

## Pressure transmitter with compact design Model EDC-K



### Applications

- Mechanical engineering
- Machine tools
- Control and feedback control systems
- Hydraulics / Pneumatics
- Pumps/ Compressors

### Special Features

- Pressure ranges: from 0 ... 1 bar up to 0 ... 1000 bar
- Non-linearity: 0.25 %
- Signal output: 4 ... 20 mA, 0 ... 10 V, 0 ... 5 V and other
- Electrical connection: DIN 175301-803 A or C, M12x1, Flying leads 2m
- Pressure connection: G1/4 , 1/4 NPT and others



Pressure transmitter EDC-K

## Description

### Simple - reliable – competitive

The DMASS EDC-K can be used for a multitude of functions across many different applications. Exceptionally simple installation, set-up and operation with an excellent price/performance ratio set this highly-reliable product apart.

| Specifications   |                       | Model EDC-K  |      |       |       |  |       |       |      |
|--|-----------------------|--|------|-------|-------|--|-------|-------|------|
| Pressure ranges  | bar                   | 1  | 1.6  | 2,5   | 4     | 6  | 10    | 16    | 25   |
| Over pressure safety   | bar                   | 2  | 3.2  | 5     | 8     | 12   | 20    | 32    | 50   |
| Burst pressure   | bar                   | 5  | 10   | 10    | 17    | 34   | 34    | 100   | 100  |
| Pressure ranges  | bar                   | 40   | 60   | 100   | 160   | 250  | 400   | 600   |      |
| Over pressure safety   | bar                   | 80   | 120  | 200   | 320   | 500  | 800   | 1200  |      |
| Burst pressure   | bar                   | 400  | 550  | 800   | 1000  | 1200   | 1700  | 2400  |      |
| MPa and kg/cm <sup>2</sup> are available   |                       |  |      |       |       |  |       |       |      |
| {Absolute pressure: 0 ... 1 bar up to 0 ... 25 bar; compound ranges: -1 ... 0 bar up to -1 ... 24 bar}   |                       |  |      |       |       |  |       |       |      |
| Pressure ranges  | psi                   | 15   | 25   | 30    | 50    | 100  | 160   | 200   | 300  |
| Over pressure safety   | psi                   | 30   | 60   | 60    | 100   | 200  | 290   | 400   | 600  |
| Burst pressure   | psi                   | 75   | 150  | 150   | 250   | 500  | 500   | 1500  | 1500 |
| Pressure ranges  | psi                   | 500  | 1000 | 1500  | 2000  | 3000   | 5000  | 10000 |      |
| Over pressure safety   | psi                   | 1000   | 1740 | 2900  | 4000  | 6000   | 10000 | 17400 |      |
| Burst pressure   | psi                   | 2500   | 7975 | 11600 | 14500 | 17400  | 24650 | 34800 |      |
| {Absolute pressure: 0 ... 15 psi up to 0 ... 300 psi;  |                       |  |      |       |       |  |       |       |      |
| compound ranges: -30 inHg ... 0 psi up to -30 inHg ... 300 psi}  |                       |  |      |       |       |  |       |       |      |
| Vacuum resistance  |                       | As of 0 ... 10 bar   |      |       |       |  |       |       |      |
| Fatigue life   |                       | 10 Mio. max. load cycles   |      |       |       |  |       |       |      |
| Materials  |                       |  |      |       |       |  |       |       |      |
| ■ Wetted parts   |                       |  |      |       |       |  |       |       |      |
| » Pressure Connection  |                       | 316 L  |      |       |       |  |       |       |      |
| » Pressure sensor  |                       | 316 L (as of 0 ... 10 bar rel 13-8 PH)   |      |       |       |  |       |       |      |
| ■ Internal transmission fluid  |                       | Silicone oil (only with pressure ranges < 0 ... 10 bar and ≤ 0 ... 25 bar abs) |      |       |       |  |       |       |      |
| ■ Case   |                       | 316 L  |      |       |       |  |       |       |      |
| Power supply UB  | U+ in VDC             | 8 ... 32 {8 ... 36 1)}   |      |       |       |  |       |       |      |
| maximum ohmic load R <sub>A</sub>  |                       | 14 ... 30 {14 ... 36} with signal output 0 ... 10 V                            |      |       |       |  |       |       |      |
|  |                       | 5 ± 10 % with signal output 0.5 ... 4.5 V ratiometric                          |      |       |       |  |       |       |      |
|  |                       | not with non-linearity 0.15 % BFSL and 4 ... 20 mA                             |      |       |       |  |       |       |      |
| Signal output and  | R <sub>A</sub> in Ohm | 4 ... 20 mA, 2-wire  |      |       |       | R <sub>A</sub> ≤ (U <sub>+</sub> - 8 V) / 0.02 A         |       |       |      |
| maximum ohmic load R <sub>A</sub>  |                       | 0 ... 10 V, 3-wire   |      |       |       | R <sub>A</sub> > 10 k                                    |       |       |      |
|  |                       | 0 ... 5 V, 3-wire  |      |       |       | R <sub>A</sub> > 5 k                                     |       |       |      |
|  |                       | 1 ... 5 V, 3-wire  |      |       |       | R <sub>A</sub> > 5 k                                     |       |       |      |
|  |                       | 0.5 ... 4.5 V, 3-wire  |      |       |       | R <sub>A</sub> > 4.5 k                                   |       |       |      |
|  |                       | 0.5 ... 4.5 V, ratiometric   |      |       |       | R <sub>A</sub> > 4.5 k {other signal outputs on request} |       |       |      |
| Setting time   | ms                    | < 1  |      |       |       |  |       |       |      |
| Current consumption  | mA                    | Signal current (max. 25) for current output                                    |      |       |       |  |       |       |      |
|  |                       | Max. 8 for voltage output signal   |      |       |       |  |       |       |      |
| Insulation voltage   | VDC                   | 500  |      |       |       |  |       |       |      |
| For power supply, use a circuit with energy limitation (EN/UL/IEC 61010-1, section 9.3) with the following maximum values for the current: bei U <sub>+</sub> = 30 V (DC): 5 A. Provide a separate switch for the external power supply. |                       |  |      |       |       |  |       |       |      |
| Alternative for North America: The connection may also be made to „Class 2 Circuits“ or „Class 2 Power Units“ according to CEC (Canadian Electrical Code) or NEC (National Electrical Code).   |                       |  |      |       |       |  |       |       |      |
| Non-linearity  | % of span             | ≤ ± 0.25 (BFSL) according to IEC 61298-2                                       |      |       |       |  |       |       |      |
| Adjusted in vertical mounting position with lower pressure connection  |                       |  |      |       |       |  |       |       |      |
| Accuracy   | % of span             | ≤ ± 1.0 (with non-linearity 0.25 %)  |      |       |       |  |       |       |      |
| Including non-linearity, hysteresis, zero point and full scale error (corresponds to error of measurement per IEC 61298-2)   |                       |  |      |       |       |  |       |       |      |
| Zero offset  | % of span             | ≤ 0.25 typ., ≤ 0.5 max. (with non-linearity 0.25 %)                            |      |       |       |  |       |       |      |

