



EM3701 | Pressure measuring terminal

The EtherCAT Terminal system is extended with pressure measuring terminals for recording differential and relative pressures. In a similar way to electrical signal acquisition, an EtherCAT Terminal with 24 mm width is used for pressure measurement. The compact design and simple connection system supports space-saving and quick installation. Additional measuring instruments are unnecessary.

The pressure measuring terminals of the EM37xx series are divided into two groups: differential pressure measurement (measurement between two terminals) and relative pressure measurement (measurement relative to the environment). The EtherCAT Terminals can be used for measuring the pressure or as a substitute for a pressure switch. The pressure value in the controller makes it possible to store the switching threshold as a parameter for a logic link. Manual setting at the pressure switch in the application is therefore no longer required.

The EM3701 measures the pressure difference between two hose connections. The measured values are available as 16-bit values. The status LEDs indicate proper function or errors such as over-range. The pressure measurement terminal is not suitable for the measurement of aggressive gases.

| Technical data | EM3701 |
|------------------------------------|--|
| Technology | differential pressure measurement |
| Number of inputs | 1 |
| Measuring error | 3 % (relative to full scale value) |
| Measuring range | -100...+100 hPa (-100...+100 mbar) |
| Max. overload | 500 hPa (500 mbar) differential |
| Resolution | 0.1 hPa (0.1 mbar) per digit |
| Measuring speed | 4 ms typ. |
| Current consumption E-bus | typ. 70 mA |
| Current consumption power contacts | – (no power contacts) |
| Bit width in the process image | 4 byte input/output per channel |
| Medium | non-aggressive gases |
| Operating/storage temperature | 0...+55 °C/-25...+85 °C |
| Relative humidity | 95 %, no condensation |
| Vibration/shock resistance | conforms to EN 60068-2-6/EN 60068-2-27 |
| EMC immunity/emission | conforms to EN 61000-6-2/EN 61000-6-4 |
| Protect. class/installation pos. | IP 20/variable |
| Approvals | CE, UL |

| Related products | |
|------------------|---|
| EM3702 | 2-channel relative pressure measuring terminal 7500 hPa (7.5 bar) |
| EM3712 | 2-channel relative pressure measuring terminal -1000...+1,000 hPa (-1...+1 bar) |