

electrical 90° rotary actuator Series AQ (50 Nm up to 500 Nm)

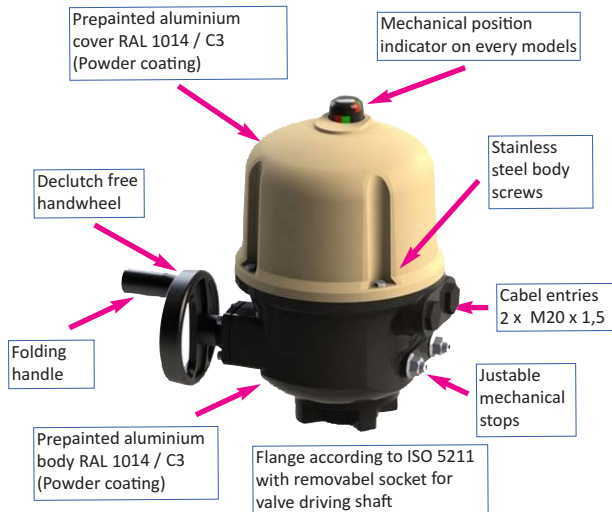
Compact electric quarter-turn actuator series which was designed for the daily industrial use. Simple but robust design distinguishes this reliable rotary actuator.

Depending on the process requirement, there are two versions to choose:

OPEN / CLOSE version, class A according to EN 15714-2 or for Inching/Positioning, class B (S4 - 30%, engine power up to 120 starts per hour at peak load) according to EN 15714-2.

The actuators are maintenance-free and internally completely pre-wired. The self-locking gear with the high-performance lubricate guarantees a long service life.

Different drive motors are available for 3-phase, single-phase (50 HZ or 60 HZ) or DC.



- 3-phase or single-phase asynchronous motor, class F insulation with integratal thermal overload protection
- DC motors with 2-wire connection available for same references
- 2 x cable gland M 20 x 1,5
- Screw-type terminals for controls and power supply. Internal earth grounding post.
- Protection class IP 68 standard (2,0 m/24h) according to NEMA 4x
- Ambient temperature range from -20 ° C up to +60 ° C
- Housing made of aluminum casting, outside powder coating, minimum 160 µm, cover RAL 1014 (ivory); corrosivity protection class C3
- Cover fastened by captive and stainless steel screws

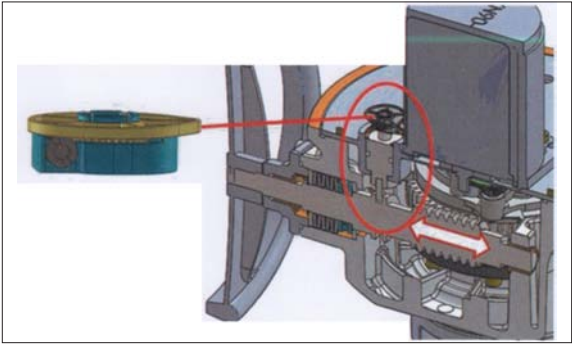
Equipment AQ series (standard OPEN / CLOSE operation)

End positions	2 SPDT switches for switching off the motor in end position OPEN and CLOSED 2 auxilliary switches for signaling the End positions OPEN and CLOSE 250 V AC - 5A / 48 V DC - 2.5 A (resistive load) 2 mechanically adjustable from the outside end stops
Mechanical position indicator	Cover on top with 3D all around visible position indicator: red = CLOSE / green = OPEN
Emergency operation	Manual emergency operation in case of power failure via handwheel -the motor is out of operating-
Anti-condensation heater	Protection against moisture in the drive housing
Self-locking	Gearbox is blocked when engine is stopped, prevents unintentional adjustment of the valve

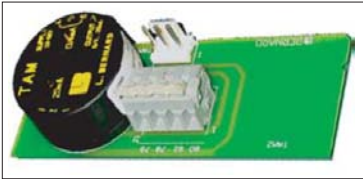


patented, vibration-proof cam mechanism for limit switch adjustment. Easy to adjust with flat screwdriver.

