

Remote Monitor - Panel Mount

RM-320P-*



- Large application flexibility due to identical basic components that can be configured as required
- Thin Client solution (with VisuNet RM Shell firmware)
- Industrial Panel PC: IP66 rating in front panel and IP20 rating in back
- Easy installation with available Mounting Kit
- Global certifications

Remote Monitor - Panel Mount

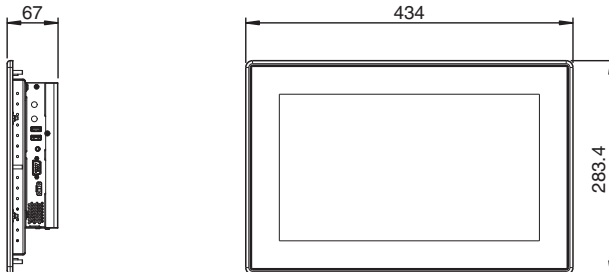


Function

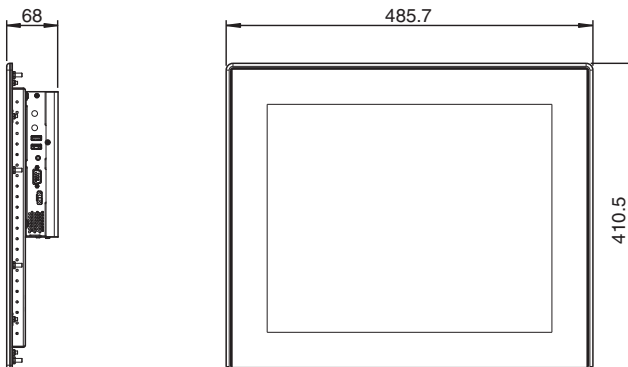
VisuNet FLX Panels consist of a display unit with touch screen in combination with a computing unit. Various display sizes (21.5", 19" and 15.6") and configurable computer units lead to highest application flexibility. The VisuNet FLX panels are designed for Zone 2/22 (Div. 2) and non-Ex applications. The gap free surface which is available with a typical surface roughness of 0.8 µm and rounded edges of the bezel prevent accumulation of liquids or bacteria. Display and seals are chemically resistant to typical cleaning agents.

Dimensions

15.6" Display



19" Display



Release date: 2023-12-13 Date of issue: 2023-12-13 Filename: t193551_eng.pdf

Refer to "General Notes Relating to Pepperl+Fuchs Product Information".

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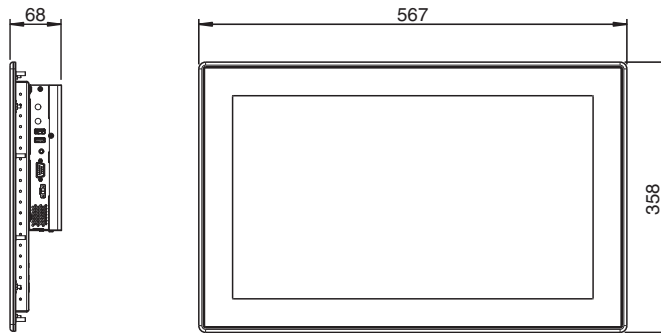
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Dimensions

21.5" Display



Technical Data

General specifications	
Type	Remote Monitor
Hardware	
Processor	Intel® Celeron™ 3965U
RAM	Configurable RAM options: A: 1x 4GB DDR4-2133, industrial temperature grade [temperature class A] K: 1x 4GB DDR4-2133, wide temperature grade
Mass storage	Storage interface: 1x M.2 2242/2280 M Key, PCIe + SATA 3 Configurable storage options: B: 64 GB M.2 SATA III, F134D 3D TLC, industrial temperature grade [temperature class A] L: 64 GB M.2 SATA III, F134D 3D TLC, wide temperature grade
Supply	
Input current	max. 3 A, max. 60 W
Power consumption	
DC	20 ... 28 V d.c. / 4.0 A (SELV/PELV or class 2) For connections designation refer to the VisuNet FLX Panel Mount manual.
Indicators/operating means	
Display	
Type	Liquid Crystal Display (LCD) with LED backlight
Screen diagonal	Configurable display options: 22GT: 54.61 cm (21.5") [temperature class A] 22FC: 54.61 cm (21.5") (Display might react sluggishly below 0 °C) 19SC: 48.26 cm (19") 15FC: 39.62 cm (15.6")
Resolution	22GT, 22FC, 15FC: 1920 x 1080 pixels (Full HD) Aspect Ratio (16:9) 19SC: 1280 x 1024 pixels (SXGA) Aspect Ratio (5:4)
Color depth	24 bit (16.7 M) color
Contrast	Typically 22GT: 1000:1 22FC: 5000:1 19SC: 1000:1 15FC: 800:1
Brightness	Configurable display options: 22GT: 250 cd/m ² 22FC: 300 cd/m ² 19SC: 450 cd/m ² 15FC: 450 cd/m ²
Reading angle	22GT: 178 ° in all directions 22FC, 19SC: horizontal: 170 °, vertical: 160 ° 15FC: 170 ° in all directions
Life span	22GT: back lamp life: 30.000 hrs typical half life, at 25 °C (77 °F) 22FC, 19SC, 15FC: back lamp life: 50.000 hrs typical half life, at 25 °C (77 °F)
Input devices	

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Touchscreen	Configurable Display Options: 10-finger multi-touch, glove-friendly 22GT: Capacitive touch, no optical bonding 22FC, 19SC, 15FC: Capacitive touch, optical bonding	
Interface		
Interface type	1 x DisplayPort 1.2 (DP++) 1 x mini DisplayPort 1.2 (DP++ w/ mono locking screw) 1 x Audio Line-out 2 x USB Ex i ports prepared for Pepperl+Fuchs intrinsically safe keyboard 2 x USB 3.1 Gen1 (5 Gbps) ports 1 x USB 2.0 port 2 x LAN ports (RJ45, 10/100/1000 Mbps) 2 x RS232/422/485 (BIOS configurable) with 5V/12V to power peripherals (1 x DB9 male + 1 x RJ45)	
Directive conformity		
Electromagnetic compatibility		
Directive 2014/30/EU		EN 61326-1:2013 (ind. Locations) EN 61000-6-4:2007+A1:2011 EN 55035:2017/A11:2020 EN 55011:2016+A1:2017
Explosion protection		
Directive 2014/34/EU		EN IEC 60079-0:2018 EN IEC 60079-7:2015/A1:2018 EN 60079-11:2012 EN 60079-31:2014
RoHS		
Directive 2011/65/EU (RoHS)		EN IEC 63000:2018
Software		
Operating system		Pepperl+Fuchs RM Shell 6 (based on Microsoft® Windows® 10 IoT Enterprise 2021 LTSC (x64)) Optional: T: ACP ThinManager Ready BIOS
Ambient conditions		
Operating temperature		Temperature classes: A: 0 ... 45 °C (32 ... 113 °F) B: -20 ... 55 °C (-4 ... 131 °F) [with wide temperature grade RAM/storage and optically bonded display unit]
Storage temperature		-20 ... 65 °C (-4 ... 149 °F)
Relative humidity		max. relative humidity 93% at 40°C (non-condensing) according to EN60068-2-78
Climatic conditions		Passive cooling, no rotating parts.
Altitude		Operating altitude max. 2000 m
Shock resistance		18 shocks 15 g, 11 ms all axis, IEC 60068-2-27
Vibration resistance		10 ... 150 Hz, +/- 0.075 mm, 1g, 10 cycles per axis according to EN60068-2-6
Mechanical specifications		
Degree of protection		Front side: IP66/Type 4X Back side: IP20
Material		Front bezel: Stainless steel AISI304 (glass, silicone gasket) Backside: Painted aluminum sheet metal
Installation		Panel mount (additional mounting kits available)
Mass		22GT, 22FC and 19SC: approx. 8 kg 15FC: 5.4 kg
Dimensions		22 inch: 567 mm x 358 mm x 68 mm 19 inch: 485.7 mm x 410.5 mm x 68 mm 15 inch: 434 mm x 283.4 mm x 67 mm For cut out dimensions refer to the VisuNet FLX Panel mount manual.
International approvals		
UL approval		

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Approved for	<p>UL OrdLoc UL approval E223772 UL61010-1 Ed.3 UL 61010-2-201 Ed2 CAN/CSA C22.2 No 61010-1-12 CAN/CSA C22.2 No 61010-2-201</p> <p>IS circuits for CL I, DIV 2, GP A-D CL II, DIV 2, GP E, F, G CL III IS circuits for CL I, ZN 2, IIC CL II, ZN 22, IIIB CL III, ZN 22, IIIA Install per drawing 116-0478</p> <p>Mounting in CL I, DIV 2, GP A-D, T4 CL II, DIV 2, GP E, F, G CL III Mounting in CL I, ZN 2, IIC, T4 CL II, ZN 22, IIIB CL III, ZN 22, IIIA</p>
ATEX approval	
ATEX certificate	UL 22 ATEX 2479X
ATEX marking	II 3 G Ex ec [ic Gc] IIC T4 Gc
ATEX certificate	UL 22 ATEX 2480U
ATEX marking	II 3D Ex tc [ic Dc] IIIC Dc
IECEX approval	
IECEX certificate	IECEX ULD 22.0017X
IECEX marking	Ex ec [ic Gc] IIC T4 Gc
IECEX certificate	IECEX ULD 22.0018U
IECEX marking	Ex tc [ic Dc] IIIC Dc
IECEX standard	IEC 60079-0:2017 Ed 7.0 IEC 60079-7:2017 Ed 5.1 IEC 60079-11:2011 Ed 6.0 IEC 60079-31:2013 Ed. 2

Type Code

RM-320P-*

Model	Ex protection	Temperature	Display unit	Power supply unit	Computing platform	RAM	Storage	OS & software	Housing	Options
Model										
RM-320P-	Remote Monitor - "Panel PC"									
Ex protection										
N	Industrial, general purpose (UL Ord Loc Listed for US & Canada)									
L	ATEX & IECEx Zone 2/22 and Class I, II, III Div 2									
Temperature										
A-	0 ... 45 °C									
B-	-20 ... 55 °C									
Display unit										
22GT-	21.5" (16:9), Full HD (1920 x 1080), capacitive touch, no optical bonding									
22FC-	21.5" (16:9), Full HD (1920 x 1080), capacitive touch, optical bonding									
19SC-	19.0" SXGA (1280x1024 pixel), capacitive touch, optical bonding									
15FC-	15.6" (16:9), Full HD (1920x1080 pixel), capacitive touch, optical bonding									
Power supply unit										
D-	24 V DC									
Computing platform										
1N	Intel Celeron									
RAM										
A	1x 4 GB, industrial temperature grade									
K	1x 4 GB, wide temperature grade									
Storage										
B	64 GB, industrial temperature grade, M.2 SATA									
L	64 GB, wide temperature grade, M.2 SATA									
N	None (only in combination with ACP ThinManager Ready)									
OS & Software										
2	Pepperl+Fuchs RM Shell 6.x (based on Win 10 IoT Enterprise 2021 LTSC)									
T	ACP ThinManager Ready BIOS									
Housing										
S1-	Stainless steel bezel SS304, prepared for panel mounting									
Options										
	NN0	Standard								

Example: RM-320P-NA-22GT-D-1NAB2S1-NN0

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