



SIMATIC S7-400, digital input SM 421, isolated 32 DI; 24 V DC

|                                                        |                     |
|--------------------------------------------------------|---------------------|
| <b>Input current</b>                                   |                     |
| from backplane bus 5 V DC, max.                        | 20 mA               |
| <b>Power loss</b>                                      |                     |
| Power loss, typ.                                       | 6 W                 |
| <b>Digital inputs</b>                                  |                     |
| Number of digital inputs                               | 32                  |
| Input characteristic according to IEC 61131            | Type 1              |
| Number of simultaneously controllable inputs           |                     |
| • Number of simultaneously controllable inputs         | 32                  |
| <b>Input voltage</b>                                   |                     |
| • Type of input voltage                                | DC                  |
| • Rated value (DC)                                     | 24 V                |
| • for signal "0"                                       | -30 V DC to +5 V DC |
| • for signal "1"                                       | 13 V DC to 30 V DC  |
| <b>Input current</b>                                   |                     |
| • for signal "0", max. (permissible quiescent current) | 1.3 mA              |
| • for signal "1", typ.                                 | 7 mA                |
| <b>Input delay (for rated value of input voltage)</b>  |                     |
| for standard inputs                                    |                     |
| — at "0" to "1", min.                                  | 1.2 ms              |
| — at "0" to "1", max.                                  | 4.8 ms              |
| — at "1" to "0", min.                                  | 1.2 ms              |
| — at "1" to "0", max.                                  | 4.8 ms              |
| <b>Cable length</b>                                    |                     |
| • shielded, max.                                       | 1 000 m             |
| • unshielded, max.                                     | 600 m               |
| <b>Encoder</b>                                         |                     |
| Connectable encoders                                   |                     |
| • 2-wire sensor                                        | Yes                 |
| — permissible quiescent current (2-wire sensor), max.  | 1.5 mA              |
| <b>Interrupts/diagnostics/status information</b>       |                     |
| Diagnostics function                                   | No                  |
| Diagnostics indication LED                             |                     |
| • Status indicator digital input (green)               | Yes                 |
| <b>Potential separation</b>                            |                     |
| Potential separation digital inputs                    |                     |
| • between the channels                                 | No                  |
| • between the channels, in groups of                   | 32                  |
| • between the channels and backplane bus               | Yes                 |

| Isolation             |                              |
|-----------------------|------------------------------|
| Isolation tested with | 500 V AC/707 V DC, type test |
| Dimensions            |                              |
| Width                 | 25 mm                        |
| Height                | 290 mm                       |
| Depth                 | 210 mm                       |
| Weights               |                              |
| Weight, approx.       | 500 g                        |
| Classifications       |                              |

|        | Version | Classification |
|--------|---------|----------------|
| eClass | 16      | 27-24-22-04    |
| eClass | 14      | 27-24-22-04    |
| eClass | 12      | 27-24-22-04    |
| eClass | 9.1     | 27-24-22-04    |
| eClass | 9       | 27-24-22-04    |
| eClass | 8       | 27-24-22-04    |
| eClass | 7.1     | 27-24-22-04    |
| eClass | 6       | 27-24-22-04    |
| ETIM   | 10      | EC001419       |
| ETIM   | 9       | EC001419       |
| ETIM   | 8       | EC001419       |
| ETIM   | 7       | EC001419       |
| IDEA   | 4       | 3566           |
| UNSPSC | 15      | 32-15-17-05    |

#### Approvals / Certificates

##### General Product Approval



[Miscellaneous](#)



##### General Product Approval

##### EMV

##### For use in hazardous locations

[China RoHS](#)

[Miscellaneous](#)

[Manufacturer Declaration](#)



##### For use in hazardous locations



[FM](#)



[Type Examination Certificate](#)



##### Maritime application



[NK / Nippon Kaiji Kyokai](#)



##### Maritime application



[CCS \(China Classification Society\)](#)

---

last modified:

10/23/2025 