuring range. The linearization accuracy is reduced with short spans.

RTD temperature probe

Designation	Connection circuit	Measuring range	Accuracy[a]	Measurement current
Pt100 EN 60751 (TC = $3.85*10^{-3}$ 1/°C)	2-/3-wire 2-/3-wire 4-wire	-200 to +100 °C -200 to +850 °C -200 to +850 °C	±0.5 °C ±0.8 °C ±0.5 °C	≈ 250 µA ≈ 250 µA ≈ 250 µA
Pt100 JIS 1604 (TC = $3.917*10^{-3}$ 1/°C)	2-/3-wire 2-/3-wire 4-wire	-200 to +100 °C -200 to +650 °C -200 to +650 °C	±0.5 °C ±0.8 °C ±0.5 °C	≈ 250 µA ≈ 250 µA ≈ 250 µA
Pt100 GOST 6651-94 A.1 (TC = $3.91*10^{-3}$ 1/°C)	2-/3-wire, 4-wire 2-/3-wire, 4-wire	-200 to +100 °C -200 to +850 °C	±0.5 °C ±0.8 °C	≈ 250 µA ≈ 250 µA
Pt500 EN 60751 (TC = $3.85*10^{-3}$ 1/°C)	2-/3-wire, 4-wire 2-/3-wire, 4-wire	-200 to +100 °C -200 to +850 °C	±0.5 °C ±0.9 °C	≈ 100 µA ≈ 100 µA
Pt1000 EN 60751 (TC = $3.85*10^{-3}$ 1/°C)	2-/3-wire 2-/3-wire 4-wire	-200 to +100 °C -200 to +850 °C -200 to +850 °C	±0.5 °C ±0.8 °C ±0.5 °C	≈ 100 µA ≈ 100 µA ≈ 100 µA

6 Technical data

Designation	Connection circuit	Measuring range	Accuracy[a]	Measurement current
Ni100 DIN 43760 (TC = 6.18*10^{-3} 1/°C)	2-/3-wire, 4-wire	-60 to +180 °C	±0.4 °C	≈ 250 µA
Pt50 ST RGW 1057 1985 (TC = 3.91*10^{-3} 1/°C)	2-/3-wire 2-/3-wire 4-wire 4-wire	-200 to +100 °C -200 to +1100 °C -200 to +100 °C -200 to +1100 °C	±0.5 °C ±0.9 °C ±0.5 °C ±0.6 °C	≈ 250 µA ≈ 250 µA ≈ 250 µA ≈ 250 µA
Cu50 (TC = 4.26*10^{-3} 1/°C)	2-/3-wire 2-/3-wire 4-wire 4-wire	-50 to +100 °C -50 to +200 °C -50 to +100 °C -50 to +200 °C	±0.5 °C ±0.9 °C ±0.5 °C ±0.7 °C	≈ 250 µA ≈ 250 µA ≈ 250 µA ≈ 250µA
Cu100 GOST 6651-94 A.4 (TC = 4.26*10^{-3} 1/°C)	2-/3-wire 2-/3-wire 4-wire 4-wire	-50 to +100 °C -50 to +200 °C -50 to +100 °C -50 to +200 °C	±0.5 °C ±0.9 °C ±0.5 °C ±0.6 °C	≈ 250 µA ≈ 250 µA ≈ 250 µA ≈ 250 µA
Connection circuit	2-, 3-, or 4-wire circuit			
Shortest span	15 °C			
Sensor lead resistance	max. 30 per conductor for 3-wire/4-wire circuit max. 10 per conductor for 2-wire circuit			
Range start/end	freely programmable within the limits, in 0.1 °C steps			
Sampling cycle	Channel 1 to 18: 125 ms in total			
Input filter	2nd order digital filter; filter constant adjustable from 0 to 10 sec			
Electrical isolation	see “Electrical data” on page 41 and “Overview of the electrical isolation” on page 25			
Resolution	dynamic resolution up to 16 bit			
Features	also programmable in °F			

[a] The linearization accuracy refers to the maximum measuring range. The linearization accuracy is reduced with short spans.

