SIEMENS

Data sheet



SIPLUS HMI KTP400 Basic Color PN based on 6AV2123-2DB03-0AX0 with conformal coating, -20...+60 °C, 4" TFT display, 65536 colors PROFINET interface

Figure similar

General information	
Product type designation	KTP400 Basic color PN
Display	
Design of display	TFT widescreen display, LED backlighting
Screen diagonal	4.3 in
Display width	95 mm
Display height	53.9 mm
Number of colors	65 536
Resolution (pixels)	
 Horizontal image resolution 	480 pixel
Vertical image resolution	272 pixel
Backlighting	
 MTBF backlighting (at 25 °C) 	20 000 h
Backlight dimmable	Yes
Control elements	
Keyboard fonts	
 Function keys 	
 Number of function keys 	4
 Number of function keys with LEDs 	0
 Keys with LED 	No
System keys	No
 Numeric keyboard 	Yes; Onscreen keyboard
alphanumeric keyboard	Yes; Onscreen keyboard
Touch operation	
 Design as touch screen 	Yes; Analog-resistive
Installation type/mounting	
Mounting in portrait format possible	Yes
Mounting in landscape format possible	Yes
maximum permissible angle of inclination without external ventilation	35°
Supply voltage	
Type of supply voltage	DC
Rated value (DC)	24 V
permissible range, lower limit (DC)	19.2 V
permissible range, upper limit (DC)	28.8 V
Input current	
Current consumption (rated value)	125 mA
Starting current inrush I²t	0.2 A ² ·s

Power	
Active power input, typ.	3 W
Processor	
Processor type	ARM
Memory	
Flash	Yes
RAM	Yes
Memory available for user data	10 Mbyte
Type of output	10 mayte
Acoustics	
Buzzer	Yes
Speaker	No
Time of day	110
Clock	
Hardware clock (real-time)	Yes
Software clock (real-time) Software clock	Yes
• retentive	Yes
synchronizable	Yes
Interfaces	
Number of industrial Ethernet interfaces	1
Number of RS 485 interfaces	0
Number of RS 422 interfaces	0
Number of RS 232 interfaces	0
Number of USB interfaces	1; Up to 16 GB
Number of 20 mA interfaces (TTY)	0
Number of parallel interfaces	0
Number of other interfaces	0
Number of SD card slots	0
With software interfaces	No
Industrial Ethernet	
Industrial Ethernet status LED	2
Protocols	
PROFINET	Yes
Supports protocol for PROFINET IO	No
IRT	No No
PROFIBUS	No
EtherNet/IP	Yes
MPI	No
Protocols (Ethernet)	
• TCP/IP	Yes
• DHCP	Yes
• SNMP	Yes
• DCP	Yes
• LLDP	Yes
WEB characteristics	
• HTTP	No
• HTML	No
Further protocols	
• CAN	No
• MODBUS	Yes; Modicon (MODBUS TCP/IP)
Interrupts/diagnostics/status information	
Diagnoses	
Diagnostic information readable	No
EMC	
Emission of radio interference acc. to EN 55 011	
Limit class A, for use in industrial areas	Yes
Limit class B, for use in residential areas	No
Degree and class of protection	
IP (at the front)	IP65
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Resistance Coolants and lubricants — Resistant to commercially available coolants and lubricants Use in stationary industrial systems — to biologically active substances according to EN 60721-3-3 — to mechanically active substances according to EN 60721-3-3 — to mechanically active substances according to EN 60721-3-3 Use on ships/at sea — to biologically active substances according to EN 60721-3-6 — to chemically active substances according to EN 60721-3-6 — to chemically active substances according to EN 60721-3-6 — to mechanically active substances according to EN 60721-3-6 — to mechanically active substances according to EN 60721-3-6 — to mechanically active substances according to EN 6054-4 — Environmental conditions for process, measuring and control systems acc. to EN 60654-4 — Environmental conditions for process, measuring and control systems acc. to EN 60654-4 and ANSI/ISA-71.04 Remark — Note regarding classification of environmental conditions acc. to EN 60721, EN 60654-4 and ANSI/ISA-71.04 Conformal coating • Coatings for printed circuit board assemblies acc. to EN 61086 • Protection against fouling acc. to EN 60664-3 • Military testing according to MIL-1-46058C, Amendment 7 Yes; Class 3B2 mold, fungus and dny rot spores (with the exception of fauna); Class 3B3 on request Yes; Class 3C4 (RH < 75 %) incl. salt spray acc. to EN 60068-2-52 (severity degree 3); * Yes; Class 6B2 mold and fungal spores (excluding fauna); Class 6B3 on request Yes; Class 6C3 (RH < 75 %) incl. salt spray acc. to EN 60068-2-52 (severity degree 3); * Yes; Class 6S3 incl. sand, dust; * Yes; Class 6S3 incl. sand,		
