

# MP406 / MP306 Applications



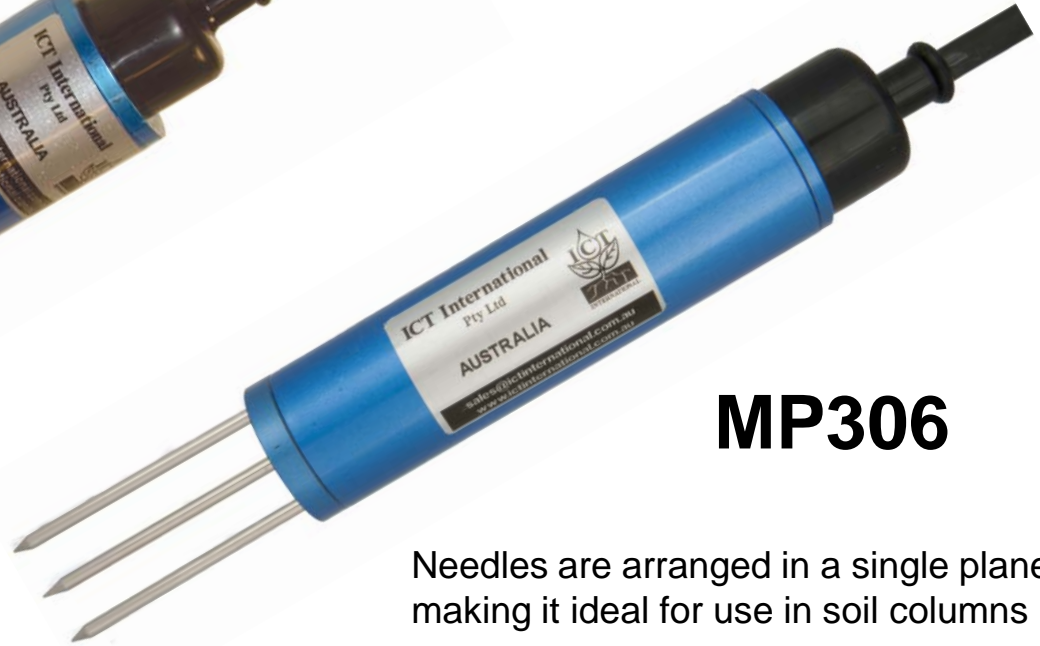
**Solutions for soil, plant & environmental monitoring**

**[www.ictinternational.com](http://www.ictinternational.com)**

# MP406

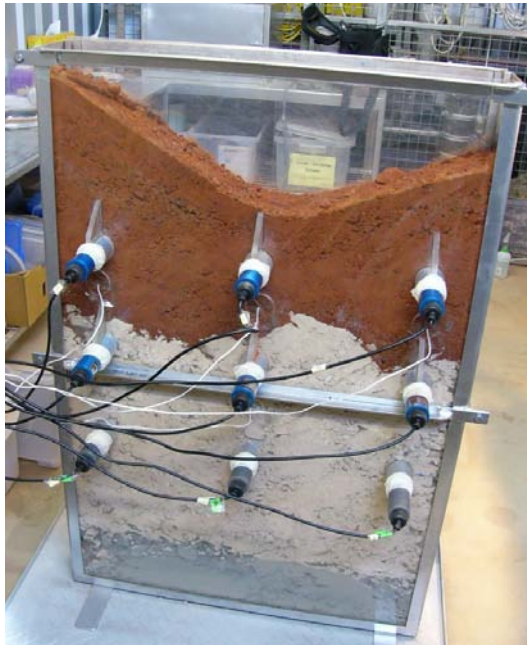


# MP306



Needles are arranged in a single plane making it ideal for use in soil columns

## Laboratory assessment of mine cover materials



## Catchment and hydrology studies



## Landfill store and release cover monitoring



## Monitor in situ water use of introduced and native grasses



# MP406 / MP306 Applications



## Soil Moisture

Irrigation Management

Forest Hydrology

Sport Fields

Parks and Gardens

## Engineering and Industrial

Concrete Pre mixture

Mine Tailings

Sand Stock Piles

Building Foundations

Fly Ash - Power Station

Mine Cover Laboratory Studies

Landfill Cover Monitoring

Road Building

Slope Monitoring

## Ecology and Catchments

Soil Profile Studies

Catchment and Hydrology Studies

Plant Ecology Studies



**Solutions for soil, plant & environmental monitoring**

[www.ictinternational.com](http://www.ictinternational.com)

