

TA-MC100 FSE/FSR



Actuators

High performance proportional actuator with fail-safe function – 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 or 3-point 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 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:

24 VAC: Modulating control.
230 VAC: 3-point 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 $\pm 15\%$
230 VAC $\pm 15\%$
Frequency 50-60 Hz $\pm 5\%$

Power consumption:

24 V: 26 VA
230 V: 30 VA

Input signal:

24 V:
0(2)-10 VDC 0,5 mA, R_i 20 k Ω
0(4)-20 mA
Starting point and inverted signal with internal micro switches.
230 V:
3-point control.

Output signal:

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

Control speed:

24 V: 2 s/mm
230 V: 9 s/mm

Fail-safe speed:

24 V: 1,0 s/mm
230 V: 1,2 s/mm

Adjusting force:

1000 N

Operation mode:

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

End position switch-off:

Load-dependent

Temperature:

Max. ambient temperature: 50°C
Min. ambient temperature: 0°C

Ingress protection:

IP54

Protection class:

(according to EN 60730)
24V: III
230V: I

Stroke:

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

Electric connection:

24 VAC and 230 VAC: 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:

2,8 kg

Function

Manual override

By a 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 (24V and 230V) or 20mA (only 24V).

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.

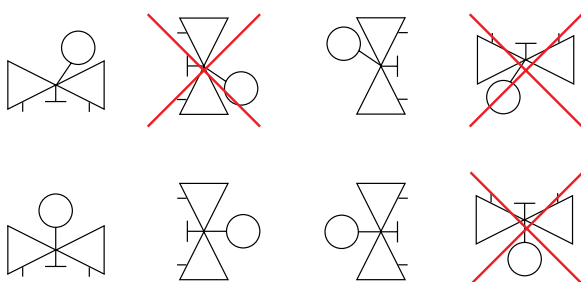
Fail-safe test

By a switch on the cover.

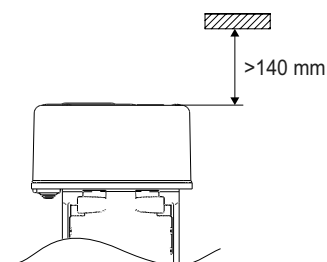
Installation

Note: 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.



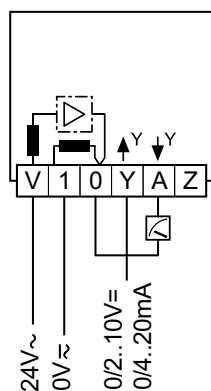
Note!



Connection diagram

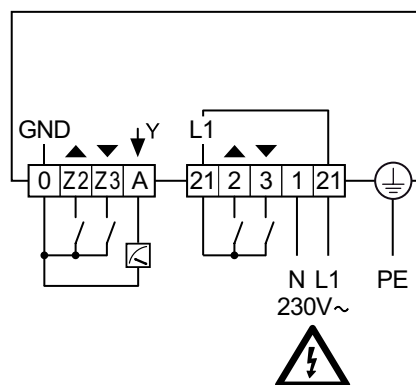
24 VAC

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

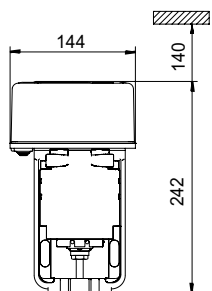


230 VAC

3-point



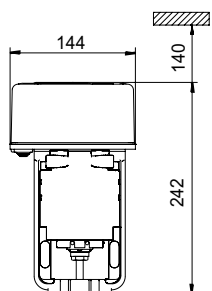
Articles



TA-MC100 FSE

Actuator's stem extended on power failure

Supply voltage	Input signal	EAN	Article No
24 VAC	0(2)-10 VDC, 0(4)-20 mA	3831112512122	61-100-101
230 VAC	3-point	3831112512139	61-100-102



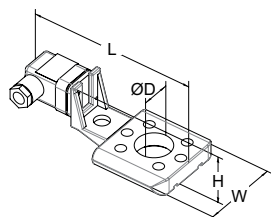
TA-MC100 FSR

Actuator's stem retracted on power failure

Supply voltage	Input signal	EAN	Article No
24 VAC	0(2)-10 VDC, 0(4)-20 mA	3831112512146	61-100-201
230 VAC	3-point	3831112512153	61-100-202

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 -10 °C.

Voltage 24 VAC $\pm 10\%$ 50/60 Hz $\pm 5\%$.

Power P_N approx. 30 W.

Current 1,4 A.

Surface temperature max. 50 °C.

