



FlatView HYG

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 FLATVIEW HYG – USER GUIDE

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Kontron Europe GmbH

Gutenbergstraße 2
85737 Ismaning
Germany
www.kontron.com

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NOTICE

You find the most recent version of the "General Safety Instructions" online in the download area of this product.

Revision History

Revision	Brief Description of Changes	Date of Issue	Author
1.0	Initial Version	2020-Dec-18	CW
1.1	Added battery caution in French and updated PSU caution in English and French. Removed pending from Compliance standards.	2021-Aug-09	CW
1.2	Added VESA power connector wire colors, new RMA link	2022-Jan-11	CW
1.3	New Part Number for the accessories Power Cable M12 IP67 protected length 2 m / 5 m	2022-Mar-18	CW
1.4	New VESA mount rear view photo and new VESA mount HDMI pinout.	2022-Apr-19	CW
1.5	Updated Table 3: Accessory List	2022-July-12	CW
1.6	Updated Table 3: Accessory List and added Figure 8 and Figure 9.	2023-Aug-22	CW
1.7	Updated Table 3: Accessory List and Chapters 10.3.1 and 10.3.2	2023-Oct-12	CW

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Symbols

The following symbols may be used in this user guide

⚠ 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.

NOTICE

NOTICE indicates a property damage message.

⚠ CAUTION

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



Electric Shock!

This symbol and title warn of hazards due to electrical shocks (> 60 V) when touching products or parts of products. Failure to observe the precautions indicated and/or prescribed by the law may endanger your life/health and/or result in damage to your material.



ESD Sensitive Device!

This symbol and title inform that the electronic boards and their components are sensitive to static electricity. Care must therefore be taken during all handling operations and inspections of this product in order to ensure product integrity at all times.



HOT Surface!

Do NOT touch! Allow to cool before servicing.



Laser!

This symbol informs of the risk of exposure to laser beam and light emitting devices (LEDs) from an electrical device. Eye protection per manufacturer notice shall review before servicing.



This symbol indicates general information about the product and the user guide.

This symbol also indicates detail information about the specific product configuration.



This symbol precedes helpful hints and tips for daily use.

For Your Safety

Your new Kontron product was developed and tested carefully to provide all features necessary to ensure its compliance with electrical safety requirements. It was also designed for a long fault-free life. However, the life expectancy of your product can be drastically reduced by improper treatment during unpacking and installation. Therefore, in the interest of your own safety and of the correct operation of your new Kontron product, you are requested to conform with the following guidelines.

High Voltage Safety Instructions

As a precaution and in case of danger, the power connector must be easily accessible. The power connector is the product's main disconnect device.

⚠ CAUTION

Warning

All operations on this product must be carried out by sufficiently skilled personnel only.

⚠ CAUTION



Electric Shock!

Before installing a non hot-swappable Kontron product into a system always ensure that your mains power is switched off. This also applies to the installation of piggybacks. Serious electrical shock hazards can exist during all installation, repair, and maintenance operations on this product. Therefore, always unplug the power cable and any other cables which provide external voltages before performing any work on this product.

Earth ground connection to vehicle's chassis or a central grounding point shall remain connected. The earth ground cable shall be the last cable to be disconnected or the first cable to be connected when performing installation or removal procedures on this product.

Special Handling and Unpacking Instruction

NOTICE



ESD Sensitive Device!

Electronic boards and their components are sensitive to static electricity. Therefore, care must be taken during all handling operations and inspections of this product, in order to ensure product integrity at all times.

⚠ CAUTION

Handling and operation of the product is permitted only for trained personnel within a work place that is access controlled. Follow the "General Safety Instructions" supplied with the product.

Do not handle this product out of its protective enclosure while it is not used for operational purposes unless it is otherwise protected.

Whenever possible, unpack or pack this product only at EOS/ESD safe work stations. Where a safe work station is not guaranteed, it is important for the user to be electrically discharged before touching the product with his/her hands or tools. This is most easily done by touching a metal part of your system housing.

It is particularly important to observe standard anti-static precautions when changing piggybacks, ROM devices, jumper settings etc. If the product contains batteries for RTC or memory backup, ensure that the product is not placed on conductive surfaces, including anti-static plastics or sponges. They can cause short circuits and damage the batteries or conductive circuits on the product.

Lithium Battery Precautions

If your product is equipped with a lithium battery, take the following precautions when replacing the battery.

⚠ CAUTION

Caution: Risk of Explosion if Battery is replaced by an Incorrect Type. Dispose of Used Batteries According to the Instructions.

ATTENTION: Risque d'explosion si la batterie est remplacée par un type incorrect. Mettre au rebus les batteries usagées selon les instructions.

General Instructions on Usage

In order to maintain Kontron's product warranty, this product must not be altered or modified in any way. Changes or modifications to the product, that are not explicitly approved by Kontron and described in this user guide or received from Kontron Support as a special handling instruction, will void your warranty.

This product should only be installed in or connected to systems that fulfill all necessary technical and specific environmental requirements. This also applies to the operational temperature range of the specific board version that must not be exceeded. If batteries are present, their temperature restrictions must be taken into account.

In performing all necessary installation and application operations, only follow the instructions supplied by the present user guide.

Keep all the original packaging material for future storage or warranty shipments. If it is necessary to store or ship the product, then re-pack it in the same manner as it was delivered.

Special care is necessary when handling or unpacking the product. See Special Handling and Unpacking Instruction.

Quality and Environmental Management

Kontron aims to deliver reliable high-end products designed and built for quality, and aims to complying with environmental laws, regulations, and other environmentally oriented requirements. For more information regarding Kontron's quality and environmental responsibilities, visit <http://www.kontron.com/about-kontron/corporate-responsibility/quality-management>.

Disposal and Recycling

Kontron's products are manufactured to satisfy environmental protection requirements where possible. Many of the components used are capable of being recycled. Final disposal of this product after its service life must be accomplished in accordance with applicable country, state, or local laws or regulations.

WEEE Compliance

The Waste Electrical and Electronic Equipment (WEEE) Directive aims to:

- ▶ Reduce waste arising from electrical and electronic equipment (EEE)
- ▶ Make producers of EEE responsible for the environmental impact of their products, especially when the product become waste
- ▶ Encourage separate collection and subsequent treatment, reuse, recovery, recycling and sound environmental disposal of EEE
- ▶ Improve the environmental performance of all those involved during the lifecycle of EEE



Environmental protection is a high priority with Kontron.

Kontron follows the WEEE directive.

You are encouraged to return our products for proper disposal.

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1/ Introduction

The FlatView HYG is designed for use in applications with the highest requirements in hygiene, e.g. food processing and pharmaceutical industry following EHEDG guidelines. With a completely sealed stainless steel housing and IP69K protection the FlatView HYG is highly resistant to detergents and prepared for easy cleaning and wash down. The 21.5" industrial monitor offers PCAP touch or protection glass with anti-glare surface for best readability.

Mounting options with support arm or VESA and operation in landscape or portrait mode guarantee utmost flexibility.

