TML

Visual LOG®

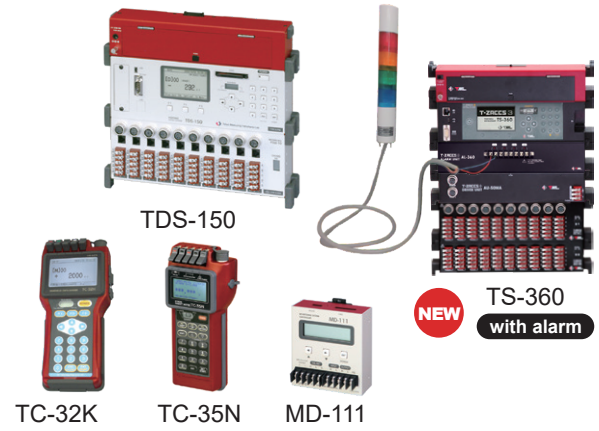
Data Mail Management Software TDS-Mail

Inclinometer and rainfall option version TDS-Mail-f

Easy telemetry

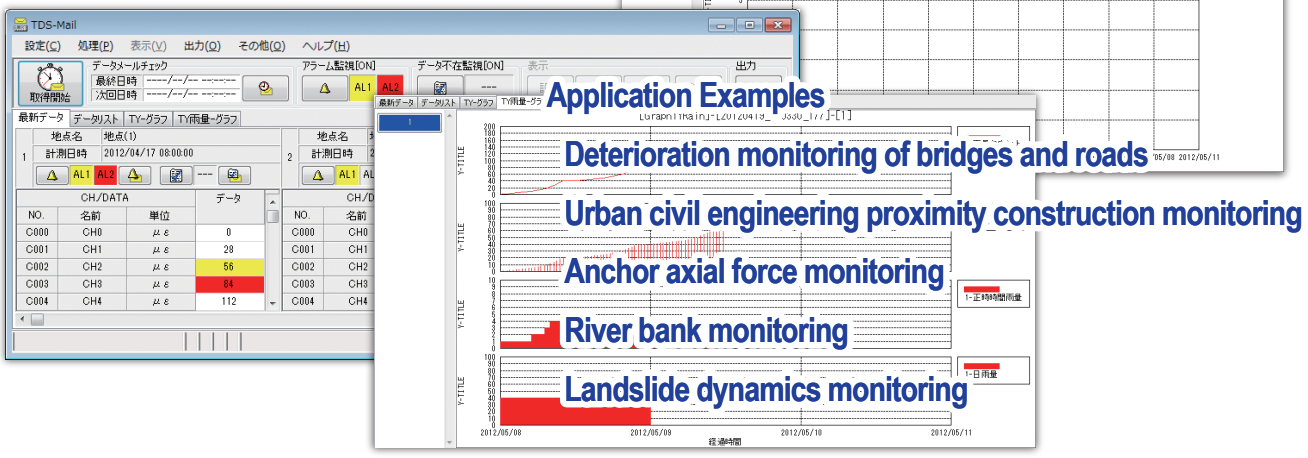
This software is designed to send measurement data by interval timer of measuring instruments (TS-360, TDS-150, TC-32K [single, multi], TC-31K [multi], TC-35N, MD-111) for 100 channels by e-mail (data mail) using a data mail converter, and to record data mail from up to 5 points (measuring instruments). The software is designed to send measurement data by interval timer or other means to 100 channels using a data mail converter, record data mail from up to 5 points (measuring instruments), and monitor alarms, thus enabling easy remote monitoring without the need to construct a large-scale server system.

In addition, rainfall measurement, quadrature calculation, multi-stage inclinometer, and horizontal displacement measurement are available as optional functions.



