Installation Instructions for the
AWM90000 Series Mass Airflow Sensors

ISSUE 2
PK 80171

⚠️ WARNING
PERSONAL INJURY
DO NOT USE these
products as safety or
emergency stop devices or
in any other application
where failure of the product
could result in personal
injury.
Failure to comply with
these instructions could
result in death or serious
injury.

PERFORMANCE CHARACTERISTICS

<table>
<thead>
<tr>
<th></th>
<th>(Min.)</th>
<th>(Typ.)</th>
<th>(Max.)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Excitation</td>
<td>8.0 Vdc</td>
<td>10.0 Vdc</td>
<td>15.0 Vdc</td>
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<tr>
<td>Power Consumption</td>
<td></td>
<td></td>
<td>50 mW</td>
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MOUNTING INSTRUCTIONS
Mount AWM90000 Series sensors with 6-32 screws. Honeywell
recommends using washers below screw head. Mounting torque is
0.68 N m [6.0 in lb] max.

CLEANING INSTRUCTIONS
Avoid cleaning the sensor, however if it must be cleaned use isopropyl
alcohol and dry the device thoroughly.

⚠️ CAUTION
CLEANING DAMAGE
- Ultrasonic cleaning may damage the sensor’s microstructure.
- Solvent cleaning may attack the epoxy that seals the chip tube. Do not
use III Tri-chloroethane, methylene chloride, methyl pyrrolidone, or any
oxidizing type acid such as formic acid.
Failure to comply with these instructions may result in product
damage.

GENERAL INFORMATION

AWM90000 Series microbridge mass airflow sensors operate on the
theory of heat transfer due to
mass gas flow across the
surface of the sensing
element. The sensing
element consists of a resistor
bridge heater circuit and dual
temperature-sensing resistor
bridges. This configuration
senses mass flow rates and
flow direction.

⚠️ CAUTION
LARGE PARTICULATE
DAMAGE
Use a 5-micron filter
upstream of the sensor to
keep media flow through
the sensor free of
condensing moisture and
particulates. Large, high-
velocity particles or
conductive particles may
damage the sensing
element. Failure to comply
with these instructions may result in product
damage.

WIRING DIAGRAMS

Sensor Bridge Circuit

Used with Heater Control
Circuit

Heater Control
Circuit (suggested)

Customer supplied 24.9K matched bridge resistors (affects null output
voltage). Output is measured differentially from pins 8 to 2.

Customer supplied 1K resistor (affects temperature compensation and
span voltage).

Sensing and Control
AWM90000 Series Mass Airflow Sensors

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MOUNTING DIMENSIONS - for reference only mm(in)

Sensor Pinout

PC Board Mounting Dimensions (outer dimensions represent the minimum sensor mounting space required.)

WARRANTY/REMEDY

Honeywell warrants goods of its manufacture as being free of defective materials and faulty workmanship. Contact your local sales office for warranty information. If warranted goods are returned to Honeywell during the period of coverage, Honeywell will repair or replace without charge those items it finds defective. The foregoing is Buyer's sole remedy and is in lieu of all other warranties, expressed or implied, merchantability and fitness for a particular purpose.

Specifications may change without notice. The information we supply is believed to be accurate and reliable as of this printing. However, we assume no responsibility for its use.

While we provide application assistance personally, through our literature and the Honeywell web site, it is up to the customer to determine the suitability of the product in the application.

For application assistance, current specifications, or name of the nearest Authorized Distributor, check the Honeywell web site or call:

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1-800-737-3360 Canada
1-815-235-6847 International

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