Figure 1: FlatView HYG



2/ General Safety Instructions

Please read this passage carefully and take careful note of the instructions, which have been compiled for your safety and to ensure to apply in accordance with intended regulations. If the following general safety instructions are not observed, it could lead to injuries to the operator and/or damage of the product; in cases of non-observance of the instructions Kontron Europe is exempt from accident liability, this also applies during the warranty period.

The product has been built and tested according to the basic safety requirements for low voltage (LVD) applications and has left the manufacturer in safety-related, flawless condition. To maintain this condition and to also ensure safe operation, the operator must not only observe the correct operating conditions for the product but also the following general safety instructions:

- ▶ The product must be used as specified in the product documentation, in which the instructions for safety for the product and for the operator are described. These contain guidelines for setting up, installation and assembly, maintenance, transport or storage.
- ▶ The on-site electrical installation must meet the requirements of the country's specific local regulations.
- ▶ If a power cable comes with the product, only this cable should be used. Do not use an extension cable to connect the product.
- ▶ To guarantee that sufficient air circulation is available to cool the product, please ensure that the ventilation openings are not covered or blocked. If a filter mat is provided, this should be cleaned regularly. Do not place the product close to heat sources or damp places. Make sure the product is well ventilated.
- ▶ Only connect the product to an external power supply providing the voltage type (AC or DC) and the input power (max. current) specified on the Kontron Product Label and meeting the requirements of the Limited Power Source (LPS) and Power Source (PS2) of UL/IEC 62368-1.
- ▶ Only products or parts that meet the requirements for Power Source (PS1) of UL/IEC 62368-1 may be connected to the product's available interfaces (I/O).
- ▶ Before opening the product, make sure that the product is disconnected from the mains.
- ▶ Switching off the product by its power button does not disconnect it from the mains. Complete disconnection is only possible if the power cable is removed from the wall plug or from the product. Ensure that there is free and easy access to enable disconnection.
- ▶ The product may only be opened for the insertion or removal of add-on cards (depending on the configuration of the product). This may only be carried out by qualified operators.
- ▶ If extensions are being carried out, the following must be observed:
 - ▶ all effective legal regulations and all technical data are adhered to
 - ▶ the power consumption of any add-on card does not exceed the specified limitations
 - ▶ the current consumption of the product does not exceed the value stated on the product label
- ▶ Only original accessories that have been approved by Kontron Europe can be used.
- ▶ Please note: safe operation is no longer possible when any of the following applies:
 - ▶ the product has visible damages or
 - ▶ the product is no longer functioning
 In this case the product must be switched off and it must be ensured that the product can no longer be operated.
- ▶ Handling and operation of the product is permitted only for trained personnel within a work place that is access controlled.
- ▶ CAUTION: Risk of explosion if the battery is replaced incorrectly (short-circuited, reverse-poled, wrong battery type). Dispose of used batteries according to the manufacturer's instructions.
- ▶ This product is not suitable for use in locations where children are likely to be present

Additional Safety Instructions for DC Power Supply Circuits

- ▶ To guarantee safe operation, please observe that:
 - ▶ the external DC power supply must meet the criteria for LPS and PS2 (UL/IEC 62368-1)
 - ▶ no cables or parts without insulation in electrical circuits with dangerous voltage or power should be touched directly or indirectly
 - ▶ a reliable protective earthing connection is provided

- ▶ a suitable, easily accessible disconnecting device is used in the application (e.g. overcurrent protective device), if the product itself is not disconnect able
- ▶ a disconnect device, if provided in or as part of the product, shall disconnect both poles simultaneously
- ▶ interconnecting power circuits of different products cause no electrical hazards
- ▶ A sufficient dimensioning of the power cable wires must be selected – according to the maximum electrical specifications on the product label – as stipulated by EN62368-1 or VDE0100 or EN60204 or UL61010-1 regulations.

2.1. Electrostatic Discharge (ESD) Precautions



A sudden discharge of electrostatic electricity can destroy static-sensitive devices or micro-circuitry.

Proper packaging and grounding techniques are necessary precautions to prevent damage. Always take the following general precautions:

1. Always be properly grounded when touching ESD sensitive product(s).
2. Always handle ESD sensitive product(s) by their casing.
3. Switch off power and input signals before inserting and removing connectors or connecting test equipment.

2.2. Grounding Methods

Proper grounding methods are necessary to avoid damage to the product. Always take the following general precautions:

1. Ensure the product is grounded before powering on the product.
2. Connect the product only to an applied ground that meets all applicable local, national and international grounding requirements.
3. When assembling, the first cable to be connected is the ground and when disassembling, the last cable to be removed is the ground cable.

⚠ CAUTION

The installation sites applied ground must meet the ground requirements specified in this user guide and in your local, national and international region.

2.3. Instructions for Lithium Battery

If the product is equipped with a lithium battery. When replacing the battery observe the instructions below.

⚠ CAUTION

Caution: Risk of Explosion if Battery is replaced by an Incorrect Type. Dispose of Used Batteries According to the Instructions.

ATTENTION: Risque d'explosion si la batterie est remplacée par un type incorrect. Mettre au rebut les batteries usagées selon les instructions.



Do not dispose of lithium batteries in general trash collection. Dispose of the battery according to the local regulations dealing with the disposal of these special materials, (e.g. to the collecting points for dispose of batteries).

3/ Scope of Delivery

3.1. Packaging

All parts are delivered together in a product specific cardboard package designed to provide adequate protection to absorb shock. Kontron recommends keeping the packaging to store or transport the FlatView HYG.

3.2. Unpacking

To unpack the FlatView HYG, perform the following:

1. Remove packaging.
2. Do not discard the original packaging. Keep the original packaging for future transportation or storage.
3. Check the delivery for completeness by comparing the delivery with the original order.
4. Keep the associated paperwork. It contains important information for handling the product.
5. Check the product for visible shipping damage.

If you notice any shipping damage or inconsistencies between the contents and the original order, contact your dealer.

3.3. Scope of Delivery

Check that your delivery is complete. If you discover damaged or missing items, contact your dealer.

Table 1: Scope of Delivery FlatView HYG Support Arm



	Qty.	Part Number	Part Description
	1	Depends on configuration, see Chapter 7/ Order Information.	FlatView HYG 21.5" with support arm bracket and cabling

