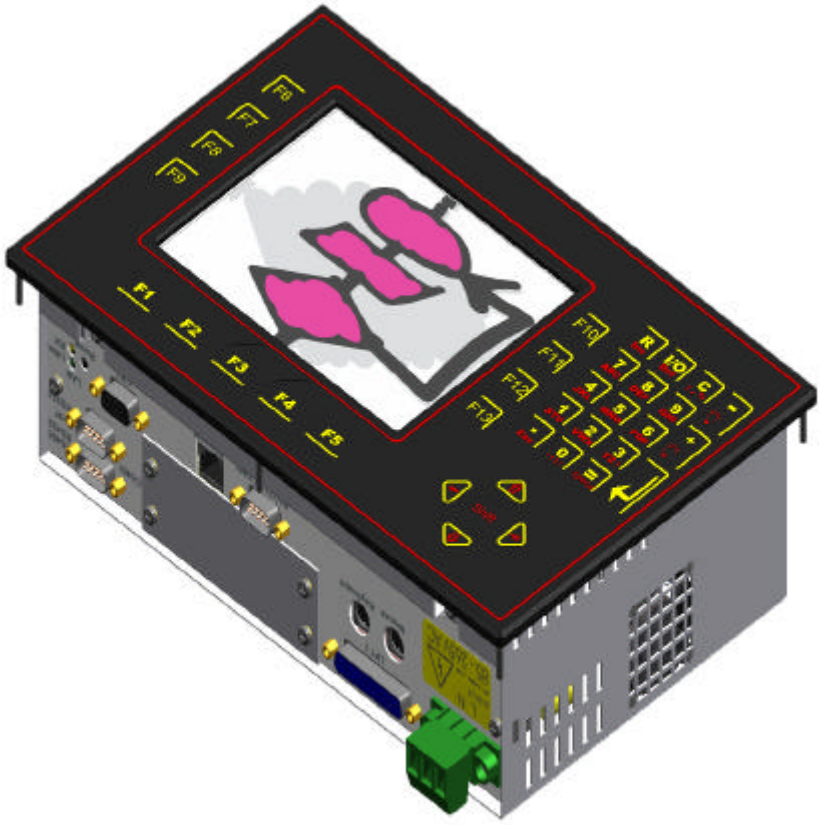
JetView 600

User Interface



Installation Manual

Jetter
AKTIENGESELLSCHAFT

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PROCESS-PLC

Edition 1.1

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This installation manual refers to JetView 600:

Type: _____

Serial No.: _____

Year of construction: _____

Order No.: _____

To be entered by the customer:

Inventory No.: _____

Place of operation: _____

Scope of Supply

- JetView 600
- 3-pin male connector (supply connector)
- Wafer-4823 manual
- JetView 600 Installation Manual
- Gasket

Significance of this installation manual

This installation manual is part of the JetView 600 user interface and

- must be kept in a way that it is always at hand until the JetView 600 user interface will be disposed.
- It is to be passed on, if the JetView 600 user interface is sold or loaned / leased out.

Attention is also to be paid to any further documentation enclosed.

In any case you encounter difficulties to clearly understand this installation manual, please contact the manufacturer.
We would appreciate any kind of suggestion and contributions on your part. This will help us to produce manuals that are more user-friendly and to address your wishes and requirements.

This JetView 600 user interface represents unavoidable residual risks to persons and property. For this reason, any person who has to deal with the operation, transport, installation, maintenance and repair of the JetView 600 user interface must have been familiarised with it and must be aware of these dangers.
Therefore, this person must carefully read, understand and observe this manual, and especially the safety instructions.

Missing or inadequate knowledge of the manual results in the loss of any claim of liability on part of Jetter AG. Therefore, the operating company is recommended to have the instruction of the persons concerned confirmed in writing.

Table of Contents

1 Safety Instructions

The JetView 600 user interface is in line with the current state of the art. This JetView 600 user interface complies with the safety regulations and standards in force. Special emphasis was given to the safety of the users.

Of course, the following regulations apply to the user:

- relevant accident prevention regulations;
- generally accepted safety rules;
- EC guidelines and other country-specific regulations.

Usage as agreed upon

Usage as agreed upon includes operation in accordance with the installation manual
The JetView 600 user interface has been designed for usage in control cabinets only. The user interface serves for monitoring control devices of various kinds of machinery, such as conveyors, production machines, and handling machines.

Usage other than agreed upon

The JetView 600 user interface must not be used in technical systems which to a high degree have to be fail-save, e.g. ropeways and aeroplanes.
If the JetView 600 is to be run under surrounding conditions, which differ from the conditions mentioned below, the manufacturer is to be contacted beforehand.

Who is permitted to operate the JetView 600 user interface?

Only instructed, trained and authorised persons are permitted to operate the JetView 600 user interface.
Mounting and backfitting may only be carried out by specially trained personnel, as specific know-how will be required.

