

Particle Sensor

HPM Series

Figure 2. Mounting Dimensions (mm/[in] For reference only.)

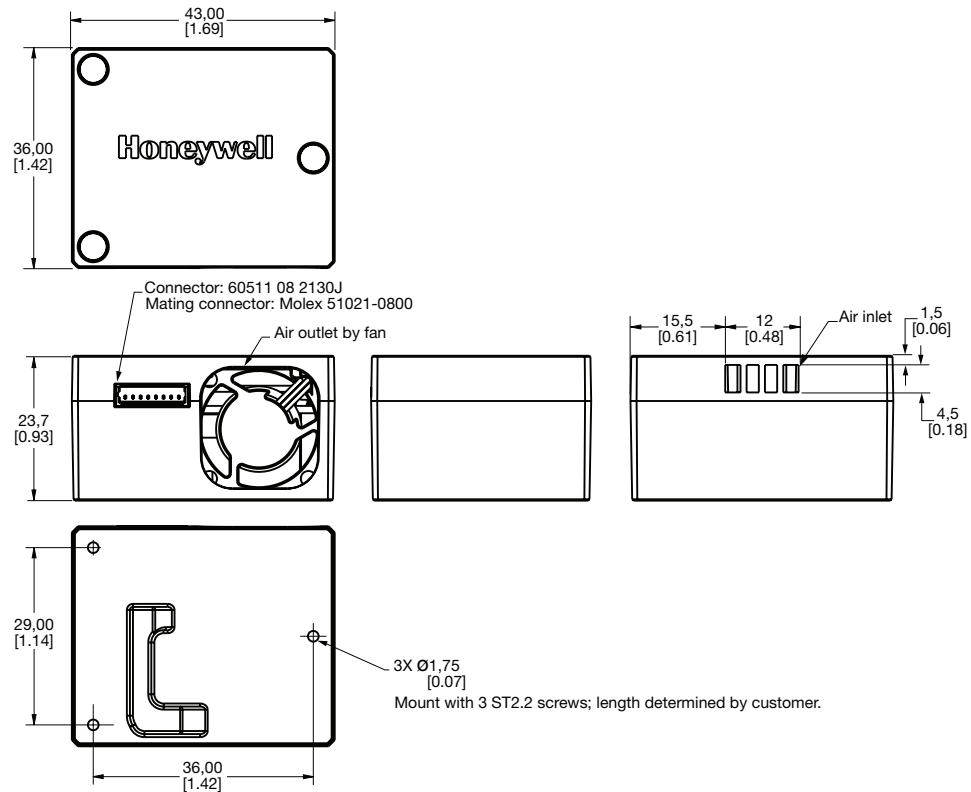
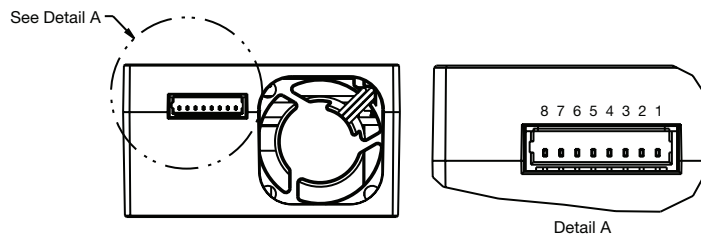


Table 2. Connector Pinout



Pin	Name	Description
1	+3.3 V	power output (+3.3 V/100 mA)
2	5 V	power input (5 V)
3	N/A	N/A
4	N/A	N/A
5	TEST	used for testing (NA)
6	TX	UART TX output (0 - 3.3 V)
7	RX	UART RX input (0 - 3.3 V)
8	GND	power input (ground terminal)

Table 3. Order Guide

Catalog Listing	Description
HPMA115S0-XXX	HPM Series PM2.5 Particle Sensor with UART output

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Table 4. Customer Use Protocol

Command Length (Bytes)	HEAD	LEN	CMD	Data	CS	Example
Read Particle Measuring Results						
Send	0x68	0x01	0x04	NA	CS = MOD ((65536-(HEAD+LEN+CMD+DATA)), 256)	68 01 04 93
Response, Pos ACK	0x40	0x05	0x04	“DF1, DF2, DF3, DF4 PM2.5 = DF1 * 256 + DF2 PM10 = DF3 * 256 + DF4”	CS = MOD ((65536-(HEAD+LEN+CMD+DATA)), 256)	40 05 04 00 30 00 31 56
Response, Neg ACK						0x9696
Start Particle Measurement						
Send	0x68	0x01	0x04	NA	CS = MOD ((65536-(HEAD+LEN+CMD+DATA)), 256)	68 01 01 96
Response, Pos ACK						0xA5A5
Response, Neg ACK						0x9696
Stop Particle Measurement						
Send	0x68	0x01	0x02	NA	CS = MOD ((65536-(HEAD+LEN+CMD+DATA)), 256)	68 01 02 95
Response, Pos ACK						0xA5A5
Response, Neg ACK						0x9696
Set Customer Adjustment Coefficient						
Send	0x68	0x02	0x08	DF1: 30 ~ 200 (Default, 100)	CS = MOD ((65536-(HEAD+LEN+CMD+DATA)), 256)	68 02 08 64 2A
Response, Pos ACK						0xA5A5
Response, Neg ACK						0x9696
Read Customer Adjustment Coefficient						
Send	0x68	0x01	0x10	NA	CS = MOD ((65536-(HEAD+LEN+CMD+DATA)), 256)	68 01 10 87
Response, Pos ACK	0x40	0x02	0x10	DF1: 30 ~ 200 (Default, 100)	CS = MOD (((65536-(HEAD+LEN+CMD+DATA)), 256)	40 02 10 64 4A
Response, Neg ACK						0x9696
Stop Auto Send						
Send	0x68	0x01	0x20	NA	CS = MOD ((65536-(HEAD+LEN+CMD+DATA)), 256)	68 01 20 77
Response, Pos ACK						0xA5A5
Response, Neg ACK						0x9696
Enable Auto Send						
Send	0x68	0x01	0x40	NA	CS = MOD ((65536-(HEAD+LEN+CMD+DATA)), 256)	68 01 40 57
Response, Pos ACK						0xA5A5
Response, Neg ACK						0x9696

¹Life may vary depending on the specific application in which the sensor is utilized.