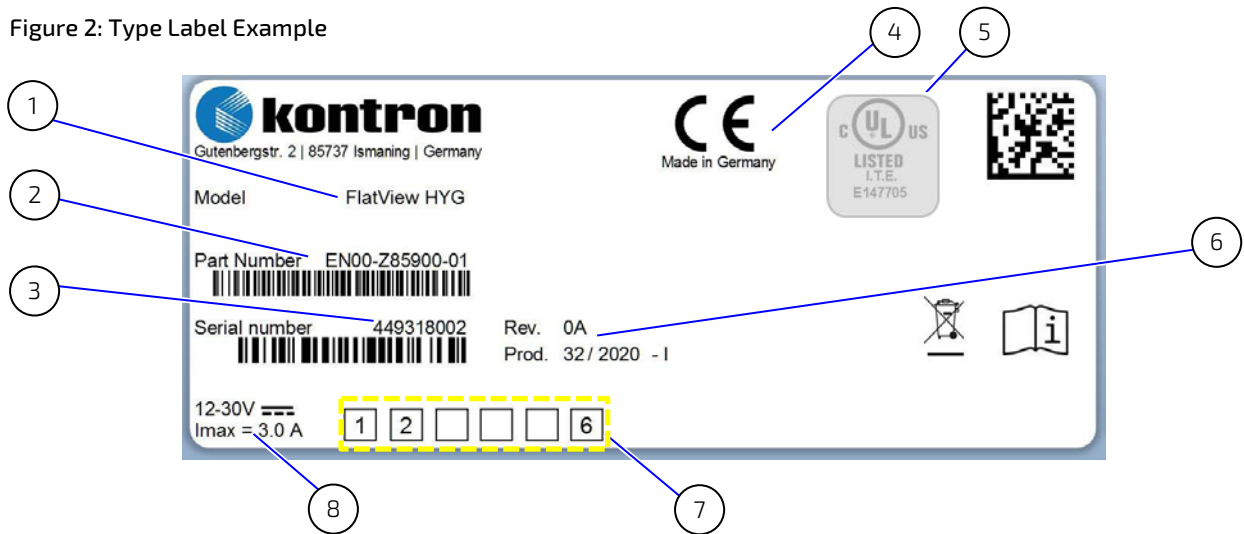
Table 2: Scope of Delivery FlatView HYG VESA

	Qty.	Part Number	Part Description
	1	Depends on configuration, see Chapter 7/ Order Information.	FlatView HYG 21.5" with VESA 100 pattern

3.4. Type Label and Product Identification

Product and Package Label, size 85 x 35mm, polyester matt silver.

Figure 2: Type Label Example



- | | | | |
|---|---------------------------|---|--------------------------------------|
| 1 | Model name 'FlatView HYG' | 5 | Optional certification |
| 2 | Part number and barcode | 6 | Product revision and production date |
| 3 | Serial number and barcode | 7 | Internal use |
| 4 | Certifications | 8 | Electrical specification |

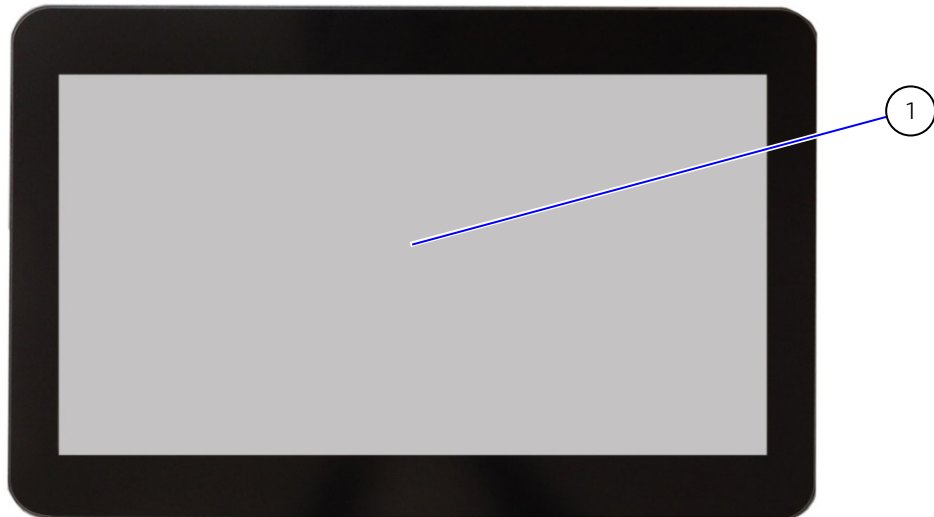


Certifications such as UL or FCC may be requested optionally.

5/ Product Description

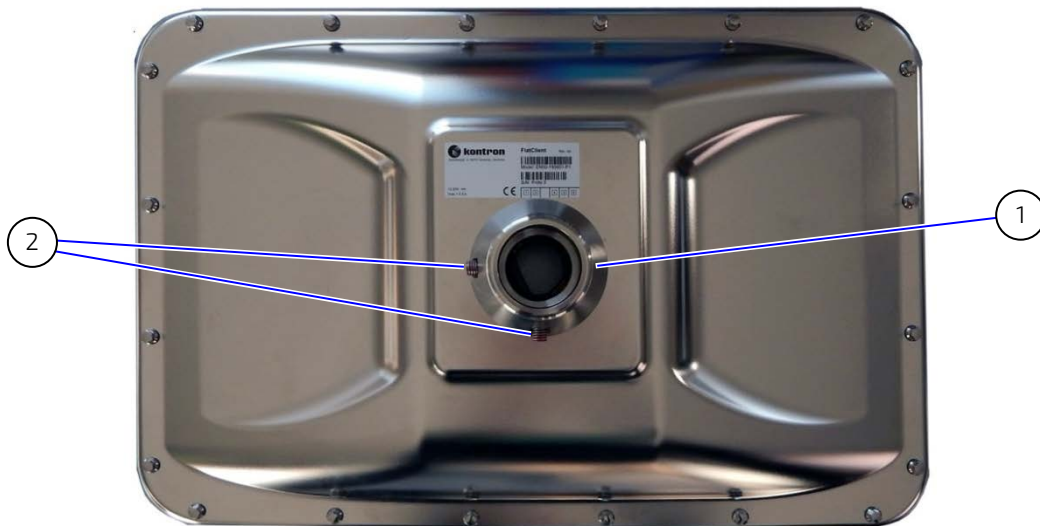
5.1. Product Views

Figure 3: Front View FlatView HYG (Support Arm /VESA)



