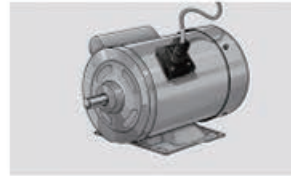


Model **MG** series

Magnet Probes



Surface temperature measurement of motor
发动机异常发热检测

Model MG series probes can be attached to the object to be measured with an internal magnet.

MG系列头部内藏磁铁，可固定于设备·金属模具等表面进行表面温度测量。既方便测量，同时也可以减少姿势误差。

Typical probes of MG series 典型产品

Type K Model **MG-11K-TS1-ANP**
Type E Model **MG-11E-TS1-ANP**



Temp. range	Tolerance	Response time	Durability
-50~250°C	±2.5°C (at 100°C surface)	2 s	A

Type K Model **MG-21K-TS1-ANP**
Type E Model **MG-21E-TS1-ANP**



Temp. range	Tolerance	Response time	Durability
-50~250°C	±2.5°C (at 100°C surface)	2 s	A

Type K Model **MG-64K-GW1-ANP**
Type E Model **MG-64E-GW1-ANP**



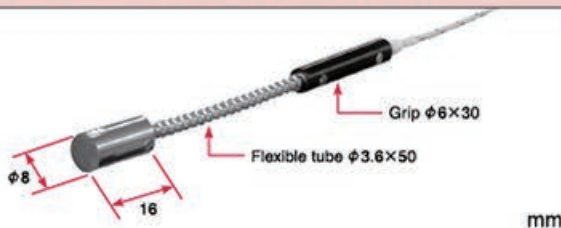
Temp. range	Tolerance	Response time	Durability
-50~400°C	±2.5°C (at 100°C surface)	2 s	A

Type K Model **MG-22K-GW1-ANP**
Type E Model **MG-22E-GW1-ANP**



Temp. range	Tolerance	Response time	Durability
-50~400°C	±2.5°C (at 100°C surface)	2 s	A

Type K Model **MG-34K-GX1-ANP**
Type E Model **MG-34E-GX1-ANP**



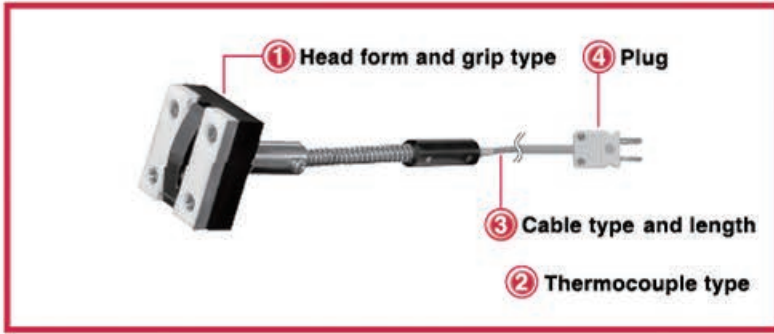
Temp. range	Tolerance	Response time	Durability
-50~400°C	±2.5°C (at 100°C surface)	2 s	A

Type K Model **MG-24K-GW1-ANP**
Type E Model **MG-24E-GW1-ANP**



Temp. range	Tolerance	Response time	Durability
-50~400°C	±2.5°C (at 100°C surface)	2 s	A

How to order of MG series 选型



MG-13K-TS1-ANP



① Head form and grip type 头部形状和握柄	No grip type 11 : □27×32mm -50~250℃ 62 : □27×32mm -50~400℃ 21 : φ14mm -50~250℃ 22 : φ14mm -50~400℃ Grip type 13 : □27×32mm -50~250℃ 64 : □27×32mm -50~400℃ 23 : φ14mm -50~250℃ 24 : φ14mm -50~400℃ 33 : φ8mm -50~250℃ 34 : φ8mm -50~400℃
② Thermocouple type 热电偶种类	K : Chromel-Alumel E : Chromel-Constantan
③ Cable type and length 导线种类和长度 (See page 9)	TS1 : For MG-11, MG-13, MG-21, MG-23 GW1 : For MG-22, MG-24, MG-62, MG-64 TA1 ^{※1} : For MG-33 GX1 ^{※2} : For MG-34 Standard specifications : 1m The cable length can be specified each 0.5m.
④ Plug 插头 (See page 8)	ANP (For AM-9***, HR-1*5*, AP-450, AR-650*) ASP (For HR-1*0*, AP-400) W (Without plug)

- ※1 Fluororesin insulated thermocouple (φ0.9mm)
 The resistance value of the TA cable is 160Ω/m.
 Please be careful about source resistance of the thermometer.
- ※2 Glass fiber insulated thermocouple (0.9×1.3mm)
 The resistance value of the GX cable is 38Ω/m.

