

Model D41G-A2
High-Coded Safety Door Switch Actuator

EN Quick Installation Manual

Thank you for purchasing Omron products. This product is a high-coded safety door switch actuator. Please read and understand this document before using the products. Keep this document ready to use whenever needed. Only qualified person trained in professional electrical technique should handle the product. Please consult your Omron representative if you have any questions or comments. Make sure that information written in this document are delivered to the final user of the product.

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Original Instructions 5673908-9A

Introduction

The D41G-A2 series is an actuator intended to be used for human's protection. This document contains simple instructions to install the D41G-A2 actuator. Please refer to the Instruction Manual for the D41G.

Destination and Use

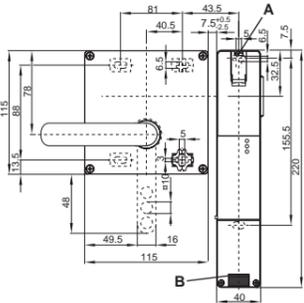
In conjunction with the safety door switch D41G the actuator is suitable for hinged and sliding guard doors. The guard door can be opened and closed from outside by turning the door-handle.

The actuator is pulled into the actuator unit by a spring. The actuator unit with emergency exit is used to open the guard door inside the hazardous area. By actuating the emergency exit, the guard door can be opened from within the hazardous area without the need for unlocking the safety door switch D41G. The guard door cannot be locked from inside. On accessible protective equipment, the lockout tag prevents persons from being inadvertently being trapped. When entering the hazardous area, each member of the operating or service team fixes a lock to the lockout tag to prevent the locking of the guard door and therefore any inadvertent machine start.

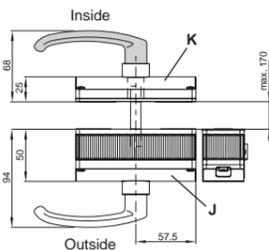
Holding force Fzh
- mounting outside 2,000 N

Dimensions

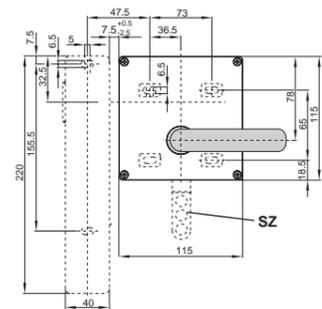
Mounting outside
Safety door switch D41G with actuator unit mounted outside the hazardous area



[Unit: mm]



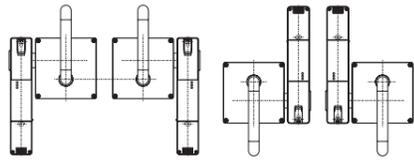
Interior view: Emergency exit E1



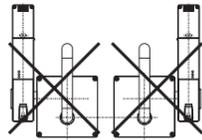
- A: Manual release
- B: Cable entry M20 x 1.5
- J: Actuator unit with door-handle
- K: Emergency exit E1
- SZ: Lockout tag (optional, ordering suffix -E1T)

Mounting

Admissible mounting set-up

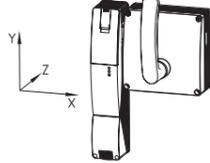


Inadmissible mounting set-up



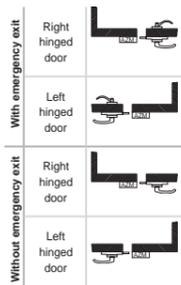
Mounting play between safety door switch and actuator

X = ± 1.5 mm
Y = ± 5.0 mm
Z = ± 1.0 mm



Representation of installation options

Actuators D41G-A2 is available for exterior installation. The safety door switch D41G is placed outside the hazardous area.



The minimum radius of the door is 400 mm.

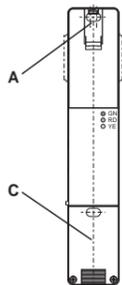
- Assumptions:
40 mm profile
- Distance between safety door switch and actuator unit: 7.5 mm.
 - Use standard hinge for 40 mm profile.

Mounting Procedure

If there are any differences with the versions these are indicated with notes or additional sketches.