Resistance transmitter and potentiometer

Designation	Measuring range	Accuracy[a]	Measurement current
Resistance transmitter	up to 4000 Ω	±4 Ω	≈ 100 µA
Potentiometer	< 400 Ω ≥ 400 Ω to 4000 Ω	±400 mΩ ±4 Ω	≈ 250 µA ≈ 100 µA
Connection circuit	resistance transmitter: 3-wire circuit potentiometer: 2-/3-/4-wire circuit		
Shortest span	60Ω		
Sensor lead resistance	max. 30 per conductor for 4-wire circuit max. 10 per conductor for 2-/3-wire circuit		
Resistance values	freely programmable within the limits, in 0.1 steps		
Sampling cycle	Channel 1 to 18: 125 ms in total		
Input filter	2nd order digital filter; filter constant adjustable from 0 to 10.0 sec		
Electrical isolation	see “Electrical data” on page 41 and “Overview of the electrical isolation” on page 25		
Resolution	dynamic resolution up to 16 bit		

[a] The linearization accuracy refers to the maximum measuring range. The linearization accuracy is reduced with short spans.

Input for DC voltage, DC current

Basic range	Accuracy[a]	Input resistance
-12 to +112 mV -10 to +210 mV -1.5 to +11.5 V -0.12 to +1.12 V -1.2 to +1.2 V -11.2 to +11.2 V	±100 µV ±240 µV ±6 mV ±1 mV ±2 mV ±12 mV	$R_E \geq 1$ MΩ $R_E \geq 470$ kΩ $R_E \geq 470$ kΩ $R_E \geq 470$ kΩ $R_E \geq 470$ kΩ $R_E \geq 470$ kΩ
Shortest span	5 mV	
Range start/end	freely programmable within the limits in 0.01 mV steps	
-1.3 to +22 mA -22 to +22 mA	±20 µA ±44 µA	burden voltage ≤ 3 V burden voltage ≤ 3 V
Shortest span	0.5 mA	
Range start/end	freely programmable within the limits in 0.01 mA steps	
Overrange/underrange	according to NAMUR NE 43	
Sampling cycle	Channel 1 to 18: 125 ms in total	
Input filter	2nd order digital filter; filter constant adjustable from 0 to 10.0 sec	
Electrical isolation	see “Electrical data” on page 41 and “Overview of the electrical isolation” on page 25	
Resolution	dynamic resolution up to 16 bit	

[a] The linearization accuracy refers to the maximum measuring range. The linearization accuracy is reduced with short spans.

Transducer short circuit/break

	Short-circuit[a]	Break[a]
Thermocouple	not detected	detected
RTD temperature probe	detected	detected
Resistance transmitter	not detected	detected
Potentiometer	not detected	detected
Voltage ≤ ±210 mV	not detected	detected
Voltage > ±210 mV	not detected	not detected
Current	not detected	not detected

[a] Programmable reaction of device, e.g. triggering alarm

6 Technical data

6.2 Binary inputs/outputs (option)

Input or output	configurable as input or output
Number	8, 16 or 24, depending on the device version, to DIN VDE 0411, Part 500; max. 25 Hz, max. 32 V
Input	
• level	logic "0": -3 to +5 V (input current max. ±1 mA), logic "1": 12 to 30 V (2.5 mA ≤ input current ≤ 5 mA)
• counting frequency	8Hz
High-speed input	the first two binary inputs of each module (B1, B2, B9, B10, B17, B18), if the module is not fitted with relays or 6 analog inputs
• task	count function, e.g. for flow measurement
• counting frequency	10 kHz
Output	
• type	open-collector output, switches relative to positive voltage
• level	logic "0": transistor is inhibited (max. permissible voltage across switching transistor 30 V, max. leakage current 0.1 mA) logic "1": transistor is switched on (max. voltage across switching transistor 1.6 V, max. current 50 mA)
• sampling cycle	at least 1 sec (1 Hz)

6.3 Outputs

1 relay (ex-factory)	changeover (SPDT), 3 A, 230 V AC[a]
6 relays (option)	changeover (SPDT), 3 A, 230 V AC[a, b]

[a] With resistive load.
[b] It is not permissible to mix SELV circuits and supply circuits.

