

# TA-MC55Y, TA-MC55



## Actuators

High performance proportional actuator – 600 N

# TA-MC55Y, TA-MC55

High performance proportional actuators with automatic stroke adaptation which provide accurate modulating or 3-point control when used together with 2-way and 3-way control valves from IMI Hydronic Engineering.

## Key features

### > Easy commissioning

Automatic measurement and adaptation to the valve lift as well as load-dependent end position switch-off helps to reduce commissioning time and protect the valve and actuator from overloading.

### > Easy troubleshooting

Protected hand drive for a safe manual operation enables easy troubleshooting.

### > Ease of service

The actuator housing cover is easy to remove. Parameters can easily be changed on site.



## Technical description

### Functions:

TA-MC55Y: Modulating control.  
TA-MC55: 3-point control.

### Supply voltage:

TA-MC55Y: 24 VAC/VDC\*  $\pm 10\%$   
TA-MC55/24: 24 VAC/VDC\*  $\pm 10\%$   
TA-MC55/230: 230 VAC  $+6\%/-10\%$   
TA-MC55/115: 115 VAC  $+6\%/-10\%$   
Frequency 50-60 Hz  $\pm 5\%$   
) DC – Direct current flat voltage.

### Power consumption:

24 V: 3,5 VA  
230 V: 7 VA  
115 V: 7 VA

### Input signal:

TA-MC55Y:  
0(2)-10 VDC 77 k $\Omega$   
0(4)-20 mA 510  $\Omega$   
Signal direction and starting point adjustable by micro switches.  
TA-MC55 (24/230/115 V):  
3-point control.

### Output signal:

0-10 VDC, max. 8 mA, min. 1,2 k $\Omega$ .

### Hysteresis:

0,3 V

### Resolution:

Electric: 0,04 VDC  
Mechanical: 0,06 mm

### Control speed:

9 or 5 s/mm

### Adjusting force:

600 N

### Operation mode:

S3-50% ED c/h 1200, EN 60034-1

### End position switch-off:

Load-dependent

### Temperature:

Max. ambient temperature: 60°C  
Min. ambient temperature: 0°C

### Ingress protection:

Automatic operation: IP54  
Manual operation: IP30

### Protection class:

(according to EN 60730)  
24 V: III  
230 V: II  
115 V: II

### Stroke:

Max. 20 mm  
Automatic detection of the valve lift (stroke detection).

### Electrical connection:

Actuator with screwed terminals.

### Connection to valve:

Simple attachment to the valve by means of M8 screws.  
For some valve types an adapter may be needed. Information on adapters included in valve datasheets.

### Colour:

Black body and red cover.

### Marking:

IMI TA, Article No, product name and technical specification.

### Weight:

1,5 kg

### Actuator variants:

- Adapter with coupling for external products

For variants and accessories please contact IMI Hydronic Engineering.

## Function

### Manual operation

Covered handwheel with automatic switch-off of the actuator.

### Position indication

Indicators on the mounting rig.

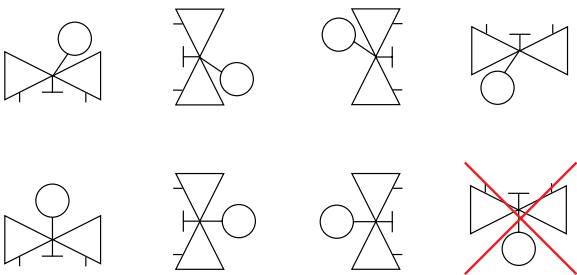
### Error detection

Automatic detection of broken control wire (for 2-10 V / 4-20 mA only).

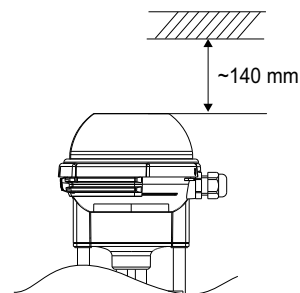
## Installation

**Note:** Read carefully the installation instruction of the actuator. Intended for indoor installation applications.

For outdoor installation applications please contact IMI Hydronic Engineering. In cooling systems, the pipe and valve must be insulated.



