

# Compact Gas Mass Flow Controllers

## Precisely control flow rates with built-in valve

– Four-point calibration improves accuracy and linearity

These controllers feature an advanced straight-tube sensor that ensures accurate and repeatable results. Gas flow measurements are unaffected by moderate temperature and pressure variations at the inlet. The meter also allows a four-point calibration across the flow range to improve meter linearity.

The flow rate set point can be established by either a local potentiometer or by a remote 4 to 20 mA or 0 to 5 VDC signal. Output data is sent via a 0 to 5 VDC or 4 to 20 mA signal; an analog-to-RS converter is also available for data collection and analysis on your PC.

All controllers include a detachable 3 1/2-digit LCD that can be tilted up to 90° for easy reading. The display is remote mountable to three feet using extension cable 32662-70. The controller is protected from polarity reversal or short circuit by a built-in resettable fuse. Aluminum models have wetted materials of anodized aluminum, brass, and Viton®; stainless steel (SS) models have wetted materials of SS and Viton.

**What's included:** NIST-traceable calibration report supplied by the manufacturer.



Adjust flow rate locally with the built-in set point potentiometer.

Thermal Dispersion / Gas Mass



### Specifications

**Maximum particulate size:**  
5 microns

**Accuracy (including linearity):**  
±1.5% full-scale (see facing page for details)

**Accuracy coefficient, temperature:**  
±0.15%/°C full-scale

**Accuracy coefficient, pressure:**  
±0.01%/psi full-scale

**Repeatability:** ±0.5% full-scale  
**Response time:** 2 seconds (typical) to within ±2% of actual flow rate from 25 to 100% of full-scale

**Operating temperature:**  
32 to 122°F (0 to 50°C)

**Maximum system pressure:**  
1000 psi (69 bar)

**Leak integrity:**  
1 x 10<sup>-7</sup> sccs He (max)

**Transducer input power:**  
12 VDC, 1100 mA max; polarity protected

**Output signal:** linear 0 to 5 VDC (1000 Ω minimum load), 4 to 20 mA (50 to 500 Ω loop resistance)

**Connections (included):**  
Models up to 50 sL/min:  
1/4" compression fittings  
200 sL/min models:  
3/8" compression fittings  
500 sL/min models:  
1/2" compression fittings  
1000 sL/min models:  
3/4" NPT(F) fittings