Maintenance of the JetView 600 user interface

The JetView 600 user interface is maintenance-free. Therefore, for the operation of the module no inspection or maintenance are required. Please note the technical data.

Decommissioning and Disposal of the JetView 600 user interface

Decommissioning and disposal of the JetView 600 user interface are subject to the environmental legislation of the respective country in effect for the operator's premises.

Description of Symbols

Danger

This sign is to indicate a possible impending danger of serious physical damage or death.

Caution

This sign is to indicate a possible impending danger of light physical damage. This sign is also to warn you of material damage.

Important!

This sign is to indicate a possible impending situation which might bring damage to the product or to its surroundings.

Note!

You will be informed of various possible applications and will receive further useful suggestions.

· / -

Enumerations are marked by full stops, strokes or scores.

Operating instructions are marked by these arrows.

Automatically running processes or results to be achieved are marked by this arrow.

1.1 Ensure your own Safety

Isolate the JetView 600 user interface from the mains, when maintenance works have to be carried out. By doing so, you will prevent accidents resulting from electric voltage and moving parts.

Modifications and alterations to the module

- For safety reasons, no modifications and changes are permitted on the JetView 600 user interface and its functions. Any modifications to the JetView 600 user interface not expressly authorised by the manufacturer will result in a loss of any liability claims to Jetter AG.
- The original parts are specifically designed for the JetView 600 user interface. Parts and equipment of other manufacturers are not tested on our part, and are, therefore, not released by us. The installation of such parts may impair the safety and the proper functioning of the JetView 600 user interface.
- For any damages resulting from the use of non original parts and equipment any claims with respect to liability of Jetter AG are excluded.

Malfunctions

- Malfunctions or other damages are to be reported to an authorised person at once.
- Secure the JetView 600 user interface against misuse or accidental use.
- Only qualified experts are allowed to carry out repairs.
- Safety and protective devices, e.g. the barrier and cover of the terminal box must not in any case be shunted or by-passed.
- Dismantled protective equipment must be reattached prior to commissioning and checked for proper functioning.

Information signs and labels

- Writings, information signs, and labels always have to be observed and kept readable.
- Damaged or unreadable information signs and labels are to be exchanged.

1.2 Notes on safety regarding the Installation

Danger resulting from electric shock!

If the JetView 600 user interface is not isolated from the mains, for example during maintenance and repair works, you can suffer from an electric shock. Please, observe the following precautions in order to avoid injuries such as muscle cramps, burns, unconsciousness, respiratory standstill, and possibly death.

- Have works on the electric and electronic system performed by qualified personnel only.
- Isolate the JetView 600 user interface from the mains (pull out the mains plug) when working on the control system.
- **Before switching on**

  - reattach dismantled protective equipment and check it for proper functioning;
  - to protect the JetView 600 from unintentional contact with conductive parts and components;
  - only to connect units or electric components with the signal wires of the JetView 600, if they have been sufficiently isolated from the connected electric circuit;
  - to establish a permanent connection to the mains voltage of theJetView 600 user interface;
  - each commissioning, even a short functional test, must always be carried out with correctly connected PE bus;
  - a correct cabling of the PE bus according to the connection diagram must be carried out;

- Connection has to be established with the help of the enclosed male connector and has to be carried out properly, protection against false polarity being granted.

