

SIMATIC IoT2000 input/output module, 5x DI 2x AI 2x DQ, ARDUINO Shield for SIMATIC IoT2040 and IoT2050



| Installation type/mounting   |  |
|--|--|
| Mounting   | On Arduino interface                   |
| Design   | Plug-in card                           |
| Supply voltage   |  |
| Type of supply voltage   | 24 V DC                                |
| Digital inputs   |  |
| Number of digital inputs   | 5                                      |
| Input voltage  |  |
| <ul style="list-style-type: none"> <li>Type of input voltage</li> <li>for signal "0"</li> <li>for signal "1"</li> </ul>  | DC<br>< 5 V DC<br>> 12 V DC            |
| Input current  |  |
| <ul style="list-style-type: none"> <li>for signal "0", max. (permissible quiescent current)</li> <li>for signal "1", typ.</li> </ul>                               | 0.9 mA<br>2.1 mA                       |
| Input delay (for rated value of input voltage)   |  |
| for standard inputs  |  |
| <ul style="list-style-type: none"> <li>at "0" to "1", max.</li> <li>at "1" to "0", max.</li> </ul>   | 1.5 ms<br>1.5 ms                       |
| Digital outputs  |  |
| Type of digital output   | transistor                             |
| Number of digital outputs  | 2                                      |
| Short-circuit protection   | Yes                                    |
| Output voltage   |  |
| <ul style="list-style-type: none"> <li>Type of output voltage</li> <li>permissible voltage at output, min.</li> <li>permissible voltage at output, max.</li> </ul> | DC<br>0 V<br>28.8 V                    |
| Output current   |  |
| <ul style="list-style-type: none"> <li>for signal "1" rated value</li> </ul>   | 0.3 A                                  |
| Parallel switching of two outputs  |  |
| <ul style="list-style-type: none"> <li>for uprating</li> </ul>   | No                                     |
| Switching frequency  |  |
| <ul style="list-style-type: none"> <li>with resistive load, max.</li> <li>with inductive load, max.</li> </ul>   | 10 Hz<br>0.5 Hz                        |
| Analog inputs  |  |
| Number of analog inputs  | 2                                      |
| Input ranges   |  |
| <ul style="list-style-type: none"> <li>Voltage</li> <li>Current</li> <li>Thermocouple</li> </ul>   | Yes; 0 to 10V<br>Yes; 0 to 20 mA<br>No |

|   |  |
|---|--|
| • Resistance thermometer  | No   |
| • Resistance  | No   |
| <b>Input ranges (rated values), voltages</b>                        |  |
| • 0 to +10 V  | Yes  |
| <b>Input ranges (rated values), currents</b>                        |  |
| • 0 to 20 mA  | Yes  |
| <b>Analog value generation for the inputs</b>                       |  |
| Integration and conversion time/resolution per channel              |  |
| • Resolution with overrange (bit including sign), max.              | 9 bit  |
| <b>Integrated Functions</b>   |  |
| Monitoring functions  |  |
| • Temperature monitoring  | No   |
| • Watchdog  | No   |
| • Status LEDs   | No   |
| • Fan   | No   |
| <b>EMC</b>  |  |
| Interference immunity against discharge of static electricity       |  |
| • Interference immunity against discharge of static electricity     | ±4 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 for 80 - 1 000 MHz, 80% AM acc. to IEC 61000-4-3; 3 V/m for 1.4 - 2 GHz, 80% AM acc. to IEC 61000-4-3; 1 V/m for 2 - 2.7 GHz, 80% AM acc. to IEC 61000-4-3; 10 V for 150 kHz - 80 MHz, 80% AM 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                      | ±2 kV in accordance with IEC 61000-4-4, burst, length > 30 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 61000-6-4:2007 +A1:2011   |
| <b>Degree and class of protection</b>                               |  |
| IP (at the front)   | n.a.   |
| <b>Standards, approvals, certificates</b>                           |  |
| CE mark   | Yes  |
| UL approval   | Yes  |
| cULus   | Yes  |
| KC approval   | Yes; For use inside SIMATIC IoT2040  |
| EMC   | CE, EN 61000-6-4:2007 +A1:2011, EN 61000-6-2:2005, EN 61000-6-3:2007 +A1:2011, EN 61000-6-1:2007   |
| <b>Ambient conditions</b>   |  |
| Ambient temperature during operation                                |  |
| • Ambient temperature during operation                              | 0 °C to 50 °C  |
| Relative humidity   |  |
| • Relative humidity   | Tested according to IEC 60068-2-78, IEC 60068-2-30: Operation: 5 % to 85 % at 30 °C (no condensation), storage / transport: 5 % to 95 % at 25 / 55 °C (no condensation)  |
| Vibrations  |  |
| • Vibration resistance during operation acc. to IEC 60068-2-6       | Tested according to IEC 60068-2-6: 5 Hz to 9 Hz: 3.5 mm; 9 Hz to 200 Hz: 9.8 m/s <sup>2</sup>  |
| Shock testing   |  |
| • Shock load during operation                                       | Tested according to IEC 60068-2-27: 150 m/s <sup>2</sup> , 11 ms   |
| <b>Operating systems</b>  |  |
| without operating system  | Yes  |
| <b>Dimensions</b>   |  |
| Width   | 75 mm  |

|        |       |
|--------|-------|
| Height | 57 mm |
| Depth  | 32 mm |

**last modified:** 5/31/2021 