

Remote Actuator

SGDC10-13·Instruction Manual

Ver. 1.0



History

1st edition

April 20, 2012

Information on use of this manual and product

Please read this manual thoroughly in order for you to make good use of the product.

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Please do not hesitate to contact us for any inquiries regarding the use of product. Contact information is listed below.

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For Your Safety

Before using this product, thoroughly read this manual and all warnings or cautions in the documentation provided in order to prevent any damage or property losses, or personal injury that may cause to user or others. After reading this manual, keep it in a safe place for future reference.

The Symbols Used in This Manual

Symbols below are used to indicate the exact nature of the warning or caution in order to prevent any damage or property losses, or personal injury that may cause to user or others.

 <b style="font-size: 1.2em;">WARNING	 <b style="font-size: 1.2em;">CAUTION
This symbol marks warnings that should be read and used to prevent serious injury or death.	This symbol indicates where caution should be used to avoid possible injury to yourself or others, or damage to property.

Disclaimer of Liability

- ①SIGMA KOKI CO.,LTD. does not accept liability for damages resulting from the use of this product or the inability to use this product.
- ②SIGMA KOKI CO.,LTD. does not accept liability for damages resulting from the use of this product that deviates from that described in the manual.
- ③SIGMA KOKI CO.,LTD. does not accept liability for damages resulting from the use of this product in extraordinary conditions, including fire, earthquakes, and other acts of God, action by any third party, other accidents, and deliberate or accidental misuse.

WARNING

- Do not use this product in the presence of flammable gas, explosives, or corrosive substances, in areas exposed to high levels of moisture or humidity, in poorly ventilated areas, or near flammable materials.
- Do not connect or check the product while the power is on.
- Do not touch the internal parts of the products.
- Should the product overheat, or should you notice an unusual smell, heat, or unusual noises coming from the product, turn off the power immediately.
- Do not touch the product when your hands are wet.
- Do not turn on the power in the event that it has received a strong physical shock as the result of a fall or other accident.
- Do not leave the product in an enclosed area or in areas in which it would be exposed to direct sunlight or vibration.

CAUTION

- Before turning the equipment on (or when beginning operations), be sure that you can turn the power off immediately in the event that an abnormality occur.
- Do not repair, modify, or disassemble the product.
- Do not touch the actuators during operation.
- Do not bend, pull, damage, or modify the power, motor or connecting cables.
- When unplugging the product, pull on the plug rather than the cord.
- Turn off the power before connecting the product to other devices. Connection should be performed following the connection diagram.
- Do not use in outdoors.
- Do not apply excessive current to the actuators, which exceeds the specified rated current.
- Wrap an actuator in antirust paper, or put into a plastic bag and keep it.
- Use dry clothes only for cleaning the equipment.

Chapter 1, Before You Begin

1. Package Contents

Purchasers of this product are advised to find that the package contains the items listed below. Check the package contents using the following checklist. Contact our International Sales Division as soon as possible in the event that you find that any item is missing or damaged.

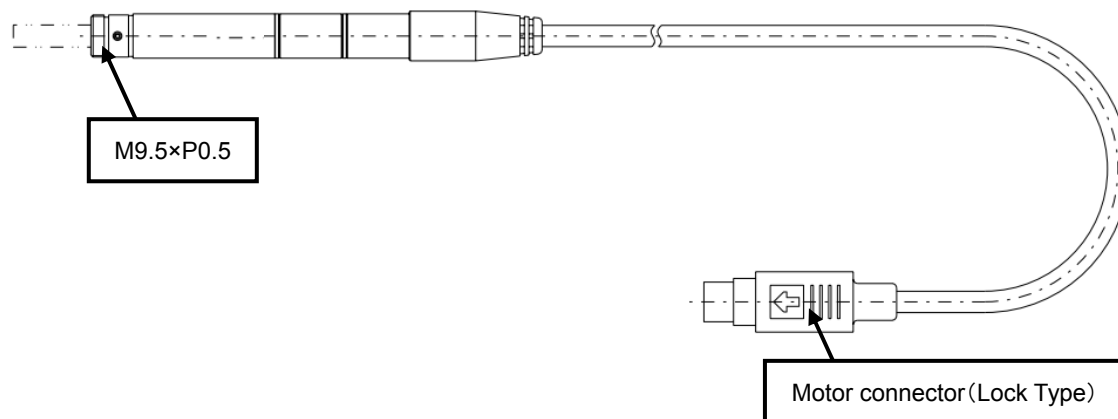
SGDC10-13 Package (Standard Set)