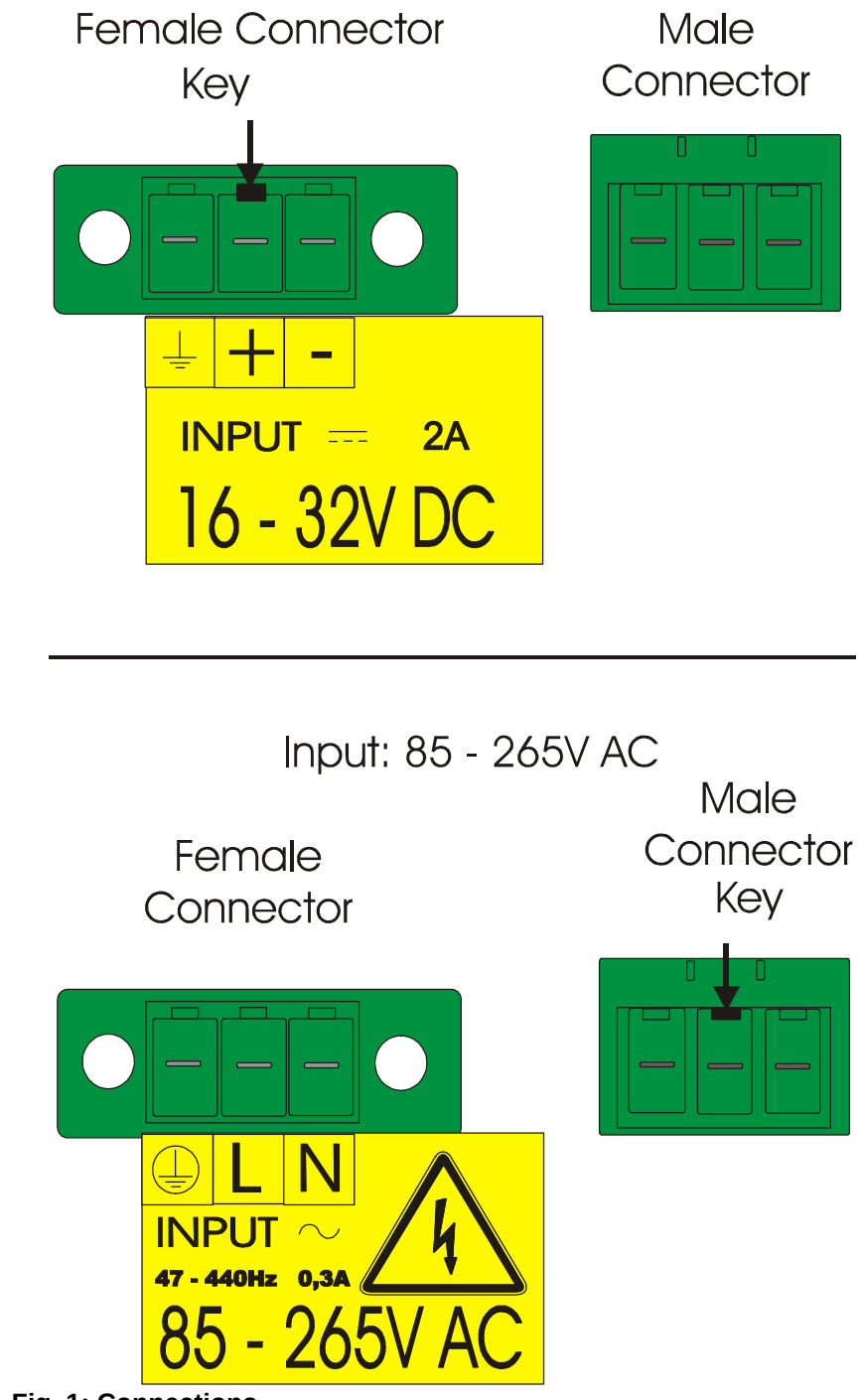


Fig. 1: Connections

- In case of 16 - 32 VDC supply, please connect functional earth
- In case of 85 - 265 VAC supply, please connect protective earth
- The supply connector serves as a disconnecting device and must be accessible as such.
- The device must not rest on the supply connector. Space for wiring must be provided for.
- The supply lines must be of a diameter of at least 0.75mm^2.
- The tightening torque (screws) for the supply connector is 0,5 .. 0,6 Nm
- The stripping length of the supply wires must not exceed 7mm.
- The applicable VDE standards are to be considered.

1.3 Safety Instructions regarding the Backup Battery

Danger!

Improper replacement of the backup battery can cause an explosion.
Do only replace the backup battery by the same type or an equivalent recommended by the manufacturer.
The battery is only to be replaced by trained personnel.
Disposal according to regulations given by the manufacturer.

1.4 Instructions on EMI

The noise immunity of a system corresponds to the weakest component of the system. For this reason, correct wiring and shielding of the cables is important.

Important!

Measures for increasing immunity to interfering:

- Shielding must be done on **both ends** of the applicable cables.
- The **entire** shield must be drawn behind the isolation, **and** then be clamped under a strain relief **with the greatest possible surface area.**
- **Connection of the signal line to screw plug terminals:**The strain relief must be connected with a grounded surface directly and with the greatest possible surface area.
- **When male connectors are used:** Only use metallised connectors, e.g. Sub-D connectors with metallised housing (see Fig. 2). Please take care of direct connection here as well.
- On principle, **physical separation** should be maintained between signal and power lines.

Male/female Sub-D connectors (9, 15 or 25 pins) with fully metallised housings.

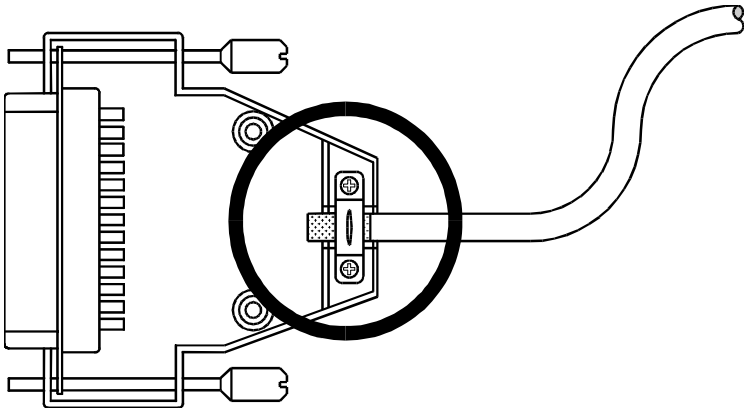


Fig. 2: Shielding in conformity with the EMC standards

Important!

