Installation and Operating Instructions (EN)

MODIS 240-FIVE FullHD

ELEMENT
ONE

ELEMENT ONE

Explanation of symbols

(!)	Important Information
⚠	Caution
⊘	Ban

Dear Customer,

thank you very much for purchasing our product.

Please read this installation and operating instructions carefully and keep them in a safe place.

In this manual we have endeavored to provide you with all the necessary information to enable you to have most success with the products.

Ralf Küchel
Technical Manager / CTO

Table of Contents

Commissioning Date

Date:

Serial No.:

Keep this document for future reference.

Pass on this document when you pass on the device.

Notes

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Scope of Supply

- MODIS 240 FIVE FullHD
- HDMI cable
- Table power supply - Input: 100-240V AC, 50 / 60Hz. 1.5A; Output: 12V 60W
- MAX 5.A (Cable length DC ~ 140cm)
- Power cable 1.5m
- transport cushion
- Installation and Operating Instructions / Manual

Description

MODIS 240 FIVE FullHD is an in furniture integratable, retractable 23.8" monitor system. The lifting mechanism is eqipeed with two individual motors: One for extending and retracting the monitor and one for the front plate. The motion is "notebook-like" – the monitor side in closed state is not visible. The display angle is steplessly controllable at the push of a button on the device or via the remote control interface). General control is via push-button on the device or via remote control interfaces (TCP / IP or dry contact). The operation is low noise <40dB. The two 12V stepper motors allows precise synchronization for simultaneous extension when using multiple MODIS 240 FIVE FullHD.

The system MODIS 240 FIVE FullHD consists of a TFT display with a frame for installation in a horizontal furniture surface.

In the starting position (retracted), the system is flush with the furniture surface and covered.
The power supply of the display is interrupted.
By pressing the button, the MODIS 240 FIVE FullHD display moves to the operating position (extended).
Power will be supplied to the display.
Pressing the button again initiates the retraction.
The power supply of the display will be interrupted.
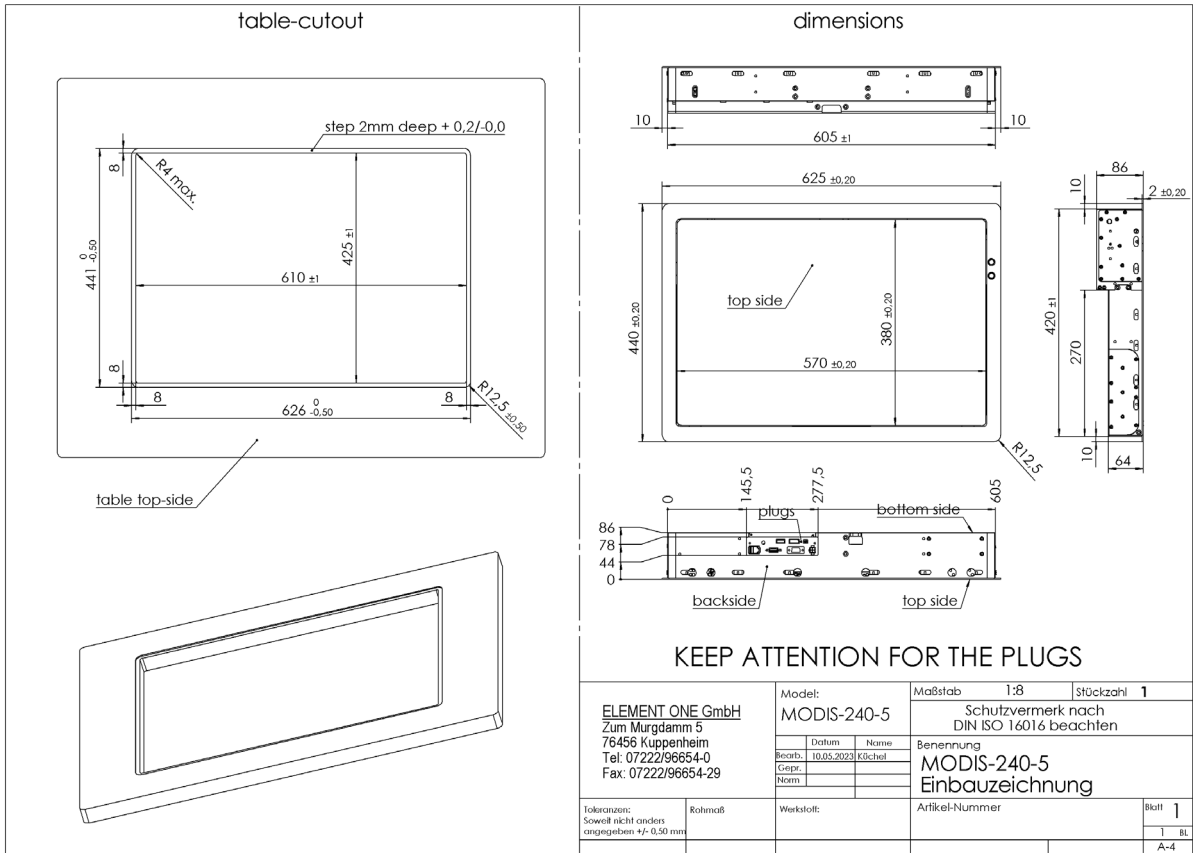Both movements can be interrupted by a short push of a button.
The solid frame and high-quality mechanical elements ensure smooth, jerk- and vibration-free operation.

