Multifunctional meter

Please read and understand following notice carefully, and correctly install and operate the product before using.

1 Notice

⚠ WARNING

🚫 DO NOT DISASSEMBLE

WATERPROOF

1. Please use the product accordance with the user manual strictly.
2. Please do not try to disassemble the main unit and its accessories.
3. This meter can not be used underwater or in the heavy rain.
4. Fierce vibration and strong impact may make the product failure.
5. Incorrect installation of battery cover at the back side will make the front panel of main unit fogged, condensed or watered.
6. As this meter has back light, power consumption will be large. When the battery is low, please replace the battery as soon as possible. The battery is CR2450.

2 Product accessories list

Product x 1   User manualx 1   Magic type x 1
Zip tiesx 6   Temperature sensor x 1   Cable component x 1
CR 2450 Battery x 1   Power wire component x 1

3 Dimension

41
79
20.6
21.6
Unit：mm

4 Installation

1. Battery installation

Notice: The meter has data storage function, previous data will be remembered automatically after replacing the battery, initial time value is 12:00.

1 Open the battery cover.   2 Put the battery inside.   3 Close the battery cover.

2. Product installation

1 Stick the loop side of the magic tape on the back of the multifunctional meter.   2 Stick the hook side of the magic tape on the device.

3 Wrap one side of the yellow cable to engine's spark plug wires 5 circles or more, and fixed by zip ties.

Notice: If the pulse/temperature cable was not be fixed firmly, it will affect the accuracy of the test data.

Temperature connection cable
Temperature cable
Red
Black
Yellow
Wrap around to spark plug cable
Connect to measuring point

3. Verify the correctness of the product installation.

Start the engine, RPM speed data is displayed which shows the product is installed correctly.

5 Interface switch

When backlight is light, short press SET to switch 3 interfaces as below pictures:

Temperature interface   RPM interface   TOT interface

6 Interface operation

1. Temperature interface operations

Temperature main interface-----Real time display current temperature

MENU Short press

View overtemperature alert   Set overtemperature alert value

Long press **MENU** 2S

MENU Short press

a) Press **MENU** to increase set value, press **SET** to decrease the set value.
b) Short press to change 1 per time; Long press for 1S to change 3 times per second, and change 10 per time.
c) Setting range：-20-℃-+300℃ (-4℉-+572℉) Long press **MENU** + **SET** for 2S to save and exit setting mode.

View max temperature

28.5 °C `MAX`

Long press **MENU** 2S

-200 °C `MAX`

a)The temperature return to initial -20℃(-4℉) after setting.

MENU Short press

View temperature unit

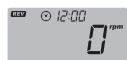**Unit °C**

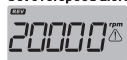Long press **MENU** 2S

Unit °C / **Unit °F**

Set temperature unit
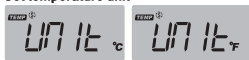
a)There are two optional temperature units℃Cand℉, the default setting is ℃. Switch the temperature by short pressing **MENU** or **SET** .
b)Long press **MENU** + **SET** for 2S to save and exit setting mode.

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2. RPM interface operations
RPM main interface-----Real time display current RPM

0 rpm ⊙ 12:00

MENU Short press

Set overspeed alert value

20000 ⚠

Long press **MENU** 2S

Overspeed alert value flash

20000 rpm ⚠

a)Press **MENU** button to increase set value, press **SET** button to decrease set value. Short press once to change 100; Long p for 1S to change 3 times per second, a change 1000 per time, default value is 8
b)Setting range is 1000-25000. Long pr **MENU** + **SET** to save and exit setting mode.

MENU Short press

View max RPM

6000 rpm `MAX`

Long press **MENU** 2S

Clear the max RPM

00000 rpm `MAX`

a)The max RPM return to initial 0.

ress
nd
000.
ess

MENU Short press

View stroke

1P1r Stro
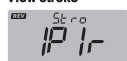
Long press **MENU** 2S

Stroke value flash

1P1r Stro
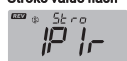
a)Switch stroke type by short pressing **MENU** or **SET** .
b)Long press **MENU** + **SET** to save and exit setting mode.
※Suitable for 9 types: 1P1R\2P1R\3P1R\ 4P1R\6P1R\8P1R\3P2R\5P2R\1P2R.

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3. Clock setting

Any main interface

90.0 °C ⊙ 12:00

Long press **MENU** 2S

Clock value flash

⊙ 12:00
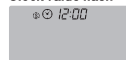
a)Press **MENU** decrease set value, press **SET** to increase set value. Short press once to change 1; Long press for 1S to change 3 per second, and change 5 per time.
b)Switch the hour setting interface and minute setting interface by short pressing **MENU** + **SET** . Default is 12:00.

Notice: After connected the meter to external power, backlight will display as follows. When engine is working, backlight will be on automatically; when engine stops working for 10S, backlight will be off.

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7 Relationship between stroke and cylinder in setting RPM mode

RPM Type	Ignition Method	Stroke and Cylinder	RPM Range
1P1R	1 spark per revolution	4 stroke 2 cylinder	0--25000
		2 stroke 1 cylinder	0--25000
2P1R	2 spark per revolution	4 stroke 4 cylinder	0--15000
		2 stroke 2 cylinder	0--15000
3P1R	3 spark per revolution	4 stroke 6 cylinder	0--10000
		2 stroke 3 cylinder	0--10000
4P1R	4 spark per revolution	4 stroke 8 cylinder	0--7500
6P1R	6 spark per revolution	4 stroke 12 cylinder	0--5000
8P1R	8 spark per revolution	4 stroke 16 cylinder	0--3750
3P2R	3 spark 2 revolution	4 stroke 3 cylinder	0--20000
5P2R	5 spark 2 revolution	4 stroke 5 cylinder	0--12000
1P2R	1 spark 2 revolution	4 stroke 1 cylinder	0--25000

Notice: A part of 4 stroke 1 cylinder engine is special. When 2P1R's data is incorrectly, please try to set 1P1R.

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8 Specifications & Parameter

Product name	Multifunctional meter
Temperature measuring range	-20℃-+300℃ （-4℉-+572℉)
Temperature measuring accuracy	±1%
Total hour range	0-99999H
Housing material	ABS
Waterproof level	IP65
Display mode	LCD
Display windows size(visible)	52×24mm
Product weight	216g
Dimension	79×41×21.6mm
Battery type	CR2450 Replaceable
External power voltage	12/24V

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9 Trouble shooting

Problems	Possible reasons	Solutions
Display nothing	1.Battery empty. 2.Battery installed backwards.	1.Replace the battery. 2.Check the battery installation is correct.
Time no change or not accurate after 6 minutes or RPM is not accurate	1.Cable loose or wrapped less cycles. 2.Cable may damaged. 3.Stroke type setting is incorrect.	1.Tighten or wrap more cycles. 2.Repair or change the cable. 3.Set the correct stroke.
Display no change	The meter is crash.	1.Re-install the battery.
LCD display ERR	1.Sensor is not connected. 2.Sensor is damaged. 3.Sensor type setting is incorrect.	1.Re-install the sensor. 2.Replace a new sensor. 3.Reset sensor type.
Unclear display on LCD or color changed	1.Wrong angle of the product. 2.Low battery.	1.Adjust the angle. 2.Replace the battery.