To avoid malfunctions the following must be ensured:

- The shielding must be extensively clamped under a strain relief.
- The connection between the housing and the shielding must be electrically conducting.
- The distance between unshielded conductor ends must be as short as possible.

1.5 Residual Dangers

1.5.1 Hazards during operation

Hazard caused by high operating voltage!

If the JetView 600 user interface is not connected-up correctly and not isolated from the mains, for example during installation, maintenance, and repair, you can get an electric shock.
Please, observe the following precautions in order to avoid injuries such as muscle cramps, burns, unconsciousness, respiratory standstill, and possibly death:

- Do not touch any supply terminals or electric components, while the JetView 600 user interface is active.
- In particular, do not touch the terminals while the JetView 600 is running.

2 Mounting Dimensions

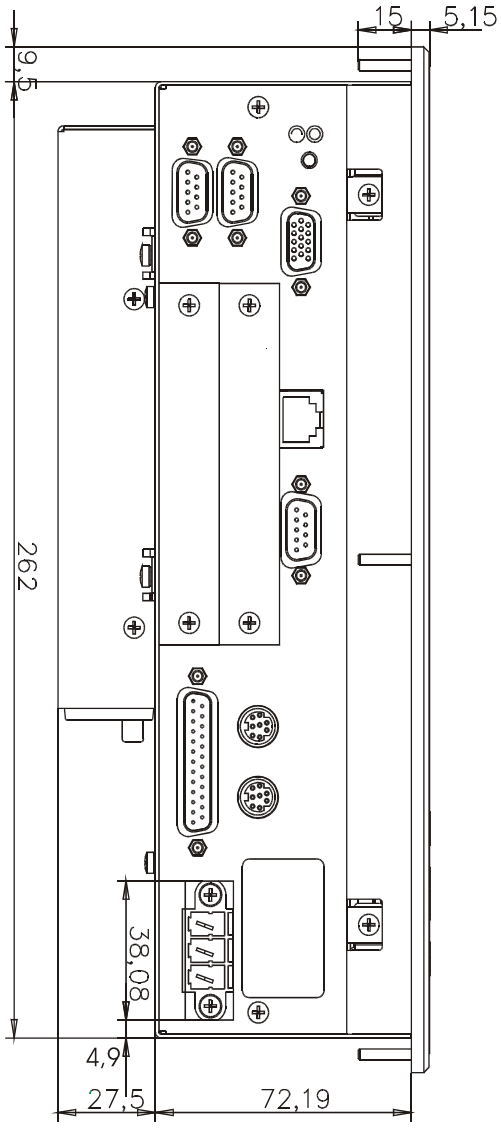


Fig. 3: Bottom view

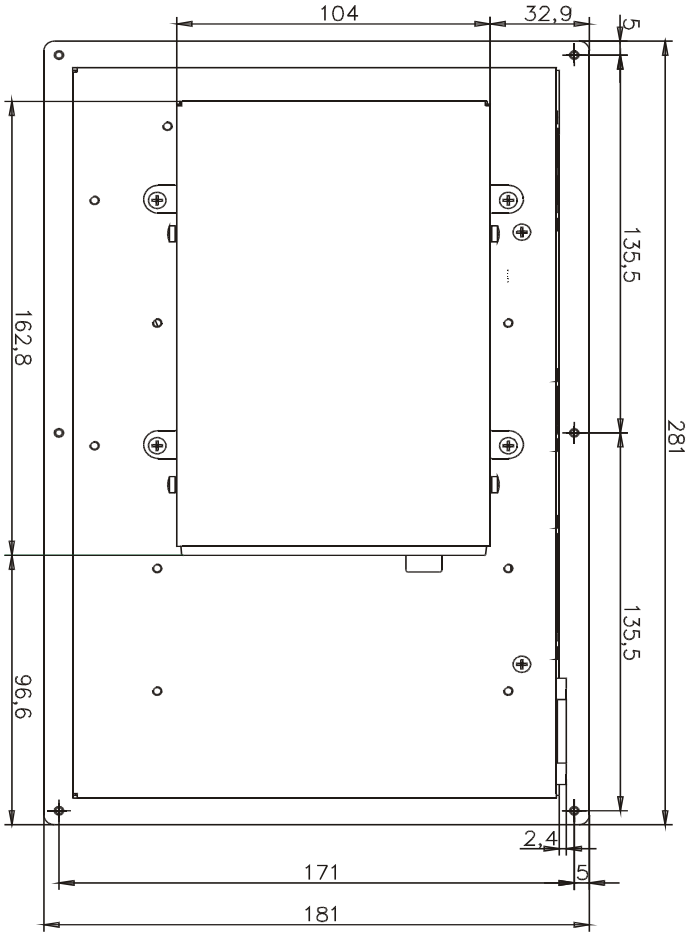


Fig. 4: Rear view

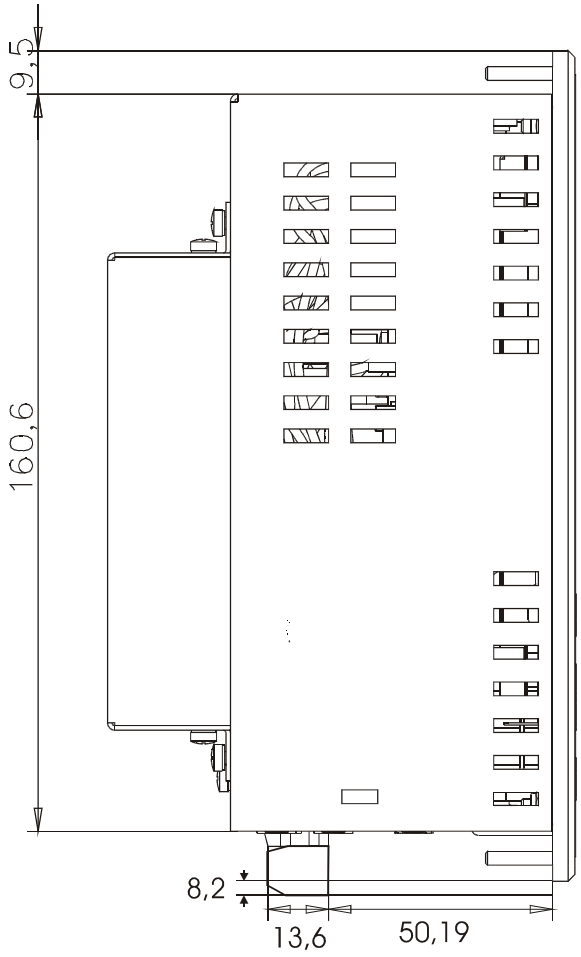


Fig. 5: Side view

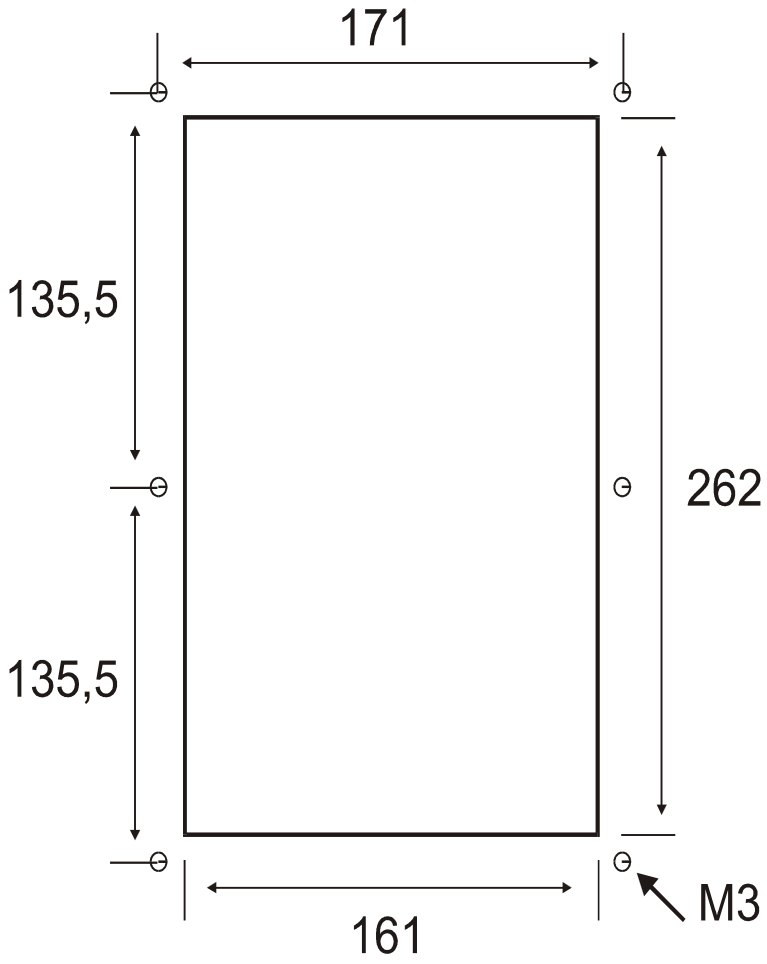
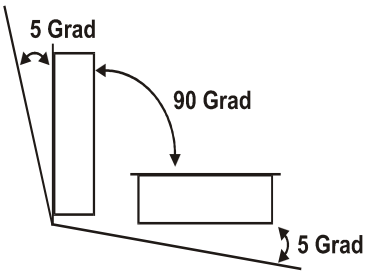