Coolants and lubricants — Resistant to commercially available coolants and lubricants Use in stationary industrial systems — to biologically active substances according to EN 60721-3-3 — to chemically active substances according to EN 60721-3-3 — to mechanically active substances according to EN 60721-3-6 — to chemically active substances according to EN 60721-3-6 — to chemically active substances according to EN 60721-3-6 — to mechanically active substances according to EN 60721-3-6 — to mechanically active substances according to EN 60721-3-6 — to mechanically active substances according to EN 60721-3-6 — to mechanically active substances according to EN 60721-3-6 — to mechanically active substances according to EN 6054-4 — Environmental conditions for process, measuring and control systems acc. to EN 60654-4 — Environmental conditions for process, measuring and control systems acc. to EN 60654-4 and ANSI/ISA-71.04 Remark — Note regarding classification of environmental conditions acc. to EN 60721, EN 60654-4 and ANSI/ISA-71.04 Conformal coating • Coatings for printed circuit board assemblies acc. to EN 61086 • Protection against fouling acc. to EN 60664-3 • Military testing according to MIL-I-46058C, Amendment 7 Yes; Class 3B2 mold, fungus and dry rot spores (with the exception of faural); Class 3B3 or request Yes; Class 3B2 mold, fungus and dry rot spores (with the exception of faural); Discuss 3B3 on request Yes; Class 3B3 mold, fungus and dry rot spores (with the exception of faural); Discuss 3B3 on request Yes; Class 3B2 mold, fungus and dry rot spores (with the exception of faural); Discuss 3B3 on request Yes; Class 3B2 mold, fungus and dry rot spores (with the exception of faural); Discuss 3B3 on request Yes; Class 3B3 mold, fungus and dry rot spores (with the exception of faural); Discuss 3B3 on request Yes; Class 6B2 mold and fungal spores (excluding faural); Class 6B3 on request Yes; Class 6B2 mold and fungal spores (excluding faural); Class 6B3 on request Yes; Class 6B3		condensation conditions)
- Resistant to commercially available coolants and lubricants Use in stationary industrial systems - to biologically active substances according to EN 60721-3-3 - to chemically active substances according to EN 60721-3-3 - to mechanically active substances according to EN 60721-3-3 Use on ships/at sea - to biologically active substances according to EN 60721-3-6 - to chemically active substances according to EN 60721-3-6 Use on ships/at sea - to biologically active substances according to EN 60721-3-6 Usage in industrial process technology - Against chemically active substances acc. to EN 60654-4 - Environmental conditions for process, measuring and control systems acc. to ANSI/ISA-71.04 Remark - Note regarding classification of environmental conditions acc. to EN 60721, EN 60654-4 and ANSI/ISA-71.04 Conformal coading • Coatings for printed circuit board assemblies acc. to EN 6086-4 • Protection against fouling acc. to EN 60664-3 • Military testing according to MIL-I-46058C, Amendment 7		
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Use in stationary industrial systems — to biologically active substances according to EN 60721-3-3 — to chemically active substances according to EN 60721-3-3 — to mechanically active substances according to EN 60721-3-3 — to mechanically active substances according to EN 60721-3-3 Use on ships/at sea — to biologically active substances according to EN 60721-3-6 — to chemically active substances according to EN 60721-3-6 — to mechanically active substances according to EN 60721-3-6 — to mechanically active substances according to EN 60721-3-6 — to mechanically active substances according to EN 60721-3-6 — to mechanically active substances according to EN 60721-3-6 — to mechanically active substances according to EN 60721-3-6 — to mechanically active substances according to EN 60721-3-6 — to mechanically active substances according to EN 60721-3-6 — To mechanically active substances according to EN 60721-3-3 Usage in industrial process technology — Against chemically active substances acc. to EN 60654-4 — Environmental conditions for process, measuring and control systems acc. to ANSI/ISA-71.04 Remark — Note regarding classification of environmental conditions acc. to EN 60721, EN 60654-4 and ANSI/ISA-71.04 Conformal coatting • Coatings for printed circuit board assemblies acc. to EN 61086 • Protection against fouling acc. to EN 60664-3 • Military testing according to MIL-1-46058C, Amendment 7		Yes; Incl. diesel and oil droplets in the air
