

## Product Specifications

Model	D707WR	
Gas *1	Non-configurable	
Full scale *1	Non-configurable	
Operating inlet pressure	350-450 kPa (A)	
Operating differential pressure	≥ 350 kPa (D)	
Operating downstream pressure	≤ 13.3 kPa (A)	≤ 53.3 kPa (A)
Control range	0.1-100 %F.S.	0.2-100 %F.S.
Flow rate accuracy at 25 °C	±1 %S.P. (2.5-100 %F.S.) ±0.025 %F.S. (0.1-2.5 %F.S.)	±1 %S.P. (5-100 %F.S.) ±0.05 %F.S. (0.2-5 %F.S.)
Temperature error from 25 °C	±0.05 %S.P./°C (2.5-100 %F.S.) ±0.00125 %F.S./°C (0.1-2.5 %F.S.)	±0.05 %S.P./°C (5-100 %F.S.) ±0.0025 %F.S./°C (0.2-5 %F.S.)
Offset/Span stability at 25 °C *2	±0.5 %F.S./year	
Repeatability *3	±0.3 %S.P. (2.5-100 %F.S.) ±0.0075 %F.S. (0.1-2.5 %F.S.)	±0.3 %S.P. (5-100 %F.S.) ±0.015 %F.S. (0.2-5 %F.S.)
Valve type	Normally closed/Piezo actuator	
Settling time for step up *4	≤ 500 msec	
Settling time for step down *4	≤ 3 sec	
Overshoot	±2 %S.P. or ±0.5 %F.S. whichever is larger	
Undershoot	±2 %S.P. or ±0.5 %F.S. whichever is larger	
Inlet pressure influence performance *5	±1 %S.P. (2.5-100 %F.S.) ±0.05 %F.S. (0.1-2.5 %F.S.)	±1 %S.P. (5-100 %F.S.) ±0.1 %F.S. (0.2-5 %F.S.)
Valve sheet leak *6	(TYP.) < ±0.025 %F.S. < ±0.05 %F.S.	
Proof pressure	1000 kPa (A)	
Design pressure	< 1000 kPa (G)	
Leak integrity	≤ 5 × 10 <sup>-12</sup> Pa·m <sup>3</sup> /s (He)	
Wetted material *7 *8	SUS316L, Ni-alloy, PFA, PCTFE	
Operating temperature	15-45 °C	
Storage temperature	0-80 °C	
Installation orientation *9	Attitude insensitive	
Inlet pressure accuracy	±10 kPa (0-1000 kPa (A))	
Temperature accuracy	±1 °C (15-45 °C)	
Warming up operation	≥ 30 minutes	
Control interface *10	RJ45 connector, EtherCAT® protocol	
Power supply	M8 5 pin male connector, 24 VDC±4V, Instantaneous peak 9.6 W/Normal dissipation 7.0 W	

\*1 Please contact us for supported kinds of gas and flow rates.

\*2 This is guaranteed value under 25 °C and ≤ 1.0 × 10<sup>-3</sup> Pa (A).

\*3 Output noise is include in Repeatability.

\*4 Settling time is MFC output signal and N<sub>2</sub> gas at 25 °C. Other detail definition follows setting time of \*SEMI Standard E17-1011 section 4.1.4\*.

\*5 Pressure perturbation has to be smaller than 20 % pressure change per second and ±70 kPa/sec. (10 PSI/sec).

\*6 The "(TYP.)" value is a representative ability value at the time of in-house verification.

\*7 PFA means Poly[tetrafluoroethylene-co-perfluoro (alkyl vinyl ether)].

\*8 PCTFE means Polychlorotrifluoroethylene.

\*9 After installation, be sure to perform zero point adjustment refer to "D707WR Zero Adjustment Procedure".

\*10 EtherCAT® is a registered trademark and patented technology, licensed by Beckhoff Automation GmbH in Germany.