Instant e-mail transmission of measurement data

Extract and manage data from email



Application Examples

- Deterioration monitoring of bridges and roads
- Urban civil engineering proximity construction monitoring
- Anchor axial force monitoring
- River bank monitoring
- Landslide dynamics monitoring

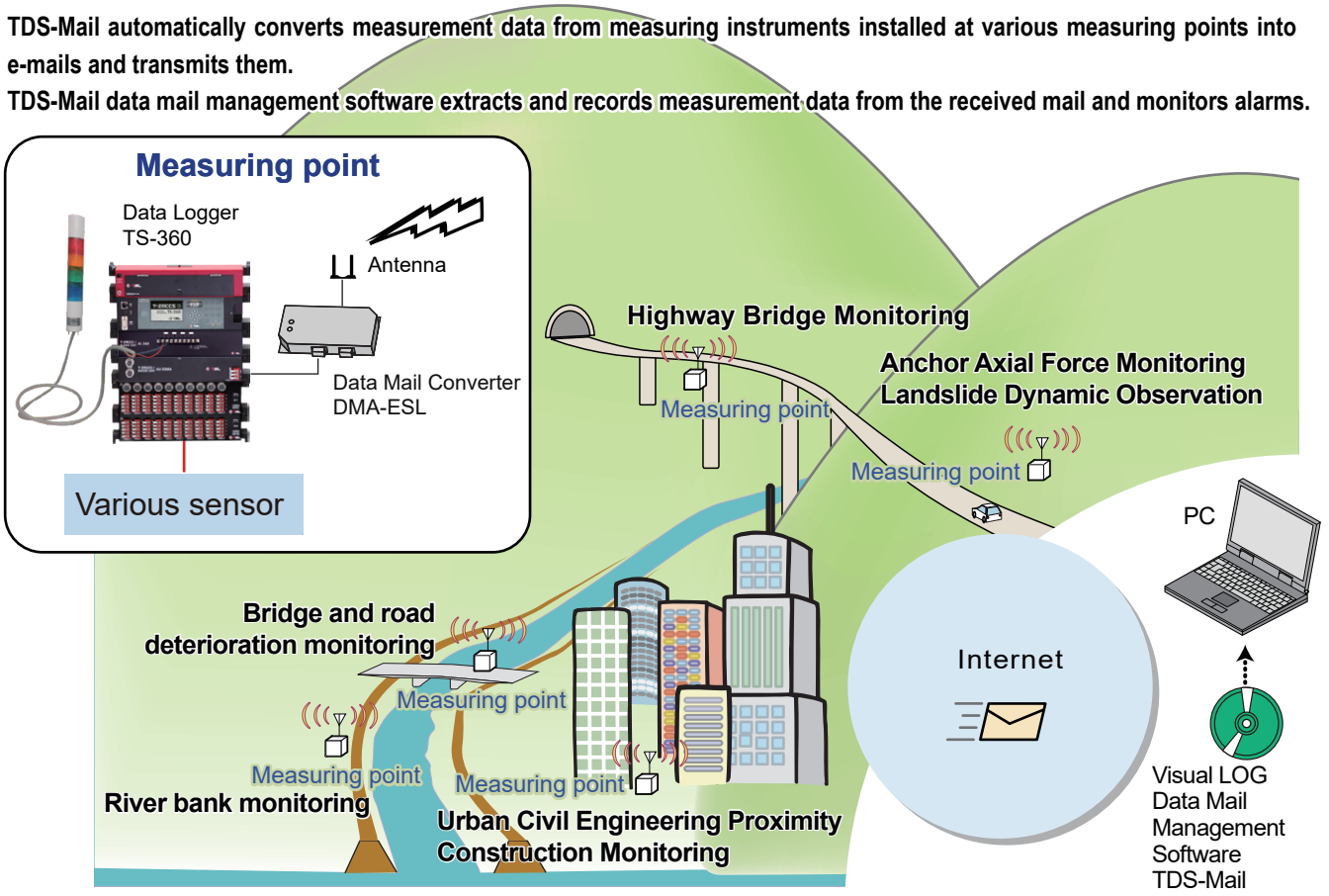
Features

- Low running cost telemetry system
- Data acquisition is possible as long as there is an environment for receiving e-mails, and multiple locations are possible
- No server management required
- Sends alarm e-mails and data absence e-mails

Tokyo Measuring Instruments Laboratory Co., Ltd.

Application image

TDS-Mail automatically converts measurement data from measuring instruments installed at various measuring points into e-mails and transmits them.
TDS-Mail data mail management software extracts and records measurement data from the received mail and monitors alarms.