- to biologically active substances according to EN 60721-3-3 - to chemically active substances according to EN 60721-3-3 - to mechanically active substances according to EN 60721-3-3 - to mechanically active substances according to EN 60721-3-3 - to mechanically active substances according to EN 60721-3-3 Use on ships/at sea - to biologically active substances according to EN 60721-3-6 - to chemically active substances according to EN 60721-3-6 - to mechanically active substances according to EN 60721-3-6 - to mechanically active substances according to EN 60721-3-6 - to mechanically active substances according to EN 60721-3-6 - to mechanically active substances according to EN 60721-3-6 - to mechanically active substances according to EN 60721-3-6 - To mechanically active substances according to EN 60721-3-6 - To mechanically active substances according to EN 60721-3-6 - To mechanically active substances according to EN 60721-3-3 Usage in industrial process technology - Against chemically active substances acc. to EN 6068-4-4 - Environmental conditions for process, measuring and control systems acc. to ANSI/ISA-71.04 Remark - Note regarding classification of environmental conditions acc. to EN 60721, EN 60654-4 and ANSI/ISA-71.04 Conformal coating Coatings for printed circuit board assemblies acc. to EN 61086 - Protection against fouling acc. to EN 60664-3 - Military testing according to MIL-I-46058C, Amendment 7		
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EN 60721-3-3 — to mechanically active substances according to EN 60721-3-6 — to biologically active substances according to EN 60721-3-6 — to chemically active substances according to EN 60721-3-6 — to mechanically active substances according to EN 60721-3-6 — to mechanically active substances according to EN 60721-3-6 — to mechanically active substances according to EN 60721-3-6 — to mechanically active substances according to EN 60721-3-6 — to mechanically active substances according to EN 60721-3-6 Usage in industrial process technology — Against chemically active substances acc. to EN 60654-4 — Environmental conditions for process, measuring and control systems acc. to ANSI/ISA-71.04 Remark — Note regarding classification of environmental conditions acc. to EN 60721, EN 60654-4 and ANSI/ISA-71.04 Conformal coating • Coatings for printed circuit board assemblies acc. to EN 61086 • Protection against fouling acc. to EN 60664-3 • Military testing according to MIL-I-46058C, Amendment 7 (severity degree 3); * Yes; Class 362 mold and fungal spores (excluding fauna); Class 6B3 on request Yes; Class 6B2 mold and fungal spores (excluding fauna); Class 6B3 on request Yes; Class 6B3 incl. sand, dust, * Yes; Class 6B3 incl. salt spray acc. to EN 60068-2-52 (severity degree 3); * Yes; Class 6B3 incl. sand, dust, * Yes; Class 6B	0 ,	
Use on ships/at sea — to biologically active substances according to EN 60721-3-6 — to chemically active substances according to EN 60721-3-6 — to mechanically active substances according to EN 60721-3-6 — to mechanically active substances according to EN 60721-3-6 — to mechanically active substances according to EN 60721-3-6 — to mechanically active substances according to EN 60721-3-6 Usage in industrial process technology — Against chemically active substances acc. to EN 60654-4 — Environmental conditions for process, measuring and control systems acc. to ANSI/ISA-71.04 Remark — Note regarding classification of environmental conditions acc. to EN 60721, EN 60654-4 and ANSI/ISA-71.04 Conformal coating • Coatings for printed circuit board assemblies acc. to EN 60664-3 • Military testing according to MIL-I-46058C, Amendment 7		
