

Main Features
The specifications are subject to change

Isolation Unit DM-900						
	DM-900	DM-900L	DM-910	DM-910L	DM-400	DM-400L
■Signal Input						
Frequency Characteristics (-3dB)	500MHz					
Band limiter	20MHz / 100MHz					
Input impedance	1Mohm // 16pF				1Mohm // 16pF or 50ohm	
Max. input voltage	400Vmax (DC+peakAC<=5kHz)CATI					
Number of channels	2		1		2 (No isolated)	
Input coupling	GND, DC1M, AC1Mohm		GND, DC1Mohm		GND, DC1M, AC1M, AC50ohm	
Input sensitivity	2mV/div to 10V/div		CH1-Main:50mV/div to 5V/div CH2-Zoom:2mV/div to 1V/div		2mV/div to 10V/div	
Offset range	2mV/div to 50mV/div: +/-1V 100mV/div to 500mV/div: +/-10V 1V/div to 10V/div: +/-100V		CH1-Main: 50mV/div to 500mV/div: +/-10V 1V/div to 5V/div: +/-100V CH2-Zoom 2mV/div to 20mV/div: +/-2V 50mV/div to 1V/div: +/-20V		2mV/div to 50mV/div: +/-1V 100mV/div to 500mV/div: +/-10V 1V/div to 10V/div: +/-100V	
DC gain accuracy	+/- (1.5% + 0.5% of full-scale)					
Probe sense	10:1, 100:1, 1000:1 (detection/manual settings)					
Sample rate	1GS/s(2GS/s during interleave)					
Vertical axis resolution	8 bits					
Maximum memory length	500k points/CH	16M points/CH	500k points/CH	16M points/CH	500k points/CH	16M points/CH
■Trigger System						
Trigger source	CH1, CH2		CH1-Main		CH1, CH2	
Trigger slope			Positive / Negative			
Coupling			AC, DC, HFREJ, LFREJ			
Level range			125% of full-scale			
■Interface						
Interface	One interface with 3 cables(Optical fiber 2m to 200m)				Wire cable 2m to 5m	
■Power Supply/Battery						
Internal battery	3 battery packs(until can operate on one battery)				-	
Battery charging	can be charged by the main unit				-	
Battery charger	Option				-	
Power consumption	120VAmx (When using AC )				40VAmx	
Battery operation time	pprox, 12 hours of continuous operation(when using 3 batteries)				-	
Battery charging time	Approx. 6 hours				-	
AC power supply	100 to 240(50/60Hz)					
■Calibration Signal						
Calibration Signal	0.6V/6V (switchable)					
■Mechanical unit						
Dimension(mm)	122.4(H) x 258.4(W) x 544(D)				96.4(H) x 171.6(W) x 322.6(D)	
Weight	7kg +/- 10%(excluding battery packs and accessories)				2.6kg	
Operating temperature	0 to 40-degree					
Performance guaranteed temp.	10 to 35-degree					
■Accessories						
Battery Pack	3				-	
Power Cable					1	

Main Unit DM-8000 and DM-8000H		
*When DM-610 Acquisition Card equipped		
	DM-8000	DM-800H
■ Transceiver Card Connection		
Number of Slot	6 slots (Max. 12isolation unit can be connected)	
■ Time axis		
Sweep range	1ns/div to 20s/div	
Clock accuracy	10ppm max.	
Acquisition modes	Normal, Peak	
■ Trigger System		
Mode	Auto, Normal, Single, Stop	
Source	Up to 24CH and an external trigger	
Type	Edge, Pulse width	
Trigger delay	Possible	
■ Interface		
Ethernet Port	10BASE-T/100BASE-TX	1000BASE-T
■ Power supply unit		
AC power supply	100 to 240V (50/60Hz)	
■ Mechanical unit		
Dimension(mm)	132(H) x 351(W) x 420(D)	
Operation temperature	0 to 40-degree	
Performance guaranteed temp.	10 to 35-degree	
■ Accessories		
LAN cable	1	
Power supply cable	1	
Operation manual	CD-R(x 1)	

IS Viewer DM-800	
*Controller PC (Option) and IS Viewer program is required to control and perform various measurement with DM-8000.	
Math	+, -, x, ÷,  x , ÷ x , f, ∫
Parameter Measurement	Max, Min, p-p, Top, Base, Top-Base, RMS, CycleRMS, Mean, CycleMean, +/-Overshoot, TransitionTime, dv/dt, Freq, Period, +/-PulseCount, +/-PulseWidth, Duty, Integral, Integral(abs), Skew(%), Skew(Level)
Other functions	Cursor, Smoothing, Channel de-skew, Smoothing, Re-scale, Off-line viewer
Waveform storage	CSV
Image Save	BMP, PNG, Clipboard
Setup Save	with/without Waveform