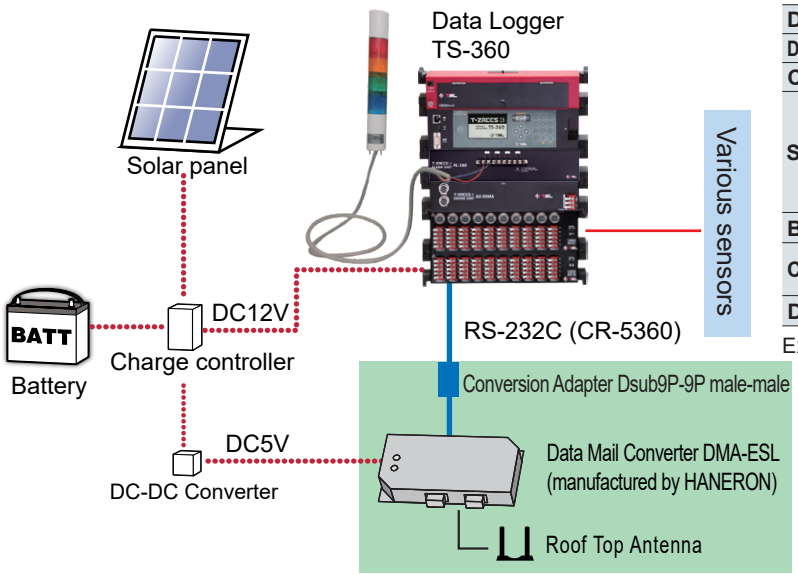


Data Mail Converter Specifications

Type	DMA-ESL
Maker	HANERON
Appearance	Communication module and equipment integrated (DMA-ESL: LTE)
Set	Main unit, main unit AC adapter, antenna
Number of registered recipients	10
Power supply voltage	5V
Current Consumption	1000mA MAX

*"FOMA", the 3rd generation mobile communication system, will terminate its service on 2026/3/31.
Please be careful if you are using FOMA network compatible model FPT-Em/DMA-S/DMA-ES.

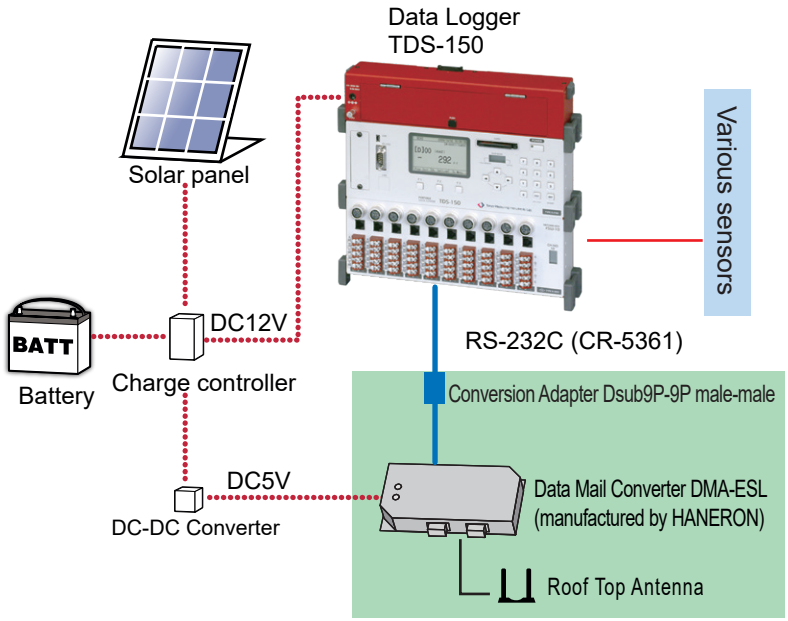
TS-360 measurement point configuration diagram



Data Logger	TS-360	
Data Logger Converter	DMA-ESL	
Connecting cable	CR-5360	
Solar panel	Nominal maximum output (Pmax)	Typical area
	85W	Tohoku, Hokuriku
	40W	Kanto, Koshin, Kinki, Chugoku
	30W	Chugoku, Shikoku, Kyushu
Battery	12V/40Ah (deep cycle battery recommended)	
Charge controller	System voltage 12V, Maximum input voltage 25Vdc, solar input current 6A	
DC-DC converter	12V to 5V	

