WTXG
WTX
WATER TEMP

PiVOT
STEPPING GAUGE

WATER TEMP-X
SG-WTX／WTXG
USER'S GUIDE (No.003)

Thank you for purchasing our PIVOT STEPPING GAUGE SERIES.
Please read these instructions carefully before installing or using this meter.

SG-WTX/WTXG Features

● Microcomputer controlled stepping motor drive provides highly precise display of water temperature. ●Includes highly precise water temperature sensor.
● One-touch hold peak function to view highest temperature.
● Includes U-shaped brace and easy-to-install stand allows freedom in installation.
● White LED Illumination(WTX). Blue LED Permeating Illumination(WTXG).

【Opening Demo】
By turning the key switch on, the needle will move in a fixed pattern. (searching for the origin)

CONTENTS

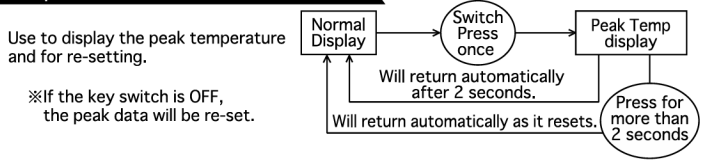| Meter	Adjustable Stand	U-shaped Brace	Water Temp. Sensor	5-pin Coupler Cable	3-pin Coupler Cable	Wire Connectors ×4
Allen Wrench	Double-Sided Tapes ×3	Hex Bolt	Hex Nut	Spring Washer	Knurled Nut	User's Guide

PART NAMES AND OPERATIONS

<FRONT>
【SG-WTX】

METER INDICATOR
● Display Range 20～120℃
● Lamp
・WTX = White LED Illumination
・WTXG = Blue LED Permeating Illumination
・Linkage to Small Lamps
・Brightness Control Function

【SG-WTXG】

Peak Switch

The operation method of a PEAK SWITCH

Use to display the peak temperature and for re-setting.

※If the key switch is OFF, the peak data will be re-set.

Normal Display → Switch Press once → Peak Temp display
Will return automatically after 2 seconds.
Will return automatically as it resets.
Press for more than 2 seconds

<REAR> WTX/WTXG common

3-pin Coupler
Connect the 3-pin coupler cable for connecting to the water temperature sensor.

Bolt Hole
When using the U-shaped brace, use this hole to fasten screw.

5-pin Coupler
Connect to 5-pin coupler cable.

Meter Brightness Setting Adjustor

Set meter brightness with the small lamps ON.

Bright ← 16 steps → Dark

The adjustor goes around with no notches.

<If you wish to adjust several meters to match>
① Decide the brightness you wish to make the standard, check how many steps away that is from the brightest (or darkest) setting.
② Adjust other meters to match the number of steps away from brightest (or darkest).

⚠ Adjust by turning with a narrowly pointed ⊕ screwdriver, being careful not to push too hard.

Troubleshooting
※Please make the following checks before seeking repair.

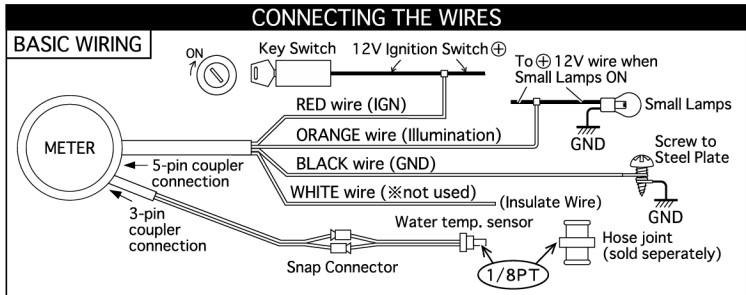| Trouble	Possible Causes	Possible Solutions
The opening demo does not work with key switched ON.	●Contact failure of RED wire(IG⊕12V). ●Contact failure of BLACK wire (GND).	Check the wire connections or conditions.
The water temp display does not change.	●Contact failure of 2-pin coupler cable from water temperature sensor. ●Contact failure of 3-pin coupler.	Check the wire connections or conditions.
Even with the small lamps ON, the meter light does not come on.	Contact failure of ORANGE wire (Small lamps ON⊕12V).	Check the wire connections or conditions.
	The brightness is set at the darkest setting.	Turn the adjustment switch to the left to adjust the brightness.
The illumination color is slightly different from other meters.	This is due to a variance in the LED and is not a malfunction. Please be aware that we cannot perfectly match the color.	
The needle stops at the key OFF position.	This is a characteristic of the stepping motor and is not a failure or breakdown. If after the opening demo with the key ON, the water temp display reads correctly (under 20℃ the display reads 20℃) the meter is working properly.	

How to use the Wire Connectors
※ If soldering is possible, please do so.

1 Peel off about 10mm of the vinyl cover at connection point.
2 Peel off about 10mm of the vinyl cover at the end of the product's wire.
3 Twist the uncovered wires.
4 Close tightly with wire connector.