To prevent personal injury and damage, MODIS 240 FIVE FullHD has been equipped with a safety control. If counterforces of 20 N or more occur during extension or retraction, an acoustic signal sounds and the process is interrupted and a countermovement is initiated for approx. 1 sec.

Features

- 15mm slim monitor housing made of powder coated aluminum
- 2mm hardened and anti-reflective protective screen
- Compact housing dimensions
- LightWeight, LowNoise, LowEnergy design
- HDMI HDCP compatible
- FullHD resolution
- 2x stepper motors 12V and precise mechanics
- Connector for remote control 9-pin d-sub and RJ45
- Electronic clamping protection plus mechanical protection in case of maloperation

Dimensions

table-cutout

dimensions

step 2mm deep + 0,2/-0,0

R4 max.

610 ±1

425 ±1

441 0/-0,50

8

8

8

8

626 0/-0,50

R12.5 ±0,50

table top-side

10

605 ±1

10

625 ±0,20

440 ±0,20

top side

380 ±0,20

570 ±0,20

R12.5

86

2 ±0,20

10

420 ±1

270

10

64

145,5

277,5

0

plugs

bottom side

605

86
78
44
0

backside

top side

KEEP ATTENTION FOR THE PLUGS

ELEMENT ONE GmbH
Zum Murgdamm 5
76456 Kuppenheim
Tel: 07222/96654-0
Fax: 07222/96654-29

Model:
MODIS-240-5

Maßstab   1:8   Stückzahl 1

Schutzvermerk nach
DIN ISO 16016 beachten

	Datum	Name
Bearb.	10.05.2023	Köchel
Gepr.		
Norm		

Benennung
MODIS-240-5
Einbauzeichnung

Toleranzen:
Soweit nicht anders
angegeben +/- 0,50 mm

Rohmaß

Werkstoff:

Artikel-Nummer

Blatt 1

1   Bl.

A-4

Safety Instructions

$\bigodot$ = Important Information

$\triangle$ = Caution

$\bigcirc$ = Ban

$\bigcirc$ The device may only be opened in a disconnected state by authorized qualified personnel!

$\bigodot$ Let damage and defects be repaired immediately by authorized specialists.

$\triangle$ Do not operate this device with any accessories other than the supplied ones.

$\bigodot$ Never open or close the monitor by force!

$\triangle$ In the event of damage caused by third-party accessories, e.g. power supply unit, or unauthorized attachments or modifications, any warranty and liability claims are excluded.

$\triangle$ To achieve the best image quality and to avoid image distortions, shadowing, image shifts, synchronization errors, etc., use only high-quality cables: at least double-shielded and with control cable according to VESA DDC 1/2 B standard.

$\bigodot$ Do not slide sharp or hard objects over the surface, it may be damaged.

$\bigodot$ Immediately remove any liquids spilled on the surface with a cloth.

$\bigodot$ Do not load the device with more than 1.0 kg when closed.

$\bigodot$ Do not cover the switched-on display for a longer period of time. Excessive temperatures due to blocked heat emission can lead to defects or a reduced lifetime..

Installation

⊘ = Important Information

⚠ = Caution

🚫 = Ban

⚠ Please make sure that your furniture has sufficient load-bearing capacity and strength against deflection and warping even after it has been weakened by the cut-out!