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- to biologically active substances according to EN 60721-3-6 - to chemically active substances according to EN 60721-3-6 - to mechanically active substances according to EN 60721-3-6 - to mechanically active substances according to EN 60721-3-6 Usage in industrial process technology - Against chemically active substances acc. to EN 60654-4 - Environmental conditions for process, measuring and control systems acc. to ANSI/ISA-71.04 Remark - Note regarding classification of environmental conditions acc. to EN 60721, EN 60654-4 and ANSI/ISA-71.04 Conformal coating		
request		Yes: Class 6B2 mold and fundal shores (excluding fauna): Class 6B3 on
- to chemically active substances according to EN 60721-3-6 - to mechanically active substances according to EN 60721-3-6 - to mechanically active substances according to EN 60721-3-6 Usage in industrial process technology - Against chemically active substances acc. to EN 60654-4 - Environmental conditions for process, measuring and control systems acc. to ANSI/ISA-71.04 Remark - Note regarding classification of environmental conditions acc. to EN 60721, EN 60654-4 and ANSI/ISA-71.04 Conformal coating		
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Usage in industrial process technology — Against chemically active substances acc. to EN 60654-4 — Environmental conditions for process, measuring and control systems acc. to ANSI/ISA-71.04 Remark — Note regarding classification of environmental conditions acc. to EN 60721, EN 60654-4 and ANSI/ISA-71.04 Conformal coating • Coatings for printed circuit board assemblies acc. to EN 61086 • Protection against fouling acc. to EN 60664-3 • Military testing according to MIL-I-46058C, Amendment 7 Yes; Class 3 (excluding trichlorethylene) Yes; Class 3 (excluding trichlorethylene) Yes; Class 3 (excluding trichlorethylene) Yes; Level GX group A/B (excluding trichlorethylene; harmful gas concentrations up to the limits of EN 60721-3-3 class 3C4 permissible); level LC3 (salt spray) and level LB3 (oil) * The supplied plug covers must remain in place over the unused interfaces during operation! Yes; Class 2 for high reliability Yes; Type 1 protection Yes; Type 1 protection Yes; Discoloration of coating possible during service life		Yes; Class 6S3 incl. sand, dust; *
— Against chemically active substances acc. to EN 60654-4 — Environmental conditions for process, measuring and control systems acc. to ANSI/ISA-71.04 Remark — Note regarding classification of environmental conditions acc. to EN 60721, EN 60654-4 and ANSI/ISA-71.04 Conformal coating • Coatings for printed circuit board assemblies acc. to EN 61086 • Protection against fouling acc. to EN 60664-3 • Military testing according to MIL-I-46058C, Amendment 7 Yes; Class 3 (excluding trichlorethylene) Yes; Level GX group A/B (excluding trichlorethylene; harmful gas concentrations up to the limits of EN 60721-3-3 class 3C4 permissible); level LC3 (salt spray) and level LB3 (oil) * The supplied plug covers must remain in place over the unused interfaces during operation! Yes; Class 2 for high reliability Yes; Type 1 protection Yes; Type 1 protection Yes; Discoloration of coating possible during service life		
EN 60654-4 — Environmental conditions for process, measuring and control systems acc. to ANSI/ISA-71.04 Remark — Note regarding classification of environmental conditions acc. to EN 60721, EN 60654-4 and ANSI/ISA-71.04 Conformal coating • Coatings for printed circuit board assemblies acc. to EN 61086 • Protection against fouling acc. to EN 60664-3 • Military testing according to MIL-I-46058C, Amendment 7 Yes; Level GX group A/B (excluding trichlorethylene; harmful gas concentrations up to the limits of EN 60721-3-3 class 3C4 permissible); level LC3 (salt spray) and level LB3 (oil) * The supplied plug covers must remain in place over the unused interfaces during operation! Yes; Class 2 for high reliability Yes; Type 1 protection Yes; Type 1 protection Yes; Discoloration of coating possible during service life		Vec: Class 3 (avaluding trichlorathylana)
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measuring and control systems acc. to ANSI/ISA-71.04 concentrations up to the limits of EN 60721-3-3 class 3C4 permissible); level LC3 (salt spray) and level LB3 (oil) Remark — Note regarding classification of environmental conditions acc. to EN 60721, EN 60654-4 and ANSI/ISA-71.04 * The supplied plug covers must remain in place over the unused interfaces during operation! * The supplied plug covers must remain in place over the unused interfaces during operation! * The supplied plug covers must remain in place over the unused interfaces during operation! * Yes; Class 2 for high reliability Yes; Type 1 protection * Yes; Type 1 protection Yes; Discoloration of coating possible during service life		Yes; Level GX group A/B (excluding trichlorethylene: harmful gas
Remark — Note regarding classification of environmental conditions acc. to EN 60721, EN 60654-4 and ANSI/ISA-71.04 * The supplied plug covers must remain in place over the unused interfaces during operation! * The supplied plug covers must remain in place over the unused interfaces during operation! * The supplied plug covers must remain in place over the unused interfaces during operation! * Yes; Class 2 for high reliability Yes; Type 1 protection * Military testing according to MIL-I-46058C, Amendment 7	measuring and control systems acc. to ANSI/ISA-	concentrations up to the limits of EN 60721-3-3 class 3C4 permissible);
 Note regarding classification of environmental conditions acc. to EN 60721, EN 60654-4 and ANSI/ISA-71.04 * The supplied plug covers must remain in place over the unused interfaces during operation! * Conformal coating * Coatings for printed circuit board assemblies acc. to EN 61086 Protection against fouling acc. to EN 60664-3 Military testing according to MIL-I-46058C, Amendment 7 * The supplied plug covers must remain in place over the unused interfaces during operation! Yes; Class 2 for high reliability Yes; Type 1 protection Yes; Type 1 protection Yes; Discoloration of coating possible during service life 		level LC3 (salt spray) and level LB3 (oil)
conditions acc. to EN 60721, EN 60654-4 and ANSI/ISA-71.04 interfaces during operation! Conformal coating Coatings for printed circuit board assemblies acc. to EN 61086 Protection against fouling acc. to EN 60664-3 Military testing according to MIL-I-46058C, Amendment 7 interfaces during operation! Yes; Class 2 for high reliability Yes; Type 1 protection Yes; Type 1 protection Yes; Discoloration of coating possible during service life		
 Coatings for printed circuit board assemblies acc. to EN 61086 Protection against fouling acc. to EN 60664-3 Military testing according to MIL-I-46058C, Amendment 7 Yes; Class 2 for high reliability Yes; Type 1 protection Yes; Type 1 protection Yes; Discoloration of coating possible during service life 	conditions acc. to EN 60721, EN 60654-4 and	
EN 61086 ● Protection against fouling acc. to EN 60664-3 ● Military testing according to MIL-I-46058C, Amendment 7 Yes; Type 1 protection Yes; Type 1 protection Yes; Discoloration of coating possible during service life	Conformal coating	
 Military testing according to MIL-I-46058C, Amendment 7 Yes; Discoloration of coating possible during service life 		Yes; Class 2 for high reliability
Amendment 7	 Protection against fouling acc. to EN 60664-3 	
		Yes; Discoloration of coating possible during service life
• Qualification and Performance of Electrical Yes; Conformal coating, Class A		Van Canfarmal agating Class A
	Qualification and Performance of Electrical	res; Conformal coating, Class A

Insulating Compound for Printed Board Assemblies according to IPC-CC-830A	
Operating systems	
	Yes
proprietary pre-installed operating system	165
Windows CE	No
configuration / header	NO
	Ven
Message indicator	Yes
Alarm system (incl. buffer and acknowledgment)	Yes
Process value display (output)	Yes Yes
Process value default (input) possible	Yes
Recipe management	1 es
Configuration software	Voc. via integrated MinCC Pagia (TIA Portal)
STEP 7 Basic (TIA Portal)STEP 7 Professional (TIA Portal)	Yes; via integrated WinCC Basic (TIA Portal)