① Head form and grip type 头部形状和握柄

No grip type 无握柄

(mm)

MG-11 Temp. range : -50~250℃



MG-62 Temp. range : -50~400℃

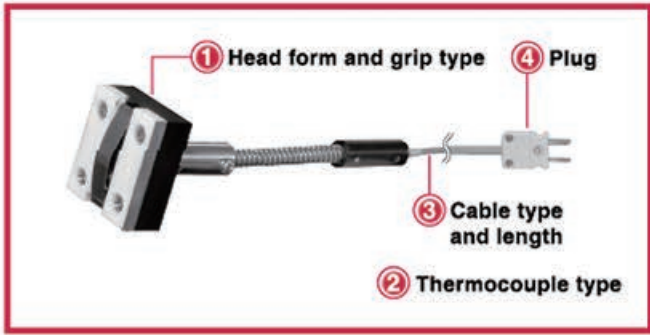


MG-21 Temp. range : -50~250℃



MG-22 Temp. range : -50~400℃





MG-13K-TS1-ANP

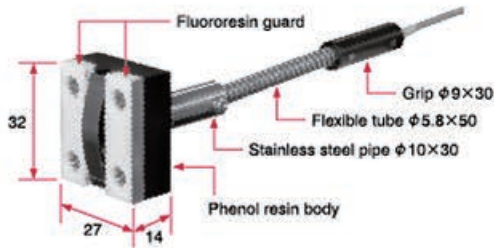


① Head form and grip type 头部形状和握柄

Grip type 有握柄

(mm)

MG-13 Temp. range : -50~250°C



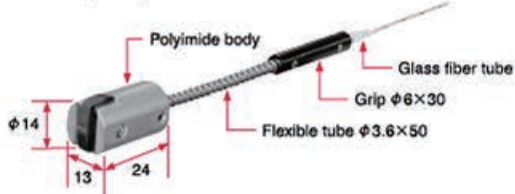
MG-64 Temp. range : -50~400°C



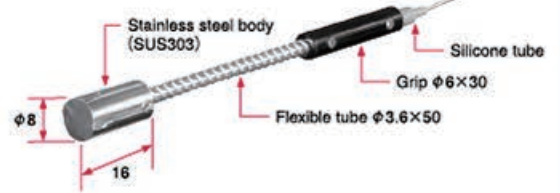
MG-23 Temp. range : -50~250°C



MG-24 Temp. range : -50~400°C



MG-33 Temp. range : -50~250°C



MG-34 Temp. range : -50~400°C



② Thermocouple type 热电偶种类

※ Select the same type of thermocouple as thermometer.

K Type K	E Type E
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③ Cable type and length 导线种类和长度

Standard	Outer diameter	Heat resistant
TS1 [※] For MG-11, MG-13, MG-21, MG-23	φ2.3mm	240°C
GW1 [※] For MG-22, MG-24, MG-62, MG-64	1.2mm×1.7mm	300°C
TA1 [※] For MG-33	φ0.9mm	200°C
GX1 [※] For MG-34	0.9mm×1.3mm	300°C

※ Standard specifications : 1m
The cable length can be specified each 0.5m.

④ Plug 插头

<p>ANP</p> <p>For AM-9*** HR-1*5* AP-450 AR-650*</p>	
<p>ASP</p> <p>For HR-1*0* AP-400</p>	
<p>W</p> <p>Without plug</p>	

Specifications of MG series 规格

Model number ^{※1}	MG-11 MG-13	MG-21 MG-23	MG-22 MG-24	MG-33	MG-34	MG-62 MG-64
Thermocouple type	Type K or E					
Temp. range ^{※2}	-50~250℃	-50~250℃	-50~400℃	-50~250℃	-50~400℃	-50~400℃
Tolerance ^{※3}	-50℃ ≤ t ≤ 100℃	±2.5℃	±2.5℃	±2.5℃	±2.5℃	±2.5℃
	100℃ < t ≤ 200℃	±3.1℃	±3.1℃	±3.1℃	±3.1℃	±3.1℃
	200℃ < t ≤ 300℃	±4.0℃ (~250℃)	±4.0℃ (~250℃)	±5.0℃	±4.0℃ (~250℃)	±5.0℃
	300℃ < t ≤ 400℃	—	—	±7.2℃	—	±7.2℃
Response time ^{※4}	2s					
Durability ^{※5}	A (More than 50,000 contacts)					
Magnetic attraction	700g	400g	400g	340g	340g	650g
Guard materials	Fluororesin	—	—	—	—	Glass cloth board with stainless steel cover
Body materials	Phenol resin	Fluororesin	Polyimide	Stainless (SUS303)	Stainless (SUS303)	Sumika super

※1 The model number after thermocouple type is omitted.

※2 The operating temperature limit is determined by the allowable temperature limit of the sensor head contacts the measurement target.

Note that the operating temperature limit is not the same as the allowable temperature limits of the grip, cable, and plug.

※3 Tolerance is available at -50℃ or above within the operating temperature on a stationary flat and smooth metal surface.

※4 The response time is the time required to detect 99% of the true value on a flat and smooth metal surface.

※5 Number of contacts enabling measurement within the tolerance range on a flat and smooth metal surface at a temperature of 300℃ (or at the operating temperature limit if the operating temperature limit is below 300℃)