

IgT-MU



⏻

+1		3

Type: IgT - MU
4-20mA DC
20mA/5V

CE ● Span
● Zero

Messko (MR)

⬆️ Live Zero
Zero ⚠️

⏻	+13	-14	mA
⏻	+15	-16	V
⏻	+17	-18	UH

Messko



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目录

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提示

本说明书中的数据可能会和交货的装置稍有差异。
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HINWEIS

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请保留本说明书以备日后参考

Please keep this manual at hand for future reference!



1 安全:

1.1 安全须知

从事本设备的安装、试运行、运行或维修的人员必须:

- 具有合格的专业资格
- 严格遵守本使用说明书

违章操作或错误使用可能导致:

- 严重的或致命的伤害
- 损坏本设备或用户的其它物品
- 降低本设备的效能

在安全须知上, 本说明书采用如下三种形式强调各种重要事项

1 Safety

1.1 Safety instructions

All personnel involved in installation, commissioning, operation or maintenance of this equipment must:

- be suitably qualified and
- strictly observe these operating

instructions. Improper operation or misuse can lead to

- serious or fatal injury,
- damage to the equipment and other property of the user
- a reduction in the efficiency of the equipment.

Safety instructions in this manual are presented in three different forms to emphasize important information.



警告

这是对生命和健康有一定危险的警示。忽视这种警示会导致严重的或致命的伤害。



WARNING

This information indicates particular danger to life and health. Disregarding such a warning can lead to serious or fatal injury.



注意

这是对本设备或用户其它设备有一定危险的警示。不排除严重的或致命的伤害。



CAUTION

This information indicates particular danger to the equipment or other property of the user. Serious or fatal injury cannot be excluded.



提示

这是对某一事项的重要说明



NOTE

These notes give important information on a certain issue.

1.2 指定用途

IgT-MU测量变换器可将直接电流转换并隔离为载荷独立直接电流及直接电压信号。

调试装置前, 务必仔细查阅铭牌上和操作使用说明书上的操作限定值。

1.3 设备操作的重要提示

用户必须遵守国家的健康及安全规章。

特别要强调的是, 如果工作是在带电的部件(直接接触会触电)上进行, 那么, 只有在这些部件断电后, 或者对它们进行了妥善的保护, 工作人员直接接触不到时, 这些工作才可以进行。

电气安装应遵守相关国家安全规章。为保证无故障运行必须连接地线。

1.2 Specified application

The measuring transducer IgT-MU converts and isolates a direct current into a load-independent direct-current and direct-voltage signal.

It is important to read and observe the limit values for operation indicated on the nameplate and in the operating instructions prior to commissioning the device.

1.3 Important notes on equipment operation

The user is obliged to comply with the national health and safety regulations.

It is especially emphasized that works performed to live, i.e. dangerous-contact components, are permissible only while these components are either de-energized or protected against direct contact.

Electrical installation is subject to the relevant national safety regulations. It is imperative to connect the protective conductor in order to ensure trouble-free operation.

2 产品说明 / Product specification



注意

本装置的安装、电气接线必须由合格的熟练的技术人员按本使用说明书进行。

用户应负责保证本装置仅用于指定的用途。

为安全起见，事先未经MESSKO公司同意，不得在设备的安装或电气接线上擅自进行任何作业。



CAUTION

Installation and electrical connection of the device may only be carried out by qualified, skilled personnel and only in accordance with these operating instructions.

It is the responsibility of the user to make sure that the device is used for the specified application only.

For safety reasons, any unauthorized and improperly executed works, i.e. installation or electrical connection of the equipment, are forbidden without first consulting Messko!



警告

必须严格遵守相关的各种防火规程。



WARNING

All relevant fire protection regulations must be strictly observed.

2 产品说明

测量的变量通过输入抑制电路传输至测量放大器或阻抗变换器。此处获得的DC电压被转换成外输入直流及外输入DC电压。光耦合器形成机械隔离。无载荷和防短路时两个输出均为稳定的。两个输出之间不允许连接。需要电源供电电压。输出信号的初始值可通过图2的调零开关采用。