Example of system with 20 channels and 1h interval

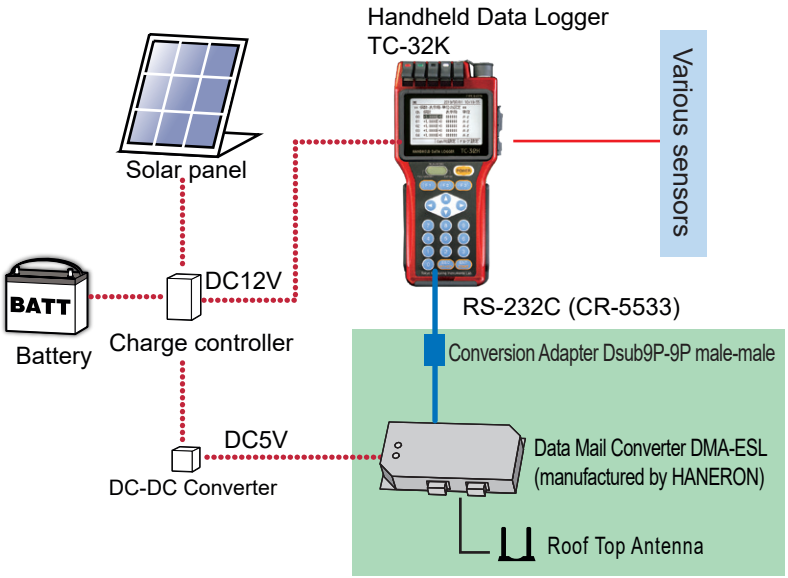
TDS-150 measurement point configuration diagram



Data Logger	TDS-150	
Data Logger Converter	DMA-ESL	
Connecting cable	CR-5361	
Solar panel	Nominal maximum output (Pmax)	Typical area
	85W	Tohoku, Hokuriku
	40W	Kanto, Koshin, Kinki, Chugoku
	30W	Chugoku, Shikoku, Kyushu
Battery	12V/40Ah (deep cycle battery recommended)	
Charge controller	System voltage 12V, Maximum input voltage 25Vdc, solar input current 6A	
DC-DC converter	12V to 5V	

Example system with 10 channels and 1h interval

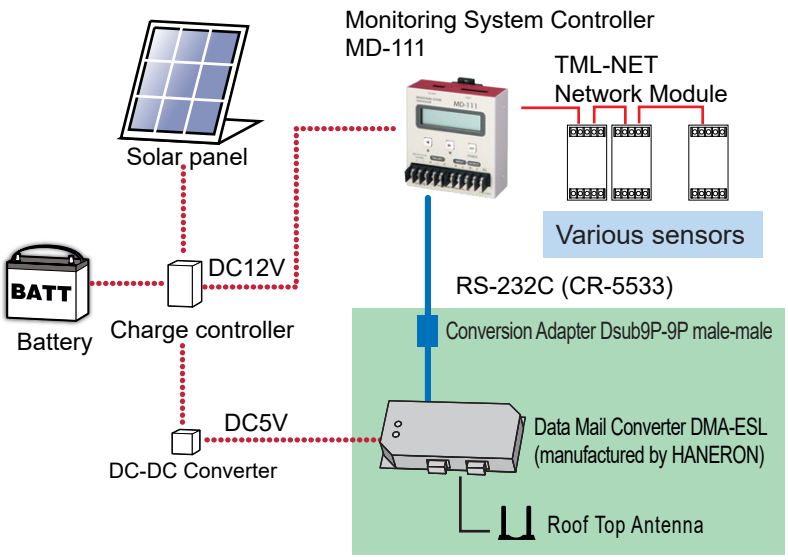
TC-32K measurement point configuration diagram



Data Logger	TC-32K	
Data Logger Converter	DMA-ESL	
Connecting cable	CR-5533	
Solar panel	Nominal maximum output (Pmax)	Typical area
	85W	Tohoku, Hokuriku
	40W	Kanto, Koshin, Kinki, Chugoku
	30W	Chugoku, Shikoku, Kyushu
Battery	12V/40Ah (deep cycle battery recommended)	
Charge controller	System voltage 12V, Maximum input voltage 25Vdc, solar input current 6A	
DC-DC converter	12V to 5V	

Example of system with 1 channel and 1h interval
(5 channels when CSW-5B is used)

MD-111 Measurement Point Configuration diagram



Data Logger	MD-111	
Data Logger Converter	DMA-ESL	
Connecting cable	CR-5533	
Solar panel	Nominal maximum output (Pmax)	Typical area
	85W	Tohoku, Hokuriku
	40W	Kanto, Koshin, Kinki, Chugoku
	30W	Chugoku, Shikoku, Kyushu
Battery	12V/40Ah (deep cycle battery recommended)	
Charge controller	System voltage 12V, Maximum input voltage 25Vdc, solar input current 6A	
DC-DC converter	12V to 5V	

Example of system with 10 network modules and 1h interval
*The same configuration can be made with the TC-35N handheld instrument for networks by simply replacing the connection cable and conversion adapter.