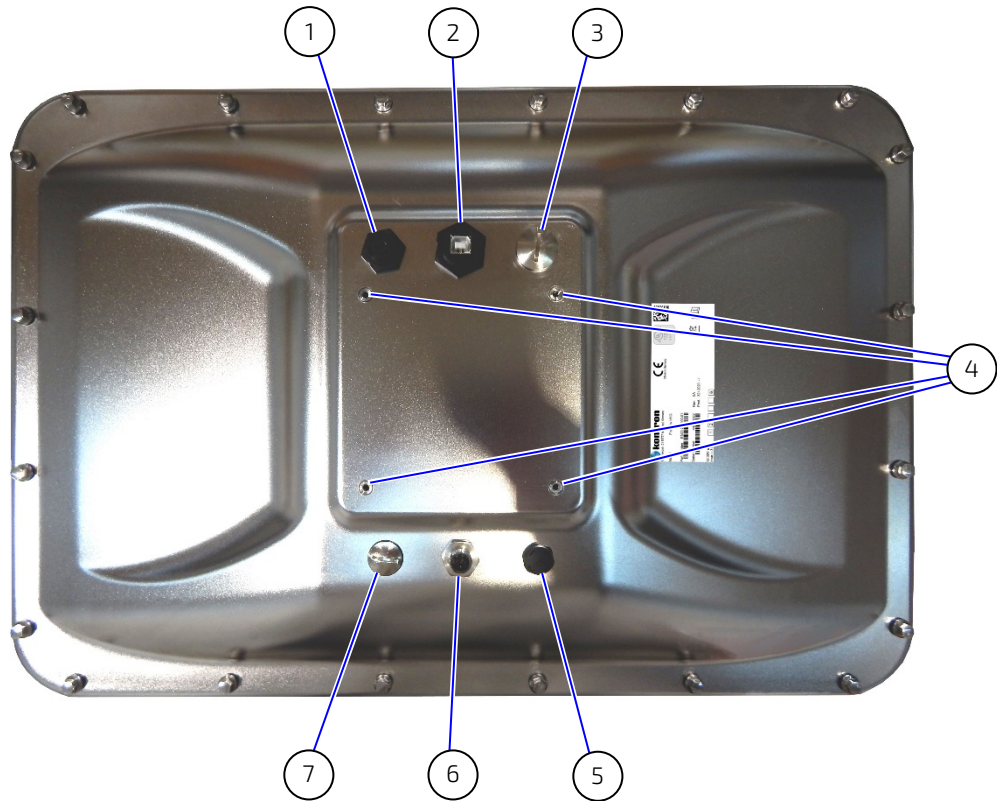
- 1 TFT Display with PCAP touch

Figure 4: Rear View FlatView HYG Support Arm



- 1 Support arm bracket with 48 mm tube (Rittal: 6664.500)
- 2 2x Support arm bracket fastening screws

Figure 5: Rear View FlatView HYG VESA



- | | | | |
|---|-----------------------------|---|--------------------------------|
| 1 | 1x HDMI-D connector | 5 | 1x Protective Vent |
| 2 | 1x USB 2.0 Type B connector | 6 | 1x M12 A-Coded power connector |
| 3 | 1x Stud | 7 | 1x Stud |
| 4 | VESA 100 pattern | | |

6/ Product Specification

6.1. Block Diagrams

Figure 6: Block Diagram FlatView HYG Support Arm

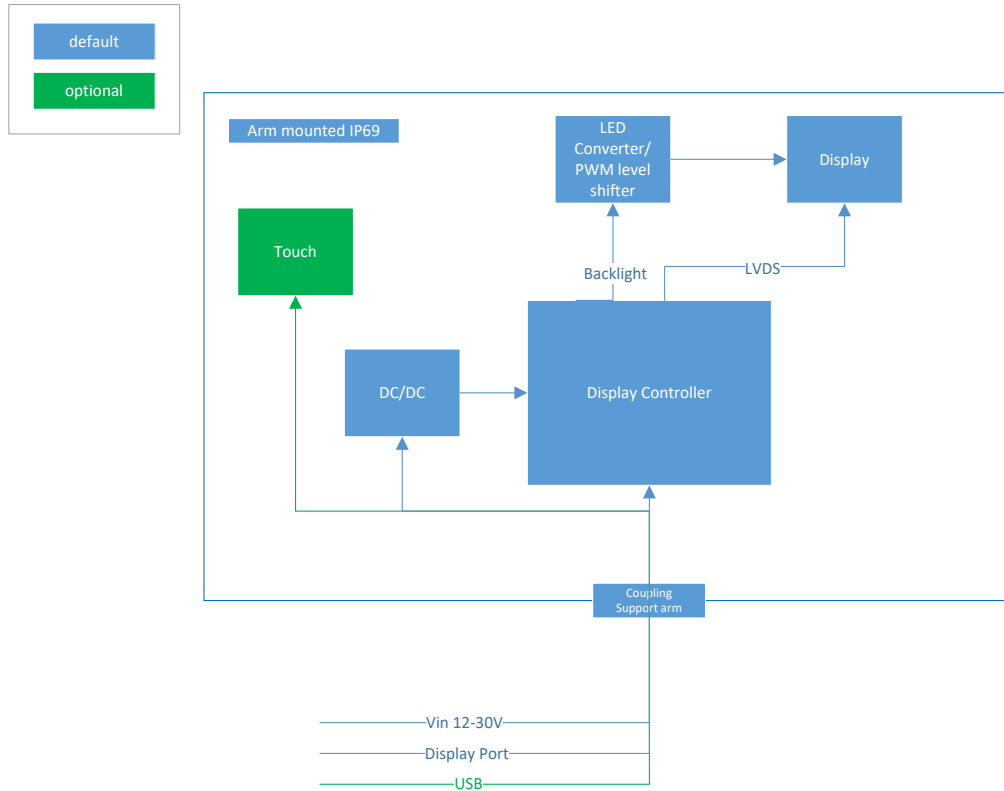
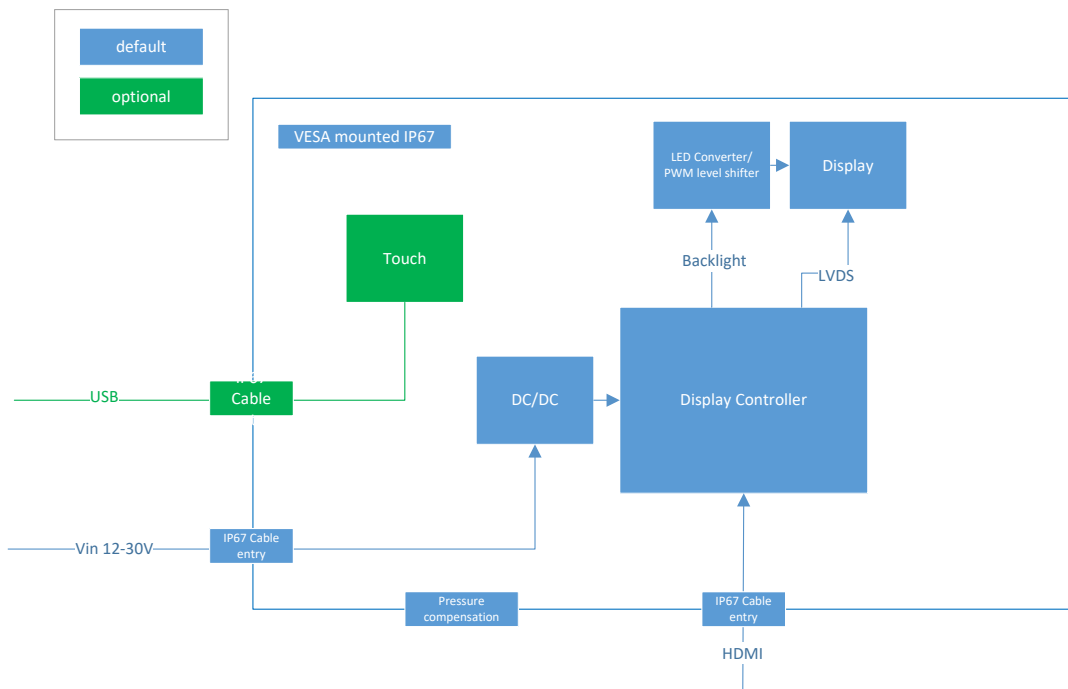


