

SIMATIC IPC 477E 22" Touch (1920 x 1080); with front USB; 4 USB (back), Ethernet (10/100/1000); Core i5-6442EQ; 3x Gbit Ethernet (IE/PN); 16 GB; without RS 232/RS485; without PCIe; Windows 10 Enterprise 2019 LTSC (64-bit), MUI (en,de,fr,it,es) for Celeron, i3 and i5, Without replaceable mass storage; 480 GB solid-state drive SATA Without SIMATIC software; 110/230 V AC industrial power supply unit with NAMUR; power supply cable Europe;

| General information                        |                                                                                                                                                                                                            |
|--------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Product type designation                   | IPC477E                                                                                                                                                                                                    |
| Display                                    |                                                                                                                                                                                                            |
| Design of display                          | 22" TFT touch                                                                                                                                                                                              |
| Screen diagonal                            | 21.5 in                                                                                                                                                                                                    |
| Resolution (pixels)                        |                                                                                                                                                                                                            |
| • Horizontal image resolution              | 1 920 pixel                                                                                                                                                                                                |
| • Vertical image resolution                | 1 080 pixel                                                                                                                                                                                                |
| Backlighting                               |                                                                                                                                                                                                            |
| • MTBF backlighting (at 25 °C)             | 30 000 h                                                                                                                                                                                                   |
| Control elements                           |                                                                                                                                                                                                            |
| Input device                               |                                                                                                                                                                                                            |
| • Mouse, at front                          | No                                                                                                                                                                                                         |
| Keyboard fonts                             |                                                                                                                                                                                                            |
| • Function keys                            | No                                                                                                                                                                                                         |
| • alphanumeric keyboard                    | No                                                                                                                                                                                                         |
| Touch operation                            |                                                                                                                                                                                                            |
| • Design as touch screen                   | Yes; analog, resistive                                                                                                                                                                                     |
| Installation type/mounting                 |                                                                                                                                                                                                            |
| Mounting                                   | For horizontal and vertical mounting                                                                                                                                                                       |
| Design                                     | Panel PC, built-in unit                                                                                                                                                                                    |
| central design                             | Yes                                                                                                                                                                                                        |
| distributed design                         | No                                                                                                                                                                                                         |
| Mounting in portrait format possible       | Yes                                                                                                                                                                                                        |
| Supply voltage                             |                                                                                                                                                                                                            |
| Type of supply voltage                     | 100/240 V AC (autorange) 50/60 Hz; optional 24 V DC                                                                                                                                                        |
| Line frequency                             |                                                                                                                                                                                                            |
| • Rated value 50 Hz                        | Yes                                                                                                                                                                                                        |
| • Rated value 60 Hz                        | Yes                                                                                                                                                                                                        |
| Mains buffering                            |                                                                                                                                                                                                            |
| • Mains/voltage failure stored energy time | 20 ms                                                                                                                                                                                                      |
| Power loss                                 |                                                                                                                                                                                                            |
| In full configuration                      | 24 V DC: max. 74 W, PCIe APGB additionally 5 W                                                                                                                                                             |
| Processor                                  |                                                                                                                                                                                                            |
| Processor type                             | Celeron G3902 (2C/2T, 1.6 GHz, 2 MB Cache); Core i3-6102E (2C/4T, 1.9 GHz, 3 MB Cache); Core i5-6442EQ (4C/4T, 1.9 (2.7) GHz, 6 MB Cache, iAMT); Xeon E3-1505L v5 (4C/8T, 2.0 (2.8) GHz, 8 MB Cache, iAMT) |
| Chipset                                    | Intel C236 / Intel H110                                                                                                                                                                                    |
| Graphic                                    |                                                                                                                                                                                                            |
| Graphics controller                        | Intel HD graphics controller                                                                                                                                                                               |
| Drives                                     |                                                                                                                                                                                                            |
| Hard disk                                  | 2.5" SATA ≥ 320 GB                                                                                                                                                                                         |
| SSD                                        | Yes; 128 / 240 / 480 GB                                                                                                                                                                                    |
| Memory                                     |                                                                                                                                                                                                            |
| Type of memory                             | DDR4-2400 SO-DIMM                                                                                                                                                                                          |
| Main memory                                | 4 / 8 / 16 GB, ECC optional                                                                                                                                                                                |

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| Capacity of main memory, max.                                       | 16 Gbyte                                                                                                                        |
| <b>Data areas and their retentivity</b>                             |                                                                                                                                 |
| Retentive data area (incl. timers, counters, flags), max.           | 512 kbyte; 128 KB can be stored in the buffer time; optional                                                                    |
| <b>Hardware configuration</b>                                       |                                                                                                                                 |
| Slots                                                               |                                                                                                                                 |
| • free slots                                                        | 1x PCIe (slot with card retainer), 1x slot for CFAST card                                                                       |