### Note!

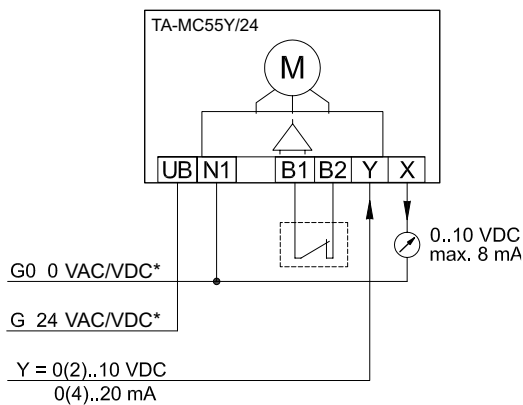


## Connection diagram

### 24 VAC/VDC\*

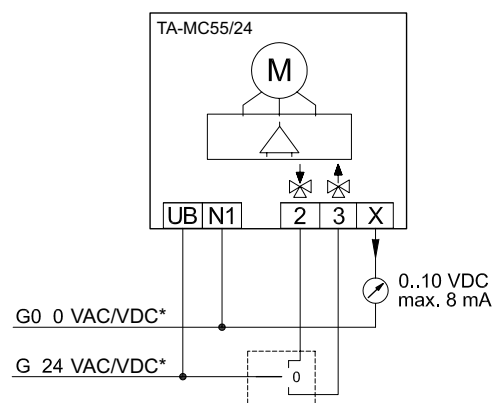
#### Modulating

0(2)-10V, 0(4)-20 mA



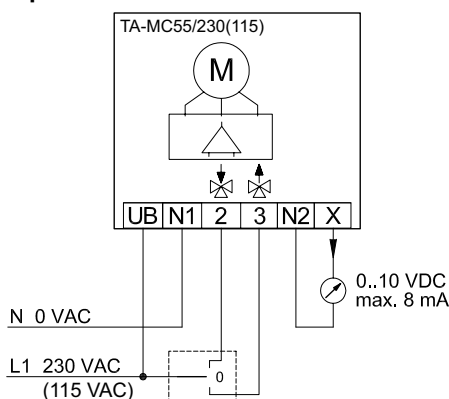
\*) DC – Direct current flat voltage.

### 3-point



### 230 VAC

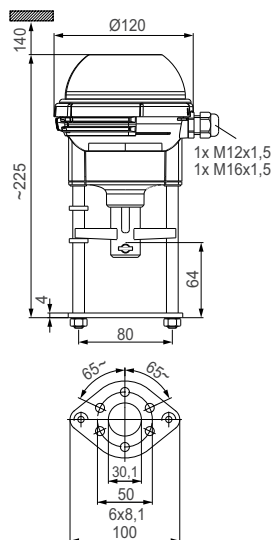
#### 3-point



Terminal	Description
UB, N1	Supply voltage
2	Control signal for extending the actuator spindle
3	Control signal for retracting the actuator spindle
B1, B2	Connection of a potential free contact (e.g. for frost protection)
N2	Zero potential of signal X - If you run the actuator in three-point mode at 230 V (115 V) you will get the 0 - 10V feedback signal between X and N2.
Y	Input for modulating control signal: 0(2) - 10V or 0(4) - 20mA
X	Output signal 0 - 10V max. 8mA

For TA-MC55/24V/230V/115V in 3-point control, the actuation direction can be changed by changing the supply lines of terminals 2 and 3 on the actuator.

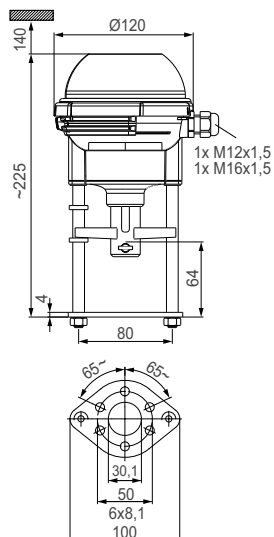
## Articles

**TA-MC55Y**

Supply voltage	Input signal	EAN	Article No
24 VAC	0(2)-10 VDC, 0(4)-20 mA	3831112506510	61 055-003
24 VDC*	0(2)-10 VDC, 0(4)-20 mA	5902276898686	61 055-004

\*) DC – Direct current flat voltage.

For some valve types an adapter may be needed. Information about adapters are included in the valve datasheets.

**TA-MC55**

Supply voltage	Input signal	EAN	Article No
24 VAC	3-point	3831112527812	61 055-001
24 VDC*	3-point	5902276804403	61 055-402
230 VAC	3-point	3831112506503	61 055-002
115 VAC	3-point	5902276894329	61 055-302

\*) DC – Direct current flat voltage.

For some valve types an adapter may be needed. Information about adapters are included in the valve datasheets.

## Accessories

**Stem heaters**

TA-MC55, TA-MC55Y, TA-MC100, TA-MC160

Type	Supply voltage	EAN	Article No
<b>ACV 13</b>	24 VAC	3831112512108	68 013-015

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