Figure 7: Block Diagram FlatView HYG VESA



6.2. Technical Specification

Table 4: Technical Specification

Display Variant	VESA	Support Arm
Display Size	21.5"	
Resolution (pixel)	1920x1080	
Format	16:9	
Brightness	300 cd/m ²	
Viewing Angle	H178 / 178	
LED Lifetime (> 50%, 25°C)	> 50.000 h	
I/O		
Standard Interfaces	HDMI, USB touch and PWR	DP, USB touch and PWR
Options		
	High brightness display Display sizes and resolutions	

6.3. Mechanical Specification

Table 5: Mechanical specification

Display Variant	VESA	Support Arm
Dimensions (WxHxD) (w/o connector & mounting bracket)	542 mm x 366 mm x 74 mm ^[1] (21.3" x 14.4" x 2.9")	542 mm x 366 mm x 126 mm ^[1] (21.3" x 14.4" x 4.9")
Mounting	VESA 100 pattern with 4x M4 screw	Support arm bracket with 48 mm tube, compatible with Rittal 6664.5000
Viewing Area	476.63 mm x 268.11 mm (18.7" x 10.5")	
Weight	10.5 kg approx. (23.15 lb)	
Cooling	Passive Cooling, fanless	
Front Option	Protective capacitive touch (PCAP)/safety glass/PMMA	

^[1] For the complete mechanical dimensions, see Chapter 8/: Mechanical Diagrams.

6.4. Environmental Specification

Table 6: Environmental Specifications

Display Variant	VESA	Support Arm
Temperature	Operating	0°C to 50°C ambient (32 F to 122 F)
	Storage	-10°C to 60°C ambient (14 F to 140 F)
Humidity	10%-90% @ 39°C, non-condensing	
Altitude	Operating	Up to 3000 m (9900 ft.)
	Storage	Up to 5000 m (16500 ft.)

NOTICE

FlatView HYG is intended for indoor use only. To avoid product damage do not use in a sheltered outdoor, outdoor or sunlit environment.

Observe that the product is not exposed to direct sunlight (UV radiation):

- Prolonged exposure shortens field life and voids the warranty
- Short exposure may lead to higher temperatures inside the product and cause permanent damage
- Direct exposure accelerates long-term aging

For intend use in an outdoor environment or a sunlit environment, contact your Kontron representative.

6.5. Compliance

The FlatView HYG complies with the relevant requirements and the approximation of the laws relating to CE and the standards that are constitutional parts of the declaration.

Table 7: Compliance

Display Variant	VESA	Support Arm
Certification	CE, UL	
Safety	EN 62368-1	
EMC	EN55032 class B	
Low Voltage Directive	2014/35/EU	
EMC Directive	2014/30/EU	
RoHS II Directives	2011/65/EU	
Protection Class	IP 67 / DIN EN 60529	IP69K (ISO 20653)
Shock DIN EN 60068-2-27	Operating Shock: 15 G, 11 ms duration, half-sinus Storage Shock: 30 G, 11 ms duration, half-sinus	Operating Shock: 15 G, 11 ms duration, half-sinus
Vibration DIN EN 60068-2-6	Operating Vibration: 5 Hz to 500 Hz: 1.0 G/3 axis Storage Vibration: 5 Hz to 500 Hz: 2.0 G/3 axis	Operating Vibration: 5 Hz to 500 Hz: 1.0 G/3 axis
MTBF	> 50000 h	
Waste Electrical and Electronic Equipment (WEEE)	2002/19/EC	



If the product is modified, the prerequisites for specific approvals may no longer apply.

6.6. Power Specification

Before connecting the FlatView HYG to an external power supply ensure that the power supply meets the required electrical specification on the product's Type Label (Figure 2, pos. 8) and described in Table 8: Electrical Specification. Protection and supply limitation must also be taken into consideration.

Table 8: Electrical Specification

Electrical Specification	
Input Voltage	24 VDC (Range 12 VDC to 30 VDC)
Input Current (I max)	3 A
Power (max.)	65 W

⚠ CAUTION

Only connect the product to an external power supply providing the voltage type (AC or DC) and the input power (max. current) specified on the Kontron Product Label.

The external power supply must meet the requirements of ES1/PS2 according to IEC/UL 62368-1.

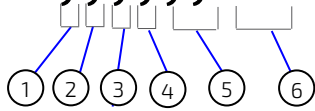
Connectez le produit uniquement à une alimentation externe fournissant le type de tension (AC ou DC) et la puissance d'entrée (courant max.) spécifiés sur l'étiquette du produit Kontron. L'alimentation externe doit répondre aux exigences de ES1/PS2 selon IEC/UL 62368-1.

NOTICE

Ensure that the power supply is used according to the manufacturer's instructions.

7/ Order Information

EN00-**yyyyyy**-**xx**



1. Product family Z = FlatView

2. Display size 8 = 21.5"

3. Touch Technology:
 - 3 = Protection safety glass
 - 5 = Touch PCAP
 - C = PMMA
 - D = Touch PCAP PMMA

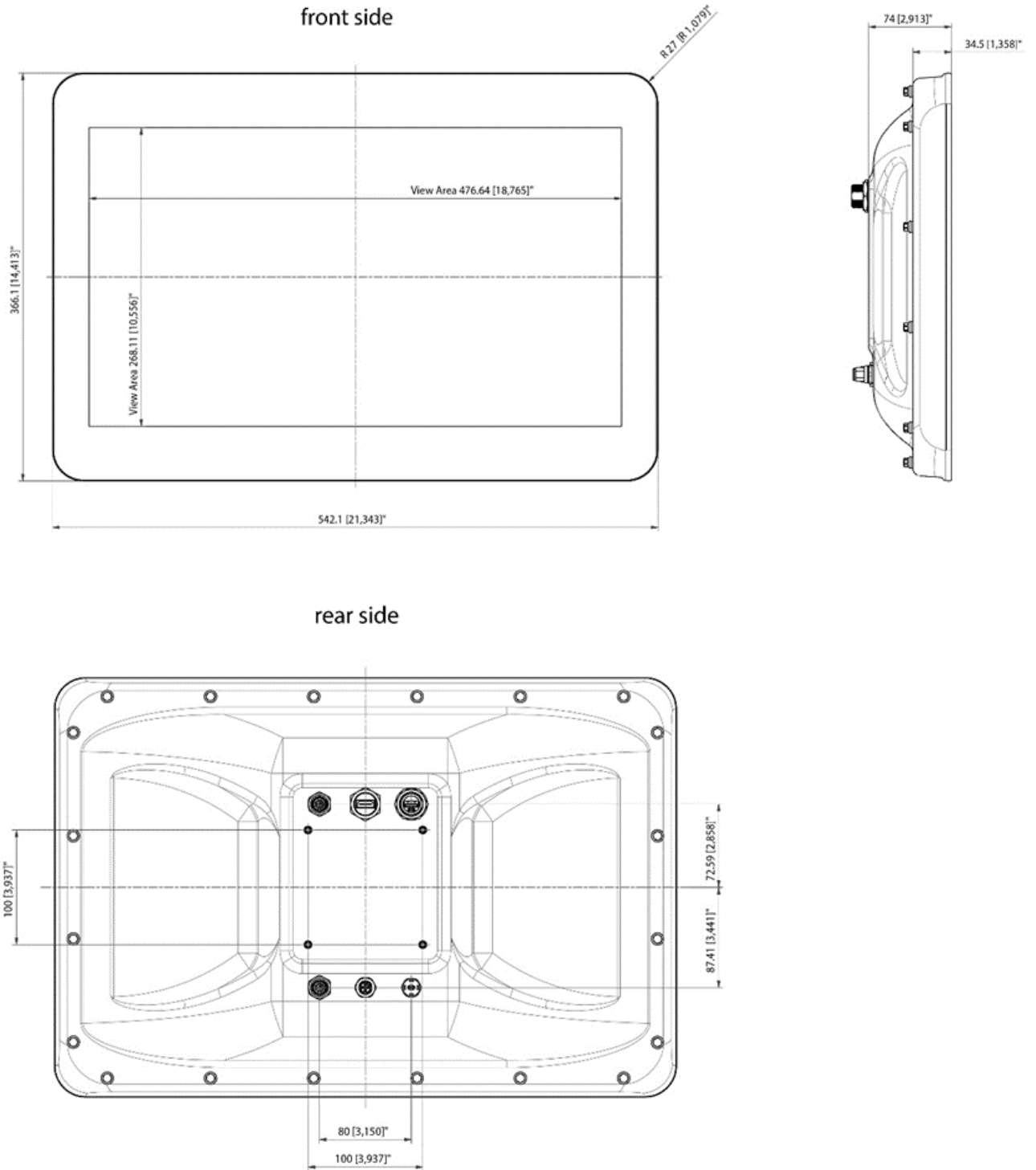
4. Mounting Variant:
 - 8 = HYG Monitor VESA
 - 9 = HYG Monitor Support Arm

