

# Remote Monitor - Panel Mount

## RM-320P-\* (P+F Self-declaration)



- Large application flexibility due to identical basic components that can be configured as required
- Global certifications (partly in preparation)
- 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

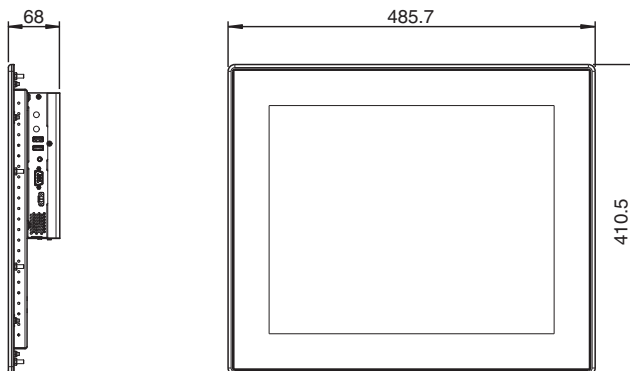
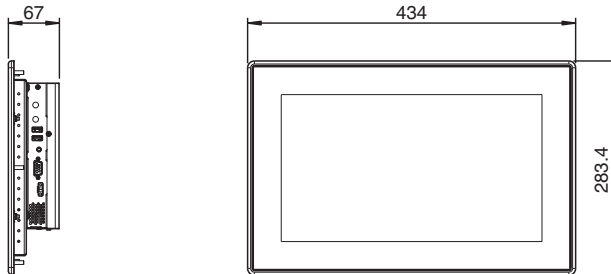
### Remote Monitor - Panel Mount



### 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



Release date: 2022-08-09 Date of issue: 2022-08-09 Filename: t207500\_eng.pdf

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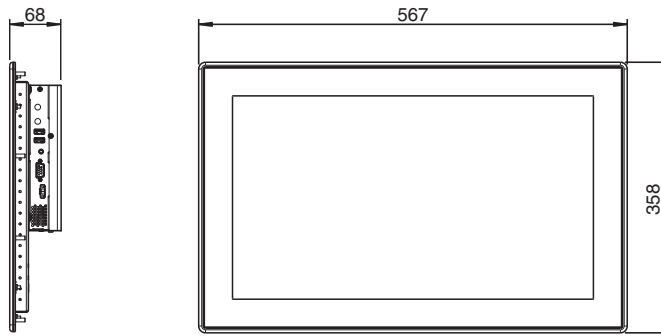
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## Dimensions



## Technical Data

| General specifications            |  |
|-----------------------------------|--|
| Type                              | Remote Monitor   |
| <b>Hardware</b>                   |  |
| Processor                         | Intel® Celeron™ 3965U  |
| RAM                               | Configurable RAM options:<br>A: 1x 4GB DDR4-2133, industrial temperature grade [temperature class A]<br>K: 1x 4GB DDR4-2133, wide temperature grade  |
| Mass storage                      | Storage interface:<br>1x M.2 2242/2280 M Key, PCIe + SATA 3<br><br>Configurable storage options:<br>A: 32 GB M.2 SATA 3, industrial temperature grade [temperature class A]<br>K: 32 GB M.2 SATA 3 III, wide temperature grade |
| <b>Supply</b>                     |  |
| Input current                     | max. 3 A, max. 60 W  |
| Power consumption                 |  |
| DC                                | 20 ... 28 V d.c. / 4.0 A (SELV/PELV or class 2)<br>For connections designation refer to the VisuNet FLX Panel Mount manual.  |
| <b>Indicators/operating means</b> |  |
| Display                           |  |
| Type                              | Liquid Crystal Display (LCD) with LED backlight  |
| Screen diagonal                   | Configurable display options:<br>22GT: 54.61 cm (21.5") [temperature class A]<br>22FC: 54.61 cm (21.5")<br>(Display might react sluggishly below 0 °C)<br>19SC: 48.26 cm (19")<br>15FC: 39.62 cm (15.6")                       |
| Resolution                        | 22GT, 22FC, 15FC: 1920 x 1080 pixels (Full HD) Aspect Ratio (16:9)<br>19SC: 1280 x 1024 pixels (SXGA) Aspect Ratio (5:4)   |
| Color depth                       | 24 bit (16.7 M) color  |
| Contrast                          | Typically<br>22GT: 1000:1<br>22FC: 5000:1<br>19SC: 1000:1<br>15FC: 800:1   |
| Brightness                        | Configurable display options:<br>22GT: 250 cd/m <sup>2</sup><br>22FC: 300 cd/m <sup>2</sup><br>19SC: 450 cd/m <sup>2</sup><br>15FC: 450 cd/m <sup>2</sup>  |
| Reading angle                     | 22GT: 178 ° in all directions<br>22FC, 19SC: horizontal: 170 °, vertical: 160 °<br>15FC: 170 ° in all directions   |
| Life span                         | 22GT: back lamp life: 30.000 hrs typical half life, at 25 °C (77 °F)<br>22FC, 19SC, 15FC: back lamp life: 50.000 hrs typical half life, at 25 °C (77 °F)   |
| Input devices                     |  |