| Specifications                 |           | Model EDC-K   |   |
|--------------------------------|-----------|---|---|
| Hysteresis                     | % of span | ≤ 0.25  |   |
| Repeatability                  | % of span | ≤ 0.2   |   |
| Long-term drift                | % of span | ≤ 0.2   | according to IEC 61298-2                      |
| Signal noise                   | % of span | ≤ 0.3   |   |
| Permissible temperature of     |           |   |   |
| ■ Medium                       |           | -40 ... 125 °C  |   |
| ■ Ambience                     |           | -40 ... 105 °C  |   |
| ■ Storage                      |           | -40 ... 125 °C  |   |
| Rated temperature range        |           |   |   |
|                                |           | -40 ... 105 °C  |   |
| Temperature error within       | % of span | ≤ 0.15 typ. ≤ 0.25 max.   |   |
| Approvals                      |           |   |   |
|                                |           | UL, CSA, GOST   |   |
| RoHS-conformity                |           |   |   |
|                                |           | Yes   |   |
| CE-conformity                  |           |   |   |
| ■ Pressure equipment directive |           | 97/23/EC  |   |
| ■ EMC directive                |           | 2004/108/EEC, EN 61 326 Emission (Group 1, Class B) and Immunity (industrial locations) |   |
| Shock resistance               | g         | 1000 according to IEC 60068-2-27  | (mechanical shock)                            |
| Vibration resistance           | g         | 20 according to IEC 60068-2-6   | (vibration under resonance) {20 g on request} |
| Wiring protection              |           |   |   |
| ■ Overvoltage protection       | VDC       | 32; 36 with 4 ... 20 mA   |   |
| ■ Short-circuit proofness      |           | S+ towards U-   |   |
| ■ Reverse polarity protection  |           | U+ towards U-   |   |
| Reference conditions           |           |   |   |
| ■ Relative humidity            | %         | 45 ... 75   |   |
| Weight                         | g         | Approx. 70  |   |

