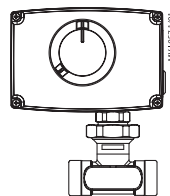
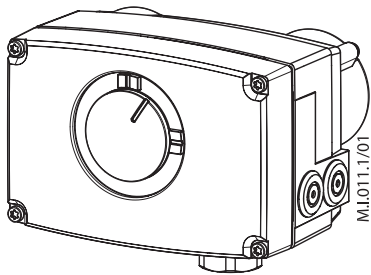


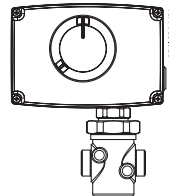
Operating Guide

AME 23, AME 23 SU, AME 33 / 73692237

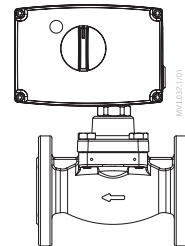
AME 23, AME 23 SU, AME 33



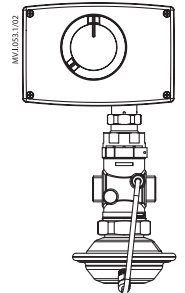
AME 23/23 SU/33 +
VS2 (DN 15-25)



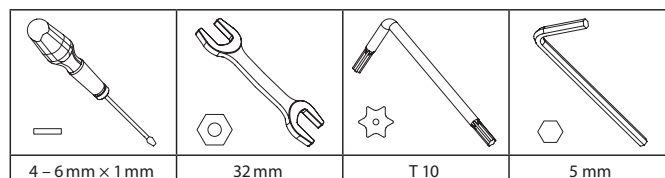
AME 23/23 SU/33 +
VM2 (DN 15-50)



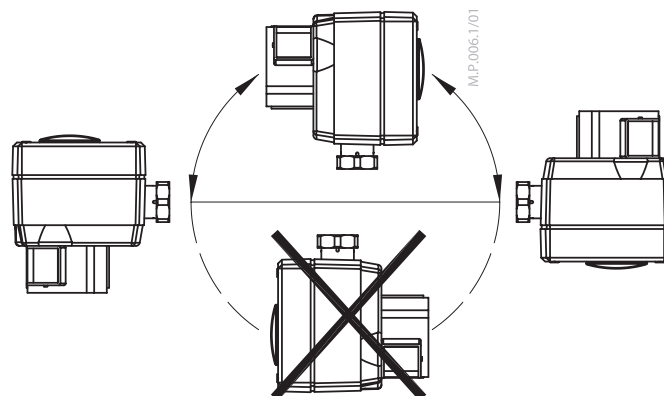
AME 23/23 SU/33 +
VB2 (DN 15-50)

