

KMG-20T Instruction Manual



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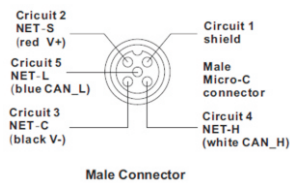
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III、Appearance Parameter

- 1. Dimension : 2.0 inch
- 2. Resolution : 320*320 pixels
- 3. Mounting Dimension : φ52.0 mm
- 4. Appearance Dimension : φ78.9 mm

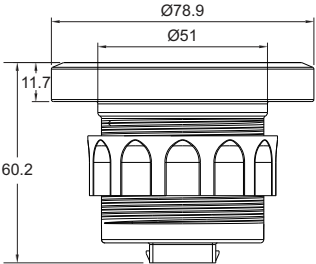
V、PINS Definition

- 1. Shield
- 2. Red – Battery(+)
- 3. Black – Battery(-)
- 4. White– CAN_H
- 5. Blue – CAN_L



IV、Electronic Parameter

- 1. Working voltage : 9 – 32 VDC
- 2. Working current : ≤100mA (12V)
- 3. Working temp. : -20~+70 °C(-4°F~158°F)
- 4. Storage temp. : -30~+80 °C(-22°F~176°F)

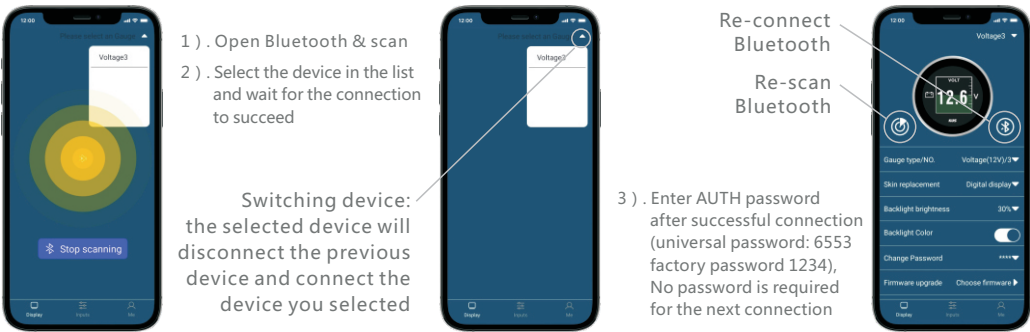


VI、Setting method of KMG-20T instrument:

Please use KUS instrument APP (Android, ios), scan and connect with KMG-20T instrument Bluetooth for operation setting.

Operation method as following (e.g.: voltmeter 12V)

- 1、Open APP, click scan KMG-20T instrument Bluetooth and connect.



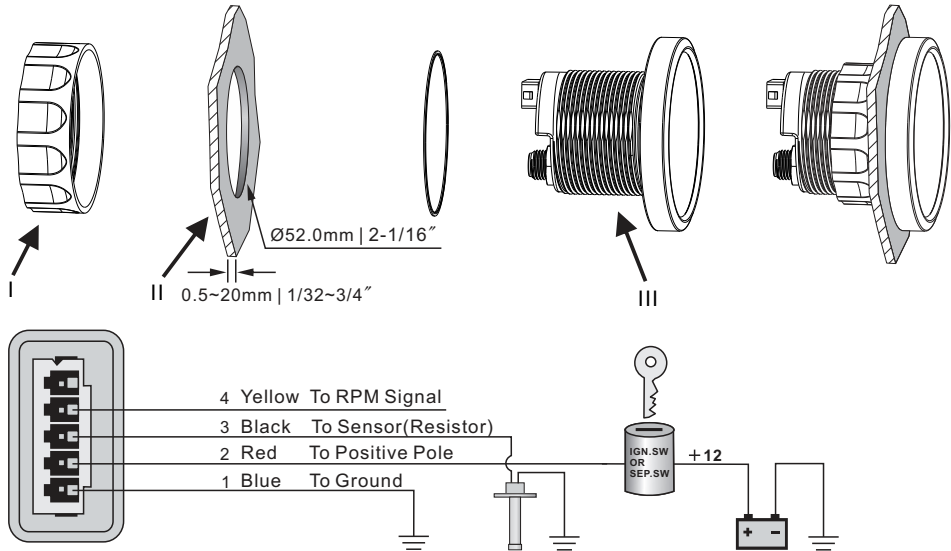
KMG-20T is a multi-functional round LCD instrument, which can switch between black and white style, Chinese and English style. Support any choice of 10 instrument, including voltmeter, oil level meter, water level meter, water temperature meter, oil temperature meter, oil pressure meter, sewage meter, balance meter, Tachometer and hour meter. The interface, display content and functional parameters of the meter can be set accordingly through the user's mobile APP, which supports the input of NMEA2000 signal, J1939 signal and analog signal.