For valve	DN	L	H	W	D	EAN	Article No
		146	49	70	30		
TA-Modulator	65-80					3831112534834	322042-80010
TA-FUSION	32-50					3831112533509	322042-80901
TA-FUSION	65-150					3831112533448	322042-81400
KTM 512	15-50					3831112533431	322042-80900
KTM 512	65-125					3831112533455	322042-81401

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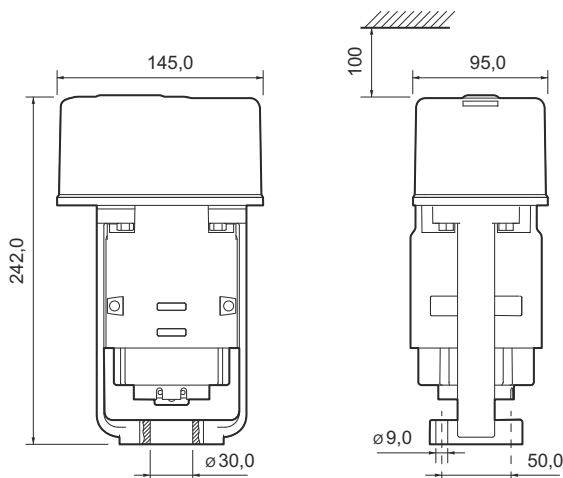
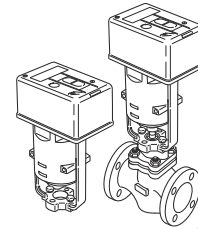
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MC100FSE/230

3.10-TA.200-99

2021-11-30



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FIGYELEM! A szerelést és telepítést csak szakképzett személyek végezhetik.

注意 安装工作只能由具备相应资质的专业技术人员进行。



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DANGER! Tension électrique 230V.

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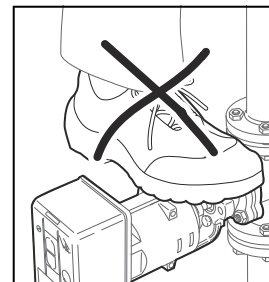
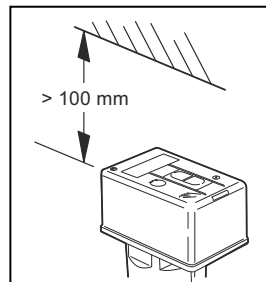
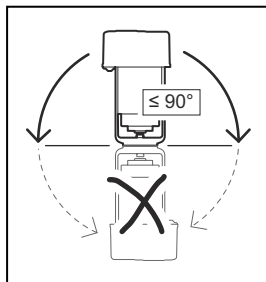
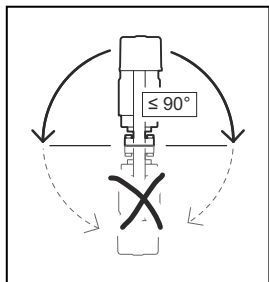
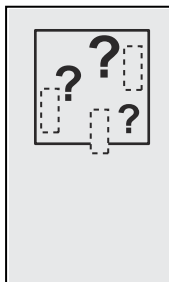
FIGYELEM! Becsípódásveszély.

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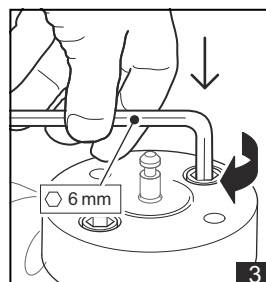
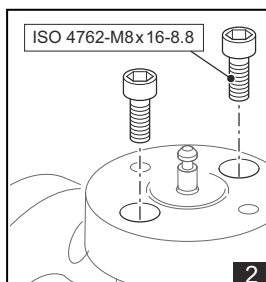
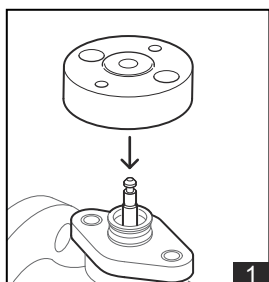
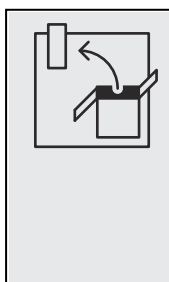