⚠ Stresses on the mechanics due to tension, pressure, impact can lead to damage or malfunctions.
ELEMENT ONE units should not be transported in the installed condition!

⚠ If transport in the installed state is necessary, the following conditions must be considered:
- Retract / close display
- Transport and store devices horizontally, i.e. according to the installation position
- Do not tilt furniture with installed devices
- Secure devices against slipping and falling out
- Observe the permissible load of the displays, do not stack them.
- transport or store MODIS 240 FIVE FullHD while lying on its left or right side.
- Attach the display protectors

⚠ ELEMENT ONE devices are fixed in the furniture by means of the decorative/holding frame. The integrated grub screws are intended for horizontal alignment in the furniture.
Please note that these may only be applied lightly (risk of damage to the furniture or distortion of the device mechanics and thus possible malfunction of the movement mechanics)
For customer-side mounting, ELEMENT ONE will provide an installation drawing upon request.

⊘ The table cut-out must be milled or sawn out before mounting the unit and according to the installation drawings (see Dimensions)

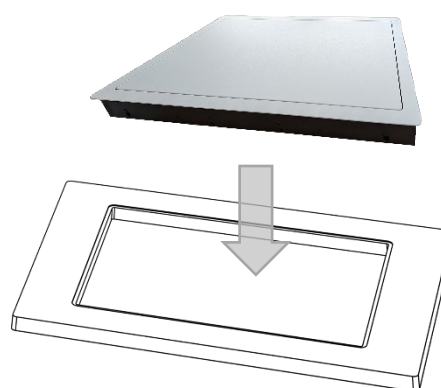⊘ It is recommended to install the device with two persons.

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1 Please open the carton at the marked top and CAREFULLY place it horizontally on the floor or a clean, flat surface.

Please remove the device from the packaging by first removing the two foam pads, then the plastic protective cover and the display protection corners.

Please carry the device by holding it on the right and left side of the housing.

2 Insert the unit vertically into the previously milled table cutout.

When inserting the device into the table cut-out provided for this purpose, make sure that the outgoing cables (connectors) on the rear side are not damaged.
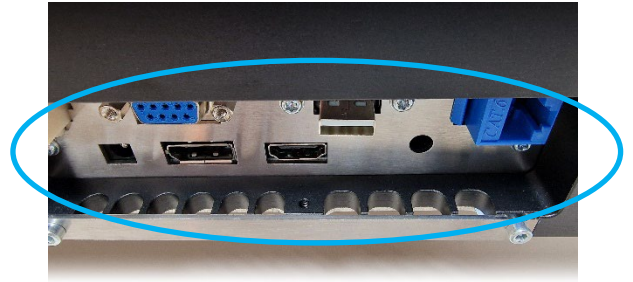
Commissioning

= Important Information

= Caution

= Ban

General Information

Note the following settings:
Graphic resolution native:
FullHD: 1,920 x 1,080 Pixel
Frame rate = 60 Hz
Higher settings are outside the specification range.

No PoE

The network used for IP-based control of the monitors must not support the PoE (Power-over-Ethernet) function!

Switch-on delay

A LAN-capable monitor system is only ready for operation after a 60-second delay after power-on if a temporary or static IP address to be assigned by the network cannot be allocated, or in the case of a device with a permanently programmed IP address, this special identifier is not set up or available in the customer network, or if the device in question is not connected to the network via LAN cable when it is switched on.

If an IP address is not assigned or is assigned incorrectly, the device does not start until a timeout of approx. 60 seconds has elapsed. Please wait until you hear a beep signal.

Stresses on the cables caused by pulling and rubbing against components shorten the lifetime and can lead to damage and malfunctions. The cables should be fastened and laid after commissioning.
The following conditions must be observed:

- Do not fall below minimum radii
- Maintain distances to mounting points and structural elements
- Cables must not touch any components during opening and closing

All edges are chamfered or rounded in the area of the cables.

Strong light can affect the image quality.

⚠️   Ensure that the cables are not pinched during insertion.

🛈   Ensure that all screw connections are secure.

🛈   Electrical connections should only be carried out when the device is disconnected from the power supply.

MODIS 240 FIVE FullHD

Insert the device into the cut-out.

