# 1 Sensor Performance

## Sensor Performance

| Parameter | LG16-0025D | LG16-0150D | LG16-043xD | LG16-1000D | LG16-2000D | Units |
|---|---|---|---|---|---|---|
| $H_2O$ full scale flow rate | 1.50 | 7 | 80 | 1000 | 5000 | µl/min |
| $H_2O$ sensor output limit[a] | 1.70 | 8 | 120 | 1100 | 5500[d] | µl/min |
| Accuracy below full scale<br>(whichever error is larger) | 10<br>0.5 | 5.0<br>0.3 | 5.0<br>0.15 | 5.0<br>0.2 | 5.0<br>0.2 | % of m.v.[b]<br>% of full scale |
| Repeatability below full scale<br>(whichever error is larger) | <1<br>0.06 | 0.5<br>0.05 | 0.5<br>0.01 | 0.5<br>0.02 | 0.5<br>0.02 | % of m.v.<br>% of full scale |
| Temperature coefficient<br>(additional error / °C; whichever is larger) | 0.15<br>0.007 | 0.09<br>0.005 | 0.13<br>0.003 | 0.1<br>0.004 | 0.1<br>0.004 | % m.v. / °C<br>% full scale / °C |
| Mounting orientation sensitivity[c] | - | <0.4 | <0.4 | 1.0 | 1.5 | % of full scale |

[a]Flow rate at which the sensor output saturates. See section 2 for performance between full scale and saturation point.
[b]Measured value
[c]Maximum additional offset when mounted vertically
[d]Extended range up to 10500 ul/min, see Specification Charts for details

**Table 1:** Model specific performance of LG16 (all data for medium $H_2O$, 23 °C, 1 $bar_{abs}$ unless otherwise noted)

| Parameter | LG16-0150D | LG16-043xD | LG16-1000D | LG16-2000HC-D | Unit |
|---|---|---|---|---|---|
| IPA full scale flow rate | 70 | 500 | 10'000 | | µl/min |
| | | | | 80 | ml/min |
| IPA sensor output limit[a] | 100 | 600 | 11'000 | | µl/min |
| | | | | 90 | ml/min |
| Accuracy below full scale<br>(whichever error is larger) | 20<br>0.3 | 20<br>1 | 20<br>1 | 10<br>0.5 | % of m.v.[b]<br>% of full scale |
| Repeatability below full scale<br>(whichever error is larger) | 1<br>0.01 | 1<br>0.05 | 1<br>0.05 | 1.5<br>0.03 | % of m.v.<br>% of full scale |
| Temperature coefficient<br>(additional error / °C; whichever is larger) | 0.4 | 0.5<br>0.025 | 0.4<br>0.02 | 0.35 | % m.v. / °C<br>% full scale / °C |

[a] Flow rate at which the sensor output saturates
[b] Measured value

**Table 2:** Model specific performance of LG16 series (all data for medium IPA, 23 °C, 1 $bar_{abs}$ unless otherwise noted)

## 1.1 Specification Charts

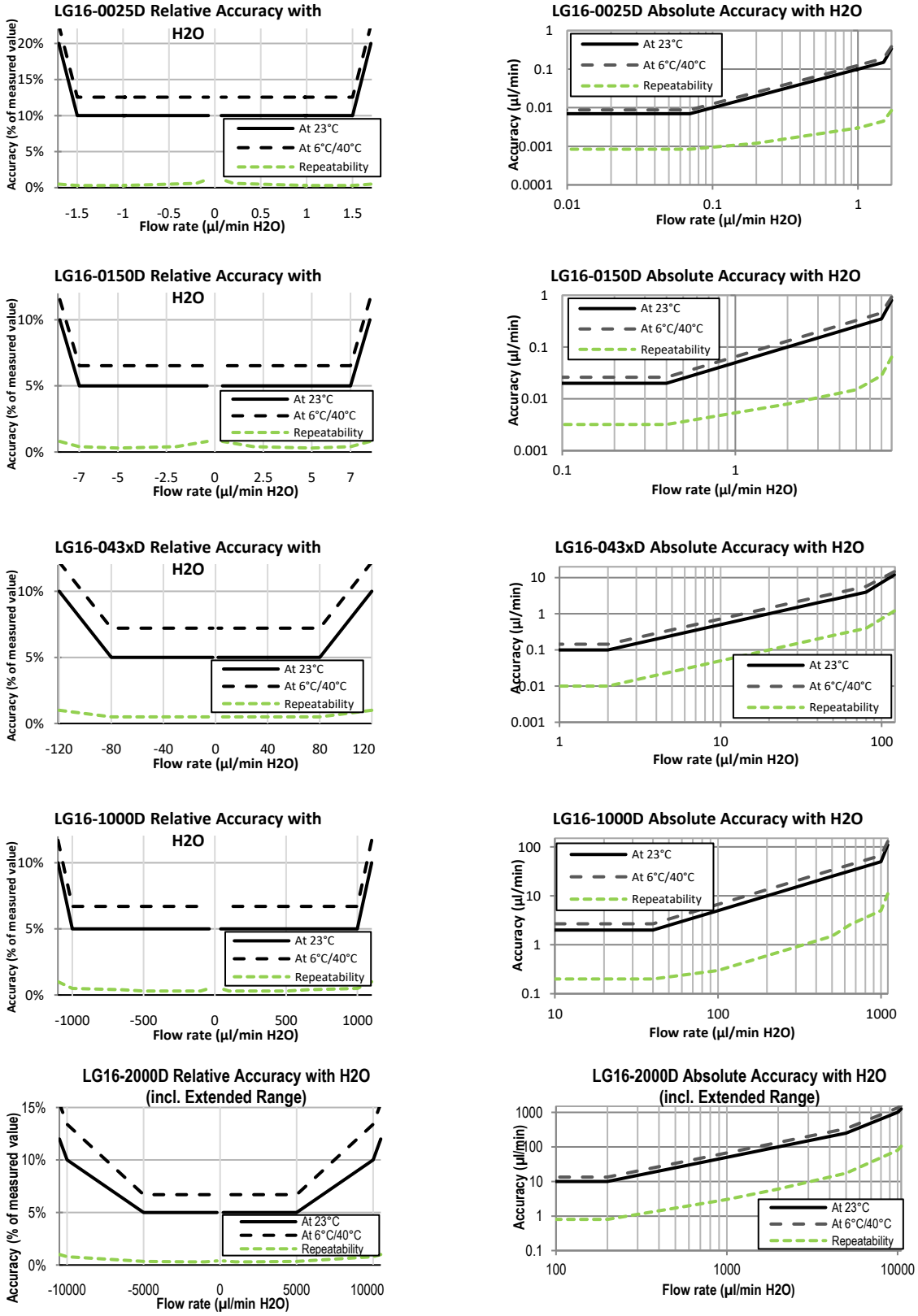


**Figure 1:** Flow meter accuracy and repeatability across the flow range. Relative error in % of measured value (left column) and absolute error in µl/min (right column) for H2O.