MC100FSE/24, MC100FSE/230

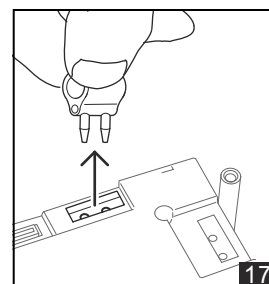
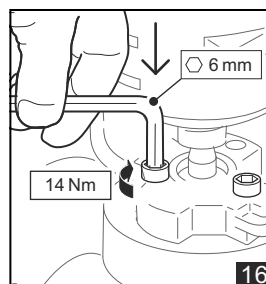
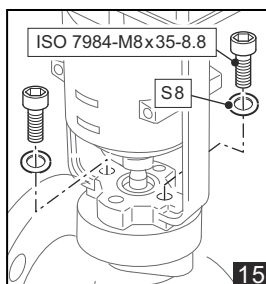
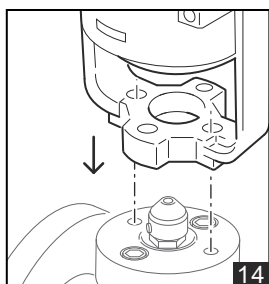
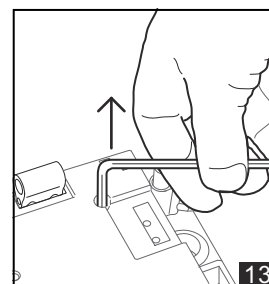
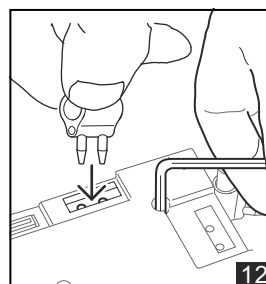
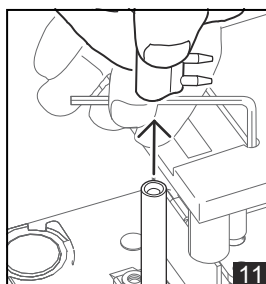
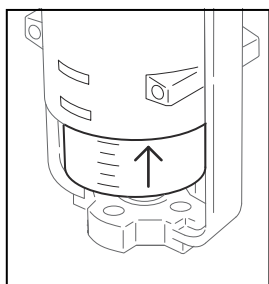
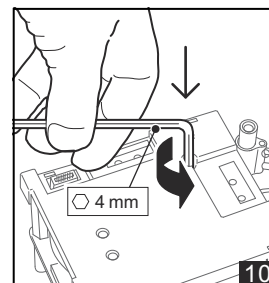
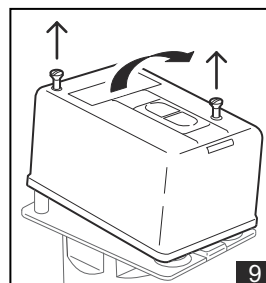
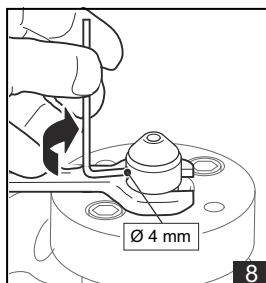
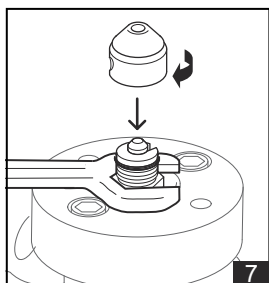
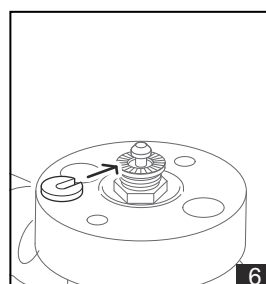
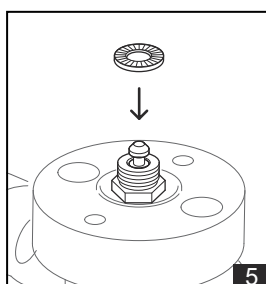
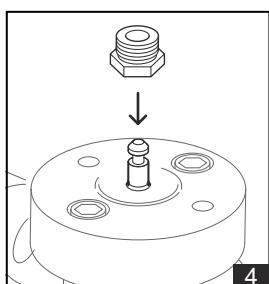