Torque limiting system standard AQ25 / AQ30 / AQ50	
Torque limiting system	<ul style="list-style-type: none"> • Torque limitation available from size AQ25 (250 Nm) • The torque limiting system is calibrated at the factory • 2 contacts as standard (1 in opening and 1 in closing) SPDT: 250 V AC 5A max (resistive load) • Adjustable torque from 40 to 100% of max torque (intrusive setting)



Additional options AQ-Serie (Inching/Positioning S4 - 30%)	
Position-transmitter	Output signal 4 - 20 mA (4 mA closed 20 mA open) voltage supply: 12 - 32 V DC (external)

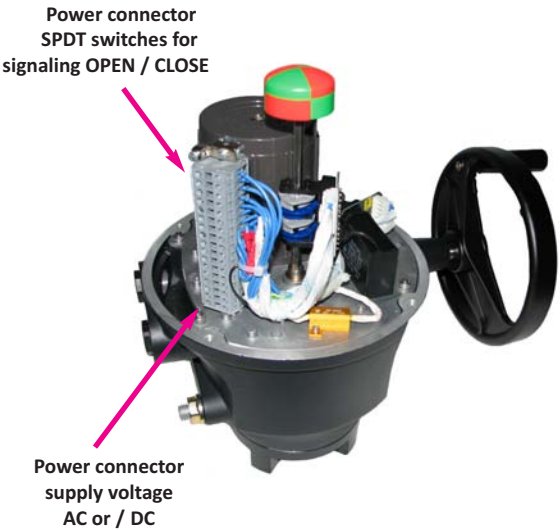


Actuator datas			Power datas 1 x 220/230 V AC 50/60 Hz				Power datas 3 x 400 V AC 50 Hz			
Actuator size	Torque (Nm max)	Positioning torque (Nm max)	Operating time s / 90°	Power (KW)	Current rated (A)	Current start (A)	Operating time s / 90°	Power (KW)	Current rated (A)	Current start (A)
AQ5	50	--	16 / 13	0,015	0,6	0,7	16	0,03	0,3	0,5
AQ10	100	50	25 / 21	0,015	0,6	0,7	25	0,03	0,3	0,5
AQ15	150	75	30 / 25	0,03	0,8	1,1	30	0,03	0,3	0,5
AQ25	250	125	30 / 25	0,04	1,1	1,4	30	0,04	0,3	0,5
AQ30	300	150	35 / 30	0,04	1,1	1,4	35	0,04	0,3	0,7
AQ50	500	250	35 / 30	0,06	1,2	1,7	35	0,07	0,3	0,8

