

WatchDog 1000 Series Micro Stations

OVERVIEW

The WatchDog 1000 Series Micro Stations set a new standard for economical data logging by offering greater capacity, sensor resolution, battery life, and support for the newest generation of sensors, while maintaining the economical price point of the original WatchDog loggers.

Micro Stations are the cost-effective choice for recording environmental conditions over a period of time. Whether your needs are plant disease alerts or soil moisture monitoring, the WatchDog Micro Station will deliver the information you need for timely, accurate data that will result in increased profits. The LCD display confirms logger operation and provides current sensor readings. View the current temperature during a freeze event, or soil moisture prior to irrigating – without downloading to a PC. Customize with up to four unique external plug-in sensors. Change monitoring parameters from one season to the next, simply by connecting a different sensor - keeping investment costs down while making more profitable decisions.

CAPACITY

- 10584 Intervals (220 days with 30 minute intervals)
- 8064 intervals with virtual channels enabled (for SMEC 300)
- Over 63,000 data points with 6 sensors
- Over 64,000 data points with 8 sensors
- Measurement intervals: 1, 5, 10, 15, 30, or 60 minutes
- Non-volatile memory preserves your data

SENSORS

- 2, 4, 5, 6, 7, or 8 sensors total – up to 4 external ports
- Sensors are powered up and read separately, enabling the use of up to four high-power sensors such as the WaterScout SM 100 or ECHO-5 soil moisture sensors.
- 10-bit data converter

Internal temperature sensor on 6 models

- Range: -40 to 185°F (-40 to 85°C)
- Accuracy: $\pm 1.1^\circ\text{F}$ ($\pm 0.6^\circ\text{C}$) at -4 to 122°F (-20 to 50°C), else $\pm 2.2^\circ\text{F}$ ($\pm 1.2^\circ\text{C}$)

Internal relative humidity sensor on 3 models

- Range: 0 to 100%
- Accuracy: $\pm 3\%$ at 77°F (25°C), 10 to 90%, else $\pm 5\%$

Optional Sensors

- Tipping bucket rain collector
- Soil sensors: WaterScout SMEC 300 WaterScout SM 100, Watermark, tensiometer, temperature, and irrigation on/off
- Light sensors: quantum (PAR) light, 3 & 6 quantum sensor bars, silicon pyranometer, and UV
- Other sensors: micro temperature, leaf wetness, CO₂, regular and extended range barometric pressure, voltage and 4-20 mA



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BATTERY POWER

- CR2450 3 volt button cell (included)
- 620 mAh, enabling use of high-power sensors
- 12 months expected life
- -4 to 140°F (-20 to 60°C) operating temperature

CASE AND DISPLAY

- All models have 4 physical ports to retain the protective plugs. By model, some are non-functioning.
- IP34 protection with port plugs in place
- Included port plugs protect against insect infiltration
- 3663A Radiation shield recommended to protect from solar radiation and rain
- Custom LCD display with 4 digits (.31in [8mm] high); also indicates channel letters, units for internal sensors, and battery level.
- Press the button to read the sensors and activate the LCD display – saving power when not needed
- Dimensions: 2.8x2.3x1.2in (7.2x5.9x3.0cm)
- Weight: Station+Battery 2.9oz (81g) Shipping 5.2oz (146g)

SOFTWARE AND COMMUNICATIONS

- Launch not required after a download – the station continues recording
- Launch can optionally retain downloaded data on the station as a safety net
- Transfer data to a PC with a direct-connect cable or 3679WD1 Data Shuttle 9600 baud communications
- Transmits actual value as well as date and time of sensor readings
- Requires SpecWare 9.02 (Basic or Pro) and up
- Field updatable firmware to support the latest sensors



MODEL COMPARISON

Item#	Model	Internal Sensors		Available External Ports	Maximum Number of SMEC 300 Sensors
3688WD1	1650	Temperature	Relative Humidity	4 (A, B, C, D)	2 (A, D)
3687WD1	1525	Temperature		4 (A, B, C, D)	2 (A, D)
3684WD1	1450	Temperature	Relative Humidity	2 (A, D)	1 (D)
3683WD1	1425	Temperature		3 (A, B, D)	1 (D)
3685WD1	1400	None		4 (A, B, C, D)	2 (A, D)
3682WD1	1250	Temperature	Relative Humidity	0 (None)	0 (None)
3681WD1	1225	Temperature		1 (A)	0 (None)
3680WD1	1200	None		2 (A, D)	1 (D)
3635WD1	1115	None		1 (A-Rainfall)	0 (None)
3554WD1	1120	Rainfall		0 (None)	0 (None)

MICRO STATION PACKAGES

Item#	Model	Internal Sensors		External Sensors	Available Ports
3684PD1	1450	Temperature	Relative Humidity	Leaf Wetness Rainfall	0
3684PAR1	1450	Temperature	Relative Humidity	PAR Light Sensor	1
3685SM14	1400	None		WaterScout SM 100 (4)	0
3685SM13	1400	None		WaterScout SM 100 (3)	1
3685SM12	1400	None		WaterScout SM 100 (2)	2
3680SM12	1200	None		WaterScout SM 100 (2)	0
3685WM14	1400	None		Watermark (4)	0
3685WM13	1400	None		Watermark (3)	1
3685WM12	1400	None		Watermark (2)	2
3680WM12	1200	None		Watermark (2)	0

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