

# PP7021



## Pressure switch with ceramic measuring cell

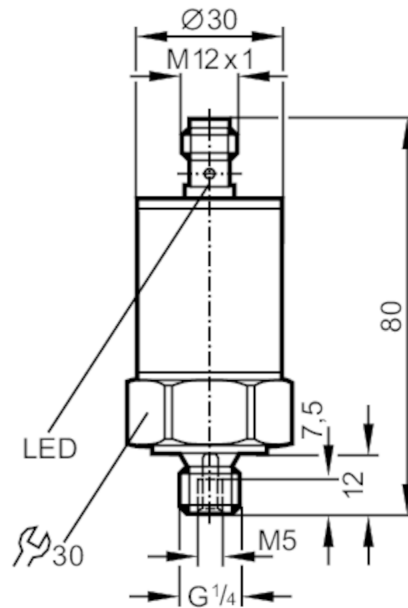
PP-250-SBG14-QFRKG/US / V

Article no longer available - archive entry

Alternative articles: PP7551 or PP0521

When selecting an alternative article and accessories please note that technical data may differ!

PP755x = DC pnp, PP052x = DC npn



### Product characteristics

|                    |  |              |            |
|--------------------|--|--------------|------------|
| Output signal      | switching signal   |              |            |
| Measuring range    | 0...250 bar  | 0...3630 psi | 0...25 MPa |
| Process connection | threaded connection G 1/4 external thread Internal thread:M5 |              |            |

### Application

|                            |  |           |        |
|----------------------------|--|-----------|--------|
| System                     | gold-plated contacts   |           |        |
| Application                | for industrial applications                                  |           |        |
| Media                      | liquids and gases  |           |        |
| Conditionally suitable for | For gaseous media the application is limited to max. 25 bar. |           |        |
| Medium temperature [°C]    | -25...80   |           |        |
| Min. bursting pressure     | 850 bar  | 12300 psi | 85 MPa |
| Pressure rating            | 400 bar  | 5800 psi  | 40 Mpa |
| Type of pressure           | relative pressure  |           |        |

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PP-250-SBG14-QFRKG/US/ IV


| Electrical data                                 |                        |   |                |
|---|------------------------|---|----------------|
| Operating voltage                               | [V]                    | 9.6...30 DC; (PP2000 with sensor: > 18)   |                |
| Current consumption                             | [mA]                   | < 45  |                |
| Min. insulation resistance                      | [MΩ]                   | 100; (500 V DC)   |                |
| Protection class                                |                        | III   |                |
| Reverse polarity protection                     |                        | yes   |                |
| Power-on delay time                             | [s]                    | 0.3   |                |
| Inputs / outputs                                |                        |   |                |
| Number of inputs and outputs                    |                        | Number of digital outputs: 2  |                |
| Outputs   |                        |   |                |
| Total number of outputs                         |                        | 2   |                |
| Output signal                                   |                        | switching signal  |                |
| Electrical design                               |                        | PNP/NPN   |                |
| Number of digital outputs                       |                        | 2   |                |
| Output function                                 |                        | normally open / closed; (configurable)  |                |
| Max. voltage drop switching output DC           | [V]                    | 2   |                |
| Permanent current rating of switching output DC | [mA]                   | 250   |                |
| Switching frequency DC                          | [Hz]                   | < 170   |                |
| Short-circuit protection                        |                        | yes   |                |
| Type of short-circuit protection                |                        | yes (non-latching)  |                |
| Overload protection                             |                        | yes   |                |
| Measuring/setting range                         |                        |   |                |
| Measuring range                                 |                        | 0...250 bar   | 0...3630 psi   |
| Set point SP                                    |                        | 3...250 bar   | 40...3630 psi  |
| Reset point rP                                  |                        | 2...249 bar   | 20...3610 psi  |
| In steps of                                     |                        | 1 bar   | 10 psi         |
|   |                        |   | 0...25 MPa     |
|   |                        |   | 0.3...25 MPa   |
|   |                        |   | 0.2...24.9 MPa |
|   |                        |   | 0.1 MPa        |
| Accuracy / deviations                           |                        |   |                |
| Switch point accuracy                           | [% of the span]        | < ± 1,5   |                |
| Repeatability                                   | [% of the span]        | < ± 0,1; (with temperature fluctuations < 10 K)   |                |
| Characteristics deviation                       | [% of the span]        | < ± 0,25 (BFSL) / < ± 0,5 (LS); (BFSL = Best Fit Straight Line; LS = limit value setting) |                |
| Linearity deviation                             | [% of the span]        | < ± 0,5   |                |
| Hysteresis deviation                            | [% of the span]        | < ± 0,1   |                |
| Long-term stability                             | [% of the span]        | < ± 0,1; (per year)   |                |
| Temperature coefficient zero point              | [% of the span / 10 K] | < ± 0,2; (-25...80 °C)  |                |
| Temperature coefficient span                    | [% of the span / 10 K] | < ± 0,3; (-25...80 °C)  |                |

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| Reaction times  |                           |  |
|---|---------------------------|--|
| Response time   | [ms]                      | < 3  |
| Damping for the switching output dAP  | [s]                       | 0...4  |
| Software / programming  |                           |  |
| Adjustment of the switch point  |                           | programming unit / teach function                            |
| Interfaces  |                           |  |
| Communication interface   |                           | EPS  |
| Operating conditions  |                           |  |
| Ambient temperature   | [°C]                      | -25...80   |
| Storage temperature   | [°C]                      | -40...100  |
| Protection  |                           | IP 67  |
| Tests / approvals   |                           |  |
| EMC   | EN 61000-4-2 ESD          | 4 kV CD / 8 kV AD  |
|   | EN 61000-4-3 HF radiated  | 10 V/m   |
|   | EN 61000-4-4 Burst        | 2 kV   |
|   | EN 61000-4-6 HF conducted | 10 V   |
| Shock resistance  | DIN IEC 68-2-27           | 50 g (11 ms)   |
| Vibration resistance  | DIN IEC 68-2-6            | 20 g (10...2000 Hz)  |
| Mechanical data   |                           |  |
| Material  |                           | stainless steel (1.4301 / 304); PA                           |
| Materials (wetted parts)  |                           | stainless steel (1.4305 / 303); ceramics; FKM                |
| Min. pressure cycles  |                           | 100 million  |
| Process connection  |                           | threaded connection G 1/4 external thread Internal thread:M5 |
| Restrictor element integrated   |                           | no (can be retrofitted)                                      |
| Displays / operating elements   |                           |  |
| Display   | Power                     | LED, green   |
|   | Switching status          | 2 x LED, yellow  |
| Teach function  |                           | yes  |
| Remarks   |                           |  |
| Pack quantity   |                           | 1 pcs.   |
| Electrical connection   |                           |  |
| Connector: 1 x M12; Contacts: gold-plated   |                           |  |
|  |                           |  |

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### Connection