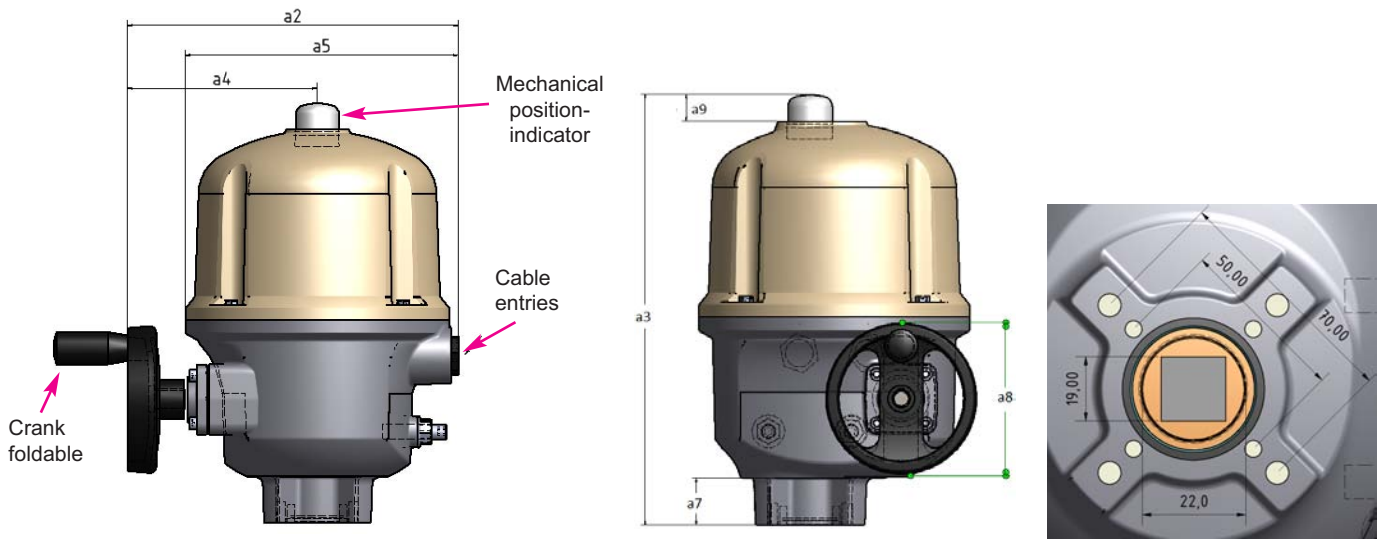
Data at 60 Hz

Actuator datas			Power datas 24 V DC			
Actuator size	Torque (Nm max)	Positioning torque (Nm max)	Operating time s / 90°	Power (KW)	Current rated (A)	Current start (A)
AQ5	50	--	13	0,03	2,5	8,0
AQ10	100	--	21	0,03	2,5	8,0
AQ15	150	--	25	0,03	2,5	8,0
AQ25	250	--	25	0,05	3,5	10,0

Order-no.:				
Actuator size	Voltage 24 V DC	Voltage 220 - 230 V AC	Voltage 3 x 400 V DC	Positioner Transmitter
AQ5	171.8088.05.13	171.8089.05.16	171.8090.05.16	-TPO
AQ10	171.8088.10.21	171.8089.10.25	171.8090.10.25	-TPO
AQ15	171.8088.15.25	171.8089.15.30	171.8090.15.30	-TPO
AQ25	171.8088.25.25	171.8089.25.30	171.8090.25.30	-TPO
AQ30	--	171.8089.30.35	171.8090.30.35	-TPO
AQ50	--	171.8089.50.35	171.8090.50.35	-TPO

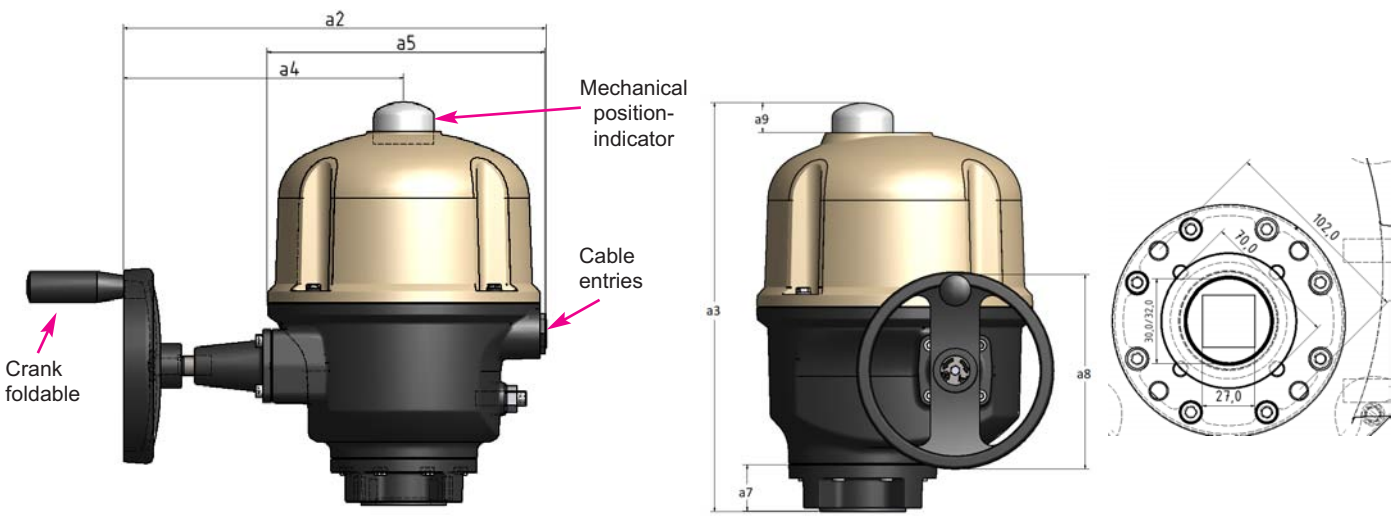


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Dimensions electrical actuators AQ05 / AQ10 / AQ15

Actuator size	Torque (Nm max)	Flange ISO 5211	Stem size max (mm)		a2 (mm)	a3 (mm)	a4 (mm)	a5 (mm)	a7 (mm)	a8 (mm)	a9 (mm)	Cable gland	weight (kg)
			Bore	Square									
AQ5	50	F05/F07	22	19	225,0	290,0	129,0	185,0	32,0	100,0	17,5	M20 x 1,5	10
AQ10	100	F05/F07	22	19	225,0	290,0	129,0	185,0	32,0	100,0	17,5	M20 x 1,5	10
AQ15	150	F05/F07	22	19	225,0	290,0	129,0	185,0	32,0	100,0	17,5	M20 x 1,5	10



