

DFM Continuous Logging Soil Moisture Probe

The Continuous Logging Soil Moisture Probe is a multilevel soil moisture content and temperature logging device. The probe measures moisture content and temperature readings at 6 depths in a soil profile and also measures surface temperature. Salinity levels do not adversely influence readings. The probe takes readings at hourly intervals per default, but the user has the option to customize reading intervals. If the interval is left to default the probe can store up to 4000 readings locally, which is half a seasons worth of readings.

The Probes are available in 6 lengths:

		Sensor Spacings																	
		10cm	20cm	30cm	40cm	50cm	60cm	70cm	80cm	90cm	100cm	110cm	120cm	130cm	140cm	150cm	160cm	170cm	180cm
P r o b e L e n g t h	40cm	X	X	X	X														
	60cm	X	X	X	X	X	X												
	80cm	X	X	X	X		X		X										
	1.0m	X	X		X		X		X		X								
	1.2m		X		X		X		X		X		X						
	1.8m			X			X			X			X			X			X

The outer shell of the probe is made of UV stabilized PVC and the inner shell is a solid resin cast. The head of the probe contains the battery and radio/connector.

The radio used in short/medium/long range systems is an ultra low power consumption device. If the reading interval of the probe is set to default, the life expectancy of the battery is estimated at a season. Changing the reading interval to a more frequent cycle will shorten the life of the battery.

Communication Protocol

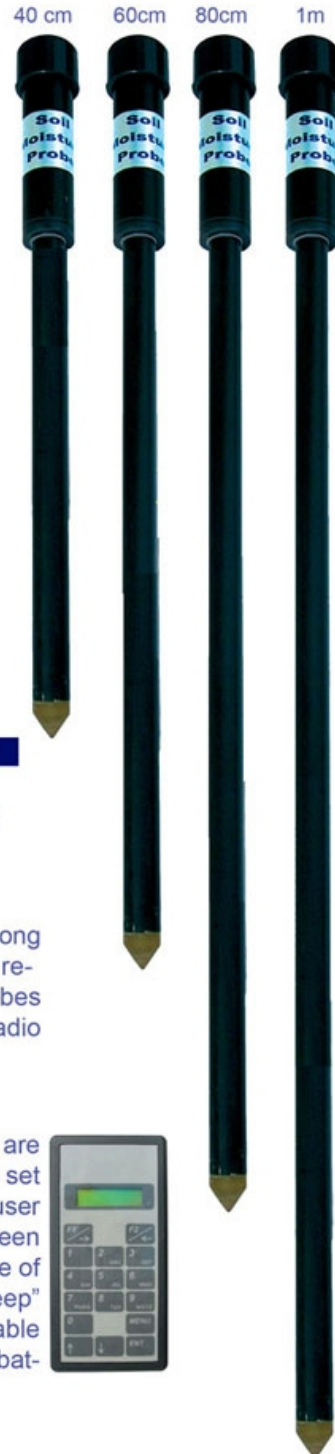
Direct	Short -	Medium -	Long Range
1 Wire TTL	3m range*	50m range*	1.2km range*
2 Wire/RS232	Standard Radio	Stronger Radio	With Repeater
RS485			

*All radio system ranges are estimated and depends on site limitations.

Short - and Medium range radio probe systems can be upgraded to a Long range system by simply adding repeaters. The probe does not have to be re-installed or re-programmed to upgrade to long range. Direct contact probes can be upgraded to short -, medium - and long range by installing a radio card.

Logger

When using Direct Contact, Short - and Medium range systems, readings are downloaded by use of mobile logger. If the reading interval of the probe is set to default, the logger can store up to 400 probes worth of data if the user downloads readings weekly. The logger also serves as the interface between the user and the probe and can be used to force readings, show the value of the last reading taken, change the reading interval, put probe into "Sleep" mode, etc. The logger is powered by a 9V battery which is non rechargeable and easily replaced. The logger puts itself into "Sleep" mode to conserve battery power and has an RS232 interface.



Subsurface and submersible models are also available.