## Landfill Cover and Mine Closure

- Soil column laboratory experiments
- Testing of geofabrics efficacy
- Long-term monitoring
- Dam walls, caps and other structures

## Irrigation Scheduling

- Spatial assessment of irrigation efficiency
- Control irrigation events

## Plant Physiology and Ecohydrology

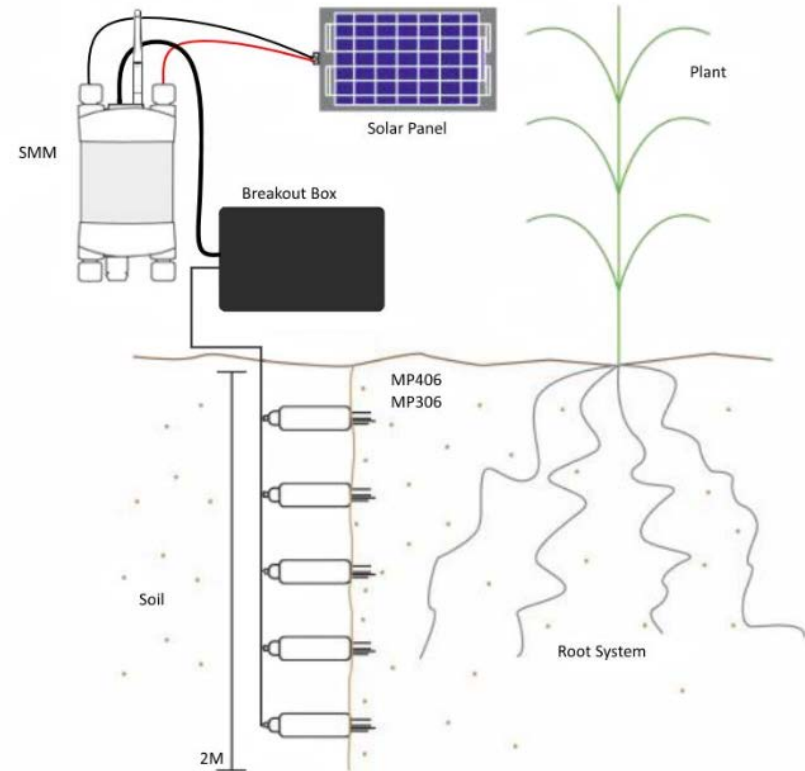
- Root zone activity
- Total moisture uptake by plants
- Run-off
- Drainage
- Transpiration
- Ecohydrology models



**Solutions for soil, plant & environmental monitoring**

[www.ictinternational.com](http://www.ictinternational.com)