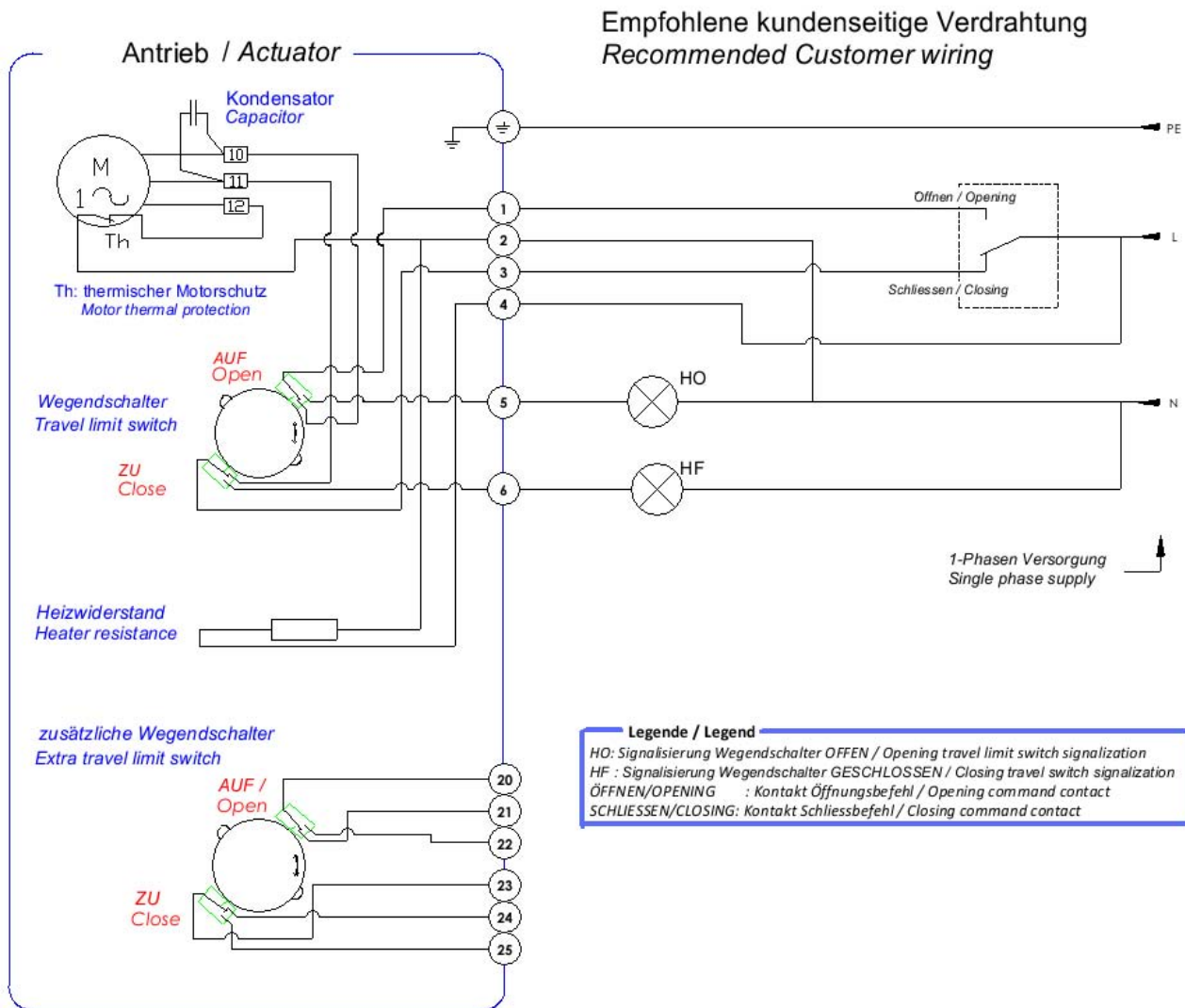
Dimensions electrical actuators AQ25 / AQ30 / AQ50