5. Options: Used on demand

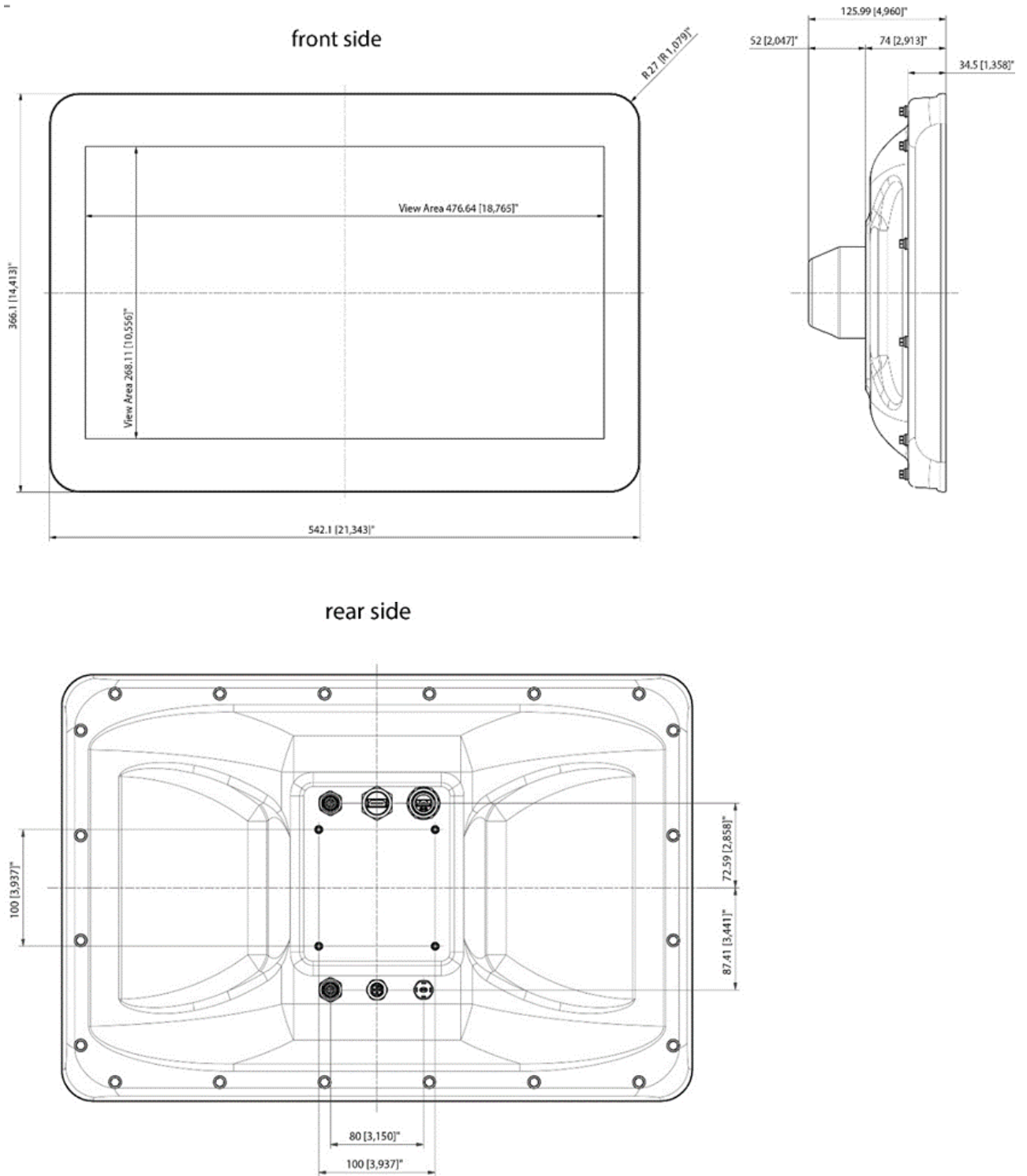
6. Internal Code: Revision

8/ Mechanical Diagrams

8.1. FlatView HYG 21.5" VESA (M12)



8.2. FlatView HYG 21.5" Support Arm



9/ Connectors

9.1. FlatView HYG Support Arm Connectors

The power, Display Port (DP) and USB 2.0 cables on the rear side of the FlatView HYG Support Arm are factory installed and secured internally. The cables exit through the support arm bracket and terminate externally with the following connectors or wires.

9.1.1. Power Connector

The power cable terminates with three colored wires with wired end ferrules to connect to a power source.

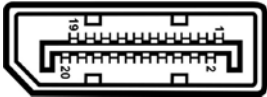
Table 9: Power Connector Cable with Wire End Ferrules

Wire Color	Signal Name
Black	GND
White	VIN (24 VDC)
Green	Functional Earth (FE)

9.1.2. Display Port

The Display Port (DP) cable terminates with a 20-pin DP connector.

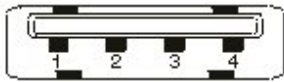
Table 10: Display Port Connector Pin Assignment

	Pin	Signal Name	Pin	Signal Name
	1	TX0+	2	GND
	3	TX0-	4	TX1+
	5	GND	6	TX1-
	7	TX2+	8	GND
	9	TX2-	10	TX3+
	11	GND	12	TX3-
	13	GND	14	GND
	15	AUX+	16	GND
	17	AUX-	18	Hot Plug Detect
	19	GND	20	PWR

9.1.3. USB Touch

This USB touch connector provides a USB 2.0 (upstream) connection and terminates with a USB 2.0 Type A connector.