# Soil Moisture Meter Option



# Soil Moisture Meter Software

	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O
1	Serial Number:	SMM38708													
2	Instrument Name:	ICT VSL													
3	Comment:														
4	Date	Time	Chan1 (VS	Chan3 (VS	Chan5 (VS	Chan7 (VS	Internal B	Internal B	External P	External P	External P	Diagnostic	Message		
5	26/07/2017	3:40:10	26.338	32.993	23.476	25.935	4.19	24.2	present	0	0				
6	26/07/2017	3:50:10	26.338	32.991	23.475	25.935	4.19	24.2	present	0	0				
7	26/07/2017	4:00:10	26.335	32.991	23.475	25.934	4.19	24.2	present	0	0				
8	26/07/2017	4:10:10	26.335	32.988	23.474	25.933	4.19	24.2	present	0	0				
9	26/07/2017	4:20:10	26.333	32.991	23.474	25.933	4.19	24.2	present	0	0				
10	26/07/2017	4:30:10	26.333	32.988	23.473	25.933	4.19	24.2	present	0	0				
11	26/07/2017	4:40:10	26.332	32.988	23.472	25.933	4.19	24.2	present	0	0				
12	26/07/2017	4:50:10	26.331	32.99	23.472	25.932	4.19	24.2	present	0	0				
13	26/07/2017	5:00:10	26.333	32.987	23.472	25.932	4.19	24.2	present	0	0				
14	26/07/2017	5:10:10	26.331	32.987	23.472	25.932	4.19	24.2	present	0	0				
15	26/07/2017	5:20:10	26.33	32.987	23.472	25.932	4.19	24.2	present	0	0				
16	26/07/2017	5:30:10	26.328	32.987	23.471	25.932	4.19	24.2	present	0	0				
17	26/07/2017	5:40:10	26.328	32.989	23.47	25.931	4.19	24.2	present	0	0				
18	26/07/2017	5:50:10	26.328	32.983	23.47	25.93	4.19	24.2	present	0	0				
19	26/07/2017	6:00:09	26.325	32.984	23.47	25.93	4.19	24.2	present	0	0				
20	26/07/2017	6:10:10	26.324	32.984	23.469	25.93	4.19	24.2	present	0	0				
21	26/07/2017	6:20:10	26.321	32.983	23.468	25.929	4.19	24.2	present	0	0				
22	26/07/2017	6:30:10	26.322	32.983	23.467	25.929	4.19	24.2	present	0	0				
23	26/07/2017	6:40:10	26.321	32.98	23.466	25.928	4.19	24.2	present	0	0				
24	26/07/2017	6:50:10	26.321	32.981	23.466	25.928	4.19	24.2	present	0	0				



Solutions for soil, plant & environmental monitoring

[www.ictinternational.com](http://www.ictinternational.com)



# Soil Moisture Meter Software

ICT Instrument: Soil Moisture Meter

Connected To: **SMM1HB03 - Soil Moisture Meter []** Edit Name And Comment Power Down

Measurement Status: **Measurement Stopped** Next Measurement: **Manual Mode** Start Measurement

Channel	Status	Value
Channel 1 (MP406-VSW%)	Active	MP406-VSW% / mV
Channel 2 (Disabled)	Disabled	-- /
Channel 3 (Disabled)	Disabled	-- /
Channel 4 (Disabled)	Disabled	-- /
Channel 5 (Disabled)	Disabled	-- /
Channel 6 (Disabled)	Disabled	-- /
Channel 7 (Disabled)	Disabled	-- /
Channel 8 (Disabled)	Disabled	-- /
Channel 9 (Disabled)	Disabled	-- /
Channel 10 (Disabled)	Disabled	-- /