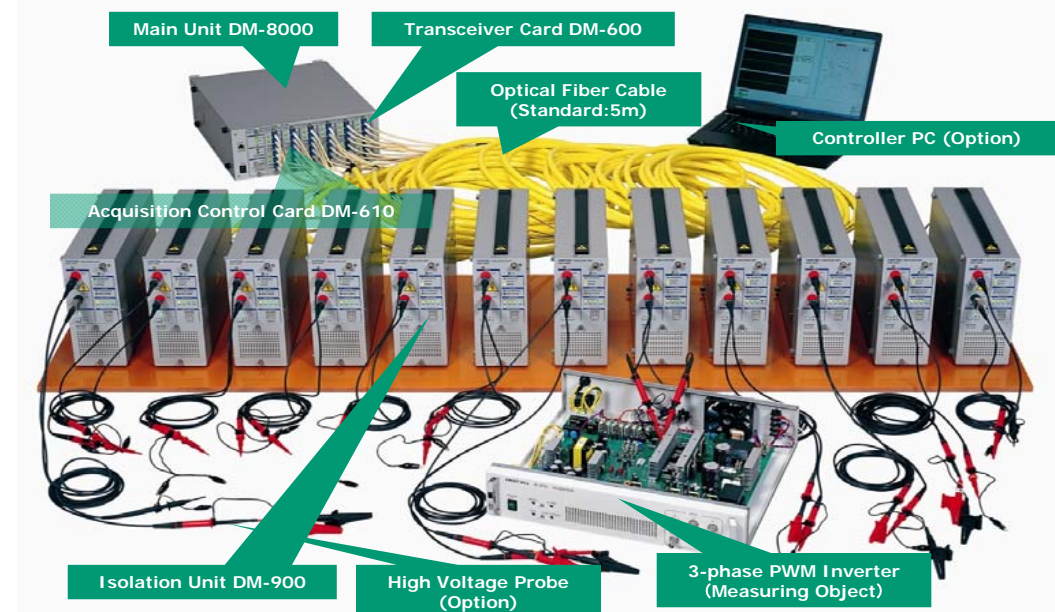
IWATSU

New product

Isolation Measurement System DM-8000

Floating / High Frequency / Multichannel / Simultaneous Suitable for Ultrahigh-Voltage Floating Measurement

- "High Voltage" and "Operation" part are isolated by Optical Fiber cable
- Frequency Bandwidth DC to 500MHz
- Multichannel Data Acquisition (2ch~24ch)
- Battery Operation (Continuous Operation approx. 12hours)



Example: Isolation Unit DM-900 x 12units (24ch)

Acquisition unit  
DM-400/DM-400L



Isolation unit  
(high resolution)  
DM-910/DM-910L



Suitable for the following application

- simultaneous measurement for upper/lower arm of Inverters
- Power Loss Measurement of Power modules
- Long-Distance Surge Measurement of Switches (Maximum transmission distance 200m)
- Observation of Lightning Surge

Suitable for Ultra-High Voltage,High Frequency,Multi-channel Measurement

"High Voltage" and "Operation" part can be isolated by Optical Fiber Cable.

Different electric potential signal, like Lower/Upper arm of Inverters, Primary and Secondary signal of Power converters can be measured because each isolation unit is isolated.

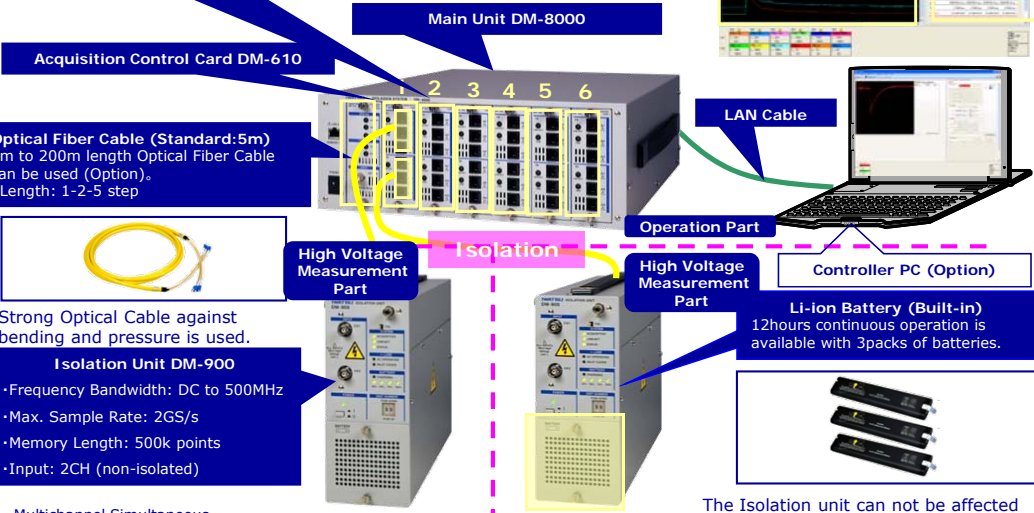
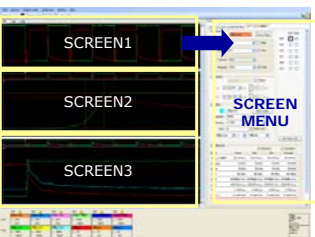
**Transceiver Card DM-600**  
2units of Isolation Unit can be connected to the card.  
Max. 6pcs of the card can be equipped to the main unit(1 to 6).