※Use a crushing tool to press the wire connector. If you do not have such a tool, use pliers or such to fold and crush the connector together for a secure contact.
※Loose connections can cause wire to come apart, so please make sure the connection is secure.
Be sure to insulate and secure with vinyl electrical tape.

CONNECTING THE WIRES

BASIC WIRING
Key Switch 12V Ignition Switch⊕
To ⊕12V wire when Small Lamps ON
Small Lamps
RED wire (IGN)
ORANGE wire (Illumination)
GND
Screw to Steel Plate
BLACK wire (GND)
METER
WHITE wire (※not used) (Insulate Wire)
GND
5-pin coupler connection
3-pin coupler connection
Water temp. sensor
Hose joint (sold seperately)
Snap Connector
1/8PT

⚠ INSTALLATION WARNING
1. For safety purposes, when working on your car always disconnect the ⊖ battery terminal (re-connect to check for power).
2. Make sure that all wire and snap connectors are firmly connected and insulated.
3. Be careful when laying wires not to cause any electrical shorts or wire breakage.

CONNECTION PROCEDURE
1. Make sure to properly connect each of the wires from the 5-pin coupler and then connect the 5-pin coupler to the back of the meter.
RED wire(IGN) = Connect to the wiring that carries (⊕ 12V) when key switch is ON.
ORANGE wire(Illumination)= Connect to the wiring that carries (⊕12V) when the small lamps are ON.
BLACK wire(GND)= Connect with the same screw (body earth) in the steel panel that carries earth.
2. Install the water temperature sensor

⚠ Install the water temperature sensor connecting the hose joint (with 1/8 PT hole=sold separately) to the upper hose of the radiator. (If the screw size is different, please use and adaptor to suit size.)

① Cut the upper radiator hose at a suitable spot.
(Water coolant will spill out, so prepare replacement coolant.)
Cut
Upper hose

② Fit the hose band onto the cut hose and securely connect the cut hose to the hose joint with the hose band, so as no leakage will occur.
Hose joint (sold separately)
1/8PT
Hose band
Upper hose

NOTE ABOUT SENSOR ⚠
The white tape around the sensor screw is to prevent leakage; please screw on the adapter as is.

⚠ INSTALLATION WARNING
1. Be sure to securely connect the hose joint so as to prevent any leakage, and periodically check for leakage.
2. Carefully select the angle of the hose joint before you connect the sensor or the wire so as not to cause any sudden or drastic twists or bends.
3. Be careful not to carry out this installation while engine is hot; it may result in burns or injury. Make sure engine has sufficiently cooled down before attempting installation.

3. Use the 3-pin coupler cable to connect the water temperature sensor to the meter.
① Pull the 3-pin coupler cable with the male/female wire connector to the engine room by way of a car harness grommet.
② Make sure to firmly connect the wires coming from the water temperature sensor to the proper wire connectors.

⚠ NOTE Make sure the snap connector is firmly connected. In particular make sure the male side, which is the cover, is firmly inserted and screwed into the female side.

③ Use the 3-pin coupler cable to connect the water temperature sensor to the meter.

⚠ NOTE Connecting the 3-pin coupler from the boost, vacuum, oil pressure, exhaust temperature gauge, or G meter will result in damage or a malfunction.

METER INSTALLATION

A Installation with U-shaped Brace
Fasten from the back of the instrument panel.

1. Fastening the Hexagonal Bolt for Installing the U-shaped Brace
① Insert the six-sided part of the hexagonal bolt into the hole at the back of the case and slide it to the left.
Bolt Hole

⚠ Inside the hole to the left is a bolt lock; position the bolt so as to lock.

② With the bolt locked in place, screw on the hexagonal nut to tighten.
Hexagonal Bolt
Hexagonal Nut

2. Installing the Meter
① Insert the meter into the front side of the panel where you wish to install it.
② On the rear side, slide the U-shaped brace onto the hexagonal bolt and securely fasten with the spring washer and the knurled nut.
U-shaped Brace
Spring Washer
Panel, etc.
Knurled Nut

B Installation with the Adjustable Stand
Fasten to a stable place with the double-sided tape. (On top of the steering column cover or dashboard.)

1. Installing the Adjustable Stand
① Place the stand's holder band around the back of the meter.
Holder Band
NOTE; If you cannot get the band around the meter, loosen the hexagonal bolt and expand the band.
Hexagonal Bolt with Washer
② After getting the band in place, tighten the hexagonal bolt to secure the band.

2. Installing to the Car
① Carefully decide installation place.
② Bend the stand to securely fit the place of installation.
③ Clean the surface; removing all oil or dust.
④ Fasten using the double-sided tape.
Double-sided Tape
Clean to remove oil & dust
⚠ Please be sure about where you wish to install the meter, as it is not advisable to reuse double-sided tape.
⑤ After deciding the position and angle of the meter face, fasten the hexagonal bolts on both sides to secure.
Hexagonal Bolt

NOTE
If after installing the meter, the 3-pin coupler cable is viewable and looks bad.
⇒ Tie the 3-pin coupler cable behind the meter with the zip tie.
zip tie