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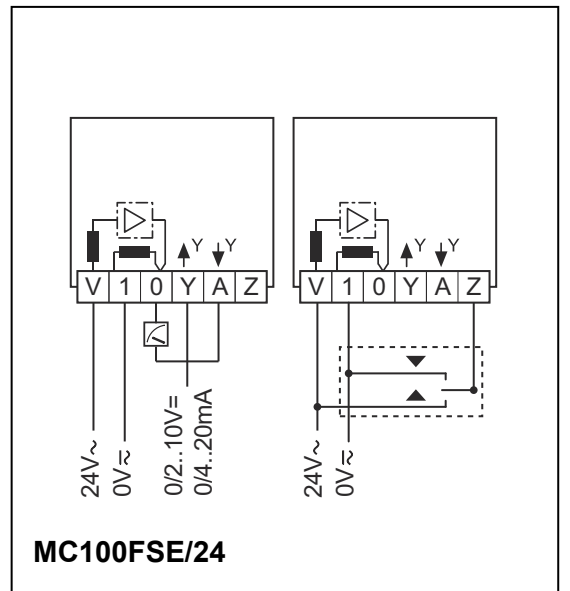
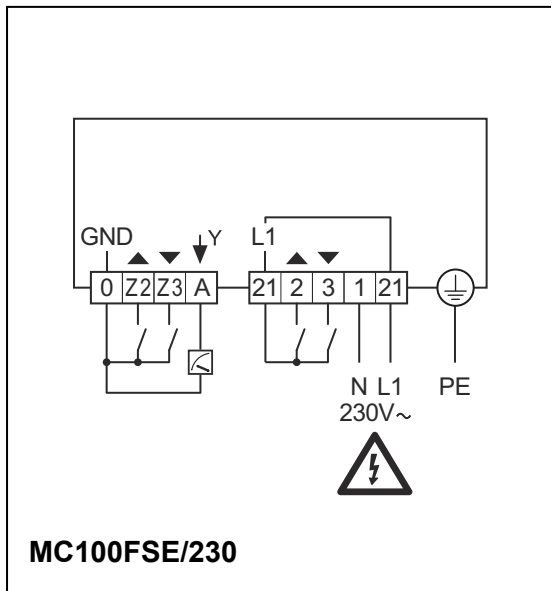
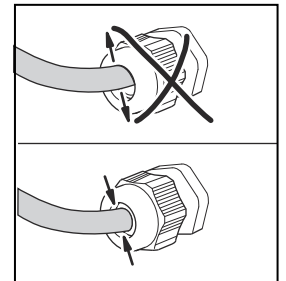
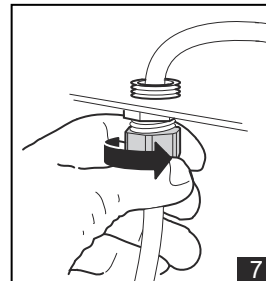
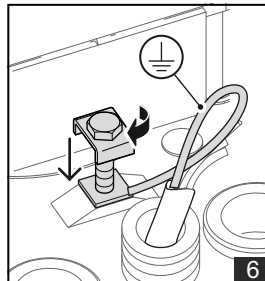
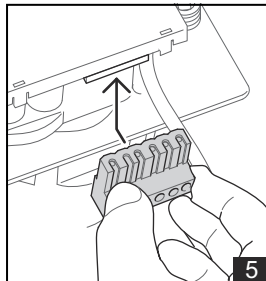
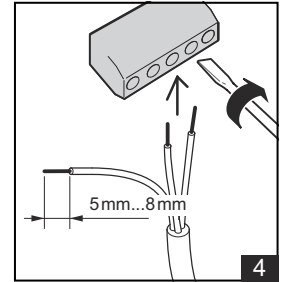
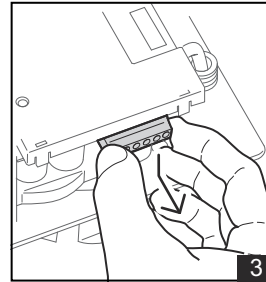
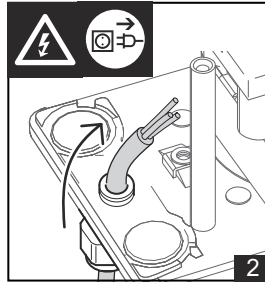
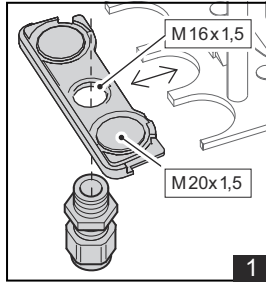
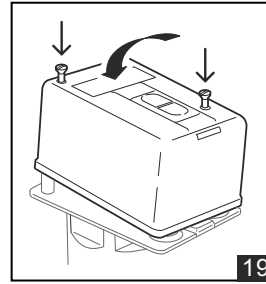
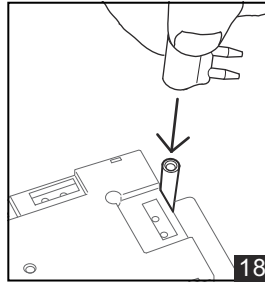
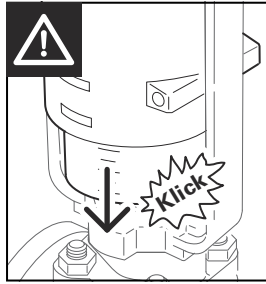
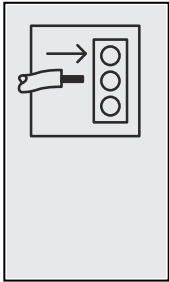


