

# Series MDHR2/MDHR3 Auto Switch Installation Example and Mounting Position

Various auto switch applications are possible through different combinations of auto switch quantities and detecting positions.

## 1) Detection when Gripping Exterior of Workpiece/Auto Switch Mounted from Direction A

Detection example		1. Confirmation of fingers in reset position	2. Confirmation of workpiece held	3. Confirmation of workpiece released
<b>Position to be detected</b>		Position of fingers fully opened 	Position when gripping a workpiece 	Position of fingers fully closed 
<b>Operation of auto switch</b>		Switch turned ON when fingers return. (Light ON)	Switch turned ON when gripping a workpiece. (Light ON)	When a workpiece is held (Normal operation): Switch to turn OFF (Light not illuminating) When a workpiece is not held (Abnormal operation): Switch to turn ON (Light illuminating)
<b>Detection combinations</b>	One auto switch	●	●	●
	Two auto switches	●—●	●—●	●—●
<b>How to determine auto switch installation position</b>		<b>Step 1)</b> Fully open the fingers. 	<b>Step 1)</b> Position fingers for gripping a workpiece. 	<b>Step 1)</b> Fully close the fingers. 
At no pressure or low pressure, connect the switch to a power supply, and follow the directions.		<b>In the case of mounting switch from A direction</b> <b>Step 2)</b> Insert the auto switch into the switch installation groove from direction A. 		
<b>Step 3)</b> Slide the auto switch in the direction of the arrow until the light illuminates and fasten it at a position 0.3 to 0.5 mm in the direction of the arrow beyond the position where the indicator light illuminates.  Position where light turns ON  0.3 to 0.5 mm Position to be secured 		<b>Step 3)</b> Slide the auto switch in the direction of the arrow until the indicator light illuminates.  <b>Step 4)</b> Slide the auto switch in the direction of the arrow until the indicator light goes out.  <b>Step 5)</b> Move the auto switch in the opposite direction, and fasten it at a position 0.3 to 0.5 mm in the direction of the arrow beyond the position where the indicator light illuminates. Position where light turns ON  0.3 to 0.5 mm Position to be secured 		

Note 1) It is recommended that gripping of a workpiece be performed close to the center of the finger stroke.  
 Note 2) When holding a workpiece close at the end of open/close stroke of fingers, detecting performance of the combinations listed in the above table may be limited, depending on the hysteresis of an auto switch, etc.

## 2) Detection when Gripping Exterior of Workpiece/Auto Switch Mounted from Direction B

Detection example		1. Confirmation of fingers in reset position	2. Confirmation of workpiece held	3. Confirmation of workpiece released
<b>Position to be detected</b>		Position of fingers fully opened 	Position when gripping a workpiece 	Position of fingers fully closed 
<b>Operation of auto switch</b>		Switch turned ON when fingers return. (Light ON)	Switch turned ON when gripping a workpiece. (Light ON)	When a workpiece is held (Normal operation): Switch to turn OFF (Light not illuminating) When a workpiece is not held (Abnormal operation): Switch to turn ON (Light illuminating)
<b>Detection combinations</b>	One auto switch	●	●	●
	Two auto switches	●—●	●—●	●—●
<b>How to determine auto switch installation position</b>		<b>Step 1)</b> Fully open the fingers. 	<b>Step 1)</b> Position fingers for gripping a workpiece. 	<b>Step 1)</b> Fully close the fingers. 
At no pressure or low pressure, connect the switch to a power supply, and follow the directions.		<b>In the case of mounting switch from B direction</b> <b>Step 2)</b> Insert the auto switch into the switch installation groove from direction B. 		
<b>Step 3)</b> Slide the auto switch in the direction of the arrow until the indicator light illuminates.  Position where light turns ON  0.3 to 0.5 mm Position to be secured 		<b>Step 3)</b> Slide the auto switch in the direction of the arrow until the indicator light illuminates. Move the switch an additional 0.3 to 0.5 mm in the direction of the arrow and fasten it.  Position where light turns ON  0.3 to 0.5 mm Position to be secured 		
<b>Step 4)</b> Slide the auto switch in the direction of the arrow until the indicator light goes out  <b>Step 5)</b> Move the auto switch in the opposite direction and fasten it at a position 0.3 to 0.5 mm beyond the position where the indicator light illuminates. Position where light turns ON  0.3 to 0.5 mm Position to be secured 		<b>Step 5)</b> Move the auto switch in the opposite direction and fasten it at a position 0.3 to 0.5 mm beyond the position where the indicator light illuminates. Position where light turns ON  0.3 to 0.5 mm Position to be secured 		

Note 1) It is recommended that gripping of a workpiece be performed close to the center of the finger stroke.  
 Note 2) When holding a workpiece close at the end of open/close stroke of fingers, detecting performance of the combinations listed in the above table may be limited, depending on the hysteresis of an auto switch, etc.