Actuator size	Torque (Nm max)	Flange ISO 5211	Stem size max (mm)		a2 (mm)	a3 (mm)	a4 (mm)	a5 (mm)	a7 (mm)	a8 (mm)	a9 (mm)	Cable gland	weight (kg)
			Bore	Square									
AQ25	250	F07/F10	30	27	330,0	390,0	198,5	265,0	37,5	158,0	24,0	M20 x 1,5	18
AQ30	300	F07/F10	30	27	360,0	401,0	230,5	293,0	37,5	158,0	24,0	M20 x 1,5	20
AQ50	500	F07/F10	32	27	360,0	401,0	230,5	293,0	37,5	158,0	24,0	M20 x 1,5	20

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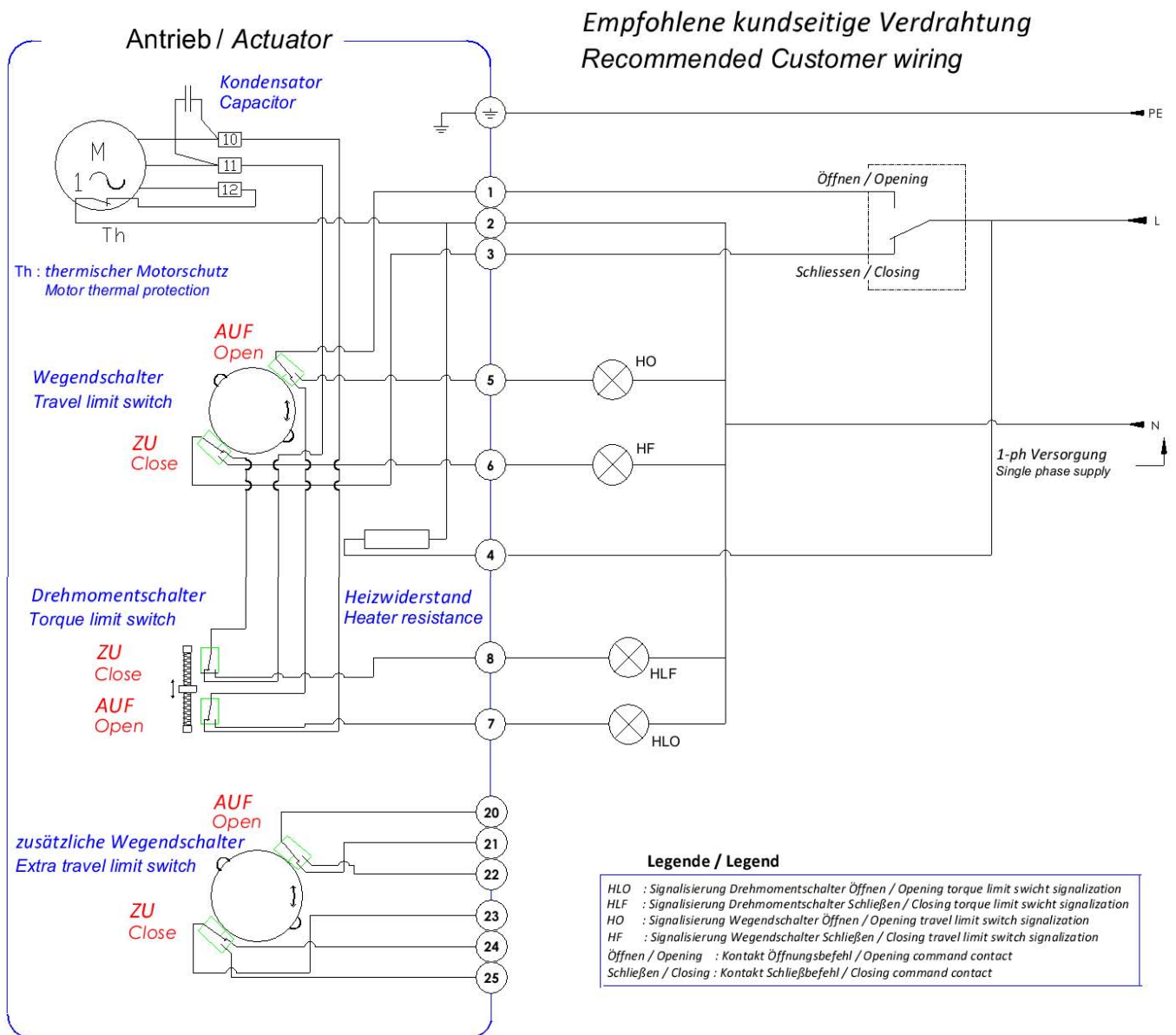
Wiring diagram electrical 90° quarter-turn actuators Series AQ 5 / AQ 10 / AQ 15 (50 Nm to 150 Nm)

