Showa Denki

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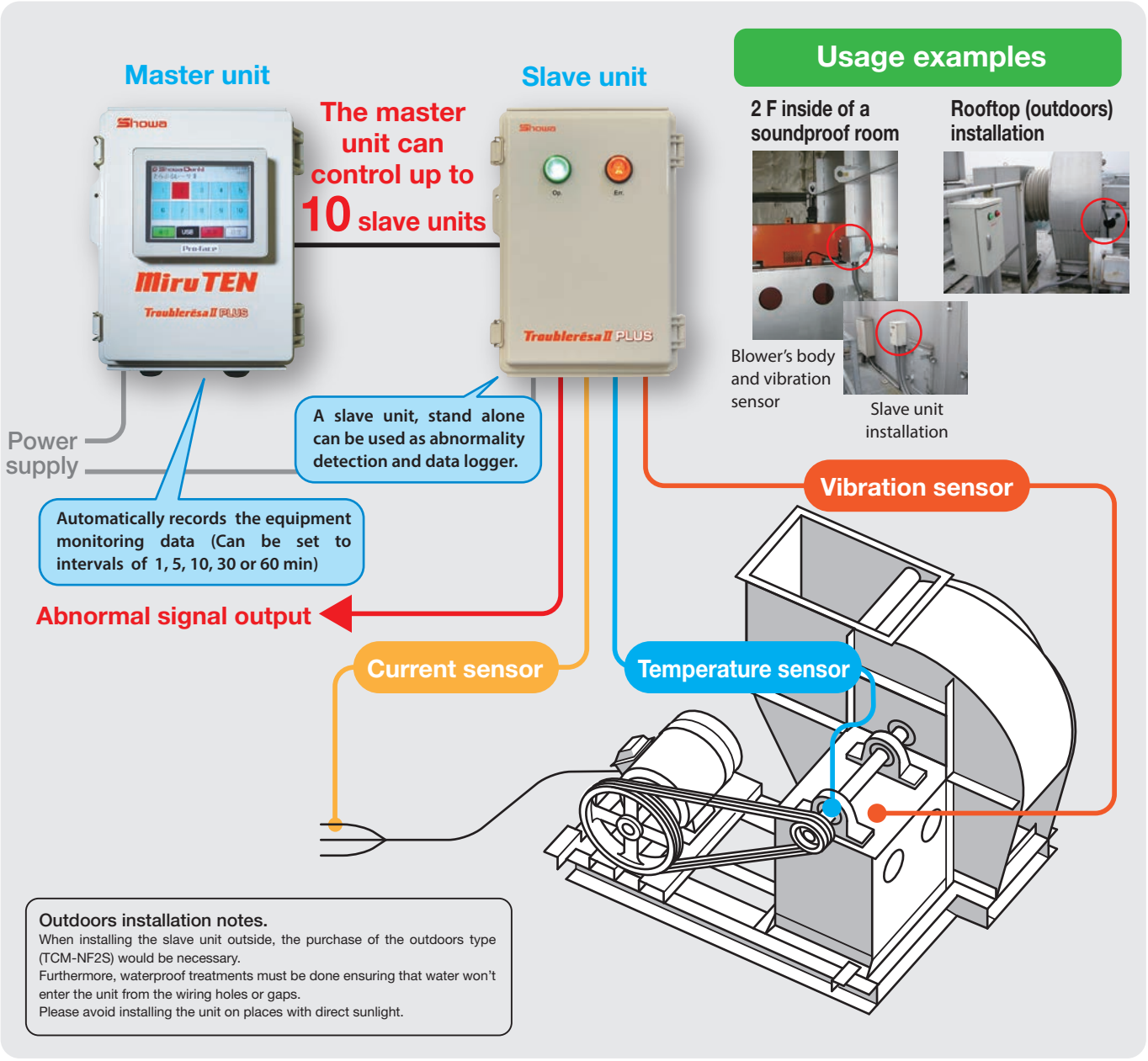
Are your machines installed in; out of reach, narrow, dark or high temperature locations?