IP54
0 °C..50 °C
 Luftfeuchte nicht kondensierend
 Non-condensing humidity
 Humidité relative, non condensée
 Humedad de aire no condensado
 Luchtvochtigheid niet condenserend
 Umidità aria in assenza di condensa
 Ej kondenserande luftfuktighet
 Nekondenzující vlhkost vzduchu
 Niekondensujúca wilgotność powietrza
 Влажность воздуха без конденсации
 Nem kondenzáló páratartalom
 不产生蒸气

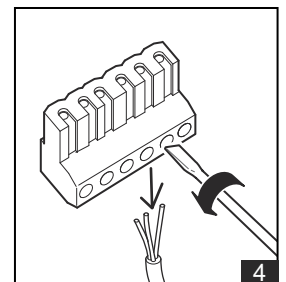
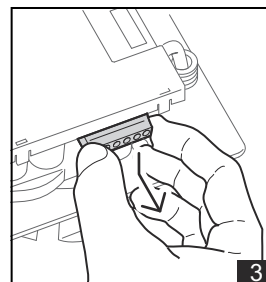
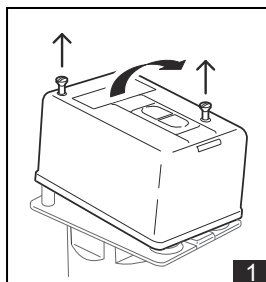
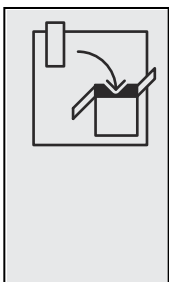


MC100FSE/24, MC100FSE/230

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4



**MC100FSE/24,
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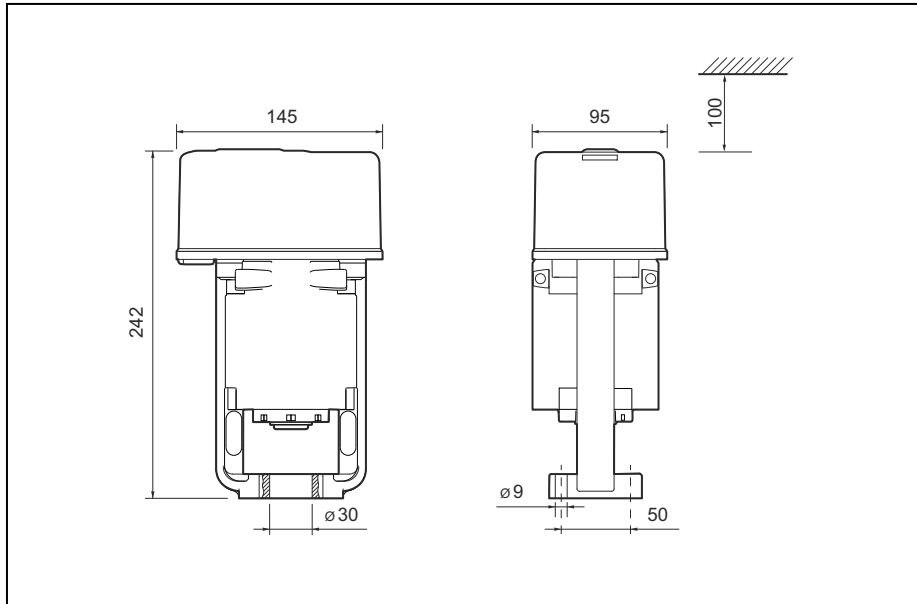
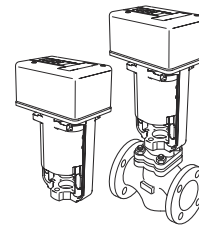
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POZOR! Montáž a instalaci smí provádět pouze kvalifikovaný odborný personál.

UWAGA! Montaż i instalację mogą przeprowadzać tylko wykwalifikowani specjaliści.

ВНИМАНИЕ! Монтаж и установка должны производиться только квалифицированным персоналом.