Fig. 6: Drilling pattern

3 Operating Parameters

Operating Parameter: Surrounding Conditions		
Parameter	**Value**	**Reference**
Range of operating temperature	+5°C to +40°C max. 3K/min (with floppy max. 0.3K/min)	
Range of storage temperature	-25°C to +70°C (with floppy -22°C to +60°C max. 0.5K/min)	DIN EN 60068-2-1 DIN EN 60068-2-2
Air humidity / category of humidity	10% to 90% with floppy 20% to 80% non-condensing	DIN IEC 68 part 2-3
Pollution degree	2	DIN EN 60950
Corrosion immunity / chemical resistance	Concerning corrosions, no special measures have been taken. The surrounding atmosphere must be free of an over-average amount of acids, alcaline or corrosive substances, salts, metallic vapour or other corrosive or electrically conductive contaminants.	
Operating altitude	2000 m above sea-level max.	

Operating Parameter: Mechanics		
Parameter	**Value**	**Reference**
Freefalls withstanding test	Height of fall (units within packing) 1 m	DIN EN 60068-2-32
Vibration resistance	10 Hz - 57 Hz: 0.0375 mm amplitude, continually (0.075 mm amplitude, occasionally) 0,5 g constant acceleration, permanently (1 g constant acceleration, occasionally) 1 octave/min, 10 sine-shaped frequency sweeps for all 3-dimensional axes	DIN EN 60068-2-6

Operating Parameter: Mechanics		
Shock resistance	15 g occasionally, 11 ms, half sine wave, 2 shocks for all 3-dimensional axes (with floppy: 5 g occasionally, 11 ms, half sine wave)	DIN EN 60068-2-27
Degree of protection	front side: IP 65, with gasket, built in rear side: IP 20	EN 60529
Mounting position with hard disk Mounting position with flash memory	Standing vertically or lying horizontally, display turned upward  (display turned upward)	

Operating Parameter: Electric Safety		
Parameter	**Value**	**Reference**
Class of protection	I	DIN EN 60950
Dielectric strength / dielectric test voltage (230 V only)	Input - ground: 1.500 VAC, 1 min	DIN EN 60950
Installation category	II	DIN EN 50178

Operating Parameter: EMI Noise		
Parameter	**Value**	**Reference**
Housing	Frequency band 30 to 230 MHz, limiting value 30 dB (µV/m) in 10 m Frequency band 230 to 1000 MHz, limiting value 37 dB (µV/m) in 10 m (Class B)	DIN EN 50081-1 DIN EN 55022
Alternating mains current (only 230 V)	Frequency bands 0.15 to 0.5 MHz, limiting value 66 to 56 dB (µV)* 0.5 to 5 MHz, limiting value 56 dB (µV)* 5 MHz up to 30 MHz, limiting value 60 dB (µV)* *Measuring with the quasi-peak value rectifier (Class B)	DIN EN 50081-1 DIN EN 55022

Operating Parameter: EMI Noise		
- Housing -		
Parameter	**Value**	**Reference**
RF-field, amplitude modulated	Frequency band 27-1000 MHz, test field strength 10 V/m AM 80% with 1 kHz Criterion A	DIN EN 50082-2 DIN EN 61000-4-3
Electro-magnetic RF-field, pulse modulated	Frequency 900 +/- 5 MHz Test field strength 10 V/m 50% ON period Repetition rate 200 Hz	DIN EN 50082-2 DIN EN 61000-4-3
ESD	Discharge through air: Test peak voltage 15 kV (severity level 4) Discharge through contact: Test peak voltage 8 kV (severity level 4) Criterion A	DIN EN 50082-2 DIN EN 61000-2-1

Operating parameter: EMI Noise		
- Signal/Data/Bus Cables, Network Inputs -		
Parameter	**Value**	**Reference**
Asymmetric RF, amplitude-modulated	Frequency range 0.15 to 80 MHz Test voltage 10 V AM 80% with 1 kHz Source impedance 150 Ohm Criterion A	DIN EN 50082-2 DIN EN 61000-4-6
Burst (repetition rate)	Test voltage 2 kV tr/tn 5/50 ns Repetition rate 5 kHz Criterion A	DIN EN 50082-2 DIN EN 61000-4-4

Operating Parameter: EMI Noise		
- Earth Connection -		
Parameter	**Value**	**Reference**
Asymmetric RF, amplitude-modulated	Frequency range 0.15 to 80 MHz Test voltage 10 V AM 80% with 1 kHz Source impedance 150 Ohm Criterion A	DIN EN 50082-2 DIN EN 61000-4-6

4 Technical Data

General and Mechanical Specifications	
Height	181 mm
Width	281 mm
Depth	72,2 mm (with floppy 99,7 mm)
Fixing Bolts	6 x 3 mm (M3)
Screen size	132 mm x 110 mm
Weight	approximately 2.4 kg (basic device without extension)
Keys	13 function keys, 23 enter keys (alphanumeric)