*1 The amount of electricity generated will vary depending on geographical conditions such as region, season, installation orientation, and weather conditions.

Function TDS-Mail

Specification TDS-Mail

Supported measuring instruments	TDS-150, TC-32K [single, multi], TC-31K [multi], MD-111, TC-35N, TS-360
Number of measuring instruments registered	5 Set the location name, instrument type, data mail converter, mail address, etc. for each registration.
Data Mail Converter	DMA-ESL manufactured by HANERON This device converts the RS-232C output of the instrument to email
Measurement channel	100 points (CH.0-99)
Alarm monitoring function	2 alarm control values can be registered for each channel. Alarms can be determined by level alarms and speed alarms. When alarm control values are exceeded, the alarm is displayed on the main screen and the alarm is sent via e-mail.
Data absence monitoring function	When it is determined that no data has been acquired for a certain period of time*1 from the present time, the absence of data is displayed on the main screen and the absence of data is sent by e-mail.
Mail check operation notification function	When the data mail converter is in operation, mail is sent at 9:00 a.m. daily.
Latest Data Display	List all the latest data
Data List Display	Displays data for a certain period of time*2 from the current point in time for each registration.
Time graph display	Displays up to 5 TY graphs per screen, showing data for a certain period of time*2 from the current point in time
CSV output	Set the time period and create a CSV file

*1) The evaluation period can be specified from 3 to 72 hours in 1-hour increments.
*2) Display period can be specified from 3 to 40 days in 1-day increments.

Operating environment

Operating environment

OS	Microsoft Windows 7(SP1)/8.1/10/11
PC	Models and CD drives recommended by the above OS environment
Memory capacity	At least the memory capacity recommended by the above OS environment
HDD Capacity	Disk space required above and below the disk space recommended by the above OS environment is required for setup. • This software: 12 MB of free space or more • Microsoft .NET Framework 4.8 : 4.5 GB
Monitor Resolution	256 display colors, 15-inch or larger monitor with SVGA (1024 x 768) resolution or higher is desirable
Communication environment	Internet connection and ability to send and receive e-mail required
Interfaces	USB port 1 for protect key
Protection key	USB dongle

TDS-Mail-F (Inclinometer and rainfall option version)

Rainfall measurement is made possible by counting the contact pulse signal from the tipping over rain gauge with our network module NSW-01CC.
When the MD-111 monitoring system controller is used, the built-in contact input can also be used.
From the rainfall counts, the total rainfall, hourly rainfall, and 24-hour rainfall are calculated.

Specifications "Inclinometer and rainfall option version" TDS-Mail-f

System configuration	
Supported measuring instruments	TDS-150 [TML-NET drive board option required], TC-35N, MD-111, TS-360 Rainfall measurement cannot be performed with TDS-150 without TML-NET drive board option.
Counter Module	Built-in contact input for NSW-01CC, MD-111 1 unit/point (for rainfall measurement)
Tipping rain gauge	Sensitivity One tipping rainfall 0.5, 1.0mm
Optional Function	
Extended data	Maximum 150 points per location (Total number of points included in the items of rainfall measurement, quadrature calculation, and multistage inclinometer horizontal displacement measurement)
Rainfall measurement	The total rainfall, hourly rainfall, and 24-hour rainfall can be calculated from the count value of the contact pulse signal of the tipping rain gauge, and the hourly rainfall and daily rainfall can be displayed on a graph at the correct time.
Four arithmetic operations	Performs a quadratic calculation using the results of the measurement data and extended data.
Multistage Inclinometer Horizontal displacement measurement	Extended data can be created for each borehole and horizontal displacement distribution graphs can be displayed
Editing of recorded data	The recorded extended data (quadrature calculations, multi-stage inclined horizontal displacement measurement) can be edited and recalculated.

*Visual LOG is a registered trademark of Tokyo Instrument Laboratory, Inc.

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