1   Connect the HDMI and/or DisplayPort cable. Please note the correct recommended specification: Maximum length 1.80 m, minimum HDMI 2.0, data rate 18 Gbit/s

2   Connect the DC-adaptor cable to the socket on the housing.

3   Connect AC plug of the power supply unit to the mains supply.

4   Connection for remote operation (9pol dSub, optional. The use of the original ELEMENT ONE cable remote control or connection cable is recommended)

5   Connection touchscreen (USB, optional Maximum length of the cable used 1.80m, included in the scope of supply)
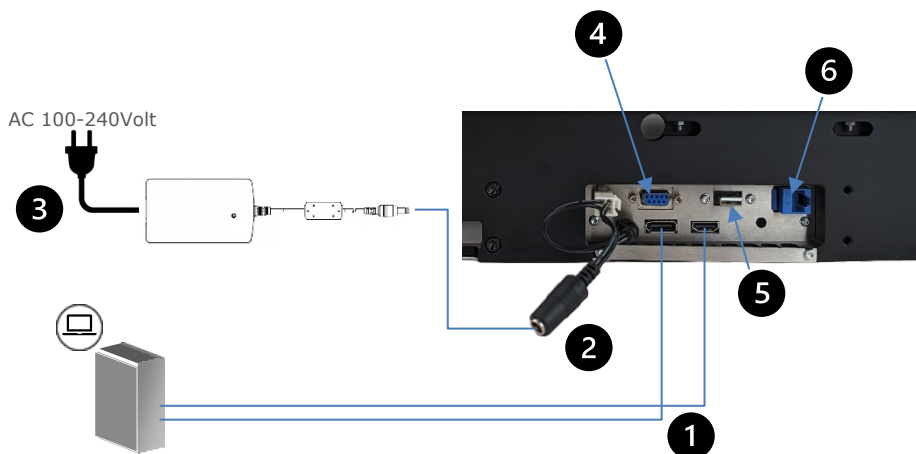
6   Connection for remote operation via RJ45 / LAN

Carry out a functional test and then attach the cables. It is recommended to use an external signal source for this purpose without any intermediate devices, such as splitters or extenders.

⚠️   Check that the cables have adequate freedom of movement.

AC 100-240Volt

Operation

General Information

⚠ Ensure that no parts of the body and/or objects are located between the frame, display and folding mechanism.

⚠ Do not reach into the device if you notice objects located between the frame, keyboard and operating buttons whilst the device is closing! Interrupt the closing procedure by briefly pressing the button **A**!
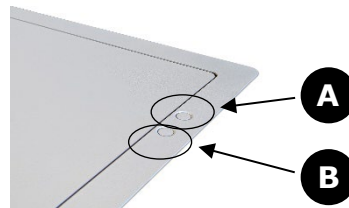
⚠ Do not use manual force to close!

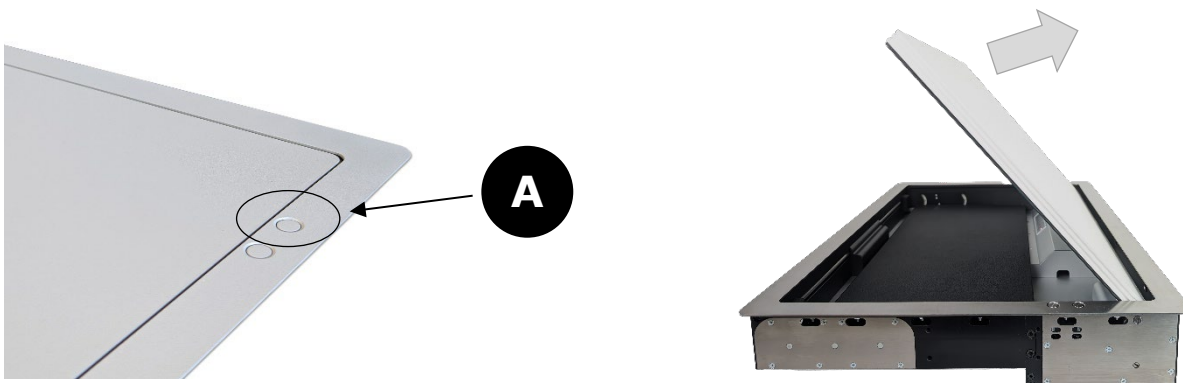⚠ Ensure there are no objects on the surface, which could obstruct the procedure.