Floating measurement is strongly required for such Vce, Vge signal measurement of Lower/Upper arm of Inverters.

It was very difficult to perform accurate measurement by using Differential Probes because of "CMRR" and limitation of "CMV" etc. This Isolation Measurement System can perform accurate High Voltage Measurement without any limitations.

IS Viewer program is required for remote operation and measurement.

The program can also be used for OFF-Line job, such like making reports and organize measurement results.



**Optical Fiber Cable (Standard:5m)**  
2m to 200m length Optical Fiber Cable can be used (Option).  
\*Length: 1-2-5 step

Strong Optical Cable against bending and pressure is used.

**Isolation Unit DM-900**  
•Frequency Bandwidth: DC to 500MHz  
•Max. Sample Rate: 2GS/s  
•Memory Length: 500k points  
•Input: 2CH (non-isolated)

Multichannel Simultaneous Measurement (2ch to Max. 24ch)

Item List (Main Unit and Options)

Item	Model #		Item	Model #	
Main Unit	DM-8000		Battery Pack	DM-551	
High-speed main unit	DM-8000 H		Battery Pack (3-pack set) *2	DM-553	
Acquisition Control Card	DM-610		Battery charger*4	DM-560	
Transceiver Card	DM-600		Optical Fiber Cable S (2 m)*3	DM-002	
Isolation unit (500 k words)*1	DM-900		Optical Fiber Cable S (5 m)*3	DM-005	
Isolation unit (16 M words)*1	DM-900 L		Optical Fiber Cable(10 m)	DM-006	
Isolation unit (high resolution, 500k words)*5	DM-910		Optical Fiber Cable(20 m)	DM-007	
			Optical Fiber Cable(50 m)	DM-008	
Isolation unit (high resolution, 16M words)*5	DM-910 L		Optical Fiber Cable(100 m)	DM-009	
			Optical Fiber Cable(100 m)	DM-009	
Acquisition unit (500 k words)	DM-400		Optical Fiber Cable(200 m)	DM-010	
Acquisition unit (16 M words)	DM-400L				

\*1: An insulating case is provided as standard.  
\*2: Provided as standard in the isolation units DM-900, DM-910, and DM-910L.  
\*3: These cables are provided without a sheath.  
\*4: The isolation units DM-900, DM-900L, DM-910, and DM-910L also include a battery charging feature.  
\*5: An insulating case is provided as standard. A separate, dedicated probe is required for voltage measurement.

System Configuration Example

**Simultaneous Measurement for Lower/Upper arm of 3-phase Inverter**

Vce, Vge Ic and Output Voltage, Current Waveform of Lower/Upper arm of Inverters can be simultaneously measured. Parameter measurement, like dv/dt and di/dt (Power loss) can also be performed.

**Display example**

Item	Model #	Q'ty
Main Unit	DM-8000	1
Acquisition Control Card	DM-610	1
Transceiver Card	DM-600	4
Isolation Unit (16ch)	DM-900	8
Optical Fiber Cable (5m)	DM-005	8

Legend: Yellow line = Optical Fiber Cable, Green line = LAN Cable. \*Router (Option) is required for DM-8000 main unit.

**Simultaneous Measurement for Lower/Upper arm of single-phase Inverter**

Item	Model #	Q'ty
Main Unit	DM-8000	1
Acquisition Control Card	DM-610	1
Transceiver Card	DM-600	1
Isolation Unit (4ch)	DM-900	2
Optical Fiber Cable (5m)	DM-005	2

**Long-distance multi-point Surge Measurement of Switches**

Max. 200m of Long-Distance isolation measurement is available with Optical Fiber Cable (5m to 200m/1-2-5 step).

**Optical Fiber Cable (100m)**

Item	Model #	Q'ty
Main Unit	DM-8000	1
Acquisition Control Card	DM-610	1
Transceiver Card	DM-600	1
Isolation Unit (4ch)	DM-900	2
Optical Fiber Cable (100m)	DM-005	2