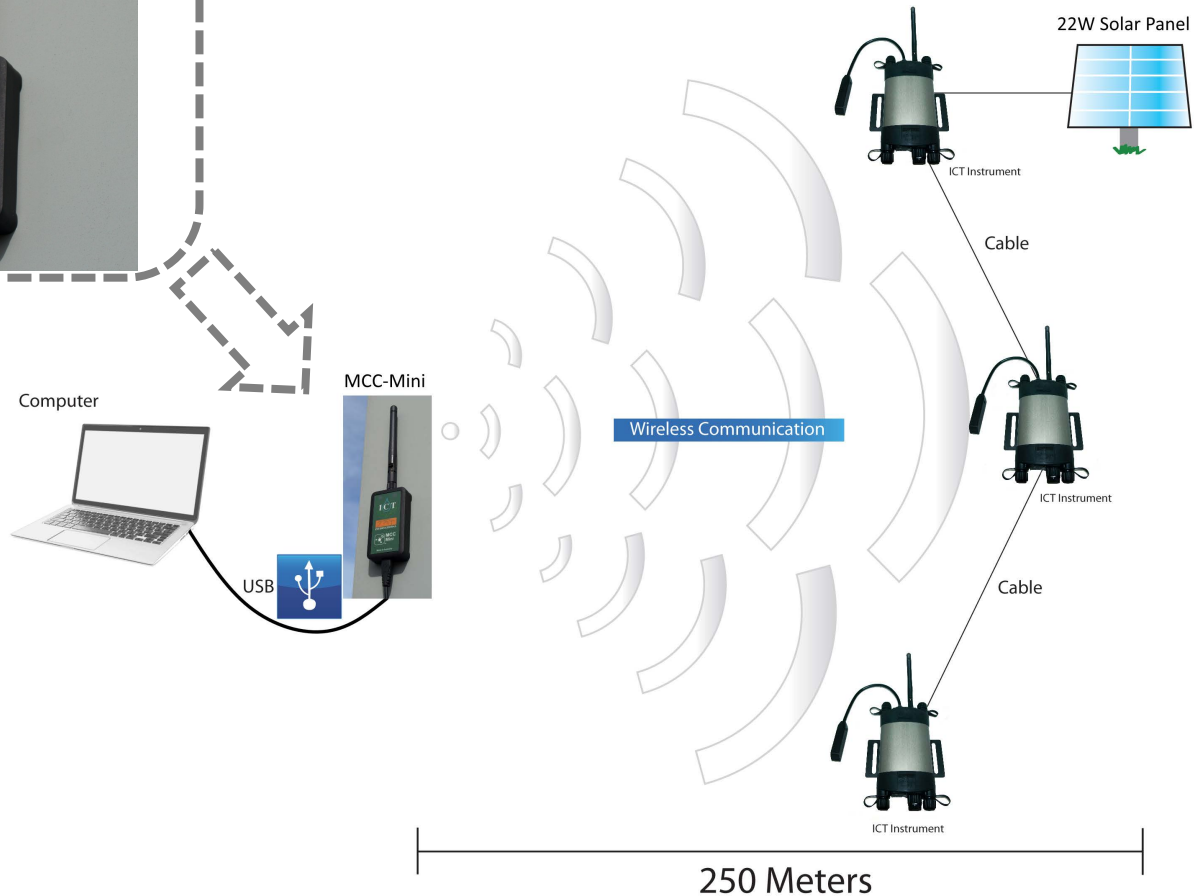
SN: SMM1HB03 3.74 V (100mA), 36.20 deg.C USB Power Card OK 09/01/2018, 13:31



Solutions for soil, plant & environmental monitoring

[www.ictinternational.com](http://www.ictinternational.com)

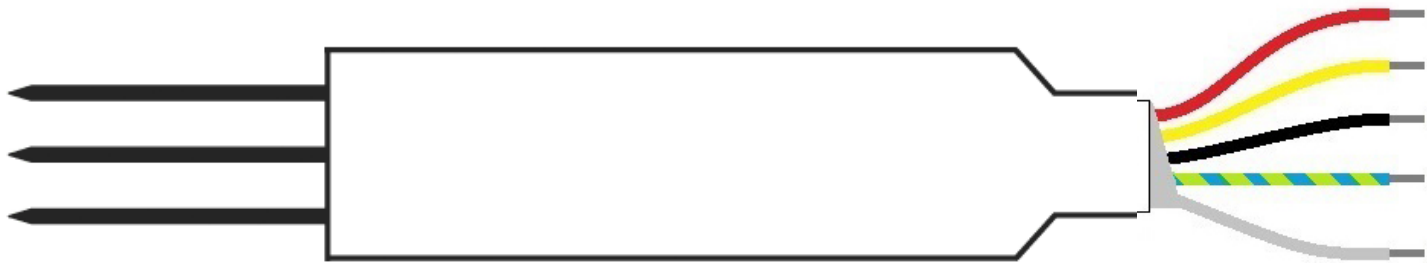
# Wireless Option



# Analogue Datalogger Option

The connections for MP406 and MP306 are:

- RED                      7 - 18 volts
- YELLOW                Signal (+)
- GREEN                 Power Ground
- BLACK                 Signal (-)



# Lookup Table

VSW%	mV MP406	VSW%	mV MP406
0.00	0	55.00	1015
2.00	120	60.00	1025
5.00	210	65.00	1035
10.00	310	70.00	1045
15.00	415	75.00	1055
20.00	510	80.00	1065
25.00	610	85.00	1075
30.00	720	90.00	1085
35.00	825	95.00	1105
40.00	895	100.00	1160
45.00	955		
50.00	1005		