,	Yes; via integrated WinCC Basic (TIA Portal) No
WinCC flexible Compact WinCC flexible Standard	No
WinCC flexible Standard WinCC flexible Advanced	No
Wincc liexible Advanced WinCC Basic (TIA Portal)	Yes
Wincc basic (TIA Portal) WinCC Comfort (TIA Portal)	Yes
Wincc Comion (TIA Portar) WinCC Advanced (TIA Portar)	Yes
Wincc Advanced (TIA Portal) WinCC Professional (TIA Portal)	Yes
Languages	
Online languages	
Number of online/runtime languages	10
Project languages	10
Languages per project	32
Functionality under WinCC (TIA Portal)	32
Libraries	Yes
Number of Visual Basic Scripts	No
Task planner	Yes
time-controlled	No
task-controlled	Yes
Help system	Yes
Number of characters per info text	500
Message system	
Number of alarm classes	32
Bit messages	
Number of bit messages	1 000
Analog messages	
Number of analog messages	25
S7 alarm number procedure	No
System messages HMI	Yes
System event, more (SIMATIC S7, SINUMERIK, SIMOTION,)	Yes; System message buffer of the SIMATIC S7-1200 and S7-1500
 Number of characters per message 	80
 Number of process values per message 	8
 Acknowledgment groups 	Yes
Message indicator	Yes
Message buffer	Yes
— Number of entries	256
 Circulating buffer 	Yes
— retentive	Yes
— maintenance-free	Yes
Recipe management	
 Number of recipes 	50
Data records per recipe	100
Entries per data record	100
Size of internal recipe memory	256 kbyte
 Recipe memory expandable 	No

Variables	
Variables	800
Number of variables per deviceNumber of variables per screen	100
	Yes
Limit valuesMultiplexing	Yes
	No
• Structures	Yes
• Arrays	res
Images	250
Number of configurable imagesPermanent window/default	Yes
Global image	Yes
Image selection by PLC	Yes
Image selection by PLC Image number in the PLC	Yes
Image objects	165
Number of objects per image	100
Text fields	Yes
I/O fields	Yes
Graphic I/O fields (graphics list)	Yes
Symbolic I/O fields (graphics list) Symbolic I/O fields (text list)	Yes
Date/time fields	Yes
Switches	Yes
Buttons	Yes
Graphic display	Yes
• Icons	Yes
Geometric objects	Yes
Complex image objects	165
Number of complex objects per screen	10
Alarm view	Yes
Trend view	Yes
User view	Yes
Status/control	No
Sm@rtClient view	No
Recipe view	Yes
• f(x) trend view	No
System diagnostics view	Yes; System message buffer of the SIMATIC S7-1200 and S7-1500
Media Player	No
Bar graphs	Yes
• Sliders	No
Pointer instruments	No
Analog/digital clock	No
Lists	
Number of text lists per project	150
Number of entries per text list	100
Number of graphics lists per project	100
Number of entries per graphics list	100
Archiving	
Number of archives per device	2
 Number of entries per archive 	10 000
Message archive	Yes
 Process value archive 	Yes
 Archiving methods 	
 Sequential archive 	Yes
— Short-term archive	Yes
 Memory location 	
— Memory card	No
— USB memory	Yes
— Ethernet	No
Data storage format	
— CSV	No
	Yes
— TXT	

— RDB	No
Security	
Number of user groups	50
Number of user rights	32
Number of users	50
Password export/import	Yes; Possible via ProSave
SIMATIC Logon	No
Character sets	
Keyboard fonts	
— US English	Yes
Transfer (upload/download)	
MPI/PROFIBUS DP	No
• USB	No
Ethernet	Yes
using external storage medium	No
Process coupling	
• S7-1200	Yes
• S7-1500	Yes
• S7-200	Yes
• S7-300/400	Yes
• LOGO!	Yes
WinAC	Yes
SINUMERIK	No
• SIMOTION	Yes
Allen Bradley (EtherNet/IP)	Yes
• Allen Bradley (DF1)	No
Mitsubishi (MC TCP/IP)	Yes
Mitsubishi (FX)	No
• OMRON (FINS TCP)	No
OMRON (LINK/Multilink)	No
Modicon (Modbus TCP/IP)	Yes
Modicon (Modbus)	No
Service tools/configuration aids	
Backup/Restore manually	Yes; Possible via ProSave
Backup/Restore automatically	No
Simulation	Yes
Device switchover	Yes
Peripherals/Options	
Printer	No
SIMATIC HMI MM memory card: Multi Media Card	No
SIMATIC HMI SD memory card: Secure Digital memory	No
card	
USB memory	Yes
Mechanics/material	
Enclosure material (front)	
• Plastic	Yes
• Aluminum	No
Stainless steel	No
Dimensions	
Width of the housing front	141 mm
Height of housing front	116 mm
Mounting cutout, width	123 mm
Mounting cutout, height	99 mm
Overali depth	33 mm
Overall depth Weights	33 mm
Weights	
Weights Weight (without packaging)	360 g
Weights	
Weights Weight (without packaging)	360 g