6.4 Interfaces

RS232/RS485 (connector 7)	Qty. 1, switchable between RS232 and RS485
• protocol	Modbus master, Modbus slave and barcode reader
• baud rate	9600, 19200, 38400
• modem	can be connected
• connector	SUB-D
• external inputs	via the Modbus master/slave function, 54 analog and 54 binary
RS232 for barcode reader (connector 2)	Qty. 1
• protocol	Modbus master, Modbus slave and barcode reader
• baud rate	9600, 19200, 38400
• connector	SUB-D
• external inputs	via the Modbus master/slave function, 54 analog and 54 binary
Ethernet (connector 6)	
• quantity	max. 1
• protocols	TCP, IP, HTTP, DHCP, SMTP, ModbusTCP
• baud rate	10 Mbits/sec, 100 Mbits/sec
• connector	RJ45
• data format	HTML

USB host (connector 5)	
• quantity	2 (or 1 with stainless steel front), connector 5 and front connector (not with stainless steel front); no parallel operation
• use	for connecting a memory stick
• max. current	100 mA
USB device (connector 15)	
• quantity	2 (or 1 with stainless steel front), connector 15 and front connector (not with stainless steel front); no parallel operation)
• use	for connecting to the (master) computer
PROFIBUS-DP (connector 3)	
• quantity	max. 1 (extra code)
• connector	SUB-D
• transfer rate	max. 12 Mbit/s
• external inputs	via Profibus slave function, 54 analog and 54 binary

6.5 Screen

Resolution/size	320 × 240 pixels/5.5"
Type/number of colors	TFT color screen/256 colors
Screen refresh rate	> 150 Hz
Brightness setting	adjustable on device
Screen saver (switch-off)	through waiting time or control signal
Operation	
• die-cast zinc front	via control knob
• stainless steel front (extra code)	via capacitive touchpad Caution: Do not use the touchpad with damp/wet fingers to avoid condensation.

6.6 Electrical data

Supply voltage (switch-mode PSU)	AC 100 to 240V +10/-15%, 48 - 63Hz or AC/DC 20 to 30V, 48 - 63Hz (ELV)
Electrical safety	to DIN EN 61010, Part 1, July 2011 overvoltage category II, pollution degree 2
Protection class I	terminal for PE conductor
Test voltages (type test)	
• mains supply circuit to meas. circuit	with AC supply: 2.3 kV/50 Hz, 1 min, with AC/DC supply: 2.3 kV/50 Hz, 1 min
• mains supply circuit to housing (protective conductor)	with AC supply: 2.3 kV/50 Hz, 1 min, with AC/DC supply: 2.3 kV/50 Hz, 1 min
• measuring current circuits to measuring current circuit and housing	500 V/50 Hz, 1 min
• electrical isolation between analog inputs	up to 30 V AC and 50 V DC
Supply voltage error	< 0.1 % of range span
Power consumption	approx. 40 VA
Data backup	CompactFlash memory card

Electrical connection	
• mains supply and relays	at rear through pluggable screw terminals, 5.08 mm raster, max. conductor cross-section ≤ 2.5 mm^2 or 2× 1.5 mm^2 with ferrules
• analog and binary inputs	at rear through pluggable screw terminals, 3.81 mm raster, max. conductor cross-section ≤ 1.5 mm^2

6.7 Environmental influences

Ambient temperature range	0 to +50 °C
Ambient temperature effect	0.03 %/°C
Storage temperature range	-20 to +60 °C
Climatic conditions	≤ 75 % relative humidity, no condensation
Site altitude	up to 2000 m above sea level
EMC	EN 61326-1
• interference emission	Class A - only for industrial use -
• immunity to interference	to industrial requirements

6.8 Housing

Housing front	zinc die-casting, optionally in stainless steel (extra code)
Housing type	housing for flush-panel mounting to IEC 61554, in stainless steel (indoor use)
Bezel size	144 mm × 144 mm to IEC 61554
Depth behind panel	193 mm (incl. terminals)
Panel cut-out	$138^{+1.0}$ mm × $138^{+1.0}$ mm to IEC 61554
Panel thickness	2 to 40 mm
Housing mounting	in panel to DIN 43834
Operating position	unrestricted, but taking into account the viewing angle of the screen, horizontally ±65°, vertically +40° to -65°
Enclosure protection	to EN 60529 Category 2, front IP65, rear IP20
Weight	approx. 3.5 kg