Zero: z.B. 0-20mA / 0-10V Live

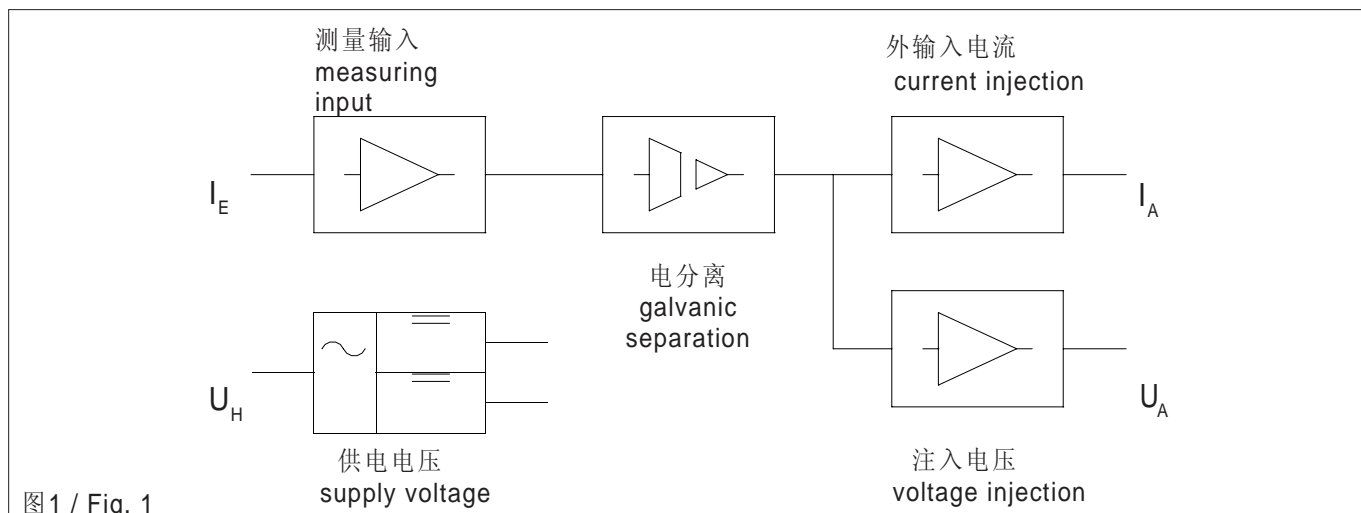
Zero: z.B. 4-20mA / 2-10V

2 Product specification

The measured variables are transmitted via an input suppressor circuit to the measuring amplifier or impedance transformer. The DC-voltage achieved here is converted into injected direct current and injected DC-voltage. Mechanical isolation is achieved by means of an opto-coupler. Both outputs are stable at no load and short-circuit proof. A connection between the two outputs is not admissible. Power supply voltage is required. The initial value of the output signal can be adapted by means of the zero switch shown in Fig. 2

Zero: e.g. 0-20mA / 0-10V Live

Zero: e.g. 4-20mA / 2-10V



3 安装



注意

必须严格遵照本使用说明书要求的使用及安装条件。



CAUTION

The operating and installation conditions demanded by this operating manual must be strictly complied with.



3.1 机械安装

测量变换器应使用背面的搭锁固定装置按DIN EN50022安装到标准35毫米轨道上。测量变换器最适合互相挨着安装。但是，如果环境温度 $>45^{\circ}\text{C}$ 时，建议变换器之间间隔10毫米为佳。安装地点应无震动且环境温度不超过 70°C 。



注意

只有经过相关国家适当的健康及安全规程培训过的合格的、熟练人员才能进行电气连接。

3.2 电气连接

测量变换器用最大 4mm^2 螺旋型接线柱连接。（见附录）连接输入量时应确保注意极性。

注入电流输出：

如果几个带电流输入的测定装置如配电装置、控制装置、测量装置、记录装置等连接在一起时，这些装置必须与测量变换器的输出串连（注意极性）。最大载荷绝不能超过 $1,5\text{kW}$ （包括连接器）。

注入电压输出：

如果几个带电压输入的测定装置如配电装置、控制装置、测量装置、记录装置等连接在一起时，这些装置必须与测量变换器的输出并联（注意极性）。最大载荷绝不能超过 20mA 。

如果两个输出同时使用，电压输出载荷不能超过 1mA 。两个输出之间不允许连接。

装置配有防短路变压器，这样变压器本身就无需安装过电流保护装置了。



注意

由于操作工工作时可能会触到与测量电压相连的元件，所以必须使用合适的电工工具。

3.1 Mechanical installation

The measuring transducer is mounted to a standardized 35mm rail acc. to DIN EN 50022 using the snap-on fixing located on the rear face. The measuring transducers are perfectly suited for installation right next to each other. However, in the presence of ambient temperatures $>45^{\circ}\text{C}$ a distance of 10mm between the devices is recommended. The installation location should be non-vibrating and the ambient temperature must not exceed 70°C .



CAUTION

Electrical connection may only be carried out by qualified, skilled personnel trained in the applicable health & safety regulations of the relevant country.

3.2 Electrical connection

The measuring transducer is connected by screw-type terminals for 4mm^2 max. (see Appendix). Be sure to pay attention to polarity when connecting the input quantities.