- | | |
|--|---|
| <input type="checkbox"/> SGDC10-13 | 1 |
| <input type="checkbox"/> Nut (M9.5×0.5) | 1 |
| <input type="checkbox"/> Open-end wrench | 1 |
| <input type="checkbox"/> Simple instruction manual | 1 |

SGDC10-13 Options

- | | |
|---|--------------------|
| <input type="checkbox"/> Remote Controller | : SRC-101, SRC-201 |
| <input type="checkbox"/> MDC Cable | : MDC-4- Δ |
| ※ Extension cable for compatible Remote Actuator. | |
| ※ 2/3/5 (cable length in meter) for Δ in Part Number. | |
| ※ Performance of Remote Actuator is not guaranteed, when total extension exceeds 5m by connection of plural cables. | |
| <input type="checkbox"/> Nut Drivers | : MNS-12.5-14.5 |
| ※ Nut driver can be used for TSD Series and TSDS Series. When attaching remote actuator, use ϕ 12.5mm size head. Some stages could not use this nut driver. Please contact our sales department for further information. | |

2. Overview



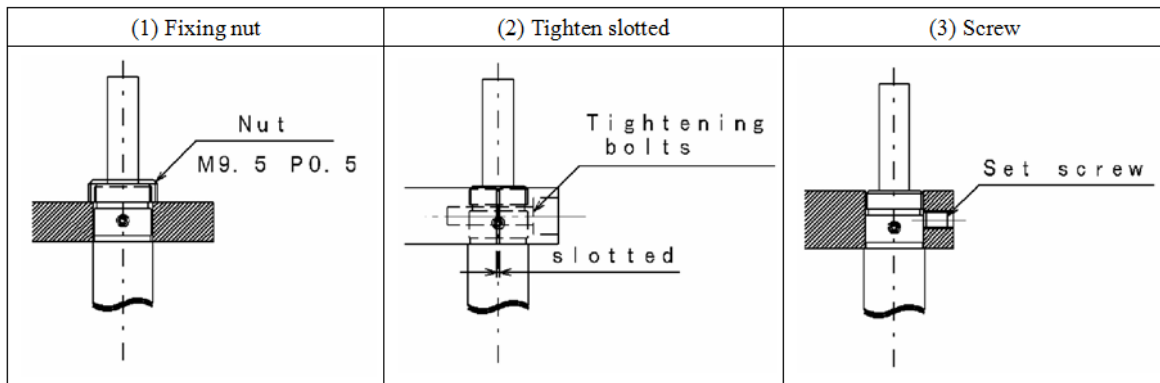
※ Connect with compatible Remote Controller or MDC cable. Make sure not to pull the connector by force as it is lock type. (Equivalent to TCS7147-012177 by Hosiden)

Chapter 2, Mounting methods

1. Method of fixation

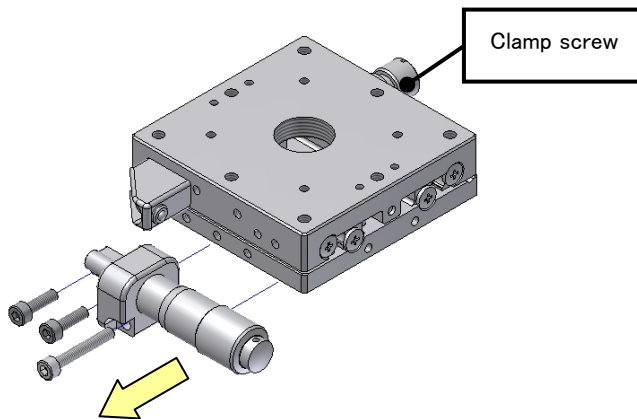
There are three method of fixing the actuator.

When installing the unit, we recommend Fixing nuts with the nut (M9.5×0.5).

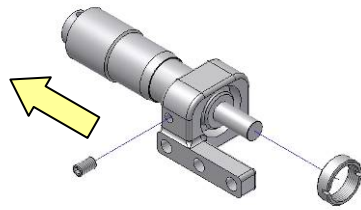


2. Mounting methods (ex. TSD-601S)

- (1) Fixing a stage to tighten the Clamp screw of the stage.
- (2) Use the Allen wrench and remove the bracket from the stage.