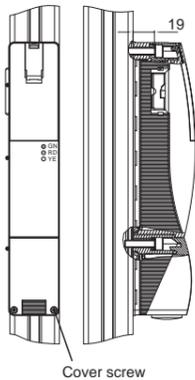
1. To free mounting holes, unscrew the cover C for the wiring compartment and open flap A for the manual release.

- To be observed:**
- For exterior installation: Actuation of manual release (beneath flap A) with triangular key (included in delivery with safety door switch D41G)

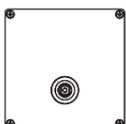


2. Mount enclosure of safety door switch D41G flush with doorpost.

- To be observed:**
- Screws DIN 912-M6 (not included in delivery with safety door switch D41G)
 - Tightening torque for safety door switch: 8 N•m
 - Tightening torque for cover screw: 0.7 to 1 N•m (Torx T10)
 - Wall thickness of the device: 19 mm
 - Washers DIN 125-6.4 (included in delivery with safety door switch D41G)
 - For applications with strong vibrations, please observe a proper securing of the screws.

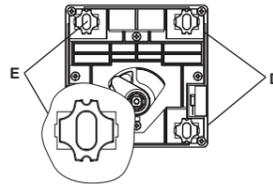


3. Unscrew the cover of the actuator unit



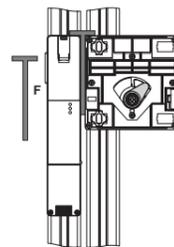
4. Insert sliding blocks (included in delivery with actuator unit D41G-A2) as shown.

Observe the alignment (notch) of the sliding blocks.
E: Left hinged door
D: Right hinged door



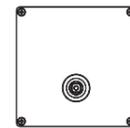
5. Fit the actuator unit to the doorpost by means of the spacer F (7.5 mm)

- To be observed:**
- Actuator unit completely retracted
 - Distance between safety door switch and actuator unit or emergency exit: 7.5 +0.5/-2.5 mm
 - Screws DIN 912-M6 (not included in delivery with safety door switch D41G)
 - Torque : 8 N•m
 - Wall thickness of actuator: 8 mm (see step 11)
 - Washers DIN 125-6.4 (included in delivery with D41G-A2)
 - For applications with strong vibrations, please observe a proper securing of the screws.



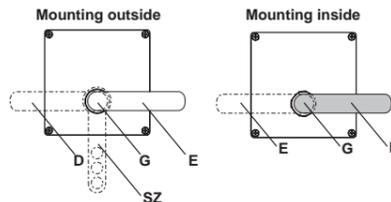
6. Mount the cover on the actuator unit

- To be observed:**
- Actuator unit completely retracted



7. Fit the door-handle

- To be observed:**
- Mount the door handle or emergency exit E1 horizontally
 - D: for left hinged door
 - E: for right hinged door
 - G: Hexagonal screw A/F 3 with screw-lock (included in delivery with D41G-A2)
 - For the model with suffix -E1T, attach the included lockout tag (SZ) at the same position as shown in the figure below, and then attach the resin ring and handle.
 - For outdoor installation without emergency exit continue to step 14

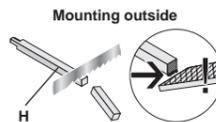


8. If an emergency exit is available, cut square tube H at length. De-burr the cut sides.

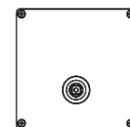
- To be observed:**
- Maximum door leaf thickness S: 170 mm
 - Length of sawn off square rod H

Mounting outside
P1: L = S + 22-2 mm

- Through-hole for square tube H: Ø16 mm

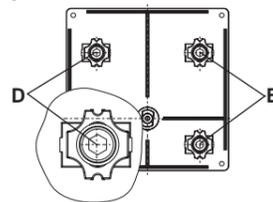


9. Unscrew the cover of the emergency exit E1



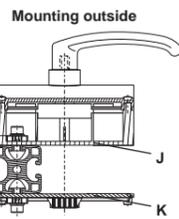
10. Insert sliding blocks as shown (included in delivery with D41G-A2)

- To be observed:**
- Observe the alignment (notch) of the sliding blocks
 - D: for left hinged door
 - E: for right hinged door



11. Fit the bottom plate of the emergency exit E1 to the door

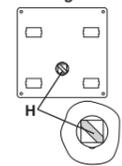
- To be observed:**
- Actuator completely in J (actuator unit or emergency exit unit) retracted
 - Arrange both the emergency exit and the actuator unit parallel
 - Screws DIN 912-M6
 - Tightening torque: 8 N•m
 - Wall thickness of the device: 8 mm
 - Washers Ø 6.4 DIN 125 (included in delivery with D41G-A2)
 - For applications with strong vibrations, please ensure the screws are correctly secured.