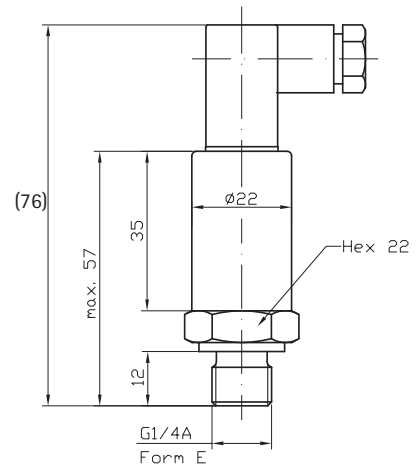
## Configurations -examples-



DIN EN175301-803



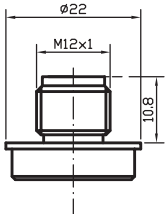
M12x1



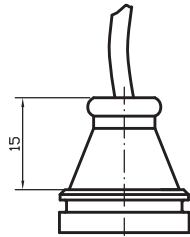
(deviations for absolute pressure are possible)

## Connectors\*

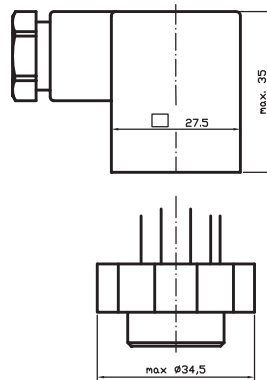
male socket  
M12x1  
(S763)



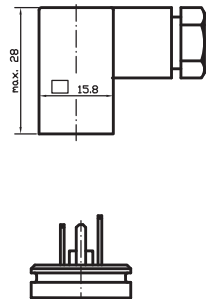
cable output



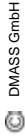
DIN EN 175301-803A



DIN EN 175301-803C

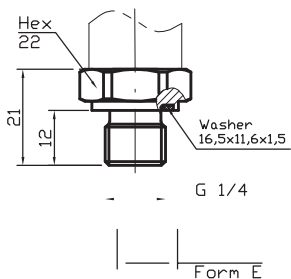


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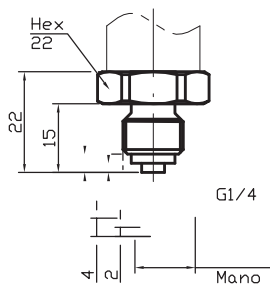


## Pressure Connections\*

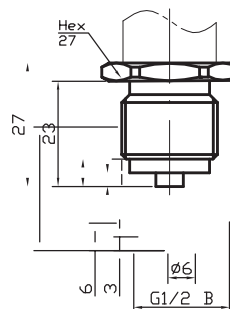
G 1/4 A; DIN 3852



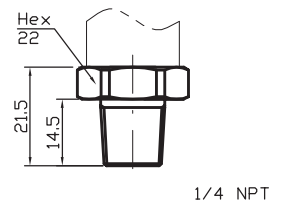
G 1/4 B



G 1/2 B



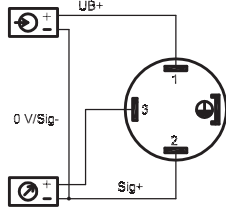
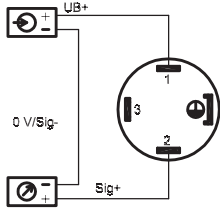
1/4 NPT



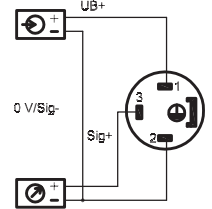
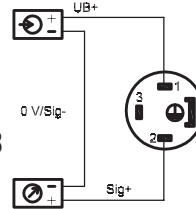
\* custom-made adjustments acc. to pressure connections and connecting options are possible

## Electrical Connections\* (left: 2-wire, right: 3-wire)

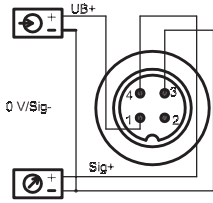
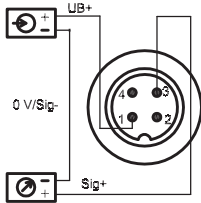
DIN EN 175301-803



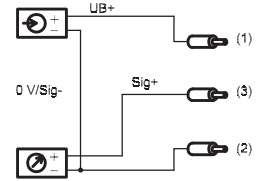
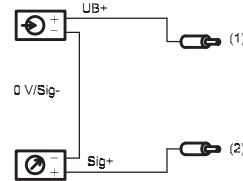
DIN EN 175301-803





male socket M12x1 (S 763)



cable output



### Notes:

-  = power supply
-  = consumer

\* custom-made adjustments acc. to pressure connections and connecting options are possible