Table 11: USB 2.0 Type A Connector Pin Assignment

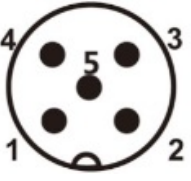
	Pin	Signal Name
	1	+5V
	2	Data-
	3	Data +
	4	Ground

9.2. FlatView HYG VESA Connectors

The power, HDMI and USB touch connectors on the rear side of the FlatView HYG VESA are IP67 protected.

9.2.1. Power Connector M12 A-coded -IP67 Protected

Table 12: M12 A-Coded (male) Power Connector Pin Assignment

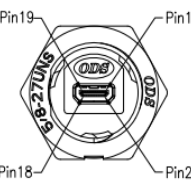
	Pin	Wire color	Signal Name
	1	Brown	VIN (24 VDC)
	2	White	
	3	Blue	
	4	Black	GND
	5	Grey	
	Shield	-	Functional Earth (FE)



To ensure IP67 protection, screw the mating connector firmly to the M12 A coded (male) power connector.

9.2.2. HDMI -IP67 Protected

Table 13: HDMI-D Connector Pin Assignment

	Pin	Signal	Pin	Signal
	1	Hot Plug Detect	11	TMDS Data0-
	2	Reserved	12	TMDS Clock+
	3	TMDS Data2+	13	Ground
	4	Ground	14	TMDS Clock-
	5	TMDS Data2-	15	Reserved
	6	TMDS Data1+	16	Ground
	7	Ground	17	DDC_CLK
	8	TMDS Data1-	18	DDC_DATA
	9	TMDS Data0+	19	+5 V Power
	10	Ground		

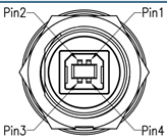


Low-active signals are indicated by a minus sign.

9.2.1. USB Touch IP67 Protected

This connector provides a USB 2.0 (upstream) connection.

Table 14: USB 2.0 - Type B Connector Pin Assignment

	Pin	Signal Name
	1	+5V
	2	Data-
	3	Data+
	4	Ground

10/ Installation and Start

⚠ CAUTION

Do Not Mount Alone

Due to the weight of the FlatView HYG, mounting alone may result in product damage or personal injury.

NOTICE

FlatView HYG is intended for indoor use only. To avoid product damage do not use in a sheltered outdoor, outdoor or sunlit environment.

Observe that the product is not exposed to direct sunlight (UV radiation):

- Prolonged exposure shortens field life and voids the warranty
- Short exposure may lead to higher temperatures inside the product and cause permanent damage
- Direct exposure accelerates long-term aging

For intend use in an outdoor environment or a sunlit environment, contact your Kontron representative.

NOTICE

Handle with care the screen may be damaged if dropped or bumped.

10.1. Support Arm Mounting

The FlatView HYG's support arm bracket is compatible with the Rittal 6664.5000 48 mm tube. When mounting only use a support arm fixture compatible with the Rittal 6664.5000 48 mm tube.

To mount, slide the support arm fixture into the support arm bracket and fasten using the two screws located on the support arm bracket, see Figure 4, pos. 2.

NOTICE

Only mount using a corresponding support arm fixtures for the Rittal 6664.5000 with 48 mm tube. Securely fasten the two support arm bracket screws.

10.2. VESA Mounting

The FlatView HYG's four threaded holes are compatible with the VESA 100 pattern. When selecting a VESA mounting bracket ensure that the mounting bracket supports the VESA 100.

To mount, always use four M4 screws that are long enough to secure the FlatView HYG. The required screw length depends on the thickness of the VESA bracket used and may not require a free thread length of more than 8 mm.

NOTICE

Mount using all four threaded holes with screws long enough to secure the FlatView HYG.

10.3. Startup Procedure

The FlatView HYG starts automatically when connected to power. Before connecting the FlatView HYG to an external DC power supply, observe the General Safety Instructions within this user guide and the instructions within this chapter.

⚠ CAUTION

Do not switch on or handle the product if there is any visible damage.

⚠ CAUTION

Only connect the product to an external power supply providing the voltage type (AC or DC) and the input power (max. current) specified on the Kontron Product Label.

The external power supply must meet the requirements of ES1/PS2 according to IEC/UL 62368-1.

Connectez le produit uniquement à une alimentation externe fournissant le type de tension (AC ou DC) et la puissance d'entrée (courant max.) spécifiés sur l'étiquette du produit Kontron. L'alimentation externe doit répondre aux exigences de ES1/PS2 selon IEC/UL 62368-1.

NOTICE

Support the power and I/O cables to minimize the strain on the connectors.

NOTICE

The last cable to be connected must always be the power cable.



All essential drivers are available in Kontron Customer section, visit [Customer Section | Kontron Europe and Asia](#).



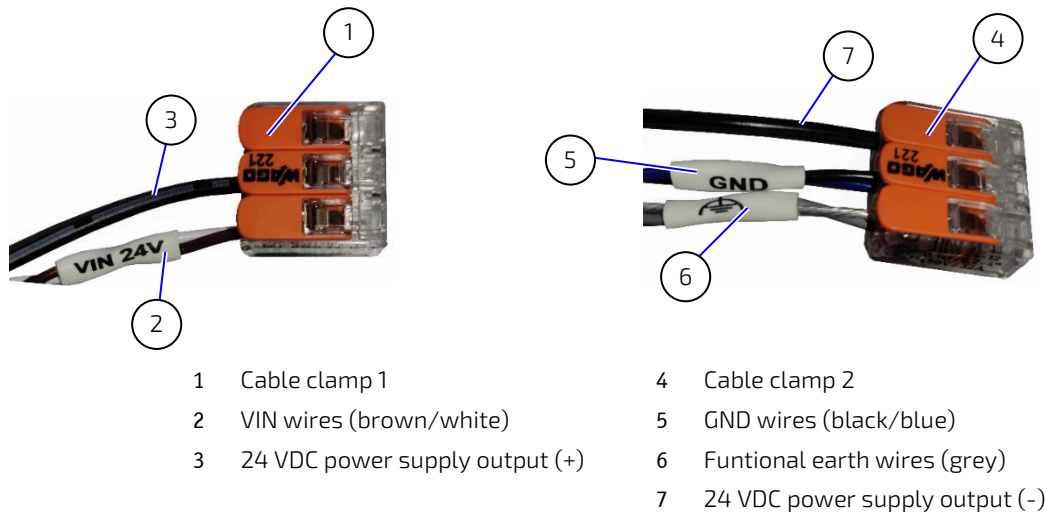
Observe and comply with the product's electrical specification, on the Type Label.