6.9 Approvals/marks of conformity

Mark of conformity	Testing laboratory	Certificates/ certification numbers	Test basis	valid for
c UL us	Underwriters Laboratories	E 201387	UL 61010-1 CAN/CSA-C22.2 No. 61010-1	the flush-mounted device; not in conjunction with extra code 350
II 2G Ex pxb IIC Gb II 2D Ex pxb IIIC Db	Eurofins Electrosuisse	SEV 08 ATEX 0155 U	EN 60079-0:2012 + A11:2013 EN 60079-2:2014	the flush-mounted device; only in conjunction with extra code 443 or 444 and without extra code 350
NEMA 4X	Intertek	4010203	NEMA 250-2008	the flush-mounted device; only in conjunction with extra code 443 and without extra code 350

6 Technical data

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More than sensors + automation

EU-Konformitätserklärung

EU declaration of conformity / Déclaration UE de conformité

Dokument-Nr. *Document No. / Document n°.*	CE 711
Hersteller *Manufacturer / Etabli par*	JUMO GmbH & Co. KG
Anschrift *Address / Adresse*	Moritz-Juchheim-Straße 1, 36039 Fulda, Germany

Produkt
Product / Produit

Name *Name / Nom*	**Typ** *Type / Type*	**Typenblatt-Nr.** *Data sheet no. / N° Document d'identification*
JUMO LOGOSCREEN fd	706585	706585

Wir erklären in alleiniger Verantwortung, dass das bezeichnete Produkt die Anforderungen der Europäischen Richtlinien erfüllt.

We hereby declare in sole responsibility that the designated product fulfills the requirements of the European Directives.

Nous déclare sous notre seule responsabilité que le produit remplit les Directives Européennes.

Richtlinie 1
Directive / Directive

Name *Name / Nom*	EMC
Fundstelle *Reference / Référence*	2014/30/EU
Bemerkung *Comment / Remarque*	
Datum der Erstanbringung des CE-Zeichens auf dem Produkt *Date of first application of the CE mark to the product / Date de 1ère application du sigle sur le produit*	2006

7 Declaration of Conformity

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Angewendete Normen/Spezifikationen
Standards/Specifications applied / Normes/Spécifications appliquées

Fundstelle *Reference / Référence*	**Ausgabe** *Edition / Édition*	**Bemerkung** *Comment / Remarque*
EN 61326-1	2013	

Gültig für Typ
Valid for Type / Valable pour le type
706585/...

Richtlinie 2
Directive / Directive

Name LVD
Name / Nom

Fundstelle 2014/35/EU
Reference / Référence

Bemerkung
Comment / Remarque

Datum der Erstanbringung des CE-Zeichens auf dem Produkt 2006
Date of first application of the CE mark to the product / Date de 1ère application du sigle sur le produit

Angewendete Normen/Spezifikationen
Standards/Specifications applied / Normes/Spécifications appliquées

Fundstelle *Reference / Référence*	**Ausgabe** *Edition / Édition*	**Bemerkung** *Comment / Remarque*
EN 61010-1	2010	

Gültig für Typ
Valid for Type / Valable pour le type
706585/*-*-*-*-*-33-*-*-.-*
706585/*-*-*-*-*-33-*-*-350-*
706585/*-*-*-*-*-33-*-*-444-*

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Richtlinie 3
Directive / Directive

Name RoHS
Name / Nom

Fundstelle 2011/65/EU
Reference / Référence

Bemerkung
Comment / Remarque

Datum der Erstanbringung des CE-Zeichens auf dem Produkt 2017
Date of first application of the CE mark to the product / Date de 1ère application du sigle sur le produit

Angewendete Normen/Spezifikationen
Standards/Specifications applied / Normes/Spécifications appliquées

Fundstelle *Reference / Référence*	**Ausgabe** *Edition / Édition*	**Bemerkung** *Comment / Remarque*
VDK Umweltrelevante Aspekte bei der Produktentwicklung und -gestaltung	V1	

Gültig für Typ
Valid for Type / Valable pour le type
706585/...