Current-injected output:

If a number of evaluation devices such as switchgear, control gear, measuring devices, recording devices etc. with current input are connected, these devices must be series-connected with the output of the measuring transducer (watch out for polarity!). The maximum load of $1,5\text{kW}$ (including connector) must not be exceeded.

Voltage-injected output:

If a number of evaluation devices such as switchgear, control gear, measuring devices, recording devices etc. with voltage input are connected, these devices must be parallel-connected with the output of the measuring transducer (watch out for polarity!). The maximum load of 20mA must not be exceeded.

If both outputs are used simultaneously, the voltage output load must not exceed 1mA . A connection between two outputs is not admissible.

The devices are equipped with short-circuit proof transformers, thus obviating the need for an over-current protective device for the transformer itself.



CAUTION

As it is possible for the operator to touch elements connected to the measuring voltage while performing these works, it is imperative to use suitable electric tools.

4 技术参数 / Technical Data



注意

本说明书中所给的技术规范均为标准产品的。对于特殊设计的产品，请注意订单和铭牌上的说明。



CAUTION

The specifications given in this operating instructions are for standard products. For special designs you have to take care about the notes given in the order and on the nameplate.

4 技术参数

输入	
输入量	按照铭牌上的直流信号
供电电压	见铭牌
输出	
输出量	按铭牌的外输入直流和外输入直流电压。如果两个输出同时使用，电压输出载荷最大不能超过1mA
载荷	见装置上的技术规格
动力系统	
精确度	±1% 至70°C
温度范围	-15...+70°C
载荷影响	无
外磁场影响	无 (至 400A/m) 残余纹波: <15mV _{SS}
反应时间	<300ms
开路电压:	最大 24V
电流限定:	饱和时最大2个载荷
系统防护等级:	外壳IP30, 接线柱 IP20
符合IEC60529	
试验电压:	输入和输出、输入及辅助、输出和辅助之间2,5kV 50-60Hz / 1min.
重量:	约170克

4 Technical Data

Input	
Input quantity:	Direct current signal according to nameplate
Supply voltage:	See nameplate
Output	
Output quantity:	Injected direct current and injected direct voltage according to nameplate. If both outputs are used simultaneously, the voltage output load must not exceed 1mA max.
Load:	See specifications at the device
Dynamic system behaviour	
Accuracy:	±1% up to 70°C
Temperature range:	-15...+70°C
Load influence:	None
External magnetic field influence:	None (up to 400A/m) Residual ripple: <15mV _{SS}
Response time:	<300ms
open circuit voltage:	Max. 24V
Current limitation:	Max. 2-load in case of saturation
System of protection:	Housing IP 30, terminals IP 20 Acc. to IEC 60529
Testing voltage:	2,5kV between input and output, input and aux, output and aux
Weight:	approx. 170g



注意

绝缘试验时，测量输入的接线柱连接必须短路。试验电压（最大500V AC）须逐级提高。



CAUTION

The terminal connections for the measuring input have to be short-circuited during the insulation test. The test voltage (max. 500V AC) has to be increased step by step.