Connecting the analog sensors (6 channels) and temperature sensors(2 channels), will allow you to immediately monitor a machine on the spot .

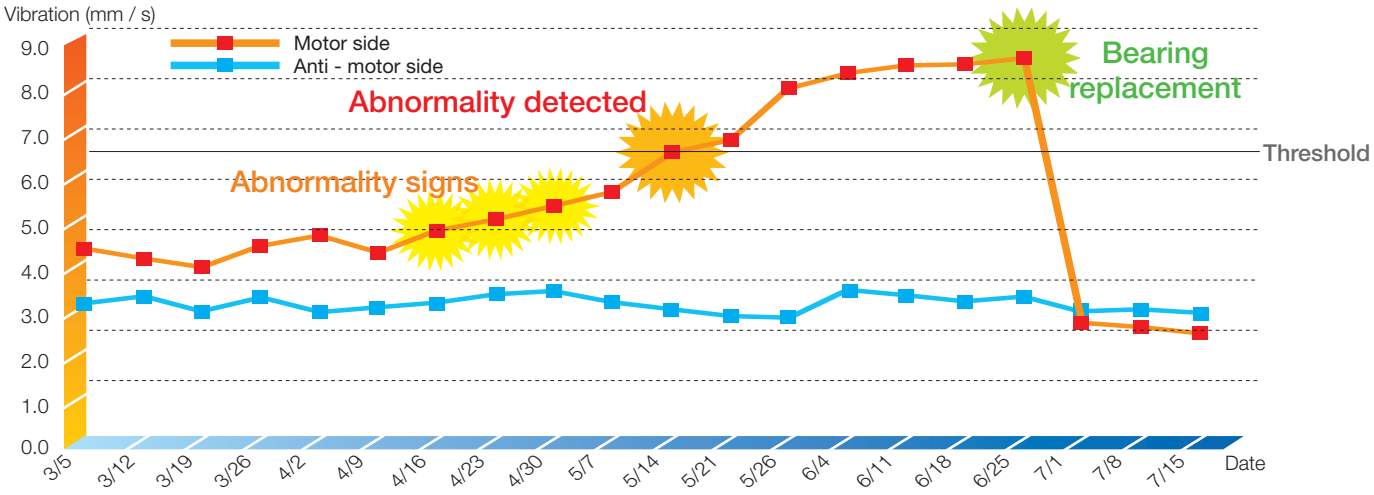
Troublerésa II PLUS



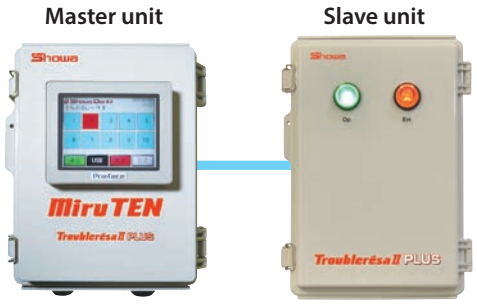
SHOWA DENKI CO., LTD.

Blower's vibration measurement record example

In this case, there was a margin of 2.5 months since signs of abnormality appeared
It was possible to fix it on about one month after the troubleresa detected the abnormality.



Product introduction



functions

① 6 analog sensor channels ＋2 temperature sensor channels
② Able to determine the type of abnormality
③ Upper and lower threshold settings.
④ Supports environmental temperatures up to 50˚C.
⑤ Outdoors model equivalent to IP65.