I、Gauge and Accessories in Package:

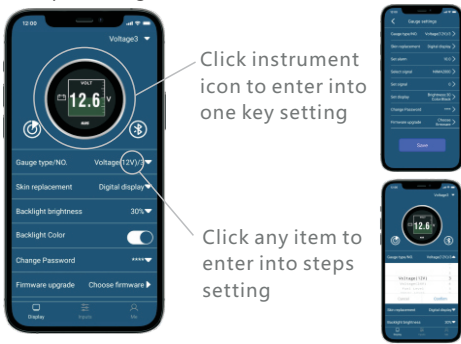
KMG-20T, CAN-BUS cable, Analog signal wiring harness and instruction: 1 each.

II、Installation Steps

- 1. Cut an 52.0mm (2 1/16") hole in the panel (II) allow a clearance of 55mm (2 3/16") . behind the panel.
- 2. Remove fastening ring (I), insert gauge from front. Tighten gauge (III) using fastening ring (I).
- 3. Connect cable into connector hole back of instrument, the other end connects with NMEA2000 network or use Analog signal wiring harness to connect with sensor.



- 2. Two kinds of setting: one key setting and steps setting



- 5). Alarm value range: voltage 12V(8~16.0V), voltage 24V(18~32.0V),oil level (1~100%), water level (1 ~ 100%), water temperature meter (40 ~ 120 °C), water temperature meter (105 ~ 250 °F), oil temperature (50 ~ 120 °C), hydraulic oil temperature (0 ~ 5.0 Bar), oil pressure (0~10.0Bar), sewage (1~100%), balance meter (none), 3-in-1 meter including tachometer (none)
- 6). Input signal: NIMA2000, J1939, analog signal.

- 3. Steps of step setting: click "OK" to set the setting successfully

- 1). At present, there are 11 types of meters: voltmeter (12V), voltmeter (24V), oil level meter, water level meter, water temperature meter (°C), water temperature meter (°F), oil temperature meter, oil pressure meter (5Bar), oil pressure meter (10Bar), sewage meter, balance meter, 3-in-1 meter (oil level, voltage, tachometer three meters).Number range: 0~7.
- 2). Currently, there are only two kinds of skin support: pointer type and digital display type.
- 3). Backlight brightness: 10~100% (scale value 10%)
- 4). Password modification: factory password (1234) universal password (6553)

- 7). Range of signal value:
NIMA2000: 0~15
J1939: No setup required
Analog signal:
Voltage 12V(none)
Voltage 24V(none)
Oil level (0~190 ohm, 240~33 ohm, customization)
Water level (0~190 ohm, 240~33 ohm, customization)
Water temperature meter (301~23 ohm, customization)
Oil temperature (362~19 ohm, customization)
Oil pressure (10~185 ohm, customization)
Sewage (0~190 ohm, 240~33 ohm, customization)
Balance meter (0~190 ohm, 240~33 ohm, customization),
Among them, it is customized (divided into 5 gear values, each gear value is 0~999), and the speed ratio of tachometer is set (0.1~24.0).

4. Language Settings

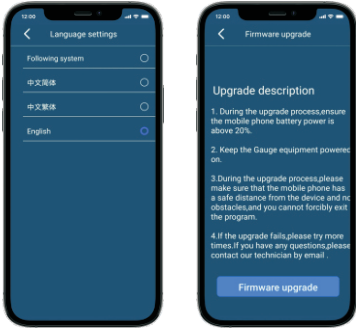
Current APP language support:

Android: Follow system/Simplified Chinese/Traditional Chinese/English

IOS: Simplified Chinese/Traditional Chinese/English

5. Firmware upgrade

Firmware upgrade refers to the process in which APP transmits the device's program to the device through Bluetooth to upgrade and update itself due to changes in demand or other reasons of the application of the instrument device.



Upgrade precautions:

- 1). During the upgrade process, ensure that phone battery is above 20%.
- 2). Keep the instrument energized.
- 3). During the upgrade process, ensure the safe distance between the phone and the device and there is no obstacle, cannot voluntarily force to exit.
- 4). Try more times if upgrade failure . If you do not understand the matter, please contact the technician.