10.3.1. Starting up FlatView HYG VESA

To connect the FlatView HYG VESA to power using the Power Supply Kit VESA (see Table 3: Accessories, item 1), perform the following:

1. Connect the supplied M12 Power cable to the power connector on the rear side of the FlatView HYG (Figure 5, pos. 6). The power cable wires are color-coded and labeled VIN 24 V (brown/white), ground (black/blue) and functional earth (grey).
2. Insert the VIN wires into one of the supplied cable clamp (Figure 8, pos. 2) and ensure the VIN wires are firmly secured.
3. Insert the GND and functional earth wires into the second supplied cable clamp (Figure 8, pos. 5 and 6) and ensure the GND and functional earth wires are firmly secured.
4. Connect to the AC/DC power supply's power cable by inserting the corresponding (+/-) AC/DC Power supply's output wires into the cable clamps:
 - a. 24VDC (+) output to the cable clamp with the VIN wires (Figure 8, pos. 3).
 - b. 24 VDC (-) output to the cable clamp with the ground and functional earth wires (Figure 8, pos. 7).

Figure 8: Wired Cable Clamps



- When connected to power, the FlatView HYG starts automatically.

⚠ CAUTION

Ensure that the VIN 24V, Ground and Functional Earth wires are connected to the corresponding AC/DC power supply's 24 VDC (+/-) outputs.

To connect the FlatView HYG VESA to power using the supplied AC/DC power supply with installed M12 IP67 power connector (see Table 3: Accessories, item 3), perform the following:

- Attach the AC/DC power supply's power cable with 5-pin M12 A coded power connector to the power connector on the rear side of the FlatView HYG (Figure 5, pos. 6) and screwing firmly.
- Connect the AC/DC power supply's cable to the mains power supply outlet.
- When connected to power, the FlatView HYG starts automatically.

10.3.2. Starting up FlatView HYG Support Arm

To connect the FlatView HYG Support Arm to power using the Power Supply Kit Support Arm (see Table 3: Accessories, item 2), perform the following:

- Identify the power cable fed out of the support arm bracket. The power cable wires are color coded VIN 24 V (white), ground (black) and functional earth (green).
- Insert the VIN wire into the cable clamp and ensure the VIN wire is firmly secured.
- Insert the GND and functional earth wires into the second cable clamp and ensure the GND and functional earth wires are firmly secured.
- Connect the AC/DC power supply's power cable by inserting the corresponding (+/-) AC/DC power supply's output wires into the cable clamps:
 - 24VDC (+) output to the cable clamp with the VIN wire.
 - 24 VDC (-) output to the cable clamp with the GND and functional earth wires.
- When connected to power, the FlatView HYG starts automatically.

⚠ CAUTION

Ensure that the VIN 24V (white), Ground (black) and Functional earth (green) wires are connected to the corresponding AC/DC power supply's 24 VDC (+/-) outputs.

11/Maintenance

The FlatView HYG contains no user serviceable parts. Return the FlatView HYG to Kontron for maintenance and repair, see Chapter 12.2: Returning Defective Merchandise.

CAUTION

Opening product is prohibited due to the risk of electrical shock. There are no customer serviceable parts in the product. If problems of a technical nature occur, contact Kontron Support or return the product for repair.



If the product protection label is broken, the warranty is invalidated.

11.1. Cleaning

With a completely sealed stainless steel housing and IP67/IP69K protection the FlatView HYG is highly resistant to most detergents and prepared for easy cleaning and wash down. The FlatView HYG's smooth flat joint-less surfaces are ideal for the easy removal of dirt and dust. When cleaning the display's surface, do not use an abrasive substance that might scratch or damage the screen.

NOTICE

Do not use an abrasive substance that might scratch or damage the display.

12/ Technical Support

If problems of a technical nature occur, contact Kontron Support or return the product for repair.

To contact technical support to request support via e-mail, report documentation errors, or general customer feedback, use Kontron's Contact Support form by visiting:

<http://www.kontron.com/about-kontron/company-overview/contact-us/forms/contact-support>.

In case the request form does not work or you do not get a response within 48 hours, follow up with support@kontron.com

Make sure you have the following product identification information on hand when you call:

- ▶ Product name,
- ▶ Product Model number
- ▶ Serial number (SN) of the unit



The serial number can be found on the product's type label.

Be ready to explain the nature of your problem to the service technician.

12.1. Warranty

Due to their limited service life, parts which by their nature are subject to a particularly high degree of wear (wearing parts) are excluded from the warranty beyond that provided by law.



If the protection label is broken, the warranty is invalidated.

12.2. Returning Defective Merchandise

All equipment returned to Kontron must have a Return of Material Authorization (RMA) number assigned exclusively by Kontron. Kontron cannot be held responsible for any loss or damage caused to the equipment received without an RMA number. The buyer accepts responsibility for all freight charges for the return of goods to Kontron's designated facility. Kontron will pay the return freight charges back to the buyer's location in the event that the equipment is repaired or replaced within the stipulated warranty period.

Follow these steps before returning any product to Kontron.

1. Visit Kontron's the RMA Information website: <https://www.kontron.com/en/support/rma-information>.
2. Download the RMA Request sheet for **Kontron Europe GmbH – Ismaning** and fill out the form. Take care to include a short detailed description of the observed problem or failure and to include the product identification Information (Name of product, Product number and Serial number). If a delivery includes more than one product, fill out the above information in the RMA Request form for each product.
3. Send the completed RMA-Request form to the fax or email address given on the RMA Request sheet and Kontron will provide an RMA-Number.
4. The goods for repair must be packed properly for shipping, considering shock and ESD protection.
5. Include the RMA-Number with the shipping paperwork and send the product to the delivery address provided in the RMA form or received from Kontron RMA Support.



Goods returned to Kontron in non-proper packaging will be considered as customer caused faults and cannot be accepted as warranty repairs.

List of Acronyms

Table 15: List of Acronyms

AC	Alternating Current
CE	Conformité Européenne
DC	Direct Current
EMC	ElectroMagnetic ompatibility
ESD	ElectroStatic Discharge
ESD	ElectroStatic Device
ETC	Embedded Computing Technology
FCC	Federal Communications Commission
FE	Funtional Earth
IOT	Internet of Things
LED	Light Emitting Diode
LPS	Limited Power Source
LVD	Low Voltage Device
MDI	Media Dependent Interface

PCAP	Protective Capacitive Touch
PMMA	Poly(methyl methacrylate)
PS	Power Source
RMA	Return Material Authorization
RoHS	Restriction of Hazardous Substances
TFT	Thin Film Transistor
UEFI	Unified Extensible Firmware Interface
USB	Universal Serial Bus
UV	Ultra Violet
VESA	Video Electronics Standards Association
WEEE	Waste Electrical and Electronic Equipment



About Kontron

Kontron is a global leader in embedded computing technology (ECT). Kontron offers a combined portfolio of secure hardware, middleware and services for Internet of Things (IoT) and Industry 4.0 applications. With its standard products and tailor-made solutions based on highly reliable state-of-the-art embedded technologies, Kontron provides secure and innovative applications for a variety of industries. As a result, customers benefit from accelerated time-to-market, reduced total cost of ownership, product longevity and the best fully integrated applications overall.

For more information, please visit: <http://www.kontron.com/>



Global Headquarters

Kontron Europe GmbH

Gutenbergstraße 2
85737 Ismaning, Germany
Tel.: +49 821 4086-0
Fax: +49 821 4086-111
info@kontron.com