

TA-MC100 FSE/FSR



Actuators

High performance proportional actuator with fail-safe function – 225 lbf (1000 N)

TA-MC100 FSE/FSR

High performance proportional actuators with fail-safe extending (FSE) or retracting (FSR) function and automatic stroke adaptation which provide accurate modulating control when used together with combined control and balancing valves – both with or without integrated Δp controller – as well as 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 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:

Modulating control.

Fail-safe function:

TA-MC100FSE: Actuator's stem extended on power failure

TA-MC100FSR: Actuator's stem retracted on power failure

Supply voltage:

24 VAC $\pm 15\%$
Frequency 50-60 Hz $\pm 5\%$

Power consumption:

24 V: 26 VA

Input signal:

0(2)-10 VDC, 0.5 mA, R_i 20k Ω
0(4)-20 mA
Starting point and inverted signal with internal micro switches.

Output signal:

0(2)-10 VDC, max. 5 mA
0(4)-20 mA, R_i 0,5 k Ω .

Control speed:

1.18 in/min

Fail-safe speed:

2.36 in/min

Adjusting force:

225 lbf

Operation mode:

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

End position switch-off:

Load-dependent

Temperature:

Max. ambient temperature: 122°F
Min. ambient temperature: 32°F

Ingress protection:

IP54

Protection class:

(according to EN 60730)
III

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:

6.06 lb

Function

Manual override

By 4 mm Allen key.

Automatic detection of blocked valve

If the actuator detects a blocked valve it sends a fault signal: the output signal will be 12,5V or 20mA.

Position indicator

Visible mechanical stroke indication with scale.

Calibration/self-stroking

Initialized by pressing the INIT button.

Valve blockage protection

The actuator will perform a quarter of a full stroke and then back to desired value if no actuation takes place for one day.
Default setting: Off.

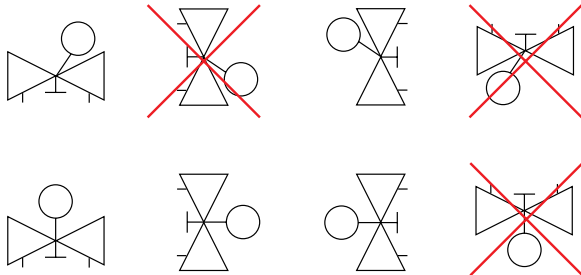
Fail-safe test

By a switch on the cover.

Installation

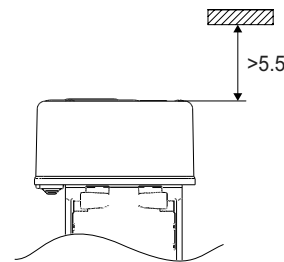
Note: Carefully read the installation instruction of the actuator. Intended for indoor installation applications.

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



Note!

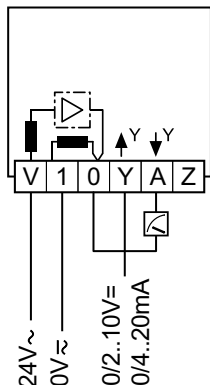
Space above actuator >5.5 in.



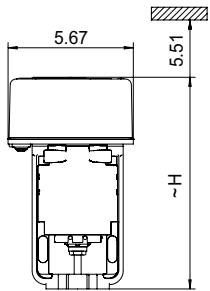
Connection diagram

24 VAC

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



Articles

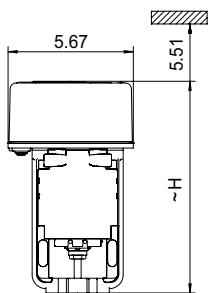


TA-MC100 FSE

Actuator's stem extended on power failure

Type	Supply voltage	Input signal	Article No
FSE	24 VAC	0(2)-10 VDC, 0(4)-20 mA	61-100-101

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



TA-MC100 FSR

Actuator's stem retracted on power failure

Type	Supply voltage	Input signal	Article No
FSR	24 VAC	0(2)-10 VDC, 0(4)-20 mA	61-100-201

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

Accessories

Stem heater

Including spindle top (extension) and extended screws.

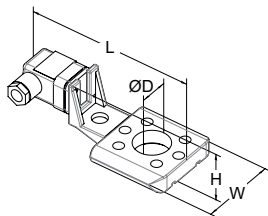
Temperature range till 14 °F.

Voltage 24 VAC ±10% 50/60 Hz ±5%.

Power P_N approx. 30 W.

Current 1.4 A.

Surface temperature max. 122 °F.



For valve	Size	L [in]	H [in]	W [in]	D [in]	Article No
		5.75	1.93	2.75	1.18	
TA-Modulator	2 1/2" - 3"					322042-80010
TA-FUSION	1 1/4" - 2"					322042-80901
TA-FUSION	2 1/2" - 6"					322042-81400
KTM 512	1/2" - 2"					322042-80900
KTM 512	2 1/2" - 5"					322042-81401

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