| • Number of PCI slots                                               | 1; Optional                                                                                                                     |
| • Number of compact flash slots                                     | 1; CFast                                                                                                                        |
| <b>Interfaces</b>                                                   |                                                                                                                                 |
| Number of industrial Ethernet interfaces                            | 3; 3x Ethernet (RJ45)                                                                                                           |
| USB port                                                            | 4x USB 3.0                                                                                                                      |
| Connection for keyboard/mouse                                       | USB / USB                                                                                                                       |
| serial interface                                                    | Without / 2x COM (RS 232 / 422 / 485), selectable in the BIOS                                                                   |
| Video interfaces                                                    |                                                                                                                                 |
| • Graphics interface                                                | 2x DisplayPort                                                                                                                  |
| Industrial Ethernet                                                 |                                                                                                                                 |
| • Industrial Ethernet interface                                     | 3x Ethernet (RJ45)                                                                                                              |
| — 100 Mbps                                                          | Yes                                                                                                                             |
| — 1000 Mbps                                                         | Yes                                                                                                                             |
| <b>Interrupts/diagnostics/status information</b>                    |                                                                                                                                 |
| Bus diagnostics                                                     | Yes                                                                                                                             |
| <b>Integrated Functions</b>                                         |                                                                                                                                 |
| Monitoring functions                                                |                                                                                                                                 |
| • Temperature monitoring                                            | Yes                                                                                                                             |
| • Watchdog                                                          | Yes                                                                                                                             |
| • Fan                                                               | No                                                                                                                              |
| • Monitoring function via network                                   | Optional                                                                                                                        |
| <b>EMC</b>                                                          |                                                                                                                                 |
| Interference immunity against discharge of static electricity       |                                                                                                                                 |
| • Interference immunity against discharge of static electricity     | ±6 kV contact discharge acc. to IEC 61000-4-2; ±8 kV air discharge acc. to IEC 61000-4-2                                        |
| Interference immunity against high-frequency electromagnetic fields |                                                                                                                                 |
| • Interference immunity against high frequency radiation            | 10 V/m, 80 ... 2 000 MHz, 80 % AM acc. to IEC 61000-4-3; 3 V/m, 2 ... 2.7 GHz; 10 V, 10 kHz ... 80 MHz acc. to IEC 61000-4-6    |
| Interference immunity to cable-borne interference                   |                                                                                                                                 |
| • Interference immunity on supply cables                            | ±2 kV acc. to IEC 61000-4-4, burst; ±1 kV acc. to IEC 61000-4-5, surge symmetric; ±2 kV acc. to IEC 61000-4-5, surge asymmetric |
| • Interference immunity on signal cables >30m                       | ±2 kV acc. to IEC 61000-4-5, surge, length > 30 m                                                                               |
| • Interference immunity on signal cables < 30m                      | ±1 kV acc. to IEC 61000-4-4; burst; length < 3 m; ±2 kV acc. to IEC 61000-4-4; burst; length > 3 m                              |
| Interference immunity against voltage surge                         |                                                                                                                                 |
| • asymmetric interference                                           | ±2 kV acc. to IEC 61000-4-5, surge asymmetric                                                                                   |
| • symmetric interference                                            | ±1 kV acc. to IEC 61000-4-5, surge symmetric                                                                                    |
| Interference immunity to magnetic fields                            |                                                                                                                                 |
| • Interference immunity to magnetic fields at 50 Hz                 | 100 A/m; to IEC 61000-4-8                                                                                                       |
| Emission of conducted and non-conducted interference                |                                                                                                                                 |
| • Interference emission via line/AC current cables                  | EN 61000-6-3, EN 61000-6-4, CISPR 22 Class B, FCC Class A                                                                       |
| <b>Degree and class of protection</b>                               |                                                                                                                                 |
| IP (at the front)                                                   | IP65                                                                                                                            |
| IP (rear)                                                           | IP20                                                                                                                            |
| <b>Standards, approvals, certificates</b>                           |                                                                                                                                 |
| CE mark                                                             | Yes                                                                                                                             |
| CSA approval                                                        | Yes                                                                                                                             |
| UL approval                                                         | Yes                                                                                                                             |
| • UL 508                                                            | Yes                                                                                                                             |
| cULus                                                               | Yes                                                                                                                             |
| RCM (formerly C-TICK)                                               | Yes                                                                                                                             |
| KC approval                                                         | Yes                                                                                                                             |
| EAC (formerly Gost-R)                                               | Yes                                                                                                                             |
| FCC                                                                 | Yes                                                                                                                             |
| EMC                                                                 | CE, EN 61000-6-4; CISPR 22:2004 Class A; FCC Class A                                                                            |
| Use in hazardous areas                                              |                                                                                                                                 |

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| <ul style="list-style-type: none"> <li>• ATEX Zone 2</li> <li>• IECEx Zone 2</li> <li>• cULus Class I Zone 2, Division 2</li> </ul>                                                                                                                                                                                             | Yes; Optional, only with Multitouch<br>Yes; Optional, only with Multitouch<br>Yes; Optional, only with Multitouch                                                           |
| <b>Marine approval</b>                                                                                                                                                                                                                                                                                                          |                                                                                                                                                                             |
| <ul style="list-style-type: none"> <li>• Germanischer Lloyd (GL)</li> <li>• American Bureau of Shipping (ABS)</li> <li>• Bureau Veritas (BV)</li> <li>• Det Norske Veritas (DNV)</li> <li>• Korean Register of Shipping (KRS)</li> <li>• Lloyds Register of Shipping (LRS)</li> <li>• Nippon Kaiji Kyokai (Class NK)</li> </ul> | Yes<br>Yes<br>Yes<br>Yes<br>Yes<br>Yes<br>Yes                                                                                                                               |
| <b>Ambient conditions</b>                                                                                                                                                                                                                                                                                                       |                                                                                                                                                                             |