Specifications	
Power supply 24 VDC 230 VAC	 16 V to 32 VDC, 2 A; (16 V / 1.4 A, 32 V / 0.7 A) 85 V to 265 VAC, 0,3 A, 47 to 440 Hz; (85 V / 250 mA, 265 V / 100 mA)
Backup Battery Typical lifetime Type	 10 years at 25° C Realtime clock / calendar with backup battery DS12B887 or an equivalent
Display	6.5“ VGA 640 x 480 TFT 200 cd m^2 MTTF 46.000 hours (half peak brightness) at room temperature and consistent maximum brightness. TTFL 20.000 hours (half peak brightness)
Background Lighting	The degree of brightness can be set by keys
Processor	DX4-100 CPU

Watchdog Timer	20 seconds until timeout (default) Every 15 seconds the watchdog is retriggered by VIADUKT. If this does not happen, the timeout will cause a reset.
Interfaces	RS232 (COM1) RS232/422/485 (COM2) Ethernet 10 Base-T (16 Bit Ethernet, Novell NE2000 compatible) Parallel Port (LPT1) PS/2 mouse port PS/2 external keyboard port CRT port 800 x 600
FlashDisc Option Option	8 MB Standard or up to 72 MB or >2.3 GB hard disk shock-proof
RAM	16 MB EDO RAM (optional 32 MB)
Graphic Memory	1 MB DRAM
Extension sockets	2 PC/104 sockets for: JetWay on a PC/104 card PCMCIA/PC-Card all PC/104 compatible cards, e.g. CAN, Profibus
Options	3.5“ floppy on back panel Touch screen, analogue, resistive, 12 Bit resolution
Operating system	Novell DOS 7.0 / DR DOS 7.03
Application software	DOS VIADUKT from version 3.32 onwards
Fan	24 dB (A), plain bearing MTTF = 80000 hours at 40°C, MTTF = 130000 hours at 25°C,

4.1 Loading of Masks

Use the FILELINK.EXE program, in order to exchange data between two processors.

The processors must be connected by serial or parallel interface, basing on the master/slave connection principle.

4.2 Watchdog

JetView 600 is equipped by an optimised watchdog. The watchdog is not activated before the **/Watchdog** parameter call-up (starting from version 3.32*).
The watchdog is deactivated, when the VIADUKT software is left.
*) In versions <3.32 the watchdog remains activated.

By default, 20 seconds pass until timeout. Every 15 seconds the watchdog is retriggered by VIADUKT. If this does not happen, the timeout will cause a reset.

Danger!

Only trained personnel is permitted to open the device and to configure the watchdog-timer.

The desired configuring of the watchdog timer is to be carried out according to the Wafer-4823 manual.