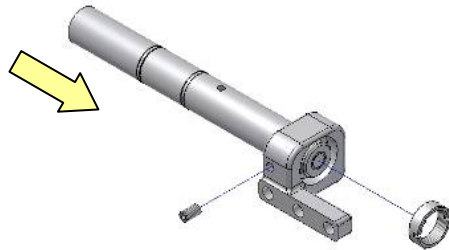


- (3) Set screw is removed with Allen wrench and nut is removed with Nut driver. Micrometer can be removed.

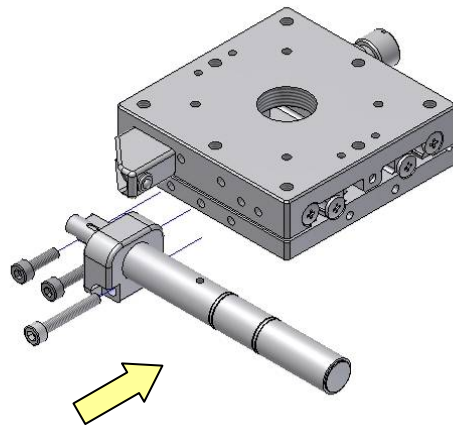


※ ϕ 12.5 Nut Driver

- (4) Remote actuator is inserted and it fixes with Set screw and Nut.
※ Please attach to direction of motor cable or twist of cable carefully.

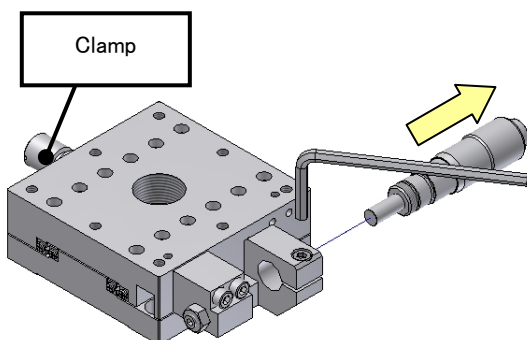


- (5) A remote actuator is attached to a stage.
※ Please attach a stage and an actuator in parallel.

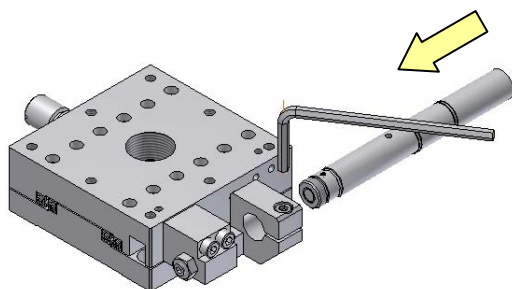


3. Mounting methods (ex. TAM-601S)

- (1) Fixing a stage to tighten the Clamp screw of the stage.
- (2) Use the Allen wrench and remove the micrometer from the stage.



- (3) A remote actuator is fixed with the Allen wrench.
 - ※ Please attach to direction of motor cable or twist of cable carefully.
 - ※ Attached nut is not used.



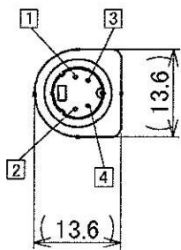
Chapter 3, Specification

1. Specification

(1) General Specification

Travel Range(stroke)	17.5mm
Screw lead	0.5mm
Maximum speed	1.0mm/sec
Axial load capacity	> 29.4N(3.0kgf)
Micrometer Sensitivity	< 0.1 μ m (For reference use)
Backlash	< 0.03mm
Motor	DC motor
Source voltage	DC6V
Operation temperature	5~40°C
Storage temperature	-20~60°C
Ambient humidity	20~80%RH (no condensation)
Outlines	ϕ 10mm \times 102mm(+17.5mm) (Cable part ϕ 11.2mm)
Cable length	0.5m
Weight	0.07kg

2. Connector pin assignment



Number	Name	Number	Name
1	Motor +	3	Motor -
2	Motor +	4	Motor -

Connector used is equivalent to TCS7147-012177 by Hosiden Corporation

3. Outlines