⚠ Do not place any objects in the area around the lowering mechanism.
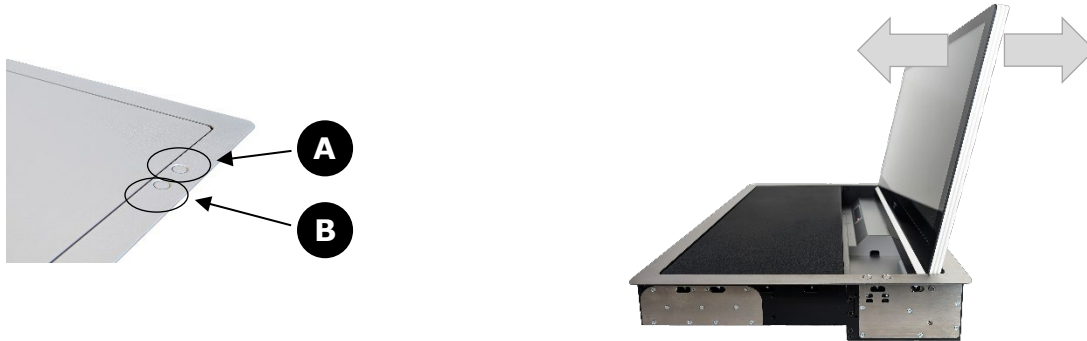

Raising

Press the button **A** on the right-hand side of the frame – the display will then rise out.

Whilst the monitor is being electrically raised, the procedure can be interrupted in any position by briefly pressing the button **B**.

Display Tilt

The tilt may be adjusted to any preferred angle in the raised position by pressing the control buttons.

The angle of inclination can be programmed; MODIS 240 FIVE FullHD display will then always move to the saved position:
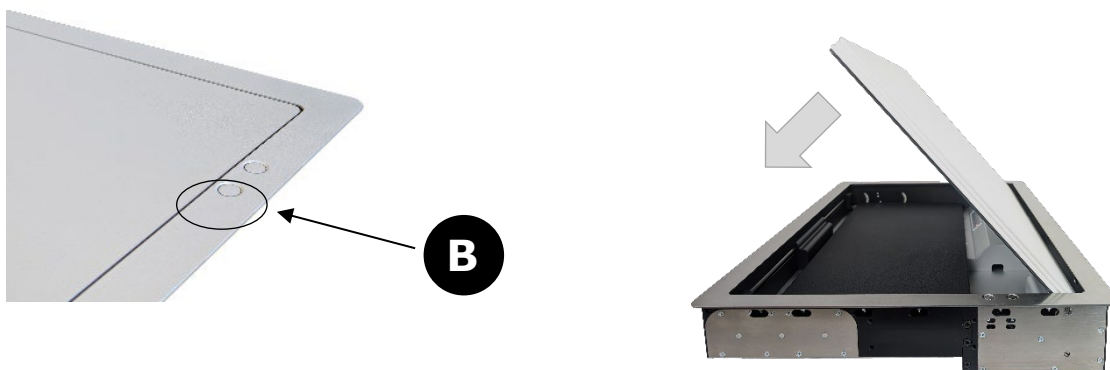
(1)   Retract display to lower end position.
(2)   Hold down the buttons **A** and **B** simultaneously until the fifth beep (approx. 1 second). The display now extends to the currently stored angle with the monitor switched off.
(3)   Set the required angle by pressing the button **A** or **B**.
(4)   Hold down the buttons **A** and **B** simultaneously until the first beep

Steps (3) and (4) must be carried out within 30 seconds or, otherwise, programming mode will be cancelled.

Retracting

Press the button **B** and the display will automatically retract.

Whilst the monitor is being electrically retracted, the procedure can be interrupted in any position by briefly pressing the button **A**.

Care Instructions

(!)   = Important Information

⚠   = Caution

🚫   = Ban

⚠   Disconnect the power supply plug before cleaning work!

(!)   To clean the device, use only cloths moistened with water or detergent.

🚫   Do not use abrasive cleaners, alcohol, thinners or similar chemicals.

Display Setting with OSD Buttons

The OSD buttons are located on the back of the display.
Operation requires the display to be extended.

	Control Buttons
🗎	Open main menu
⬆	Select Sub-Menu Increase the current value
⬇	Display submenu Decrease the current value
➡	Navigation
⬅	Navigation
⏻	Display on / off
☼	LED dark = display is switched off green = normal function flashing green = standby mode or signal out of range orange = no signal oder fail safe Mode flashing orange = no signal red = input format is not supported

TCP/IP - Control and Status request

ⓘ   Important notes for the setup in the LAN

All devices of the MODIS FIVE Series are equipped with a Cat-5 LAN cable socket as a network interface. Via this interface, the monitor systems can be operated IP-based with control commands (e.g. via a media control system or via a smartphone app).

