



Model DA30



User Manual

Warranty

This product is fully warranted against defective materials and/or workmanship for a period of one year after purchase, provided it was not improperly used. For your protection, please use this product as soon as possible. If returned, it must be securely wrapped, sent prepaid and insured to:

Pacer Industries, Inc.
1450 First Avenue
Chippewa Falls, WI 54729
PH: 715-723-1141
FX: 715-723-7890

Please include a note with name, address, telephone number and description of the problem. Although we provide assistance on Pacer products both personally and through our literature, it is still the total responsibility of the customer to determine the suitability of the product for use in their application.

This manual is provided by Pacer Industries without any kind of warranty. Precautions have been taken in accurately preparing this manual; however, we neither assume responsibility for any omissions or errors that may appear nor assume liability for any damages that result from the use of the products in accordance with the information contained in the manual.

INTRODUCTION

Pacer's model DA30 digital anemometer is a low cost instrument for measuring air velocity from HVAC ducts or process airflow.

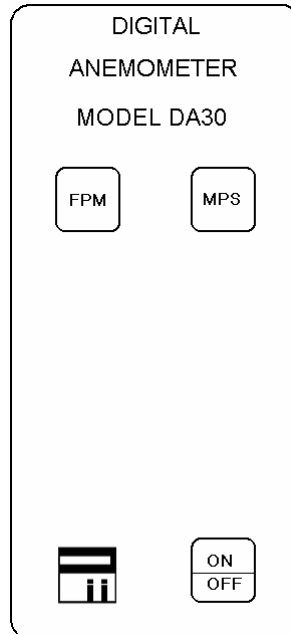
The heavy, all metal (except electronics) probe can be used for airstreams that have a wide range of humidity, temperature and contaminants without compromising accuracy.

Features include accuracy, long battery life, tolerance of temperatures up to 210°F (98.9°C) at the probe, and durability.

SECTION 1 - SPECIFICATIONS

Range:	60 – 6800 FPM (0.3 – 35.0 MPS)
Accuracy:	±2.5% of reading
Resolution:	1 FPM or 0.01 MPS
Operating Temperature:	
Instrument:	32 to 125°F (0 to 50°C)
Probe:	-4° to 210°F (-20° to 98.9°C)
Power Supply:	2 AA alkaline batteries, E91 Eveready or equivalent
Battery Life:	Approximately 300 hours
Battery check:	Automatic low battery display
Dimensions:	
Instrument:	7.1" x 3.0" x 0.8"
AP100S probe:	1" diameter
Weight:	8 ounces with batteries
Display:	0.5" LCD, 4 digits
Options:	
Model CG-4 charger:	PN 3303 (with 4 NiMH batteries)
Extra extension rod:	PN 5001 rigid, PN 5002 flexible
AP275 (2 ¾") probe:	Not available for DA30, ask for DA40 or other models.
Included:	
2 pieces:	PN 5001 rigid extension rod
1 piece:	PN 5002 flexible extension rod
2 pieces:	AA 1.5V alkaline batteries
1 piece:	PN 6004 hard-shell carrying case
1 piece:	M2946 operation manual

SECTION 2 – SWITCH FUNCTIONS



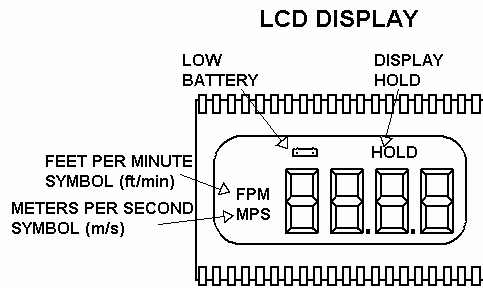
- ON/OFF** Pressing “ON/OFF” key switches unit ON. Pressing the key a second time turns it OFF.
- FPM** Pressing “FPM” key displays air velocity in FPM (feet per minute) with 1 FPM resolution.
- MPS** Pressing “MPS” key displays air velocity in MPS (meters per second) with 0.01 MPS resolution.

SECTION 3 – OPERATION

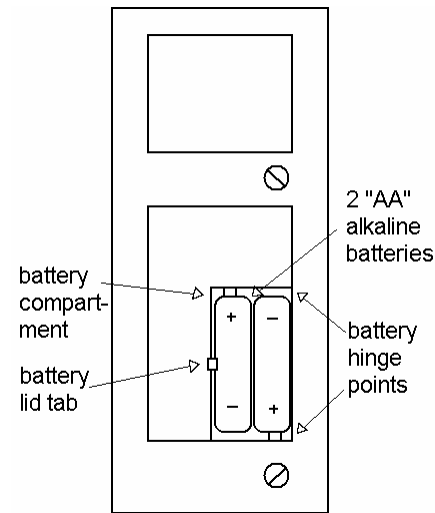
NOTE: Unit should be “OFF” before changing batteries.

- 1) Remove battery compartment lid and insert batteries; replace lid (see APPENDIX B).
- 2) Press the “ON/OFF” key to turn unit ON. The display will show all its elements (see APPENDIX A) followed by the remaining battery capacity (“bA85” means the battery is at 85% capacity).
NOTE: If the battery symbol displays during normal operation, replace the batteries.
- 3) Press “FPM” or “MPS” key, if necessary, to display desired units. Place probe in the air stream with direction arrow in the direction of the airflow. To calculate CFM see APPENDIX C.

APPENDIX A – LCD DISPLAY SYMBOLS



APPENDIX B – CHANGING BATTERIES

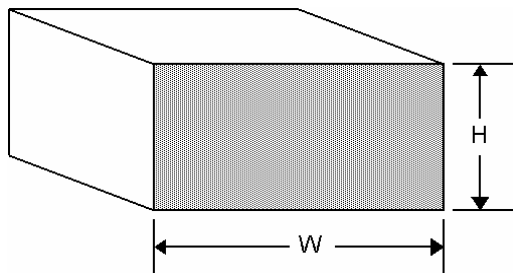


APPENDIX C – AIRFLOW VOLUME CALCULATIONS

Theory: To calculate cubic feet per minute (CFM) from a measured air velocity (FPM), you need the calculated cross-sectional area of the airflow stream:

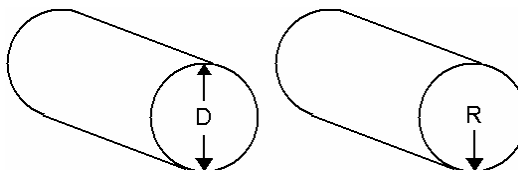
$$\text{Volume Flow (CFM)} = \text{Velocity (FPM)} \times \text{Area (sq ft).}$$

In rectangular ductwork this cross sectional area equals the Width times the Height.



$$W \times H = A \text{ (cross-sectional area)}$$

In circular ductwork this cross section area equals the radius squared times π (3.14).



$$R \times R \times 3.14 = A \text{ (cross-sectional area)}$$

To convert an area calculated in square inches to an area calculated in square feet (which is required for the Volume Flow equation above) divide by 144: (area in sq in.)/144 = (area in sq ft.).

Example: The air duct is rectangular, the width is 24 in. and the height is 12 in. The air velocity reading through the duct is 450 FPM. Calculate the Volume Flow.

Step 1: Cross-sectional area = 24 in. x 12 in. = 288 sq in.

Step 2: 288 sq in /144 = 2 sq ft.

Step 3: Volume flow = Air Velocity x Area, therefore, Volume flow rate = 450 FPM x 2 sq ft. = 900 CFM.

Notes: