



Soil TDR Probes

For Campbell Scientific Time-Domain Reflectometry (TDR) Systems







Rugged, Reliable, and Ready for any Application



Soil TDR probes act as a wave guide. Impedance along the rods varies with the dielectric permittivity of the surrounding soil. Because the dielectric permittivity of soil primarily depends on the amount of water present, soil volumetric water content can be inferred from the reflected measurements. Soil bulk electrical conductivity is determined from the attenuation of the applied pulse.

Campbell Scientific offers six probes that have different rods and connector cables allowing them to be used in different soil types and with different cable lengths. The probes consist of three pointed rods and a rugged head. The CS605G insertion guide is available to aid the installation of the CS605 or CS610.

MAJOR SPECIFICATIONS

	Rod Dimensions		Probe Head Dimensions			Cable Type	Maximum Soil Bulk Electrical Conductivity	Maximum Cable Length ^a	Compliance Information
	Length	Diameter	Length	Width	Thickness				
CS605 3-rod TDR Probe For typical soils 	30 cm (12 in)	0.475 cm (0.187 in)	10.8 cm (4.3 in)	7.0 cm (2.8 in)	1.9 cm (0.7 in)	RG58	1.4 dS m ⁻¹	15 m (49 ft)	View EU Declaration of Conformity at: www.campbellsci.com/cs605-1
CS610 3-rod TDR Probe For typical soils 	30 cm (12 in)	0.475 cm (0.187 in)	10.8 cm (4.3 in)	7.0 cm (2.8 in)	1.9 cm (0.7 in)	RG8 low loss	1.4 dS m ⁻¹	25 m (82 ft)	View EU Declaration of Conformity at: www.campbellsci.com/cs610-1
CS630 3-rod TDR Probe For high conductivity soils 	15 cm (6 in)	0.318 cm (0.125 in)	5.75 cm (2.25 in)	4.0 cm (1.57 in)	1.25 cm (0.49 in)	RG58	3.5 dS m ⁻¹	15 m (49 ft)	View EU Declaration of Conformity at: www.campbellsci.com/cs630
CS635 3-rod TDR Probe For high conductivity soils 	15 cm (6 in)	0.318 cm (0.125 in)	5.75 cm (2.25 in)	4.0 cm (1.57 in)	1.25 cm (0.49 in)	LMR-200 low loss	3.5 dS m ⁻¹	25 m (82 ft)	View EU Declaration of Conformity at: www.campbellsci.com/cs635
CS640 3-rod TDR Probe For very high conductivity soils 	7.5 cm (3 in)	0.159 cm (0.063 in)	4.5 cm (1.77 in)	2.2 cm (0.87 in)	1.0 cm (0.39 in)	RG58	5 dS m ⁻¹	15 m (49 ft)	View EU Declaration of Conformity at: www.campbellsci.com/cs640
CS645 3-rod TDR Probe For very high conductivity soils 	7.5 cm (3 in)	0.159 cm (0.063 in)	4.5 cm (1.77 in)	2.2 cm (0.87 in)	1.0 cm (0.39 in)	LMR-200 low loss	5 dS m ⁻¹	25 m (82 ft)	View EU Declaration of Conformity at: www.campbellsci.com/cs645

^aMeasured from the tips of the probe's rods to the reflectometer.