The devices are supplied with DHCP support.

Depending on your requirements, the monitors can be controlled via the network accordingly

- either via automatic / dynamic IP address allocation in their LAN network
- or via static IP address allocation, assigned in their network manually to the MAC address of each device.

For control, a TCP-based, text protocol is used. To send a command, a TCP connection must be established to the unit on port 8282.

Parameters are separated from one another by a space. Each command and each response ends with a Carriage Return (<CR>) plus a Line Feed (<LF>).

IP command list (based on Ethernet Protocol Vers. 1.00)		
Command	Function	Response/message
move up	Unit opens	OK: if monitor retracted or movement stopped
		ERROR: if monitor moving in or out
move down	Unit closes	OK: if monitor extended or movement stopped
		ERROR: if monitor moving in or out
display on	Switches display on	With CONVERS and MODIS, this command is followed by the response, ERROR, if the monitors are retracted!
display off	Switches display off	always OK, even if display is already switched off
stop	Stops monitor movement	always OK
status	Requests information on current position of monitor	OK open: if monitor extended or stopped
		OK closed: if monitor retracted
devicedetails	Requests information on type of unit	OK monitor system
protocol	Requests information on Ethernet protocol version	OK 1.00: in the case of Ethernet protocol vers. 1.00
check	To check whether connection to unit is working	OK: if monitor fully retracted or extended ERROR: if monitor in intermediate position
		Unit response is always OK if the unit can be contacted over the network, no response if it cannot be contacted
lock on	Blocks control of the unit with the push button *temporarily*	Temporarily = until unit is restarted
		Unit response always OK, even if already temporarily blocked
lock off	Cancels *temporary* blocking of push button control	Unit response always OK, even if not blocked
lock perm on	Blocks control of the unit with the push button *permanently*	Permanently = until block is cancelled by "lock perm off" command; cancellation by turning off the supply is *not* possible
		Unit response always OK, even if already permanently blocked
lock perm off	Cancels *permanent* blocking of push button control	Unit response always OK, even if not blocked

Control via a Media Control System with 9-pin d-sub Remote Interface

🚫 Do not apply external voltage!

🚫 Pins may not be bridged!

⚠ Current pulse for switching = approx. 15 mA at 12 V DC
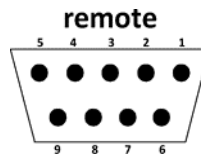
⚠ To **extend** connect Pin 1 to Pin 2

⚠ To **retract** connect Pin 3 to Pin 4

1-2 = up
3-4 = down
5 = out 12V/0,1 A max. 9 = GND

remote

Firmware Update
(Authorized Personnel only)

It is possible to update the firmware of the E1 monitor systems. To execute the firmware update, the monitor system must be connected to a specially configured PC / laptop by means of an adapter cable.

The firmware update requires:

- a special Configurator Software (E1 product),
- a special USB adapter cable (E1 product),
- an appropriately configured PC / notebook

Detailed information is available on request on the firmware update procedure, the system requirements for the PC/laptop used and how to obtain the special hardware and software required.