4.3 Overview over Interfaces

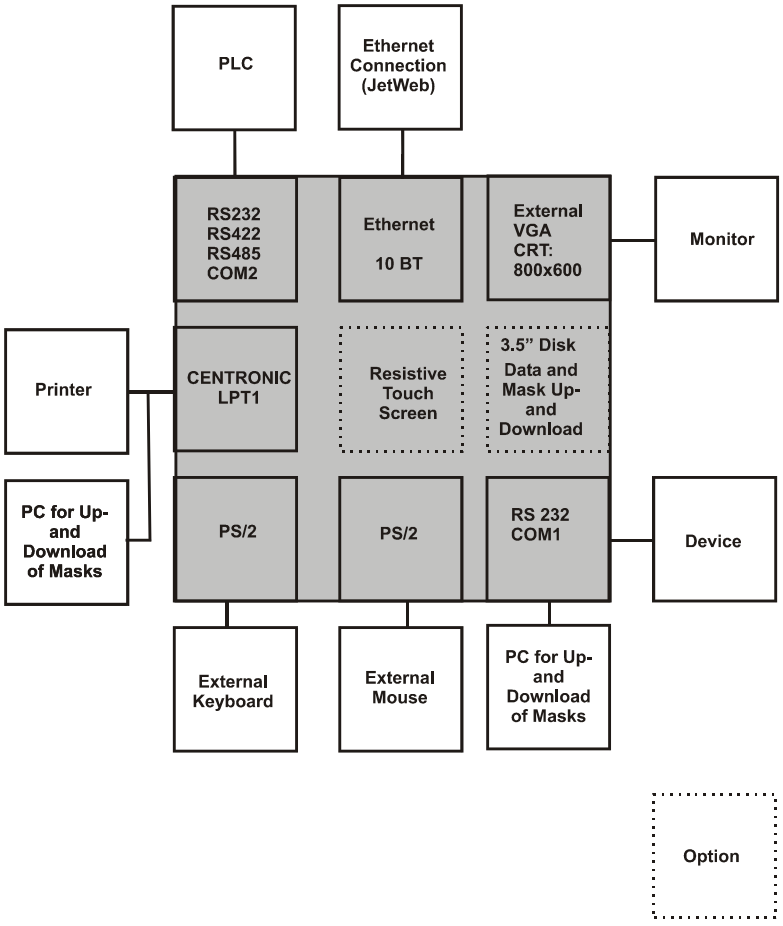


Fig. 7: Overview over interfaces

5 Description of Connections

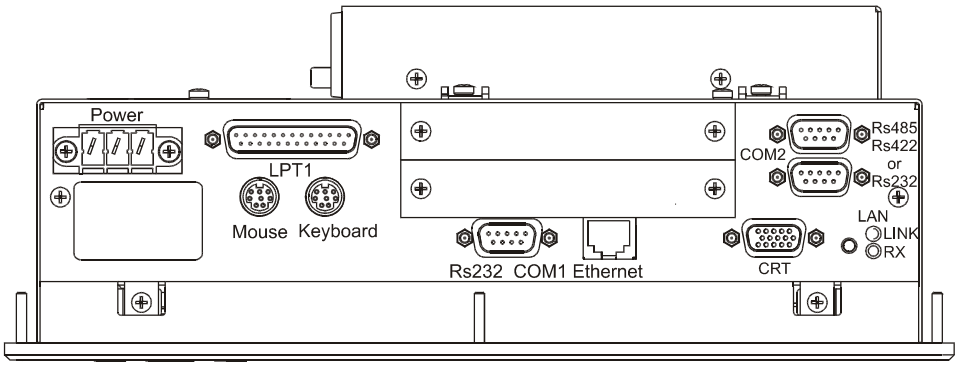


Fig. 8: Description of connections

COM1 RS232 9-pin sub-D male connector	
Pin	**Description**
1	DCD
2	RXD
3	TXD
4	DTR
5	GND
6	DSR
7	RTS
8	CTS
9	RI

COM2 RS232 or RS485/RS422 9-pin sub-D male connector		
Pin	**RS485/RS422** **JP20 = 3-4**	**RS232** **JP20 = 1-2**
1	TX2-	DCD
2	TX2+	RXD
3	RX2+	TXD
4	RX2-	DTR
5		GND
6		DSR
7		RTS
8		CTS
9		RI

Important!

COM2 is set at RS422 and RS485 by default:

- RS422 / RS485 is selected by JP20, jumper 3-4.
- RS232 at COM2 will be deactivated then.

Danger!

Only trained personnel is permitted to open the device and to configure the COM2 interface.

- RS232 is selected by jumper 20 on 1-2
- RS485 at COM2 will be deactivated then

- Both interfaces (RS232 and RS485) cannot be active at the same time.
- Depending on the selected interface, the connection is to be established at connector RS232 or RS485 / RS422.
- If the RS485 interface is used, both the TX2+ and RX2+ wires, as well as the TX2- and RX2- wires must be twisted in pairs.

LPT1 Centronics 25 pin Sub-D female connector	
Pin	**Description**
1	STROBE#
2	DATA0
3	DATA1
4	DATA2
5	DATA3
6	DATA4

7	DATA5
8	DATA6
9	DATA7
10	ACK
11	BUSY
12	Paper Empty
13	PRN Select
14	A.F.F#
15	ERROR#
16	INIT.
17	LPT Select LN#
18	GND
19	GND
20	GND
21	GND
22	GND
23	GND
24	GND
25	GND

VGA / CRT 15 pin Sub-D female connector HD	
Pin	**Description**
1	RED
2	GREEN
3	BLUE
4	NC
5	GND
6	GND

7	GND
8	GND
9	NC
10	GND
11	NC
12	NC
13	HSYNC
14	VSYNC
15	NC

RJ45 LAN Ethernet 10BT	
Pin	**Description**
1	TX+
2	TX-
3	RX+
4	NC
5	NC
6	RX-
7	NC
8	NC

Keyboard 6-pin Mini-DIN	
Pin	**Description**
1	KBDAT
2	NC
3	GND

4	+5 V
5	KBCLK
6	NC

PS/2 Mouse 6-pin Mini-DIN (this connection cannot be accessed if touch screen devices are used)	
Pin	**Description**
1	MDAT
2	MDAT
3	GND
4	+5 V
5	MCLK
6	MCLK

Caution

Note!

Connecting a mouse to touch screen devices will destroy the touch screen controllers.

6 Flag Assignment

Flag assignment of the keys	
Key	**Flag**
F1	210
F2	202
F3	203
F4	204
F5	205
F6	206
F7	207
F8	208
F9	209
F10	210
F11	211
F12	212
F13	213
Arrow up	221
Arrow down	222
Arrow left	223
Arrow right	224
Shift + Arrow up (Page up)	225
Shift + Arrow down (Page down)	226
Shift	230
R	231
I	232
C	233
Enter	234
0	235

Flag assignment of the keys	
1	236
2	237
3	238
4	239
5	240
6	241
7	242
8	243
9	244
.	245
-	246
=	248

Appendix A: List of Illustration