Flow rate	Pressure drop (max flow)	Aluminum bodies				Price	316 stainless steel bodies				Price
		Air/N <sub>2</sub>	O <sub>2</sub>	H <sub>2</sub>	Ar		Air/N <sub>2</sub>	O <sub>2</sub>	H <sub>2</sub>	Ar	
		Cat. no.	Cat. no.	Cat. no.	Cat. no.		Cat. no.	Cat. no.	Cat. no.	Cat. no.	
0 to 10 sccm	1.06 psi	<a href="#">GH-32660-00</a>	<a href="#">GH-32660-26</a>	<a href="#">GH-32660-52</a>	<a href="#">GH-32660-78</a>	<a href="#">GH-32661-00</a>	<a href="#">GH-32661-26</a>	<a href="#">GH-32661-52</a>	<a href="#">GH-32661-78</a>		
0 to 20 sccm		<a href="#">GH-32660-02</a>	<a href="#">GH-32660-28</a>	<a href="#">GH-32660-54</a>	<a href="#">GH-32660-80</a>	<a href="#">GH-32661-02</a>	<a href="#">GH-32661-28</a>	<a href="#">GH-32661-54</a>	<a href="#">GH-32661-80</a>		
0 to 50 sccm	1.06 psi	<a href="#">GH-32660-04</a>	<a href="#">GH-32660-30</a>	<a href="#">GH-32660-56</a>	<a href="#">GH-32660-82</a>	<a href="#">GH-32661-04</a>	<a href="#">GH-32661-30</a>	<a href="#">GH-32661-56</a>	<a href="#">GH-32661-82</a>		
0 to 100 sccm		<a href="#">GH-32660-06</a>	<a href="#">GH-32660-32</a>	<a href="#">GH-32660-58</a>	<a href="#">GH-32660-84</a>	<a href="#">GH-32661-06</a>	<a href="#">GH-32661-32</a>	<a href="#">GH-32661-58</a>	<a href="#">GH-32661-84</a>		
0 to 200 sccm	1.06 psi	<a href="#">GH-32660-08</a>	<a href="#">GH-32660-34</a>	<a href="#">GH-32660-60</a>	<a href="#">GH-32660-86</a>	<a href="#">GH-32661-08</a>	<a href="#">GH-32661-34</a>	<a href="#">GH-32661-60</a>	<a href="#">GH-32661-86</a>		
0 to 500 sccm		<a href="#">GH-32660-10</a>	<a href="#">GH-32660-36</a>	<a href="#">GH-32660-62</a>	<a href="#">GH-32660-88</a>	<a href="#">GH-32661-10</a>	<a href="#">GH-32661-36</a>	<a href="#">GH-32661-62</a>	<a href="#">GH-32661-88</a>		
0 to 1 sL/min	1.06 psi	<a href="#">GH-32660-12</a>	<a href="#">GH-32660-38</a>	<a href="#">GH-32660-64</a>	<a href="#">GH-32660-90</a>	<a href="#">GH-32661-12</a>	<a href="#">GH-32661-38</a>	<a href="#">GH-32661-64</a>	<a href="#">GH-32661-90</a>		
0 to 2 sL/min		<a href="#">GH-32660-14</a>	<a href="#">GH-32660-40</a>	<a href="#">GH-32660-66</a>	<a href="#">GH-32660-92</a>	<a href="#">GH-32661-14</a>	<a href="#">GH-32661-40</a>	<a href="#">GH-32661-66</a>	<a href="#">GH-32661-92</a>		
0 to 5 sL/min	3.87 psi	<a href="#">GH-32660-16</a>	<a href="#">GH-32660-42</a>	<a href="#">GH-32660-68</a>	<a href="#">GH-32660-94</a>	<a href="#">GH-32661-16</a>	<a href="#">GH-32661-42</a>	<a href="#">GH-32661-68</a>	<a href="#">GH-32661-94</a>		
0 to 15 sL/min		<a href="#">GH-32660-19</a>	<a href="#">GH-32660-45</a>	<a href="#">GH-32660-71</a>	<a href="#">GH-32660-95</a>	<a href="#">GH-32661-19</a>	<a href="#">GH-32661-45</a>	<a href="#">GH-32661-71</a>	<a href="#">GH-32661-95</a>		
0 to 30 sL/min	3.50 psi	<a href="#">GH-32660-20</a>	<a href="#">GH-32660-46</a>	<a href="#">GH-32660-72</a>	<a href="#">GH-32660-97</a>	<a href="#">GH-32661-20</a>	<a href="#">GH-32661-46</a>	<a href="#">GH-32661-72</a>	<a href="#">GH-32661-97</a>		
0 to 50 sL/min		<a href="#">GH-32660-22</a>	<a href="#">GH-32660-48</a>	<a href="#">GH-32660-74</a>	<a href="#">GH-32660-98</a>	<a href="#">GH-32661-22</a>	—	—	—		
0 to 100 sL/min	11 psi	<a href="#">GH-32660-24</a>	<a href="#">GH-32660-50</a>	<a href="#">GH-32660-76</a>	<a href="#">GH-32660-99</a>	<a href="#">GH-32661-24</a>	—	—	—		
0 to 500 sL/min	20 psi	<a href="#">GH-32665-00</a>	—	—	—	<a href="#">GH-32666-00</a>	—	—	—		
0 to 1000 sL/min	47 psi	<a href="#">GH-32665-10</a>	—	—	—	<a href="#">GH-32666-10</a>	—	—	—		

[GH-17080-10](#) NIST-traceable recalibration with data  
[GH-32662-65](#) Cable, 8-ft (2.4 m) L for connecting flowmeters/controllers to any instrument that accepts analog input signals. DB15(F) connector with bare wire ends  
[GH-32662-70](#) Extension cable, for remote placement of display up to three feet away

**Power Supplies** for operation by AC voltage.

- [GH-32662-50](#) Power supply; US plug, 110 VAC
- [GH-32662-55](#) Power supply; Euro plug, 220 VAC
- [GH-32662-60](#) Power supply; U.K. plug, 240 VAC

**Flow Totalizer 32650-22** displays instantaneous, total, and accumulated flow rates, has 47 different volumetric and mass flow units, and digital interface.

[GH-32650-22](#) Flowmeter totalizer