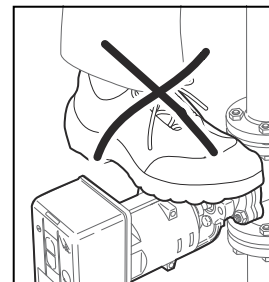
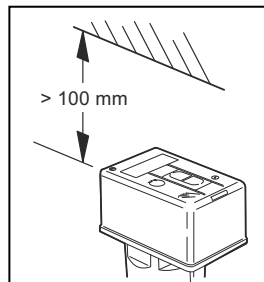
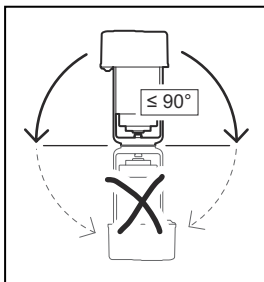
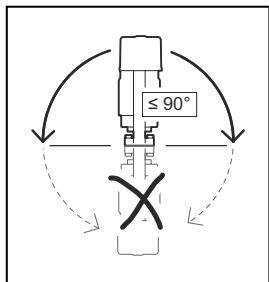
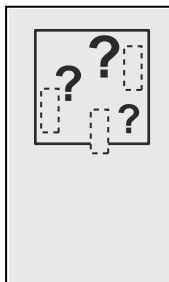
FIGYELEM! A szerelést és telepítést csak szakképzett személyek végezhetik.

注意 安装工作只能由具备相应资质的专业技术人员进行。

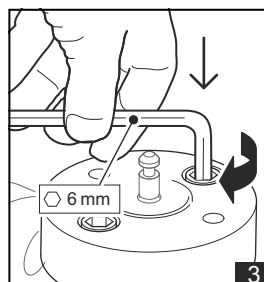
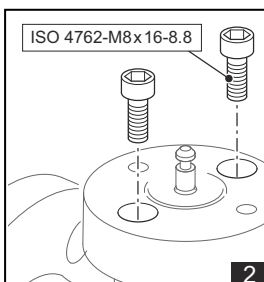
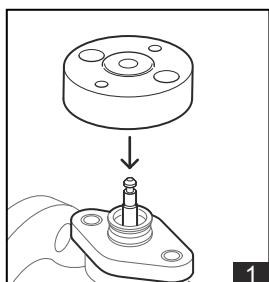
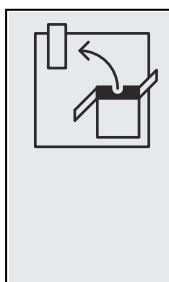