Technical Specification

MODIS 240 FIVE FullHD
In furniture integratable 23.8" monitor system; Lifting mechannism with two individual motors for extending / retracting monitor and front panel - notebook-type movement: operation side in closed state below, steplessly controllable at the push of a button on the device or via the remote control interface). Control via push-button on the device or via remote control interfaces (TCP / IP or dry contact); Independent electromotive adjustment of the tilt angle - both central pre-setting via remote interface and individual adjustment by user. MOTOR & MECHANICS: 12 V stepping motor with precise synchronization - for simultaneous extension when using several monitors. [Separate step motor for inclination angle. Can be preset on the unit or via remote control Maintenance-free Nearly silent: <40dB Display movement up/down: approx. 14.2 seconds
MATERIAL: Monitor: housing milled aluminum, powder-coated RAL 9006 white aluminum metallic fine structure matt; 2mm anti-reflective protective glass pane | Mechanics: Anodized aluminium, stainless steel | Mounting frame: Stainless steel, powder-coated RAL 9006 white aluminum metallic fine structure matt | Front panel / keyboard panel: artificial leather, black
Screen size: 23.8" (16:9)
Resolution: 1920 x 1080 - FullHD, 16.7M colors (6bit + A-FRC)
Brightness: 250 cd/m2
Contrast ratio: (typ.) 1,000:1
Viewing angle: Horizontal 178° / vertical 178°
Pixel pitch: 0.2745 mm x 0.2745 mm
Display area: 527.04mm (H) x 296.46mm (V)
LED life span: up to 30,000 hrs
Mass: 16.0 kg
DIMENSIONS: approx. 625 x 440 x 86mm Maximum insertion dimension for keyboard: WxDxH: approx. 550x175x20 mm
Power consumption: typ. 20 Watt
P. consumption display: OFF: 0.12 Watt, Sleep: 0.60 Watts, ON: 20 Watts
Extension angle monitor: 20°
Monitor extension height: 341mm at 20°
2x stepper motors: display motion & tilt function
Video interface: HDMI, DisplayPort (HDCP compliant)
Remote control: 9-pin d-sub serial + RJ45 TCP/IP for device control - and setting of extension parameters as well as firmware update (E1 cable and software required)
Operating temperature: 0°C to +50°C, without direct sunlight or other heat sources
Storage temperature: 0°C to +60°C, without direct sunlight or other heat sources.
Operating humidity: 10% to 95% RH, non-condensing
Storage humidity: 10% to 95% RH, non-condensing
Scope of supply: Power adapter - Input: 100-240V AC, 50 / 60Hz. 1.5A; Output: 12V 60W max 5.A (cable length DC ~ 140cm) power cable 1.5m

Safety Standards

VESA: DPMS
DDC2B-Standard (Version 2 Level B)

FCC

For optional accessories, observe the instructions enclosed with them!

Declaration of Conformity

We declare under our sole
responsibility that
devices of the series
FOLD!
comply with the regulations
2006/42/EG, 2006/95/EG,
2004/ 108/EG
Harmonized standards applied:
EN ISO 12000:2010
EN 60950-1+A1:2010
EN 55022:2010
EN 55024:2010
EN 61000-3-2/A1/ A2:2009
EN 61000-3-3:2008

Kuppenheim, 20.12.2023

Ralf Küchel
Technical Manager / CTO

Warranty

(1) The warranty for ELEMENT ONE products is as follows from the date of purchase
- 60 months on all purely mechanical components, and
- 24 months on all electrical and electronic components.

In the case of a purchase that is a commercial transaction for both parties, the customer must report defects of any kind - except hidden defects - in writing within eight working days (Saturday does not count as a working day) after delivery; otherwise the goods are considered approved. Hidden defects must be notified in writing within eight working days (Saturday does not count as a working day) after discovery; otherwise the goods shall be deemed to have been approved also in view of these defects.

(2) In the event of injury to life, limb or health for which we are responsible, as well as in cases of intent and gross negligence, the limitation period for material defect claims shall be two years. Otherwise, the limitation period for material defect claims shall be one year.

(3) Insofar as the delivered goods have a not insignificant defect, the customer may demand, at our discretion, either the rectification of the defect (subsequent improvement) or the delivery of a defect-free item (replacement delivery) as subsequent performance. If we are not prepared or not in a position to rectify the defect/replace the delivery, in particular if this is delayed beyond a reasonable period of time for reasons for which we are responsible, or if the rectification/replacement delivery fails in any other way, the customer shall be entitled, at his discretion, to withdraw from the contract or to reduce the purchase price, provided that further attempts at subsequent performance are unreasonable for him.

(4) There shall be no warranty obligation for normal wear and tear, in particular on parts subject to wear and tear. Furthermore, there shall be no warranty obligation if damage to or malfunctions of the delivery item occur due to improper handling or use of unsuitable operating conditions.

(5) We shall only be liable for damage due to defectiveness of the delivery item within the limits specified in Clause 8.

(6) Insofar as the defective delivery item is a third-party product, we shall be entitled to assign our material defect claims against our upstream suppliers to the customer and to refer the customer to their (legal) recourse. Claims may only be asserted against us under subsections 3 and 5 if the claims against our upstream suppliers cannot be enforced despite timely (judicial) recourse or if recourse is unreasonable in the individual case.

WEEE-Rg.Nr.: DE69117530