Setting	Display Setting	Gauge Select	Fuel Level
			Water Level
			Holding Tank
			Water Temp. °C
			Water Temp. °F
			Oil Temp.
			Oil Press.(5Bar)
			Oil Press.(10Bar)
			Voltage(12V)
			Voltage(24V)
	Style Setting	Brightness	Trim
			Multifunction
			Backlight Color : Black/White
			Skin Replacement : Pointer/Digital
			0~100%
	Language		中文/English
			Alarm Setting
			Input Select
	Input Setting		NMEA2000/J1939/ANALOG
			Instance Setting
			Resistance/Ratio Setting

VII、KMG-20T Operation mode : touch version

- 1. Long press the fingerprint icon for 2s until the interface flashes, then release your finger to enter the menu setting interface.
- 2. Menu Diagram Setting

VIII、NMEA2000 & J1939 Parameter Group Number (PGN)

NMEA2000 PGN

PGN	PGN Name	DD#	Field Name
127488	Engine Parameters	129	Engine speed
		138	Engine tilt/trim
		049	Engine oil pressure
127489	Engine Parameters	043	Engine temp.
		130	Engine oil temp.
		132	Total engine hours
127505	Fluid Level	208/215	Fluid Type/Fluid Level (Fuel/Fresh Water/Black Water)
127508	Battery Status	136	Battery Voltage

SAE-J1939

PGN	PGN Name	SPN	Parameter Name
61444	Electronic Engine Controller1	190	Engine Speed
65253	Engine Hours , Revolutions	247	Engine Total Hours of Operation
65262	Engine Temperature 1	110	Engine Coolant Temperature
		175	Engine Oil Temperature
65263	Engine Fluid Level/Pressure 1	100	Engine Oil Pressure
		111	Engine Coolant Level
65271	Vehicle Electrical Power 1	158	Keyswitch Battery Potential
65276	Dash Display	96	Fuel Level

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KMG-20T 说明书



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三、外形尺寸

- 显示区域：2.0英寸
- 分辨率：320*320像素
- 安装孔径：φ52.0 mm
- 外观尺寸：φ78.9 mm

四、电气参数

- 工作电压：9 – 32 VDC
- 工作电流：≤100mA (12V)
- 工作温度：-20~+70 °C(-4°F~158°F)
- 存储温度：-30~+80 °C(-22°F~176°F)

五、引脚定义

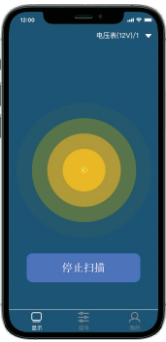
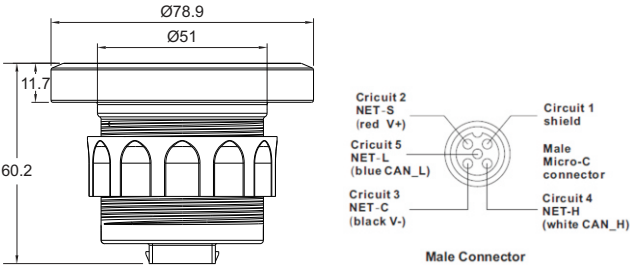
- 屏蔽线
- 红色——电源正(+)
- 黑色——电源负y(-)
- 白色——CAN_H – CAN_H
- 蓝色——CAN_L – CAN_L

六、KMG-20T仪表设置方式

请使用KUS仪表app (Android、ios) 扫描并连接 KMG-20T仪表设备蓝牙进行操作设置。

操作流程如下步骤（示例：电压表12V）

- 1、打开app，点击扫描KMG-20T仪表的蓝牙并进行连接。



1) 打开蓝牙并扫描



2) 选择设备列表中的设备并等待连接成功

切换设备：
当选中设备会
断开上一个设备，
连接你选中的设备。



3) 连接成功后输入验证密码
(万能密码：6553 出厂密码1234) ，
下次连接无需输入密码

5、固件升级

固件升级是指仪表设备的应用程序因有需求变更或者其他原因需要升级更新，app将设备的程序通过蓝牙传输给设备自行升级更新的过程。

升级注意事项：

- 1)、升级过程中，保证手机电量20%以上。
- 2)、保持仪表设备通电。
- 3)、升级过程中，确保手机跟设备安全距离且无障碍物，不能自行强制退出。
- 4)、升级失败多次尝试几次。如有不明白事项，请联系技术人员。



七、KMG-20T触屏操作设置

- 1、长按指纹位置2秒，直到界面出现黑白闪烁，松开手指进入菜单设置界面。

2、菜单设置框图

* 序列号设置：当选择NMEA2000信号时，序列号即为设备的Instance Number值。

设置	显示设置	仪表选择	油位表
			水位表
			污水表
			水温表 (摄氏度)
			水温表 (华氏度)
			油位表
			油压表 (5Bar)
			油压表 (10Bar)
			电压表 (12V)
			电压表 (24V)
	风格设置	背光调节	平衡表
			多功能
			背景颜色：黑色/白色
			指示类型：数显式/指示式
			0~100%
	语言设置	报警设置	中文/English
			输入选择
			NMEA2000/J1939/模拟信号
	输入设置		*序列号设置
			阻值设置/速比设置