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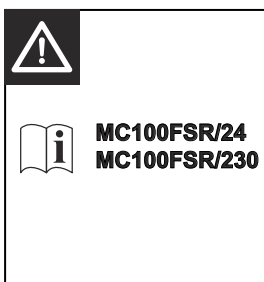
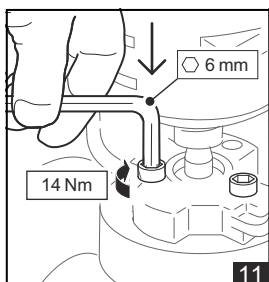
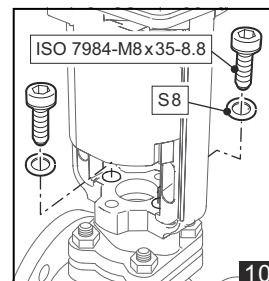
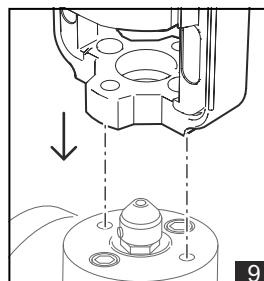
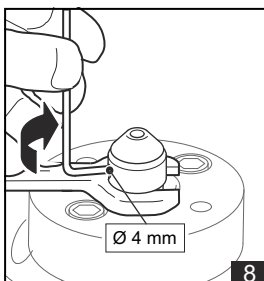
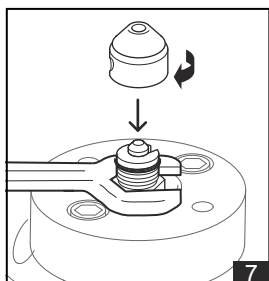
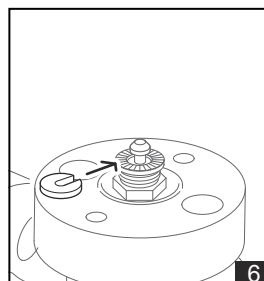
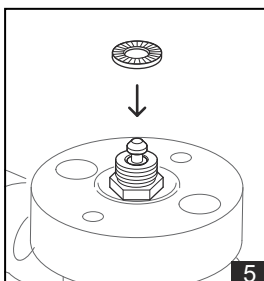
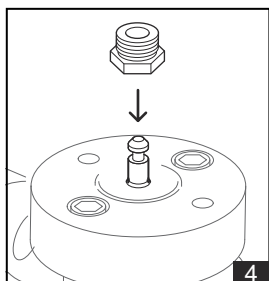
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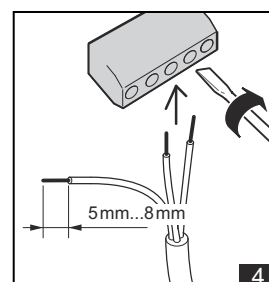
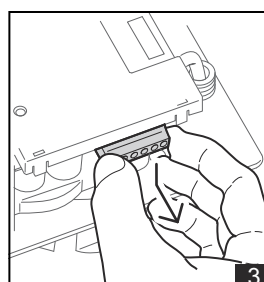
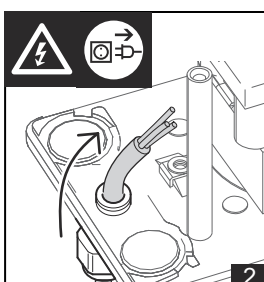
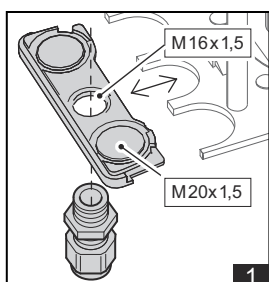
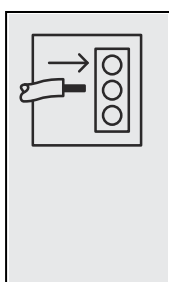