Richtlinie 4
Directive / Directive

Name ATEX
Name / Nom

Fundstelle 2014/34/EU
Reference / Référence

Bemerkung Mod. B+D
Comment / Remarque

Datum der Erstanbringung des CE-Zeichens auf dem Produkt 2008
Date of first application of the CE mark to the product / Date de 1ère application du sigle sur le produit

7 Declaration of Conformity

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Angewendete Normen/Spezifikationen

Standards/Specifications applied / Normes/Spécifications appliquées

Fundstelle *Reference / Référence*	**Ausgabe** *Edition / Édition*	**Bemerkung** *Comment / Remarque*
EN 60079-0	2012+A11:2013	
EN 60079-2	2014	

Gültig für Typ

Valid for Type / Valable pour le type

706585/*-*-*-*-*-*-*-*-443-*

706585/*-*-*-*-*-*-*-*-444-*

EU-Baumusterprüfbescheinigung 4.1

EU type examination certificate / Certificat d'examen de type UE

Fundstelle *Reference / Référence*	SEV 08 ATEX 0155 U
Benannte Stelle *Notified Body / Organisme notifié*	Eurofins Electrosuisse Product Testing AG
Kennnummer *Identification no. / N° d'identification*	1258

Anerkannte Qualitätssicherungssysteme der Produktion

Recognized quality assurance systems of production / Systèmes de qualité reconnus de production

Benannte Stelle *Notified Body / Organisme notifié*	**Kennnummer** *Identification no. / N° d'identification*
TÜV NORD CERT GmbH	0044

Allgemeine Bemerkungen

General remarks / Observations générales

For Directive 2014/34/EU, this document is an attestation of conformity because the product is classified as a component.

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Aussteller
Issued by / Etabli par

JUMO GmbH & Co. KG

Ort, Datum
Place, date / Lieu, date

Fulda, 2018-04-24

Rechtsverbindliche Unterschriften
Legally binding signatures /
Signatures juridiquement valable

Bereichsleiter Vertrieb Inland / Globales Produkt- und Branchenmanagement
ppa. Dimitrios Charisiadis

Qualitätsbeauftragter und Leiter Qualitätswesen
i. V. Harald Gienger

7 Declaration of Conformity

eurofins | Electrosuisse Product Testing

EU-Type Examination Certificate

(1)

(2) Equipment or protective system intended for use in potentially explosive atmospheres - **Directive 2014/34/EU**

(3) Certificate number: **SEV 08 ATEX 0155 U**

(4) Product: Logoscreen nt resp. fd Type:
706581 / xx-xxx-xx / xxx, 443, 706581 / xx-xxx-xx / xxx, 444
706585 / xx-xxx-xx / xxx, 443, 706585 / xx-xxx-xx / xxx, 444

(5) Manufacturer: JUMO GmbH & Co. KG

(6) Address: Moritz-Juchheim-Strasse 1, 36039 Fulda, GERMANY

(7) The equipment and any acceptable variation thereto is specified in the schedule to this certificate and the documents therein referred to.

(8) Eurofins, notified body No. 1258, in accordance with article 17 of Directive 2014/34/EU of the European parliament and of the council, dated 26 February 2014, certifies that this product has been found to comply with the essential health and safety requirements relating to the design and construction of products intended for use in potentially explosive atmospheres given in Annex II to the Directive.

The examination and test results are recorded in confidential report no 08-IK-0140.01 incl. E1 - E3, 18-Ex-0103.01 E4

(9) Compliance with the essential health and safety requirements has been assured by compliance with:

EN 60079-0:12 + A11:13 **EN 60079-2:14**

Except in respect of those requirements listed at item 18 of the schedule.

(10) The sign "U" is placed after the certificate number. It indicates that this certificate must not be mistaken for a certificate intended for an equipment or protective system. This partial certification may be used as a basis for certification of an equipment or protective system.

(11) This EU type examination certificate relates only to design and construction of the specified product. Further requirements of this directive apply to the manufacturing process and supply of this product. These are not covered by this certificate.

(12) The marking of the product shall include the following:

II 2G Ex pxb IIC Gb
II 2D Ex pxb IIIC Db

Eurofins Electrosuisse Product Testing AG
Notified Body ATEX

Martin Plüss
Product Certification

eurofins | Electrosuisse Product Testing

(13) # Appendix

(14) **EU-Type Examination Certificate no. SEV 08 ATEX 0155 U**

(15) **Description of product**

The Logoscreen type 706581/xx-xxx-xx/xxx, 443, 706585/xx-xxx-xx/xxx, 443, 706581/xx-xxx-xx/xxx, 444, 706585/xx-xxx-xx/xxx, 444 is intended for the registration and display of physical measured quantities in industrial environments, as specified in the technical data. The device is suitable for mounting in switchgear cabinets with pressurised enclosure. At the front, the device can be used in potentially explosive atmospheres (Zone 1 or 21) under these conditions.

