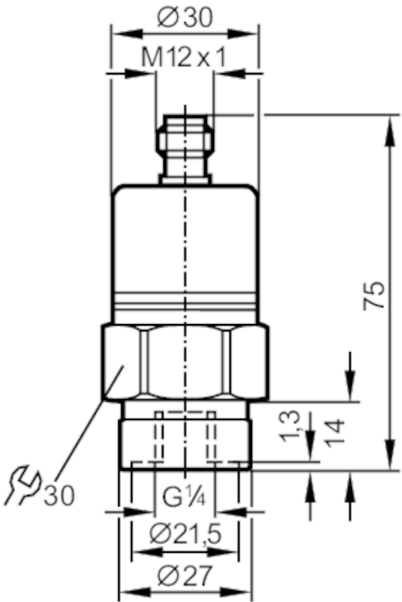


# PA309A



## Pressure transmitter with ceramic measuring cell

PA-0-1-RBR14-A-ZVG/US/ 3D/3G V



### Product characteristics

|                              |                                           |                |              |
|------------------------------|-------------------------------------------|----------------|--------------|
| Number of inputs and outputs | Number of analog outputs: 1               |                |              |
| Measuring range              | -1...0 bar                                | -1000...0 mbar | -100...0 kPa |
| Process connection           | threaded connection G 1/4 Internal thread |                |              |

### Application

|                         |                                                                  |       |
|-------------------------|------------------------------------------------------------------|-------|
| Special feature         | gold-plated contacts                                             |       |
| Application             | for industrial applications; For applications in hazardous areas |       |
| Media                   | liquids and gases                                                |       |
| Medium temperature [°C] | -20...60                                                         |       |
| Min. burst pressure     | 30 bar                                                           | 3 MPa |
| Pressure rating         | 10 bar                                                           | 1 MPa |
| Type of pressure        | relative pressure; vacuum                                        |       |

### Electrical data

|                                 |                 |  |  |
|---------------------------------|-----------------|--|--|
| Operating voltage [V]           | 9.6...32 DC     |  |  |
| Min. insulation resistance [MΩ] | 100; (500 V DC) |  |  |
| Protection class                | III             |  |  |
| Reverse polarity protection     | yes             |  |  |

### Inputs / outputs

|                              |                             |
|------------------------------|-----------------------------|
| Number of inputs and outputs | Number of analog outputs: 1 |
|------------------------------|-----------------------------|

### Outputs

|                            |               |
|----------------------------|---------------|
| Total number of outputs    | 1             |
| Output signal              | analog signal |
| Number of analog outputs   | 1             |
| Analog current output [mA] | 4...20        |

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|                                    |                        |                                                                                                                 |                     |              |
|------------------------------------|------------------------|-----------------------------------------------------------------------------------------------------------------|---------------------|--------------|
| Max. load                          | [Ω]                    | 720; (Ub = 24 V; (Ub - 9,6 V) / 20 mA)                                                                          |                     |              |
| Overload protection                |                        | yes                                                                                                             |                     |              |
| Measuring/setting range            |                        |                                                                                                                 |                     |              |
| Measuring range                    |                        | -1...0 bar                                                                                                      | -1000...0 mbar      | -100...0 kPa |
| Accuracy / deviations              |                        |                                                                                                                 |                     |              |
| 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)                       |                     |              |
| Long-term stability                | [% of the span]        | < ± 0,05; (per 6 months)                                                                                        |                     |              |
| Temperature coefficient zero point | [% of the span / 10 K] | 0,2; (0...60 °C)                                                                                                |                     |              |
| Temperature coefficient span       | [% of the span / 10 K] | 0,2; (0...60 °C)                                                                                                |                     |              |
| Reaction times                     |                        |                                                                                                                 |                     |              |
| Step response time analog output   | [ms]                   | 3                                                                                                               |                     |              |
| Operating conditions               |                        |                                                                                                                 |                     |              |
| Ambient temperature                | [°C]                   | -20...60                                                                                                        |                     |              |
| Storage temperature                | [°C]                   | -40...100                                                                                                       |                     |              |
| Protection                         |                        | IP 65; IP 67                                                                                                    |                     |              |
| Tests / approvals                  |                        |                                                                                                                 |                     |              |
| ATEX marking                       |                        |  II 3D Ex tc IIIC T85°C Dc X |                     |              |
|                                    |                        |  II 3G Ex ec IIC T4 Gc X     |                     |              |
| EMC                                |                        | DIN EN 61000-6-2                                                                                                |                     |              |
|                                    |                        | DIN EN 61000-6-3                                                                                                |                     |              |
| Shock resistance                   |                        | DIN EN 60068-2-27                                                                                               | 50 g (11 ms)        |              |
| Vibration resistance               |                        | DIN EN 60068-2-6                                                                                                | 20 g (10...2000 Hz) |              |
| MTTF                               | [years]                | 555                                                                                                             |                     |              |
| Pressure equipment directive       |                        | sound engineering practice; can be used for group 2 fluids; group 1 fluids on request                           |                     |              |
| Mechanical data                    |                        |                                                                                                                 |                     |              |
| Weight                             | [g]                    | 236                                                                                                             |                     |              |
| Housing                            |                        | tubular                                                                                                         |                     |              |
| Dimensions                         | [mm]                   | Ø 30 / L = 75                                                                                                   |                     |              |
| Material                           |                        | stainless steel (1.4404 / 316L); FKM; PA; EPDM/X                                                                |                     |              |
| Materials (wetted parts)           |                        | stainless steel (1.4305 / 303); ceramics; FKM                                                                   |                     |              |
| Min. pressure cycles               |                        | 100 million                                                                                                     |                     |              |
| Tightening torque                  | [Nm]                   | 25...35; (recommended tightening torque Depends on lubrication, seal and pressure rating)                       |                     |              |
| Process connection                 |                        | threaded connection G 1/4 Internal thread                                                                       |                     |              |
| Restrictor element integrated      |                        | no (can be retrofitted)                                                                                         |                     |              |
| Remarks                            |                        |                                                                                                                 |                     |              |
| Pack quantity                      |                        | 1 pcs.                                                                                                          |                     |              |

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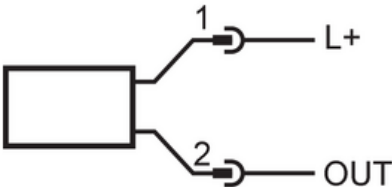
PA-0-1-RBR14-A-ZVG/US/ 3D/3G V

### Electrical connection - plug

Connector: 1 x M12; coding: A; Contacts: 4, gold-plated



### Connection



|                   |     |    |
|-------------------|-----|----|
| 1                 | L+  |    |
| 2                 | OUT | AO |
| AO: analog output |     |    |