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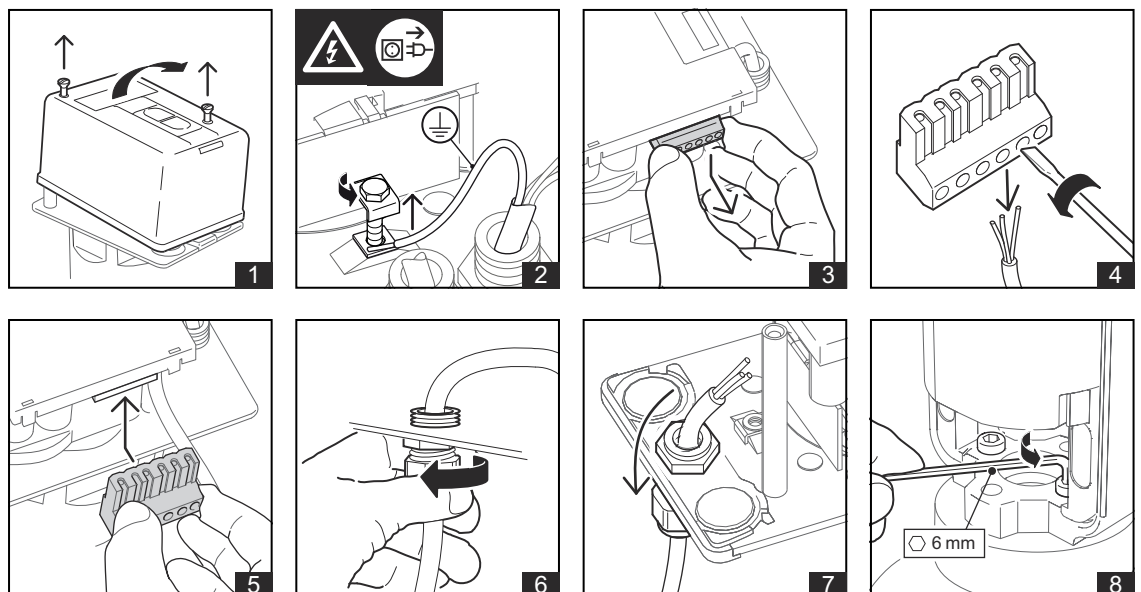
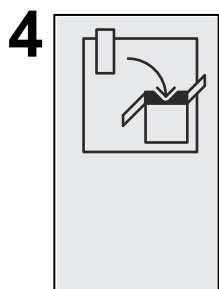
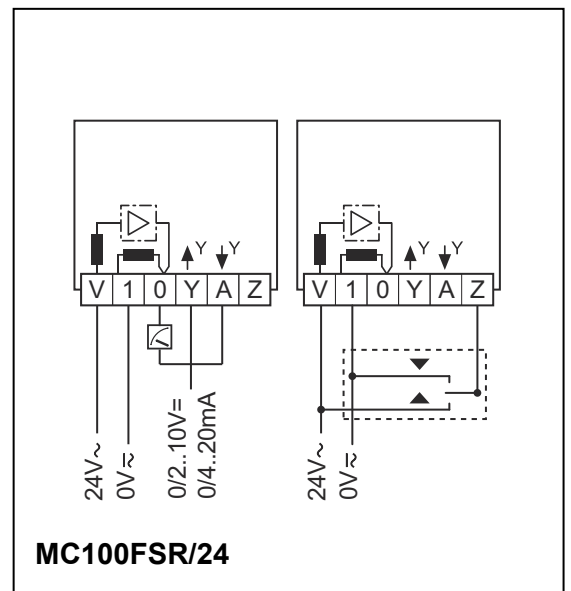
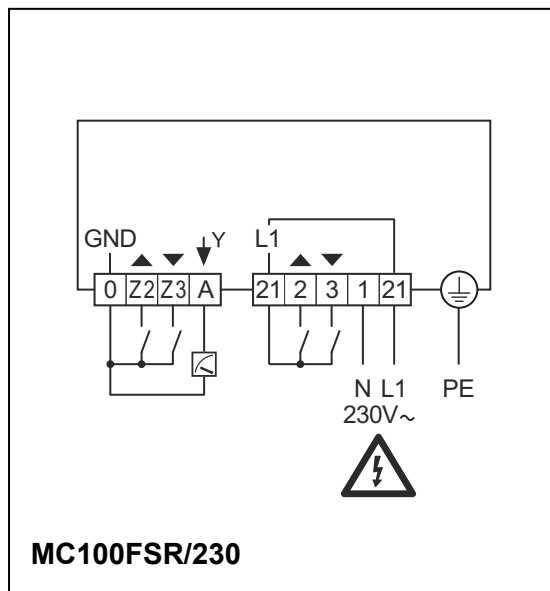
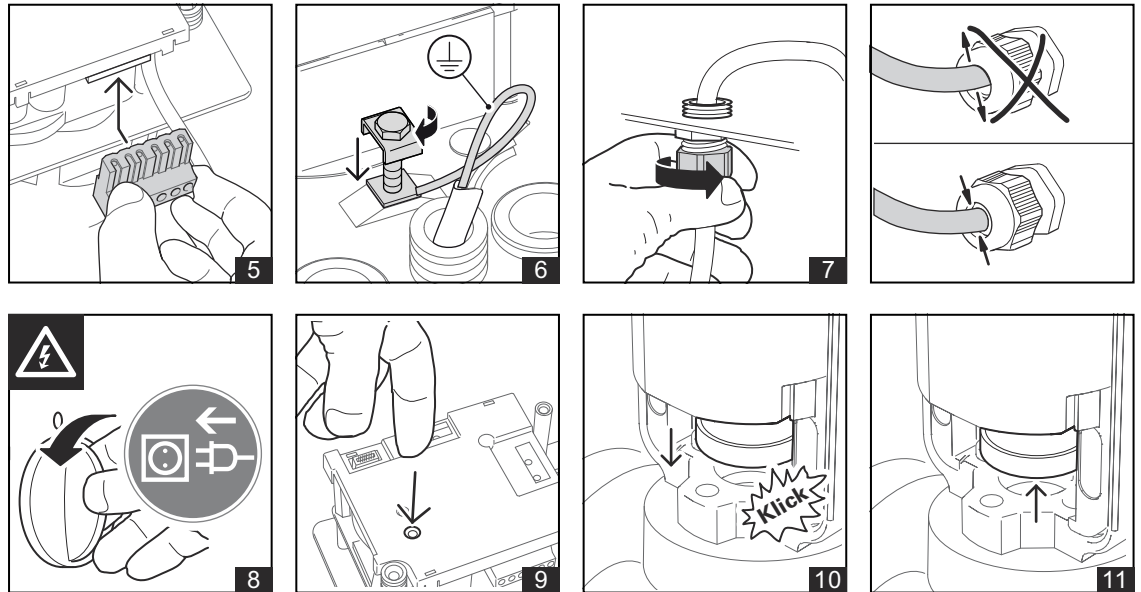
IP54
0 °C..50 °C
 Luftfeuchte nicht kondensierend
 Non-condensing humidity
 Humidité relative, non condensée
 Humedad de aire no condensado
 Luchtvochtigheid niet condenserend
 Umidità aria in assenza di condensa
 Ej kondenserande luftfuktighet
 Nekondenzující vlhkost vzduchu
 Niekondensująca wilgotność powietrza
 Влажность воздуха без конденсации
 Nem kondenzáló páratartalom
 不产生蒸气



3



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**MC100FSR/24,
MC100FSR/230**

