

# SIEMENS

## Product data sheet

## 6ES7223-1PH30-0XB0



SIMATIC S7-1200, DIGITAL I/O SM 1223,  
8DI / 8DO, 8DI DC 24 V, SINK/SOURCE,  
8DO, RELAY 2A

|   |                        |
|---|------------------------|
| <b>Supply voltage</b>                     |                        |
| 24 V DC                                   | Yes                    |
| permissible range, lower limit (DC)       | 20.4 V                 |
| permissible range, upper limit (DC)       | 28.8 V                 |
| <b>Input current</b>                      |                        |
| from backplane bus 5 V DC, max.           | 145 mA                 |
| <b>Digital inputs</b>                     |                        |
| from load voltage L+ (without load), max. | 4 mA/input 11 mA/relay |
| <b>Output voltage</b>                     |                        |
| <b>Power supply to the transmitters</b>   |                        |
| present                                   | Yes                    |
| <b>Power losses</b>                       |                        |
| Power loss, typ.                          | 5.5 W                  |
| <b>Digital inputs</b>                     |                        |
| Number/binary inputs                      | 8                      |

|   |   |
|---|---|
| In groups of  | 2   |
| Input characteristic curve acc. to IEC 61131, Type 1  | Yes   |
| <b>Number of simultaneously controllable inputs</b>   |   |
| all mounting positions                                |   |
| up to 40 °C, max.                                     | 8   |
| horizontal installation                               |   |
| up to 40 °C, max.                                     | 8   |
| up to 50 °C, max.                                     | 8   |
| vertical installation                                 |   |
| up to 40 °C, max.                                     | 8   |
| <b>Input voltage</b>                                  |   |
| Type of input voltage                                 | DC  |
| Rated value, DC                                       | 24 V  |
| for signal "0"  | 5 V DC at 1 mA  |
| for signal "1"  | 15 V DC at 2.5 mA   |
| <b>Input current</b>                                  |   |
| for signal "0", max. (permissible quiescent current)  | 1 mA  |
| for signal "1", min.                                  | 2.5 mA  |
| for signal "1", typ.                                  | 4 mA ; Typical  |
| <b>Input delay (for rated value of input voltage)</b> |   |
| for standard inputs                                   |   |
| Parameterizable                                       | Yes ; 0.2, 0.4, 0.8, 1.6, 3.2, 6.4, and 12.8 ms, selectable in groups of four |
| for interrupt inputs                                  |   |
| Parameterizable                                       | Yes   |
| <b>Cable length</b>                                   |   |
| Cable length, shielded, max.                          | 500 m   |
| Cable length unshielded, max.                         | 300 m   |
| <b>Digital outputs</b>                                |   |
| Number/binary outputs                                 | 8   |
| In groups of  | 2   |
| Functionality/short-circuit strength                  | No ; to be provided externally  |
| <b>Switching capacity of the outputs</b>              |   |
| with resistive load, max.                             | 2 A   |

|  |  |
|--|--|
| on lamp load, max.                                 | 30 W DC ; 200 W AC                                     |
| <b>Output voltage</b>                              |  |
| Rated value (AC)                                   | 5 to 250 V AC  |
| Rated value (DC)                                   | 5 to 30 V AC   |
| <b>Output current</b>                              |  |
| for signal "1" permissible range, max.             | 2 A  |
| <b>Output delay with resistive load</b>            |  |
| "0" to "1", max.                                   | 10 ms  |
| "1" to "0", max.                                   | 10 ms  |
| <b>Aggregate current of outputs (per group)</b>    |  |
| <b>horizontal installation</b>                     |  |
| up to 50 °C, max.                                  | 10 A ; Current per mass                                |
| <b>Relay outputs</b>                               |  |
| Number of relay outputs                            | 8  |
| Rated input voltage of relay coil L+ (DC)          | 24 V   |
| Number of operating cycles, max.                   | mechanically 10 million, at rated load voltage 100,000 |
| <b>Switching capacity of contacts</b>              |  |
| with inductive load, max.                          | 2 A  |
| on lamp load, max.                                 | 30 W DC ; 200 W AC                                     |
| Switching frequency/contacts/at ohmic load/maximum | 2 A  |
| <b>Cable length</b>                                |  |
| Cable length, shielded, max.                       | 500 m  |
| Cable length unshielded, max.                      | 150 m  |
| <b>Interrupts/diagnostics/status information</b>   |  |
| <b>Alarms</b>                                      |  |
| Alarms   | Yes  |
| Diagnostic alarm                                   | Yes  |
| <b>Diagnostic messages</b>                         |  |
| Diagnostic functions                               | Yes  |
| <b>Diagnostics indication LED</b>                  |  |
| for status of the inputs                           | Yes  |
| For status of the outputs                          | Yes  |
| for maintenance                                    | Yes  |

|   |  |
|---|--|
| Status indicator digital output (green)                             | Yes  |
| Status indicator digital input (green)                              | Yes  |
| <b>Galvanic isolation</b>   |  |
| <b>Galvanic isolation digital inputs</b>                            |  |
| between the channels, in groups of                                  | 2  |
| <b>Galvanic isolation digital outputs</b>                           |  |
| between the channels  | Relay  |
| between the channels, in groups of                                  | 2  |
| between the channels and the backplane bus                          | 1500 V AC for 1 minute   |
| <b>Permissible potential difference</b>                             |  |
| between different circuits  | 750 V AC for 1 minute  |
| <b>Degree and class of protection</b>                               |  |
| IP20  | Yes  |
| <b>Standards, approvals, certificates</b>                           |  |
| CE mark   | Yes  |
| C-TICK  | Yes  |
| FM approval   | Yes  |
| <b>Climatic and mechanical conditions for storage and transport</b> |  |
| <b>Climatic conditions for storage and transport</b>                |  |
| <b>Free fall</b>  |  |
| Drop height, max. (in packaging)                                    | 0.3 m ; five times, in dispatch package                                      |
| <b>Temperature</b>  |  |
| Permissible temperature range                                       | -40 °C to +70 °C   |
| <b>Air pressure acc. to IEC 60068-2-13</b>                          |  |
| Permissible air pressure  | 1080 to 660 hPa  |
| <b>Mechanical and climatic conditions during operation</b>          |  |
| <b>Climatic conditions in operation</b>                             |  |
| <b>Temperature</b>  |  |
| Permissible temperature range                                       | 0 °C to 55 °C horizontal installation<br>0 °C to 45 °C vertical installation |
| Permissible temperature change                                      | 5°C to 55°C, 3°C / minute  |
| <b>Connection method</b>  |  |
| required front connector  | Yes  |
| <b>Mechanics/material</b>   |  |

|                         |              |
|-------------------------|--------------|
| Type of housing (front) |              |
| Plastic                 | Yes          |
| <b>Dimensions</b>       |              |
| Width                   | 45 mm        |
| Height                  | 100 mm       |
| Depth                   | 75 mm        |
| <b>Weight</b>           |              |
| Weight, approx.         | 230 g        |
| Status                  | Jul 17, 2012 |