5 附录 / Appendix

5.1 安装图 / Installation diagram

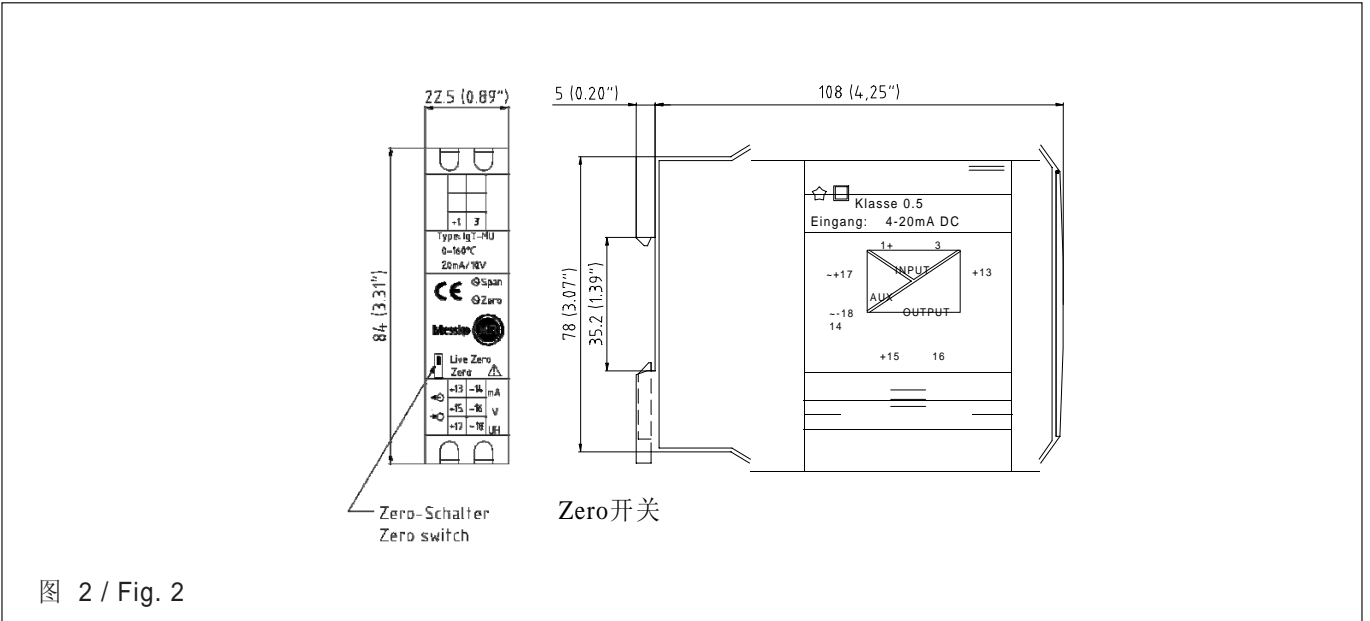


图 2 / Fig. 2

5.2 无源感应器连接图

Connection diagram passive sensor

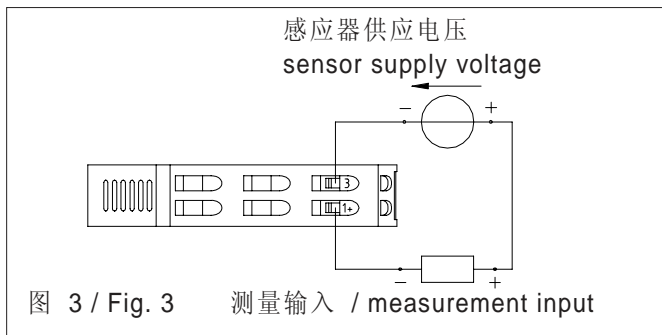


图 3 / Fig. 3 测量输入 / measurement input

5.3 有源感应器连接图

Connection diagram active sensor

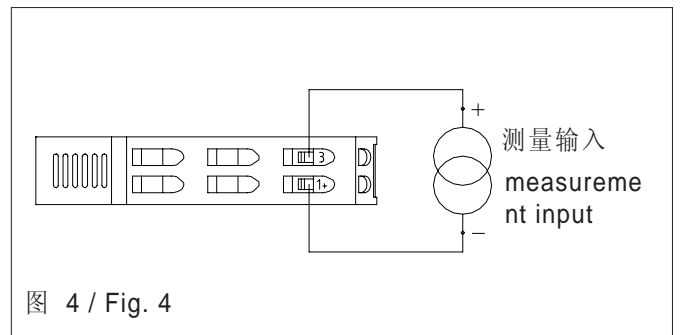


图 4 / Fig. 4

5.4 底侧连接图 / Connection diagram bottom side

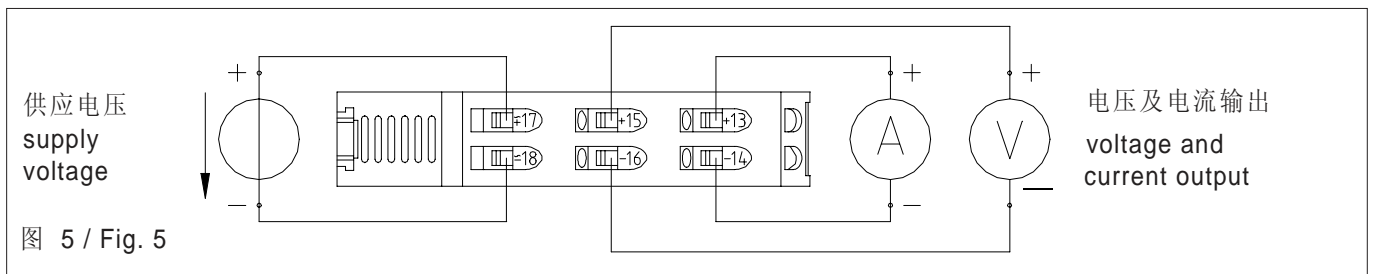


图 5 / Fig. 5



注意

电流、电压输出及供应电压输入的有效值均列在铭牌上。

如果使用无源感应器，必须考虑感应器的规定值及其电流和电压供应。



CAUTION

The validated values for the current and voltage output and the supply voltage input are listed on the nameplate.

If you use a passive sensor, you must consider the specific values of the sensor and its current resp. voltage supply.

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