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



## Technical Data

|  |   |   |
|--|---|---|
| Touchscreen  | Configurable Display Options:<br>10-finger multi-touch, glove-friendly<br>22GT: Capacitive touch, no optical bonding<br>22FC, 19SC, 15FC: Capacitive touch, optical bonding   |   |
| <b>Interface</b>   |   |   |
| Interface type   | 1 x DisplayPort 1.2 (DP++)<br>1 x mini DisplayPort 1.2 (DP++ w/ mono locking screw)<br>1 x Audio Line-out<br>2 x USB Ex i ports prepared for Pepperl+Fuchs intrinsically safe keyboard<br>2 x USB 3.1 Gen1 (5 Gbps) ports<br>1 x USB 2.0 port<br>2 x LAN ports (RJ45, 10/100/1000 Mbps)<br>2 x RS232/422/485 (BIOS configurable) with 5V/12V to power peripherals (1 x DB9 male + 1 x RJ45) |   |
| <b>Directive conformity</b>                                    |   |   |
| Electromagnetic compatibility                                  |   |   |
| Directive 2014/30/EU   |   | EN 61326-1:2013 (ind. Locations)<br>EN 61000-6-4:2007+A1:2011<br>EN 55035:2017/A11:2020<br>EN 55011:2016+A1:2017  |
| Explosion protection   |   |   |
| Directive 2014/34/EU   |   | EN IEC 60079-0:2018<br>EN IEC 60079-7:2015/A1:2018<br>EN 60079-11:2012<br>EN 60079-31:2014  |
| RoHS   |   |   |
| Directive 2011/65/EU (RoHS)                                    |   | EN IEC 63000:2018   |
| <b>Software</b>  |   |   |
| Operating system   |   | Pepperl+Fuchs RM Shell 5 (based on Microsoft® Windows® 10 IoT Enterprise 2019 LTSC (x64))   |
| <b>Ambient conditions</b>                                      |   |   |
| Operating temperature  |   | Temperature classes:<br>A: 0 ... 45 °C (32 ... 113 °F)<br>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  |
| <b>Mechanical specifications</b>                               |   |   |
| Degree of protection   |   | Front side: IP66/Type 4X<br>Back side: IP20   |
| Material   |   | Front bezel: Stainless steel AISI304 (glass, silicone gasket)<br>Backside: Painted aluminum sheet metal   |
| Installation   |   | Panel mount (additional mounting kits available)  |
| Mass   |   | 22GT, 22FC and 19SC: approx. 8 kg<br>15FC: 5.4 kg   |
| Dimensions   |   | 22 inch: 567 mm x 358 mm x 68 mm<br>19 inch: 485.7 mm x 410.5 mm x 68 mm<br>15 inch: 434 mm x 283.4 mm x 67 mm<br>For cut out dimensions refer to the VisuNet FLX Panel mount manual. |
| <b>Data for application in connection with hazardous areas</b> |   |   |
| Certificate  |   |   |
| Marking  |   | PF 21 CERT 6287X<br>Ⓜ II 3 G Ex ec [ic] IIC T4 Gc<br>PF 21 CERT 6288U<br>Ⓜ II 3 D Ex tc [ic] IIC Dc   |
| <b>International approvals</b>                                 |   |   |
| UL approval  |   | Certificate in preparation.   |

## Technical Data

|                   |   |
|-------------------|---|
| Approved for      | Ordinary location<br>acc. UL 61010-1 and UL 61010-2-201   |
|                   | Hazardous location<br>Class I, DIV 2, GPS A-D<br>Class II, DIV 2, GPS F-G<br>Class III<br>Class I, ZN 2, IIC T4<br>Class II, ZN 2, IIC T85°C<br>Class III |
| IECEX approval    |   |
| IECEX certificate | Certificate in preparation.   |
| IECEX marking     | Ex ec [ic] IIC T4 Gc<br>Ex tc [ic] IIC Dc   |
| Standards         | IEC 60079-0:2017<br>IEC 60079-7:2017<br>IEC 60079-11:2011<br>IEC 60079-31:2013  |