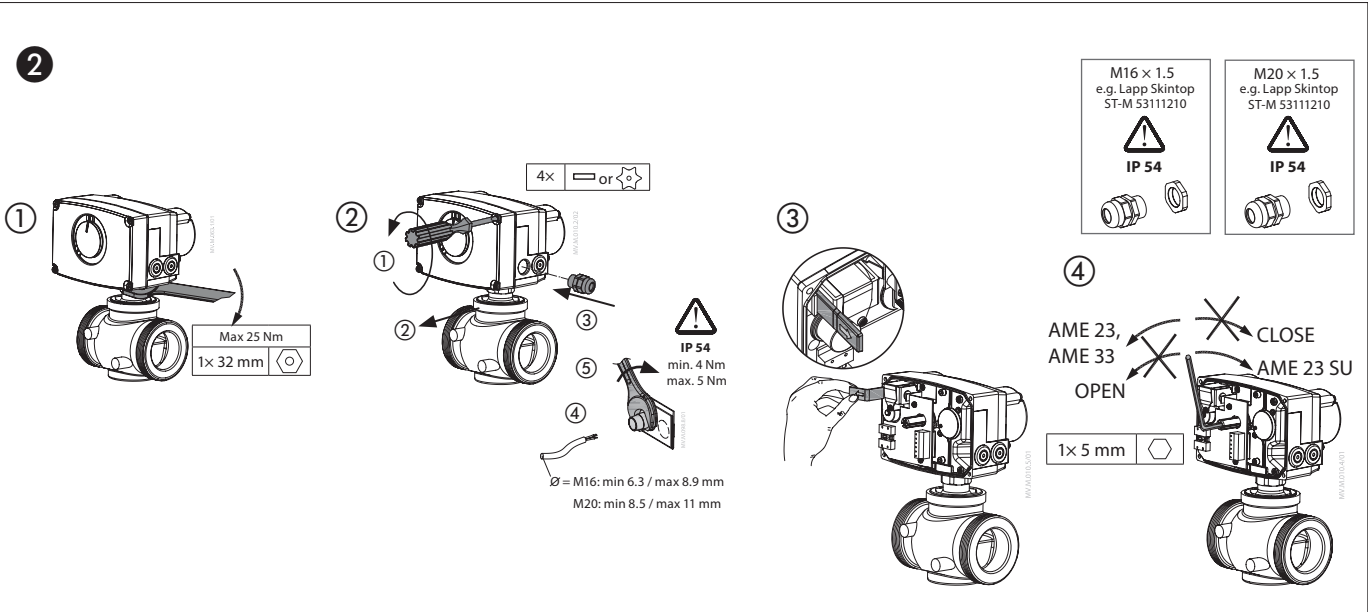


AME 23, AME 33 +
AVQM (DN 15-50)



1





3

Wiring for modulating mode

Proportional 3 point/RL

SN	0 V	Neutral
SP	24 VAC	Power supply
Y	0(2)-10 V 0(4)-20 mA	Input
1	0 V	Input
3	0 V	Input
X	0(2)-10 V	Output

**Wiring for 3-point floating mode
Controller with triacs output**

Proportional 3 point/RL

SN	0 V	Neutral
SP	24 VAC	Power supply
1	24 VAC	Input
3	24 VAC	Input
X	0(2)-10 VDC	Output

**Wiring for 3-point floating mode
Controller with relay output**

Proportional 3 point/RL

SN	0 V	Neutral
SP	24 VAC	Power supply
1	24 VAC	Input
3	24 VAC	Input
X	0(2)-10 VDC	Output

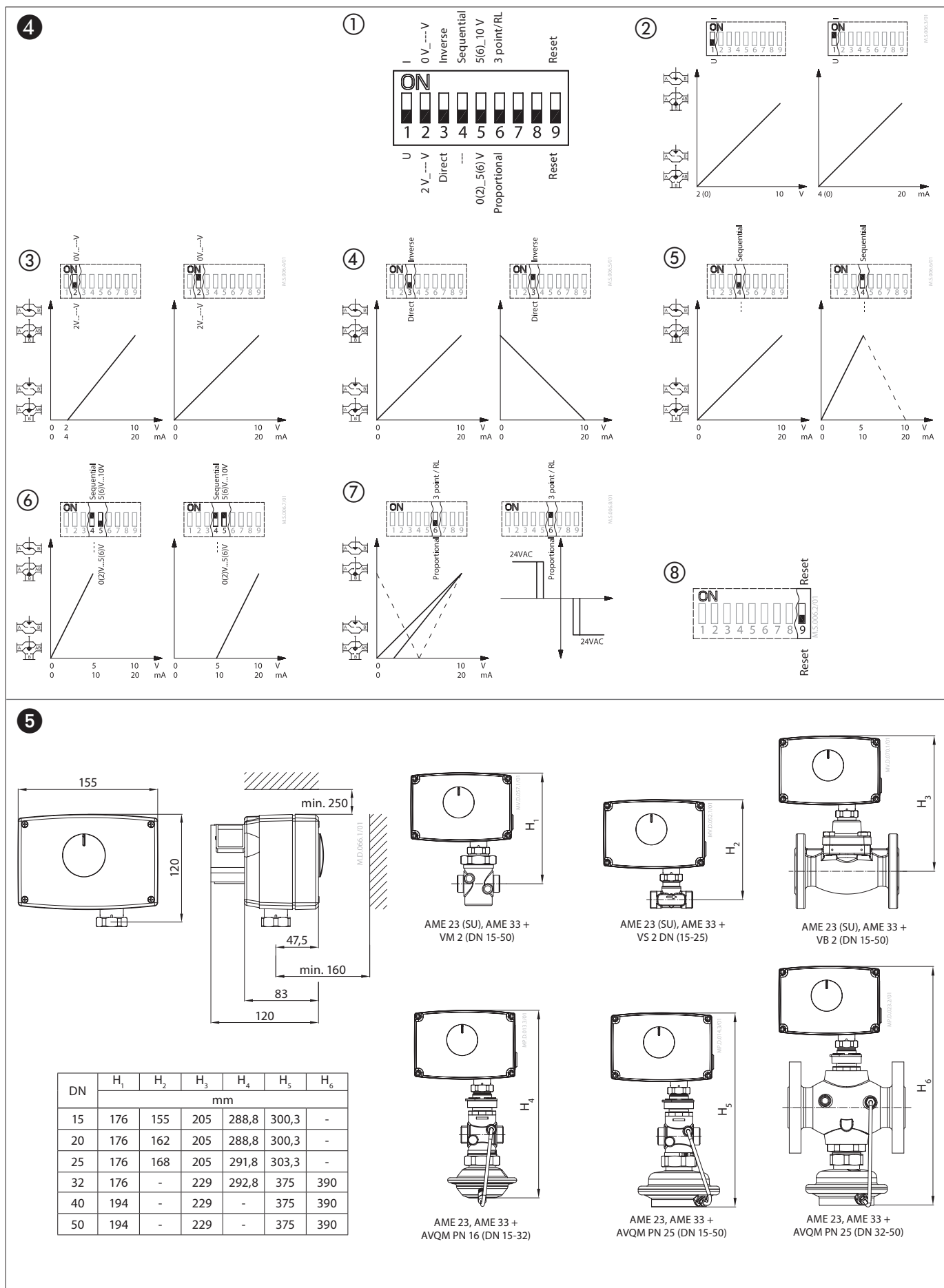
ECL 310, 24 V a.c.

