

Climate
Control

IMI TA

TA-MC55Y, TA-MC55



Actuators

High performance proportional actuator –
135 lbf (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.

Key features

Easy commissioning

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

Easy troubleshooting

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

Ease of service

The actuator housing cover is easy to remove (without screws). Parameters can be easily 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-MC55/115: 115 VAC $+6\%/-10\%$
Frequency 50-60 Hz $\pm 5\%$
*) DC – Direct current flat voltage.

Power consumption:

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

Input signal:

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

Output signal:

0-10 VDC, max. 8 mA, min. 1,2 k Ω .

Hysteresis:

0,3 V

Resolution:

Electric: 0.04 VDC
Mechanical: 0.0024 in (0.06 mm)

Control speed:

0.26 or 0.47 in/min

Adjusting force:

135 lbf

Operation mode:

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

End position switch-off:

Load-dependent

Temperature:

Max. ambient temperature: 140°F
Min. ambient temperature: 32°F

Ingress protection:

Automatic operation: IP54
Manual operation: IP30

Protection class:

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

Stroke:

Max. 0.79 in
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.

Color:

Black body and red cover.

Marking:

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

Weight:

3.31 lb

Actuator variants:

- Adapter with coupling for external products

For variants and accessories please contact your local sales office.

Function

Manual operation

Covered handwheel with automatic switch-off of the actuator.

Position indication

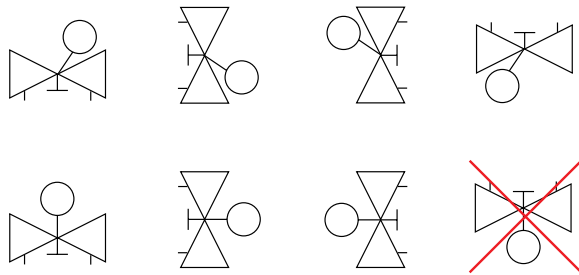
Indicators on the mounting rig.

Error detection

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

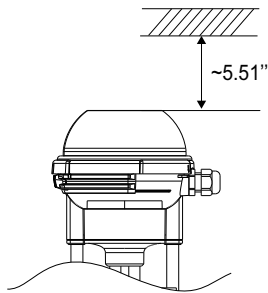
Installation

Note: Carefully read the installation instruction of the actuator. Intended for indoor installation applications. For outdoor installation applications please contact IMI. In cooling systems, the pipe and valve must be insulated.



Note!

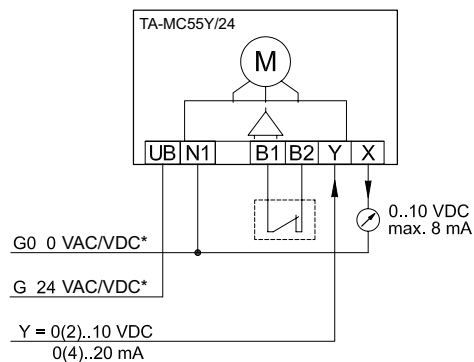
Space above actuator >5.5 in.



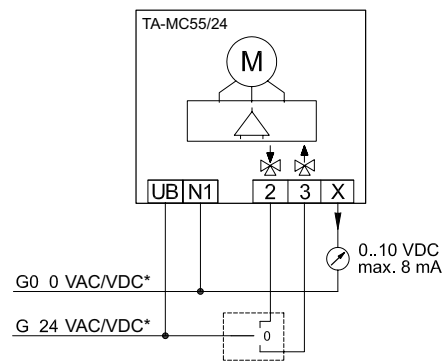
Connection diagram

24 VAC/VDC*

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



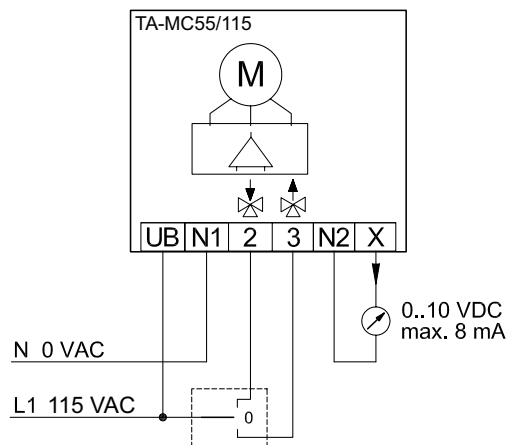
3-point



*) DC – Direct current flat voltage.

115 VAC

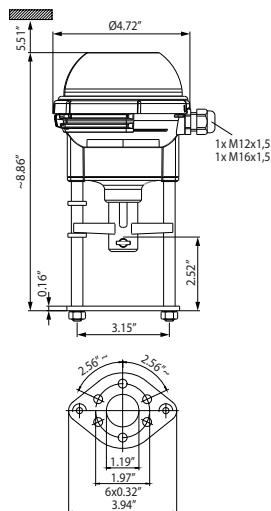
3-point



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 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/115V 3-point control, the actuating direction can be changed by switching the supply lines to terminals 2 and 3 on the actuator.

Articles

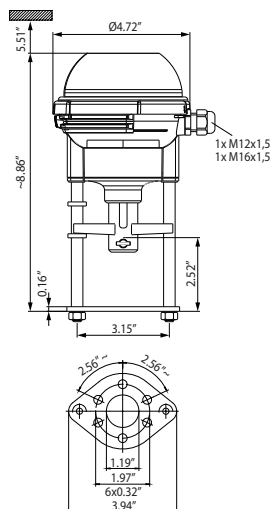


TA-MC55Y

Supply voltage	Input signal	Article No
24 VAC	0(2)-10 VDC, 0(4)-20 mA	61 055-003
24 VDC*	0(2)-10 VDC, 0(4)-20 mA	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	Article No
24 VAC	3-point	61 055-001
24 VDC*	3-point	61 055-402
115 VAC	3-point	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

	Supply voltage	Article No
ACV 13	24 VAC	68 013-015



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