Type designation

The x's in the type designation can be replaced by numbers or letters relating to specific variants which have no influence on explosion protection and general safety.

Ratings

Supply circuit	
Rated voltage	Un = 100 ... 240 V AC/+10/-15 %
or	
Rated voltage	Un = 20 ... 30 V AC/DC
Frequency	fn = 48 ... 63 Hz
Power	Pn = 40 VA
Classification of installation and use:	stationary
Ingress protection:	IP65; IP67 optional
Rated ambient temperature range:	0 °C to +50 °C

(16) **Report number** 08-IK-0140.01 incl. E1 - E3, 18-Ex-0103.01 E4

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(17) **Specific conditions of use**

1. For mounting the Logoscreen type 706581/xx-xxx-xx/xxx, 443, 706585/xx-xxx-xx/xxx, 443, 706581/xx-xxx-xx/xxx, 444, 706585/xx-xxx-xx/xxx, 444 in switchgear cabinets with the type of protection "px" or "pz" or "py", it must be ensured that:
   a) The defined maximum permissible temperatures are not exceeded.
   b) The degree of protection IP65 according to the standard IEC/EN 60529 is achieved (mounting seal).

2. The Logoscreen type 706581/xx-xxx-xx/xxx, 443, 706585/xx-xxx-xx/xxx, 443, 706581/xx-xxx-xx/xxx, 444, 706585/xx-xxx-xx/xxx, 444 is a component (Ex component) of the equipment group II, Category 2G according to Directive 2014/34/EU additional I. The installation of these components is subject to a separate conformity assessment procedure.
   The requirements of EN 60079-14 must be observed for use/installation.

3. The Logoscreen type 706581/xx-xxx-xx/xxx, 443, 706585/xx-xxx-xx/xxx, 443, 706581/xx-xxx-xx/xxx, 444, 706585/xx-xxx-xx/xxx, 444 is also a component (Ex component) of the equipment group II, Category 2D according to Directive 2014/34/EU additional I. The installation of these components is subject to a separate conformity assessment procedure.
   The requirements of EN 60079-14 must be observed for use/installation.

4. The permissible ambient temperature range – internally and externally – is 0 °C to +50 °C.

5. The outside temperature on the front side of the Logoscreen type 706581/xx-xxx-xx/xxx, 443, 706585/xx-xxx-xx/xxx, 443, 706581/xx-xxx-xx/xxx, 444, 706585/xx-xxx-xx/xxx, 444 reaches maximum 69°C under fault conditions.

6. WARNING: Battery is located inside this enclosure. Do not open when an explosive atmosphere is present.

7. WARNING: This pressurized enclosure contains a battery which remains connected after the external power has been isolated. The removal of the battery should be considered if the housing will be unprotected by Ex "p" for a significant amount of time.

(18) **Essential health and safety requirements**

In addition to the essential health and safety requirements (EHSRs) covered by the standards listed at item 9, the following are considered relevant to this product, and conformity is demonstrated in the report:

Clause	**Subject**
None	

(19) **Drawings and Documents**

See test report "Manufacturer's Documents"

8 Type Examination Certificate

	
产品组别 Product group: 706585	产品中有害物质的名称及含量 China EEP Hazardous Substances Information
部件名称 Component Name	

	铅 （Pb）	汞 （Hg）	镉 （Cd）	六价铬 （Cr(VI)）	多溴联苯 （PBB）	多溴二苯醚 （PBDE）
外壳 Housing (Gehäuse)	X	○	○	○	○	○
过程连接 Process connection (Prozessanschluss)	○	○	○	○	○	○
螺母 Nuts (Mutter)	○	○	○	○	○	○
螺栓 Screw (Schraube)	○	○	○	○	○	○

本表格依据SJ/T 11364的规定编制。
This table is prepared in accordance with the provisions SJ/T 11364.
○：表示该有害物质在该部件所有均质材料中的含量均在GB/T 26572规定的限量要求以下。
Indicate the hazardous substances in all homogeneous materials' for the part is below the limit of the GB/T 26572.

×：表示该有害物质至少在该部件的某一均质材料中的含量超出GB/T 26572规定的限量要求。
Indicate the hazardous substances in at least one homogeneous materials' of the part is exceeded the limit of the GB/T 26572.

9 China RoHS

A

B

C

D

E

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T

U

V

W

10 Index

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