TR1
TR2

7= act. stem retract
6= act. stem extend

*R1, *R2=2.6 kΩ (0.5W)

AME



ENGLISH

Safety Note



To avoid injury of persons and damages to the device, it is absolutely necessary to read and observe these instructions carefully.

Necessary assembly, start-up, and maintenance work must be performed by qualified and authorized personnel only.

Please comply with the instructions of the system manufacturer or system operator.



Do not remove the cover before the power supply is fully switched off.

Mounting

Admissible Installation Positions ①

Fix the AME 23, AME 23 SU, AME 33 on the valve.

②

Wiring ③



Do not touch anything on the PCB! Switch off the power line before wire the actuator! Lethal voltage! Wire the actuator according to the wiring diagram.

Control signal

Control signal from the controller must be connected to terminals Y (input signal) and SN (common) on the AME printed board.

Output signal

Output signal from the terminal X can be used for indication of the current position. Range depends on the DIP switch settings.

Supply voltage

Supply voltage (24 V ~ -15 to +10 %, 50/60 Hz) must be connected to the terminals SN and SP.

DIP switch settings ④

U		I	
2 V_... V		0 V_... V	
Direct		Inverse	
---		Sequential	
0(2)_5(6) V		5(6)_10 V	
Proportional		3 point/RL	
LOG. flow		LIN. flow	
100 % k_{vs}		RED. k_{vs}	
Reset		Reset	



Factory settings:
ALL switches are on OFF position! ④①



Note: All combinations of DIP switches are allowed. All functions that are selected are added consecutively. There is only one logic override of functionalities i.e. the switch No.6 Proportional/3 point, which sets actuator to ignore control signal and works as a "simple" 3-point actuator.

SW1: U/I ④②



Factory settings:
Voltage control signal (0-10 V).

SW2: 2-10 V/0-10 V ④③



Factory settings:
2-10 V.

SW3: Direct/Inverse ④④



Factory settings:
DIRECT

SW4: ---/Sequential ④⑤

Two actuators can be set to work parallel with one control signal. If the SEQUENTIAL is set then an actuator responds to split control signal (see 0(2)-5(6) V/5(6)-10 V).



Note: This combination works in combination with switch No.5: 0(2)-5(6) V/5(6)-10 V

SW5: 0(2)-5(6) V/5(6)-10 V ④⑥



Note: This function is available if switch No.4: ---/Sequential is set.

SW6: Proportional/3 point ④⑦



Actuator needs to perform Self stroking prior changing DIP 6 to ON. Output signal depends on DIP 2, 3&5 setting.

Actuator can operate in modulating (DIP 6 to OFF) or in "simple" 3-point mode, if the 3-point function is selected (DIP 6 to ON).

Connect power supply on terminals SN and SP terminals.

Factory set DIP 6 to OFF for operating actuator in Modulating mode.

Actuator's stem will run to its totally extended or retracted position by bridging SN signal to terminals 1 or 3 and will remain in this position as long as potential is present.

Set DIP 6 to ON for operating actuator in 3 point mode.

Look carefully wiring diagram as wiring is different for controllers with triac output (ECL) in comparison to controllers with relay output.

