

■ MPS-1

Decagon Devices, Inc.
Pullman, Washington, USA
800-755-2751, www.decagon.com

The MPS-1 Dielectric Water Potential Sensor measures the water potential (WP) of the soil by pairing dielectric technology with solid matrix equilibration. The MPS-1 provides continuous *in situ* soil WP measurements without difficult calibrations or constant field maintenance. By measuring WP, the availability of soil water can be determined in any soil type. The MPS-1 measures the WP of the soil by equilibrating two well-characterized ceramic discs with the soil, measuring the dielectric permittivity of the ceramic to find its water content, and then calculating the WP of the ceramic through its moisture characteristic relationship. Data show that the MPS-1 calibration equation is constant over all soil types and salinities up to at least 5 dS/m and that temperature effects on the sensor are minimal. The MPS-1 is designed for years of continuous field use without constant field maintenance.