## Accessories

|   |                                      |   |
|---|--------------------------------------|---|
|    | <b>DPU3200-15FC-304A-V1-N0</b>       | Display Unit  |
|    | <b>DPU3200-19SC-304A-V1-N0</b>       | Display Unit  |
|   | <b>VISUNET-RM-SHELL5 (2019 LTSC)</b> | Thin Client Firmware for VisuNet Remote Monitors, Box Thin Clients and Tablet Thin Clients (mobile) |
|  | <b>BPC3200-N*</b>                    | Industrial Box PC   |
|  | <b>DPU3200-22GT-304A-V1-N0</b>       | Display Unit  |
|  | <b>DPU3200-22FC-304A-V1-N0</b>       | Display Unit  |
|  | <b>Mounting Options</b>              | Mounting options for the VisuNet FLX Panel Mount  |
|  | <b>VISUNET-RM-SHELL5 (2016 LTSB)</b> | Thin Client Firmware for VisuNet Remote Monitors and Box Thin Clients                               |

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**Type Code**

**RM-320P-\***

| Model                     | Ex protection  | Temperature | Display unit | Power supply unit | Computing platform | RAM | Storage | OS & software | Housing | Options |
|---------------------------|--|-------------|--------------|-------------------|--------------------|-----|---------|---------------|---------|---------|
| <b>Model</b>              |  |             |              |                   |                    |     |         |               |         |         |
| <b>RM-320P-</b>           | Remote Monitor - "Panel PC"  |             |              |                   |                    |     |         |               |         |         |
| <b>Ex protection</b>      |  |             |              |                   |                    |     |         |               |         |         |
| <b>N</b>                  | Industrial, general purpose  |             |              |                   |                    |     |         |               |         |         |
| <b>R</b>                  | ATEX Zone 2/22 (P+F self declaration)                                      |             |              |                   |                    |     |         |               |         |         |
| <b>Temperature</b>        |  |             |              |                   |                    |     |         |               |         |         |
| <b>A-</b>                 | 0 ... 45 °C  |             |              |                   |                    |     |         |               |         |         |
| <b>B-</b>                 | -20 ... 55 °C  |             |              |                   |                    |     |         |               |         |         |
| <b>Display unit</b>       |  |             |              |                   |                    |     |         |               |         |         |
| <b>22GT-</b>              | 21.5 " (16:9), Full HD (1920 x 1080), capacitive touch, no optical bonding |             |              |                   |                    |     |         |               |         |         |
| <b>22FC-</b>              | 21.5 " (16:9), Full HD (1920 x 1080), capacitive touch, optical bonding    |             |              |                   |                    |     |         |               |         |         |
| <b>19SC-</b>              | 19.0" SXGA (1280x1024 pixel), capacitive touch, optical bonding            |             |              |                   |                    |     |         |               |         |         |
| <b>15FC-</b>              | 15.6" (16:9), Full HD (1920x1080 pixel), capacitive touch, optical bonding |             |              |                   |                    |     |         |               |         |         |
| <b>Power supply unit</b>  |  |             |              |                   |                    |     |         |               |         |         |
| <b>D-</b>                 | 24 V DC  |             |              |                   |                    |     |         |               |         |         |
| <b>Computing platform</b> |  |             |              |                   |                    |     |         |               |         |         |
| <b>1N</b>                 | Intel Celeron  |             |              |                   |                    |     |         |               |         |         |
| <b>RAM</b>                |  |             |              |                   |                    |     |         |               |         |         |
| <b>A</b>                  | 1x 4 GB, industrial temperature grade                                      |             |              |                   |                    |     |         |               |         |         |
| <b>K</b>                  | 1x 4 GB, wide temperature grade  |             |              |                   |                    |     |         |               |         |         |
| <b>Storage</b>            |  |             |              |                   |                    |     |         |               |         |         |
| <b>A</b>                  | 32 GB, industrial temperature grade, M.2 SATA                              |             |              |                   |                    |     |         |               |         |         |
| <b>K</b>                  | 32 GB, wide temperature grade, M.2 SATA                                    |             |              |                   |                    |     |         |               |         |         |
| <b>OS &amp; Software</b>  |  |             |              |                   |                    |     |         |               |         |         |
| <b>2</b>                  | Pepperl+Fuchs RM Shell 5.x (based on Win 10 IoT Enterprise 2019 LTSC)      |             |              |                   |                    |     |         |               |         |         |
| <b>Housing</b>            |  |             |              |                   |                    |     |         |               |         |         |
| <b>S1-</b>                | Stainless steel bezel SS304, prepared for panel mounting                   |             |              |                   |                    |     |         |               |         |         |
| <b>Options</b>            |  |             |              |                   |                    |     |         |               |         |         |
| <b>NN0</b>                | Standard   |             |              |                   |                    |     |         |               |         |         |

Example: RM-320P-NA-22GT-D-1NAA2S1-NN0

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