MHZ

MHF

MHL

MHR

MHK

MHS

MHC

MHT

MHY

MHW

MRHQ

Misc.

D-

20-

# Series MDHR2/MDHR3 Auto Switch Installation Example and Mounting Position

Various auto switch applications are possible through different combinations of auto switch quantities and detecting positions.

### 3) Detection when Gripping Interior of Workpiece/Auto Switch Mounted from Direction A

Detection example		1. Confirmation of fingers in reset position	2. Confirmation of workpiece held position	3. Confirmation of workpiece released position
Position to be detected				
Operation of auto switch		Switch turned ON when fingers return. (Light ON)	Switch turned ON when gripping a workpiece. (Light ON)	When a workpiece is held (Normal operation): Switch to turn OFF (Light not illuminating) When a workpiece is not held (Abnormal operation): Switch to turn ON (Light illuminating)
Detection combinations	One auto switch	●	●	●
	Two auto switches	●—●	●—●	●—●
How to determine auto switch installation position		<b>Step 1)</b> Fully close the fingers. 	<b>Step 1)</b> Position fingers for gripping a workpiece. 	<b>Step 1)</b> Fully open the fingers. 
At no pressure or low pressure, connect the switch to a power supply, and follow the directions.		<b>In the case of mounting switch from A direction</b> <b>Step 2)</b> Insert the auto switch into the switch installation groove from direction A. 		
<b>Step 3)</b> Slide the auto switch in the direction of the arrow until the indicator light illuminates.  <b>Step 4)</b> Slide the auto switch in the direction of the arrow until the indicator light goes out.  <b>Step 5)</b> Move the auto switch in the opposite direction and fasten it at a position 0.3 to 0.5 mm beyond the position where the indicator light illuminates. 		<b>Step 3)</b> Slide the auto switch in the direction of the arrow until the indicator light illuminates. Move the switch an additional 0.3 to 0.5 mm in the direction of the arrow and fasten it.  <b>Position where light turns ON</b>  <b>Position to be secured</b> 		

Note 1) It is recommended that gripping of a workpiece be performed close to the center of the finger stroke.  
 Note 2) When holding a workpiece close at the end of open/close stroke of fingers, detecting performance of the combinations listed in the above table may be limited, depending on the hysteresis of an auto switch, etc.

### 4) Detection when Gripping Interior of Workpiece

Detection example		1. Confirmation of fingers in reset position	2. Confirmation of workpiece held position	3. Confirmation of workpiece released position
Position to be detected				
Operation of auto switch		Switch turned ON when fingers return. (Light ON)	Switch turned ON when gripping a workpiece. (Light ON)	When a workpiece is held (Normal operation): Switch to turn OFF (Light not illuminating) When a workpiece is not held (Abnormal operation): Switch to turn ON (Light illuminating)
Detection combinations	One auto switch	●	●	●
	Two auto switches	●—●	●—●	●—●
How to determine auto switch installation position		<b>Step 1)</b> Fully close the fingers. 	<b>Step 1)</b> Position fingers for gripping a workpiece. 	<b>Step 1)</b> Fully open the fingers. 
At no pressure or low pressure, connect the switch to a power supply, and follow the directions.		<b>In the case of mounting switch from B direction</b> <b>Step 2)</b> Insert auto switch into the switch installation groove from direction B. 		
<b>Step 3)</b> Slide the auto switch in the direction of the arrow until the light illuminates and fasten it at a position 0.3 to 0.5 mm in the direction of the arrow beyond the position where the indicator light illuminates.  <b>Position where light turns ON</b>  <b>Position to be secured</b> 		<b>Step 3)</b> Slide the auto switch in the direction of the arrow until the indicator light illuminates.  <b>Step 4)</b> Slide the auto switch in the direction of the arrow until the indicator light goes out.  <b>Step 5)</b> Move the auto switch in the opposite direction, and fasten it at a position 0.3 to 0.5 mm in the direction of the arrow beyond the position where the indicator light illuminates.  <b>Position where light turns ON</b>  <b>Position to be secured</b> 		

Note 1) It is recommended that gripping of a workpiece be performed close to the center of the finger stroke.  
 Note 2) When holding a workpiece close at the end of open/close stroke of fingers, detecting performance of the combinations listed in the above table may be limited, depending on the hysteresis of an auto switch, etc.

- MHZ
- MHF
- MHL
- MHR
- MHK
- MHS
- MHC
- MHT
- MHY
- MHW
- MRHQ
- Misc.
- D-
- 20-