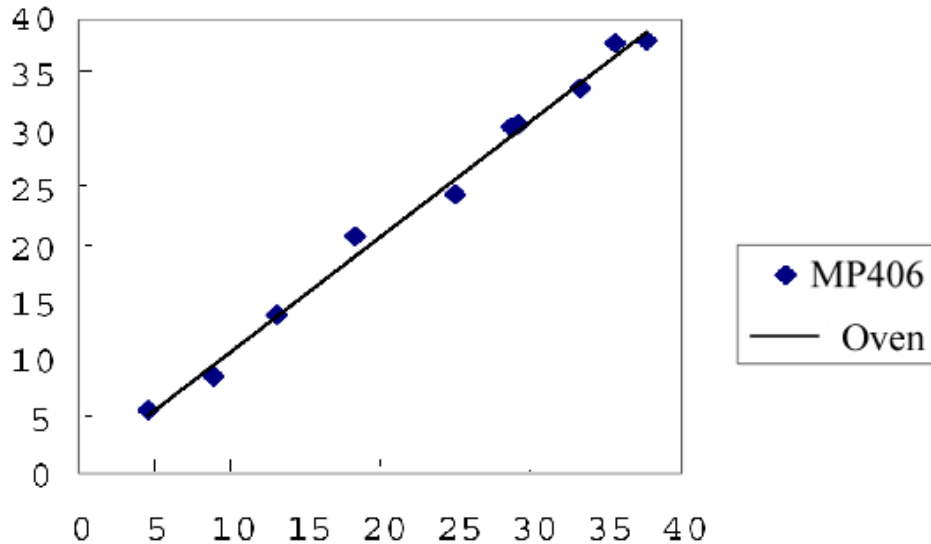


**Solutions for soil, plant & environmental monitoring**

[www.ictinternational.com](http://www.ictinternational.com)

# MP406 Measurement of VSW%

## MP406 Measurement of VSW% using Soil Samples as a standard

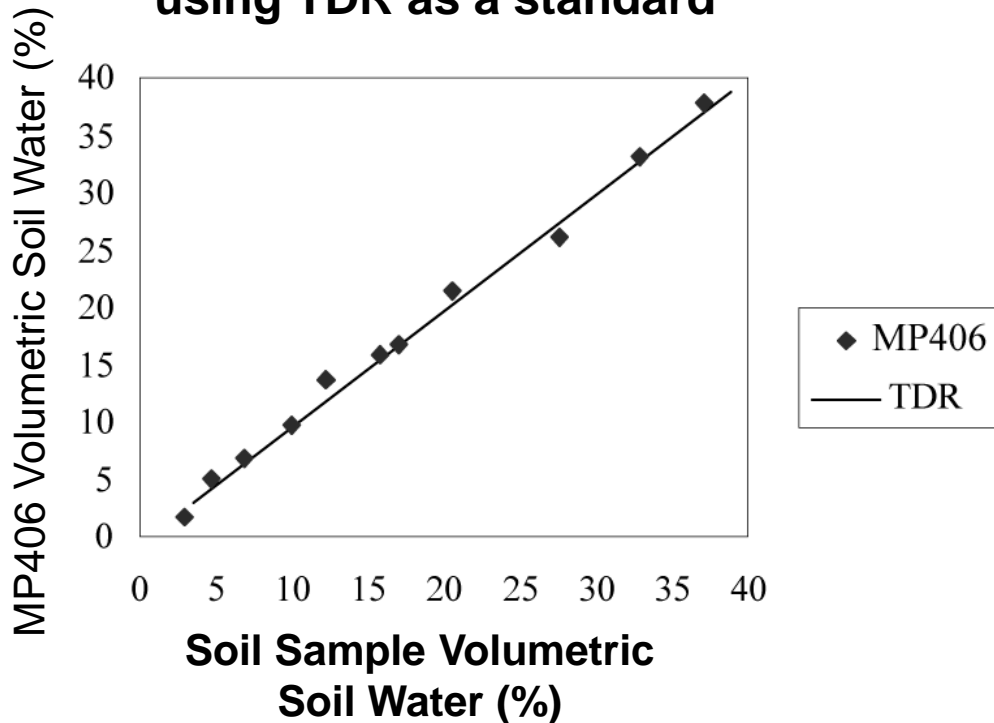


MP406 measurement of Absolute Volumetric Soil Water Percent (VSW%) from prepared independent soil samples