| <b>Ambient temperature during operation</b>                                                                                                                                                                                                                                                                                     |                                                                                                                                                                             |
| <ul style="list-style-type: none"> <li>• Ambient temperature during operation</li> </ul>                                                                                                                                                                                                                                        | 0 °C to 45 °C                                                                                                                                                               |
| <b>Ambient temperature during storage/transportation</b>                                                                                                                                                                                                                                                                        |                                                                                                                                                                             |
| <ul style="list-style-type: none"> <li>• min.</li> <li>• max.</li> </ul>                                                                                                                                                                                                                                                        | -20 °C<br>60 °C                                                                                                                                                             |
| <b>Relative humidity</b>                                                                                                                                                                                                                                                                                                        |                                                                                                                                                                             |
| <ul style="list-style-type: none"> <li>• Relative humidity</li> </ul>                                                                                                                                                                                                                                                           | Tested according to IEC 60068-2-78, IEC 60068-2-30: 5% to 80% at 25 °C (no condensation)                                                                                    |
| <b>Vibrations</b>                                                                                                                                                                                                                                                                                                               |                                                                                                                                                                             |
| <ul style="list-style-type: none"> <li>• Vibration resistance during operation acc. to IEC 60068-2-6</li> </ul>                                                                                                                                                                                                                 | IEC 60068-2-6; 5 Hz to 9 Hz: 3.5 mm; 9 Hz to 500 Hz: 9.8 m/s <sup>2</sup> (with SSD or CFast); 10 Hz to 58 Hz: 0.0375 mm; 58 Hz to 200 Hz: 4.9 m/s <sup>2</sup> (hard disk) |
| <b>Shock testing</b>                                                                                                                                                                                                                                                                                                            |                                                                                                                                                                             |
| <ul style="list-style-type: none"> <li>• Shock load during operation</li> </ul>                                                                                                                                                                                                                                                 | IEC 60068-2-27; 150 m/s <sup>2</sup> , 11 ms (without hard disk); 50 m/s <sup>2</sup> , 30 ms (with hard disk)                                                              |
| <b>Operating systems</b>                                                                                                                                                                                                                                                                                                        |                                                                                                                                                                             |
| pre-installed operating system                                                                                                                                                                                                                                                                                                  | Windows 7 Ultimate (Multi-Language) 64-bit, Windows Embedded Standard 7 E/P 32-bit / 64-bit, Windows 10                                                                     |
| without operating system                                                                                                                                                                                                                                                                                                        | Yes; Optional                                                                                                                                                               |
| <b>pre-installed operating system</b>                                                                                                                                                                                                                                                                                           |                                                                                                                                                                             |
| <ul style="list-style-type: none"> <li>• Windows 7</li> <li>• Windows 10 Enterprise</li> </ul>                                                                                                                                                                                                                                  | Yes; Ultimate 64 bit<br>Yes; Windows 10 Enterprise 2016 LTSC, 64 bit, MUI                                                                                                   |
| <b>Software</b>                                                                                                                                                                                                                                                                                                                 |                                                                                                                                                                             |
| SIMATIC Software                                                                                                                                                                                                                                                                                                                | Optionally with pre-installed SIMATIC WinCC RT Advanced / Software Controller CPU 1500S software bundle                                                                     |
| <b>Dimensions</b>                                                                                                                                                                                                                                                                                                               |                                                                                                                                                                             |
| Width of the housing front                                                                                                                                                                                                                                                                                                      | 560 mm                                                                                                                                                                      |
| Height of housing front                                                                                                                                                                                                                                                                                                         | 380 mm                                                                                                                                                                      |
| Mounting cutout, width                                                                                                                                                                                                                                                                                                          | 542 mm                                                                                                                                                                      |
| Mounting cutout, height                                                                                                                                                                                                                                                                                                         | 362 mm                                                                                                                                                                      |
| Overall depth                                                                                                                                                                                                                                                                                                                   | 76 mm                                                                                                                                                                       |
| <b>Weights</b>                                                                                                                                                                                                                                                                                                                  |                                                                                                                                                                             |
| Weight, approx.                                                                                                                                                                                                                                                                                                                 | 9.5 kg                                                                                                                                                                      |
| <b>last modified:</b>                                                                                                                                                                                                                                                                                                           | 4/30/2021                                                                                |