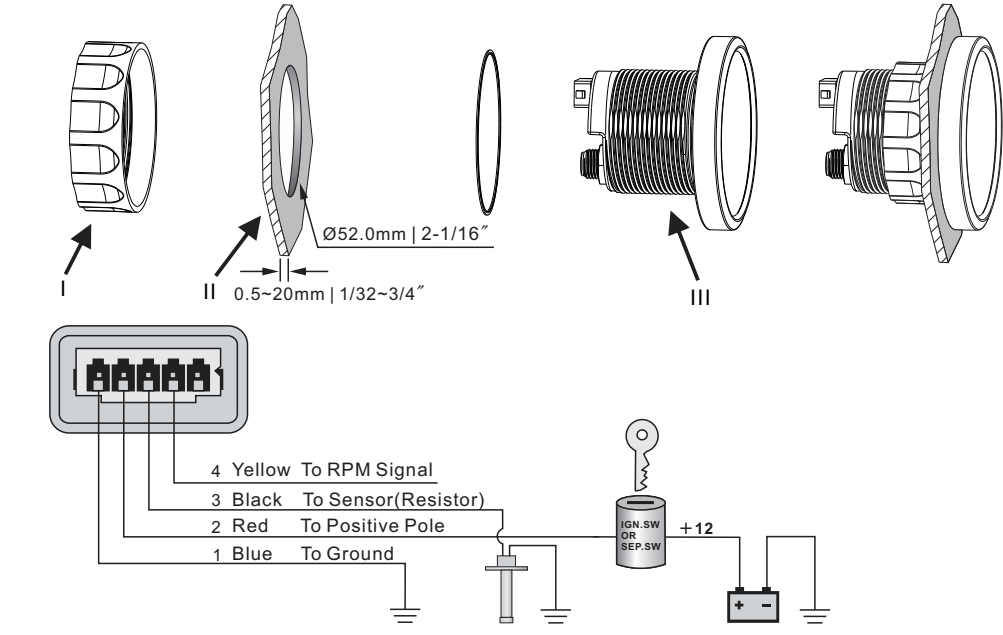
KMG-20T是一款多功能的圆形液晶显示仪表，支持黑白两种风格切换，中英文切换。支持十款仪表任意选择，包括电压表、油位表、水位表、水温表、油温表、油压表、污水表、平衡表、转速表、小时计。仪表界面、显示内容和功能参数可通过用户手机APP进行相应设置，支持NMEA2000信号、J1939信号、模拟信号输入。

一、包装内含物:

KMG-20T、CAN-BUS线缆、模拟信号线束、说明书各一件。

二、安装说明

1. 在仪表板(II)上开一个直径为Φ52mm (2 1/16") 的孔，并确保仪表板后面至少要有55mm (2 3/16") 的空间来放置表。
2. 去掉固定圈(I)，从前面放入仪表，调整好位置后用固定圈(II)锁紧仪表 (III)
3. 将线缆连接到仪表背后的连接器孔，另一端连接到NMEA2000网络或者使用模拟信号线束连接传感器。



2、设置方式分为两种：一键设置和分步设置



点击仪表图片
进入一键设置



点击任意一项
进行分步设置

4、语言设置

目前app语言支持

Android：跟随系统/中文简体/繁体/英文

Ios：中文简体/繁体/英文



3、分步设置步骤：该设置点击确认即可设置成功

- 1)、目前仪表类型11种，分别为：电压表(12V)、电压表(24V)、油位表、水位表、水温表(°C)、水温表(°F)、油温表、油压表(5Bar)、油压表(10Bar)、污水表、平衡表、三合一表 (油位、电压、转速三表组成)。编号范围：0~7。
- 2)、目前皮肤只支持两种：指针式和数显式。
- 3)、背光亮度：10~100%(刻度值10%)
- 4)、密码修改：出厂密码 (1234)万能密码 (6553)
- 5)、报警值可设置范围：
电压12V(8~16.0V)、电压24V(18~32.0V)、
油位(1~100%)、水位(1~100%)、水温表(40~120°C)、
水温表(105~250°F)、油温(50~120°C)、油压(0~5.0Bar)、
油压(0~10.0Bar)、污水(1~100%)、平衡表(无)，
三合一表其中转速表(无)
- 6)、输入信号：NMEA2000、J1939、模拟信号

- 7)、信号值范围:
NMEA2000：0~15
J1939：不需设置

模拟信号：
电压12V(无)
电压24V(无)
油位(0~190 ohm、240~33 ohm、自定义)
水位(0~190 ohm、240~33 ohm、自定义)
水温表(301~23 ohm、自定义)
油温(362~19 ohm、自定义)
油压(10~185 ohm、自定义)
污水(0~190ohm、240~33ohm、自定义)
平衡表(0~190ohm、240~33ohm、自定义)
其中自定义(分五个档位值，每个档位值0~999)，转速表速比设置(0.1~24.0)。

八、NMEA2000 & J1939 Parameter Group Number (PGN)

NMEA2000 PGN

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