Return signal X indicates the correct position.



Note: If 3 point function is selected actuator does not respond to any control signal on port Y. It only rises and lowers spindle if power is supplied on port 1 or 3.

SW7: LOG/LIN - Not in use.

SW8: 100% k_{vs} /Reduced k_{vs} - Not in use.

SW9: Reset ④⑧

After the actuator has been connected to power supply, the actuator will start the self-adjustment procedure. The indicator LED flashes until self adjustment is finished. The duration depends on the spindle travel and will normally last a few minutes. The stroke length of the valve is stored in the memory after self adjustment has been completed. To restart self adjustment, change the position of RESET switch (switch No.9). If the supply voltage is switched off or falls below 80 % in more than 0.1 s, the current valve position will be stored in the memory and all data remain saved in the memory also after a power supply cut-out.

Function test

The indicator light shows whether the positioner is in operation or not. Moreover, the indicator shows the control status and faults.

Constant light

- normal operation

No light

- no operation or no power supply

Intermittent light (1 Hz)

- self adjusting-mode

Intermittent light (3 Hz):

- power supply too low
- insufficient valve stroke (<20 s)
- end-position cannot be reached.

Dimensions ⑨

Part Name	Hazardous Substances Table					
	Lead (Pb)	Mercury (Hg)	Cadmium (Cd)	Hexavalent Chromium (Cr(VI))	Polybrominated biphenyls (PBB)	Polybrominated diphenyl ethers (PBDE)
Housing	X	O	O	O	O	O
Electromagnet	X	O	O	O	O	O
Nut	X	O	O	O	O	O
Bush	X	O	O	O	O	O
Brake weights	X	O	O	O	O	O
O: Indicates that this hazardous substance contained in all of the homogeneous material for this part is below the limit requirement in GB/T 26572;						
X: Indicates that this hazardous substance contained in at least one of the homogeneous material for this part is above the limit requirement in GB/T 26572;						

DANSK

Sikkerhedsbestemmelser



For at undgå skader på personer og udstyr, er det absolut nødvendigt at gennemlæse følgende vejledning.

Montering, opstart og vedligeholdelse må kun foretages af kvalificeret og autoriseret personale.

Følg fabrikantens eller operatørens instruktioner.



Fjern ikke dækslet, før strømforsyningen er helt koblet fra.

Elektrisk tilslutning ③



*Rør ikke ved PCB!
Sluk for strømmen inden elektrisk tilslutning af motoren! Kan være livsfarlig!*

Tilslut motoren iht. ledningsdiagrammet.



DEUTSCH

Sicherheitshinweise



Um Verletzungen an Personen und Schäden am Gerät zu vermeiden, ist diese Anleitung unbedingt zu beachten.

Montage, Inbetriebnahme und Wartungsarbeiten dürfen nur von sachkundigen und autorisierten Personen durchgeführt werden.

Die Vorgaben des Anlagenherstellers und Anlagenbetreibers sind zu beachten.



Entfernen Sie die Abdeckung nicht, bevor die Stromversorgung komplett ausgeschaltet ist.

Elektrischer Anschluß ③



*Bitte die Platine nicht direkt berühren!
Trennen Sie das Netzkabel vor der Verdrahtung des Stellantriebs!*

*Tödliche Spannung!
Schließen Sie den Stellantrieb gemäß dem Verdrahtungsplan an.*



FRANÇAIS

Sécurité



Pour éviter des blessures des personnes et des dégâts au dispositif, il est absolument nécessaire de lire attentivement et de respecter ces instructions.

Le montage, la mise en marche et toute opération de maintenance doivent être effectués par un service ou une personne de qualification.

Suivre les instructions du fabricant du système ou de son service.



Ne pas retirer le capot avant d'avoir totalement coupé l'alimentation.

Branchement électrique ③



*Ne pas toucher la carte de circuit imprimé!
Couper l'alimentation avant de raccorder l'actionneur! Danger de mort!*

Raccorder l'actionneur conformément au schéma de branchement électrique.



ESPAÑOL

Nota de seguridad



A fin de evitar lesiones personales o daños en el dispositivo, es absolutamente necesario leer y respetar estrictamente estas instrucciones.

Las operaciones de montaje, puesta en marcha y mantenimiento deben ser realizadas únicamente por personal cualificado y autorizado.

Por favor, respete las instrucciones del fabricante u operador del sistema.