II PLUS New functions		
Slave unit	1	The slave unit can monitor abnormalities by itself *if using 2 or more slave units a master unit is necessary
	2	The slave unit can record data
	3	Connect to an existing network
Master unit	1	Connect to an existing network
	2	Information displayed in English or Japanese
	3	FTP function added
	4	2 external outputs added
	5	Automatic return from error screen

Customizable to meet the customer specifications

Hand carry demo set

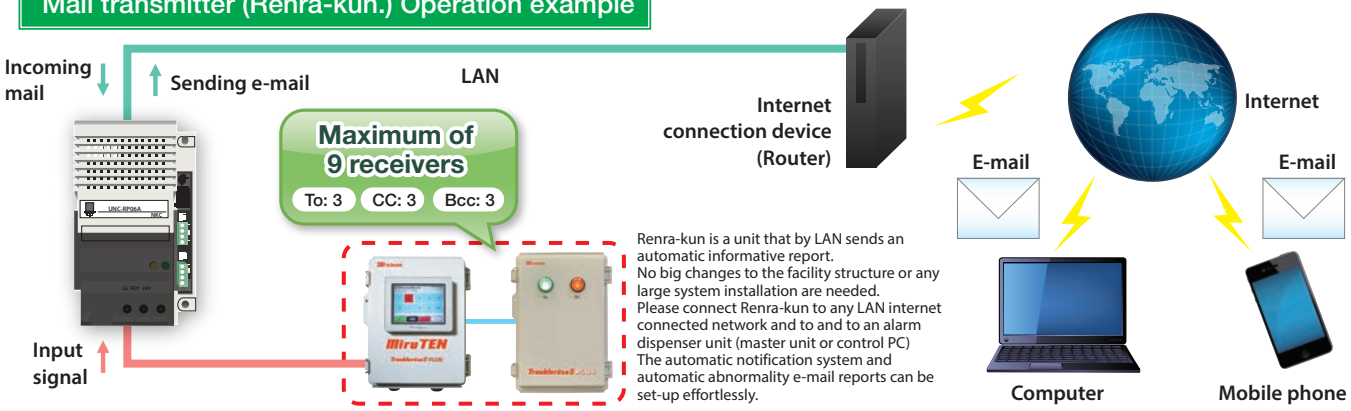
The Hand carry set is useful to take with you and do demonstrations on the spot!

You can combine any type of filter to adapt the Troubleresa to your specifications or environment.

When an error occurs, it sends an alarm mail to the person in charge.

Feel relieved even at night or on holidays!

Mail transmitter (Renra-kun.) Operation example



Renra-kun is a unit that by LAN sends an automatic informative report.
No big changes to the facility structure or any large system installation are needed.
Please connect Renra-kun to any LAN internet connected network and to and to an alarm dispenser unit (master unit or control PC)
The automatic notification system and automatic abnormality e-mail reports can be set-up effortlessly.

You will need

- A computer
- LAN cable
- The transmitter (Renra-kun)
- A Router

Setting procedure

1. Download the transmitter application
2. Connect it to a PC with LAN cable
3. Open the transmitter's browser screen and set it up
4. After the set up, wire the inputs / outputs
5. Complete it connecting the transmitter to the network

Abnormal Event.

Can be used as abnormality detector (one single slave unit)

Used for constant monitoring (for 2 or more slave units)