12. Insert square rod H in the backside of the actuator

To be observed:
For mounting outside: Insert chamfer of square into emergency exit or insert cut side of square into actuator unit. Position of the chamfer as shown, when actuator unit is actuated.

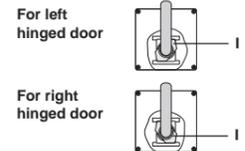
Mounting outside



13. Fit the cover and the handle onto the emergency exit

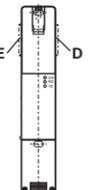
- To be observed:**
- Position of the driving shaft I as shown, when actuator unit is actuated.
 - Functional test of the emergency exit handle: it should be possible to open the guard door inside the hazardous area; it should not be possible to lock the guard door from inside. The emergency exit handle must be in upright position when closed.

Mounting outside



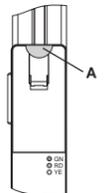
14. Clip the dust-proof flap in the unused side.

- To be observed:**
- D: for left hinged door
 - E: for right hinged door



15. After being set up, secure the cover A of the manual release with the seal, which is included in delivery with safety door switch D41G.

Seal the cover of the manual release A



Commissioning, Set-up and Maintenance Checklist

Checking safety door handle system D41G

Within the scope of commissioning and regular maintenance of the machine, the following items of the safety door-handle system, consisting of D41G sensor, the corresponding actuator unit and the emergency exit must be checked and inspected by a specialist:

1. Fixation: All fixing screws installed and tightened with the specified torque
 2. Distance: Distance 7.5 +0.5/-2.5 mm between safety door switch D41G and actuator unit must be adhered to.
 3. Emergency exit handle: After locking, the correct closing of the door must be checked. It should be possible to open the guard door from the hazardous area; it should not be possible to lock the guard door from inside. The emergency exit handle must be in the upright position when closed.
 4. Sticker emergency exit handle (included in delivery with D41G-A2): The sticker is visibly attached.
 5. Dust-proof flap: Check tight fitting of the dust-proof flap.
 6. Functional testing: The enabling signal is only transmitted to the safety circuit, if the actuator is within range of the safety door switch and locked.
- | | |
|----------------|--|
| LED | Status |
| Green | Operating voltage |
| Yellow | Actuator inserted (and locked for D41G) |
| Flashes yellow | Actuator inserted and not locked (only for D41G) |
| Red | Error |
7. Cover for manual release: Access cover or access hole is sealed (only for D41G).

Dispose in accordance with applicable regulations.

Suitability for Use

Omron Companies shall not be responsible for conformity with any standards, codes or regulations which apply to the combination of the Product in the Buyer's application or use of the Product. At Buyer's request, Omron will provide applicable third party certification documents identifying ratings and limitations of use which apply to the Product. This information by itself is not sufficient for a complete determination of the suitability of the Product in combination with the end product, machine, system, or other application or use. Buyer shall be solely responsible for determining appropriateness of the particular Product with respect to Buyer's application, product or system. Buyer shall take application responsibility in all cases.

NEVER USE THE PRODUCT FOR AN APPLICATION INVOLVING SERIOUS RISK TO LIFE OR PROPERTY OR IN LARGE QUANTITIES WITHOUT ENSURING THAT THE SYSTEM AS A WHOLE HAS BEEN DESIGNED TO ADDRESS THE RISKS, AND THAT THE OMRON PRODUCT(S) IS PROPERLY RATED AND INSTALLED FOR THE INTENDED USE WITHIN THE OVERALL EQUIPMENT OR SYSTEM.

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