Soil Sample Volumetric  
Soil Water (%)

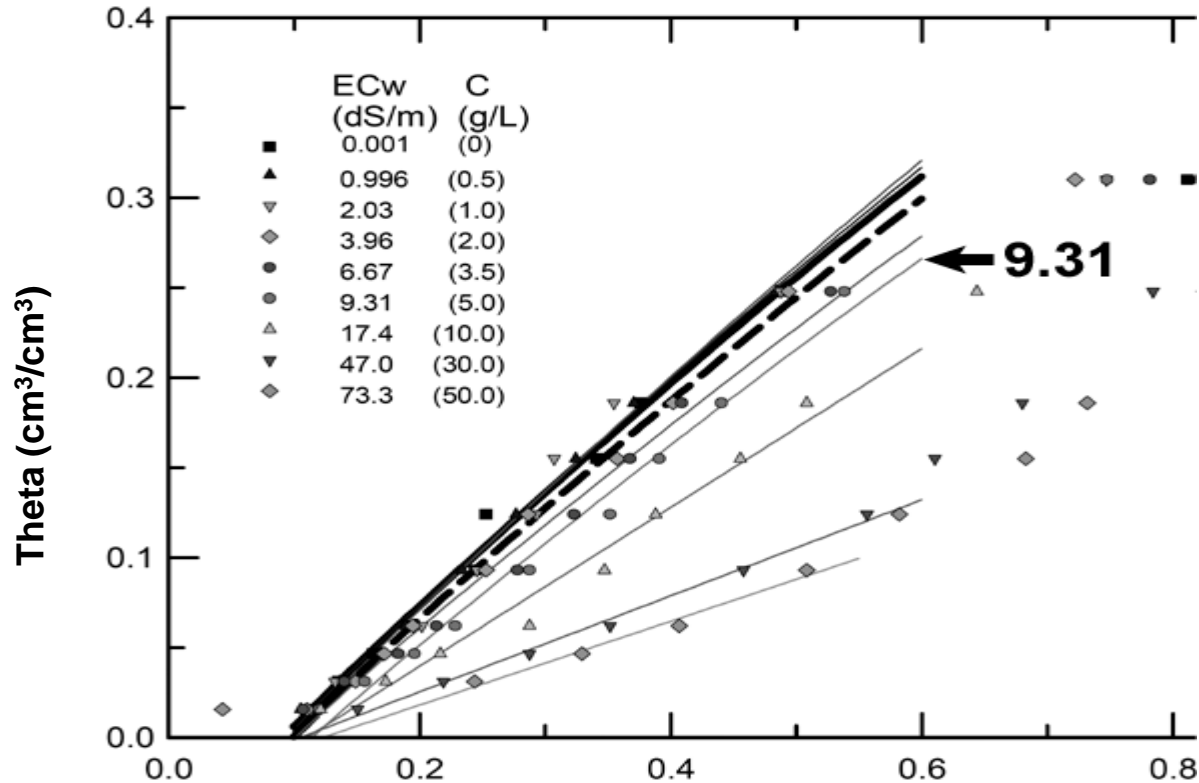
# Comparing MP406 & TDR

**MP406 Measurement of VSW%  
using TDR as a standard**



The MP406 in comparison to “Trase” TDR measurement of Absolute Volumetric Soil Water Percent (VSW%) from prepared independent soil samples

# Effect of Salt Concentration on Calibration



From: Inoue, M "Effect of salt concentration on measurement of soil water content based on dielectric constant", Japanese Journal of Soil Physics.  
[wwwsoc.nii.ac.jp/jssp3/45thSympo/45abstract\\_list.htm](http://wwwsoc.nii.ac.jp/jssp3/45thSympo/45abstract_list.htm)

# ICT International Pty Ltd

**Solutions for soil, plant and environmental research**

[www.ictinternational.com](http://www.ictinternational.com)

[sales@international.com.au](mailto:sales@international.com.au)

Phone: [61]-2-6772-6770

Fax: [61]-2-6772-7616

PO Box 503, Armidale, NSW, Australia, 2350



INTERNATIONAL

**Solutions for soil, plant & environmental monitoring**

[www.ictinternational.com](http://www.ictinternational.com)