Specification

■Slave unit

		Specifications	Notes
Model		TCM-NF2P	
Features		1. Data can be saved inside the slave unit •If using a single slave unit, the measured values from all the 8 channels can be stored on a CSV file inside the unit. (maximum 480 data unit, data will be stored on intervals of 30 min on a period of 10 days, once de 480 data unit will be reached the units would be replaced from the oldest one) •To extract the data from the slave unit, connect this one to a PC with a LAN cable, using Internet Explorer would allow you to see it. 2. E-mail sending function (optional) You can send an abnormality alarm mail to a total of 9 addresses (To•CC•BCC 3 of each) 3. Blinking red lamp •The red lamp will blink when an anomaly will be detected, making it easier to notice.	
Power supply	Voltage	AC100～240V 50/60Hz	Power supply cable not included
	Allowable voltage range	AC85～265V 47～63Hz	
	Power consumption	MAX 7W (36W)	The power consumption whit sensors included is indicated between brackets ()
Input	Measurement points	8ch (6 switched 0-5V/4-20mA channels, 2 temperature channels)	
	Measurement range (accuracy)	0-5V: 2%FS (output ±0.1V)	
		4-20mA: 1.5%FS (output ±0.24mA)	
		K thermocouple 0～300˚C: 1.5%FS	The standard temperature sensor limit is set on a MAX of 150˚C
	Resolution	0-5V: 0.001V	
		4-20mA: 0.004mA	
		Thermocouple: 0.1˚C	
	Sensor power supply	DC24V/MAX0.9A	The total value is the value of the 6 channels
	Terminal shape	Terminal block	
Output points	External output contacts	2 no voltage form A connectors	
	Contact capacity	AC250V/DC30V 5A	
	Terminal shape	Terminal block	
Indicator light	Monitoring light	Green colour (lighted up while monitoring, in any other case will flash)	
	Abnormality detection light	Red colour	
Communication	Protocol	Modbus/TCP	
	Terminal	Ethernet (RJ-45)	
Environmental specification	Temperature	-10～+50˚C	
	Humidity	10～90%RH (without condensation)	
	Ubication	Indoors	Special outdoor measures available
	Altitude	Less than 2000m	
Casing	Material	ABS (Acrylonitrile butadine styrene)	
	Dimension	D280×W190×H100mm (excluding protuberances)	
	Weight	1.5kg	

*Please contact us for outdoors specifications

Miru Ten

Monitoring Software (coming soon)

■Master unit (Miru Ten)

		Specifications	Notes
Model		FCM-BM2PT	
Features		•Up to 10 slave units can be connected. •The data saving intervals can be set to 1, 5, 10, 30 or 60 min. •8 GB USB memory included (can store data for more than 10 years)	
Power supply	Voltage	AC100～240V 50/60Hz	
	Allowable voltage range	AC85～265V 50/60Hz	
	Power consumption	MAX 10W	In case of communicating 10 slaves units.
Communication	Protocol	Modbus/TCP	
	Terminal	Ethernet (RJ-45)	
Environmental specification	Temperature	0～50˚C	
	Humidity	10～85%RH (without condensation)	
	Location	Indoors	
Casing	Material	ABS (Acrylonitrile butadine styrene)	
	Dimension	D160×W220×H130mm (excluding protuberances)	
	Weight	1.4kg	
Output points		2 no voltage connectors	

■Master unit monitoring software (PC use)

Model		FCM－BM2P (monitoring software)
Features		•Up to 100 slave units can be connected. •A PC with Windows OS is necessary (supports Windows 7, 8 and 10). •The data saving intervals can be set to 1, 5, 10, 30 or 60 min. •9 data display units, another additional 5 units can be set up freely.
Operating specifications	PC	Normal PC working on Windows OS. (not included)
	OS	Windows*7 32bit/64bit (Enterprise, Ultimate, Professional, Home Premium, Starter) Windows*8 32bit/64bit (core, Pro, Enterprise) Windows*10 32bit/64bit
	CPU	1.5GHz or more (1.5GHz min)
	Free space on HDD	5GB (recommended)
	Resolution	1280×768 or more (recommended)
	Others	Microsoft.NET Framework4 Communication foundation: Ethernet port (LAN port) CD-ROM Reader (necessary for installation)

*The PC is not included and must be purchased by the customer

Optional parts	Vibration sensor (VS-2502-□□、VS-V103-01) Temperature sensor (YYU4KM04B20A) Current sensor (CTT-□□-CLS-CV-○○) Mail transmitter (UNC-RP06A)	Slave unit outdoors model Slave unit wall mounting parts Magnet (to fix the vibration sensor)	(TCM-NF2S) (BFL-2G) (MG-01)

Components to prepare by the customer	•LAN Cable (category 5e or more) •Generic USB Hub •Wireless LAN •Sensors •Wiring installation •Power cord

This product detects abnormalities caused on rotating machines, it doesn't count with countermeasures or fixing function. Furthermore abnormalities that can not be detected with this product may occur.