No retire la cubierta antes de haber desconectado el suministro eléctrico por completo.

Cableado ③



*¡No toque nada en la placa de circuito impreso! ¡Tensión letal!
¡Desactive la línea de suministro eléctrico antes de conectar el actuador!
Conecte el actuador de acuerdo con el esquema de cableado.*



SUOMI

Turvallisuushuomautus!



Näitä ohjeita on ehdottomasti noudatettava henkilö- ja omaisuusvahinkojen välttämiseksi.

Ainoastaan ammattitaitoiset ja valtuutetut henkilöt saavat tehdä kokoonpano-, käynnistys- ja huoltotöitä.

Noudata järjestelmän valmistajan ohjeita.



Älä irrota kantta, ennen kuin virransyöttö on täysin katkaistu.

Johdotus ③



*Älä koske mihinkään piirilevyllä!
Käännä virta pois päältä ennen toimimoottorin kytkemistä!
Hengenvaarallinen jännite!
Kytke toimimoottori johdotuskaavion mukaisesti.*



NEDERLANDS

Veiligheid



Om verwondingen van personen en schade aan het apparaat te voorkomen dient men deze instructies met aandacht te lezen.

Montage, inbedrijfstelling en onderhoudswerkzaamheden mogen alleen door deskundig en erkend personeel uitgevoerd worden.

Neem alle instructies betreffende installatiecomponenten van andere fabrikanten in acht.



Verwijder de afdekkap niet voordat de voedingsspanning volledig is uitgeschakeld

Elektrische aansluiting ③



*Gevaarlijke spanning, raak niets aan op de printplaat! Dodelijke spanning!
Schakel de stroom uit voordat de bedrading van de servomotor wordt aangebracht!
Sluit de servomotor aan volgens het aansluitschema.*



POLSKI

Warunki bezpieczeństwa



Aby uniknąć obrażeń u ludzi oraz uszkodzenia sprzętu, należy koniecznie zapoznać się z tymi informacjami i przestrzegać ich.

Niezbędne prace związane z montażem, uruchomieniem i konserwacją mogą być wykonywane wyłącznie przez autoryzowany i wykwalifikowany personel.

Prosimy stosować się do instrukcji producenta lub operatora układu.



Nie zdejmować pokryw przed całkowitym odłączeniem zasilania.

Okablowanie ③



*Nie wolno niczego dotykać na płycie drukowanej!
Przed przystąpieniem do podłączania do siłownika przewodów elektrycznych należy odłączyć zasilanie sieciowe! Zagrożenie życia!
Podłączyć siłownik zgodnie z podanym schematem.*



РУССКИЙ

Техника безопасности



Во избежание получения травм или повреждений устройства обязательно прочитайте настоящую инструкцию и тщательно ее соблюдайте.

Все необходимые работы по сборке, вводу в действие и техническому обслуживанию оборудования должны выполняться только квалифицированным персоналом, имеющим соответствующее разрешение.

Следуйте указаниям производителя системы или оператора системы.



Не снимайте крышку до того, как питание будет полностью отключено.

Схема электрических соединений ③



*Не прикасайтесь к открытым контактам!
Отключать линию питания перед монтажом проводки электропривода! Возможен летальный исход!
Смонтируйте проводку привода согласно электрической схеме.*



ROMÂNĂ

Notă privind siguranța în funcționare



Pentru a evita rănirea persoanelor și distrugerii ale echipamentului, este absolut necesar să citiți și să respectați cu atenție aceste instrucțiuni.

Activitatea necesară de instalare, pornire și întreținere trebuie executată numai de personal calificat și autorizat.

Vă rugăm să respectați instrucțiunile fabricantului sistemului sau ale operatorului de sistem.



Nu îndepărtați capacul până când alimentarea cu electricitate nu este complet deconectată.

Cablarea ③



*Nu atingeți nicio componentă de pe placa circuitelor integrate!
Deconectați linia de alimentare electrică înainte de conectarea prin fire a servomotorului! Tensiune letală!
Conectați servomotorul prin fire în conformitate cu schema de conexiuni.*



AME 23, AME 23 SU, AME 33

中文

安全注意事项



为避免发生人身和设备事故，请仔细阅读本手册。

安装、调试、维修必须由专业人员进行。

请遵循系统制造商或系统操作人员的说明。



电源未完全关闭前，请勿取下顶盖

接线 

不要碰触电路板上的任何元件！
接线前请先断开电源！致命的电压！
请按接线图接线



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