Voltage supply single-phase AC 220/230 V (AC)



Wiring diagram electrical 90° quarter-turn actuators Series AQ 25 / AQ 30 / AQ 50 (250 Nm up to 500 Nm)

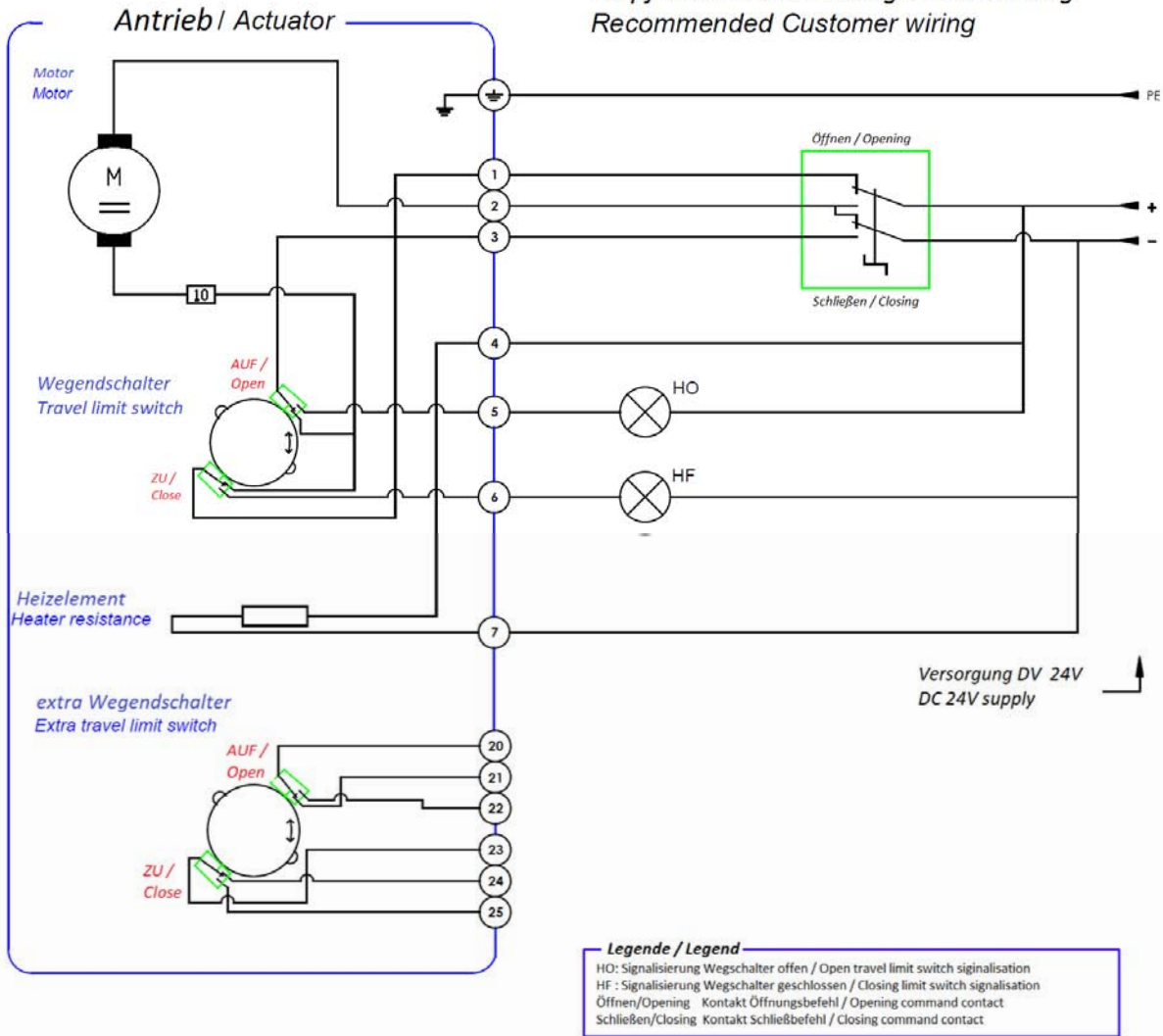
Voltage supply single-phase AC 220/230 V (AC)



Wiring diagram electrical 90° quarter-turn actuators Series AQ 5 / AQ 10 / AQ 15 (50 Nm bis 150 Nm)

Voltage supply 24V DC (DC)

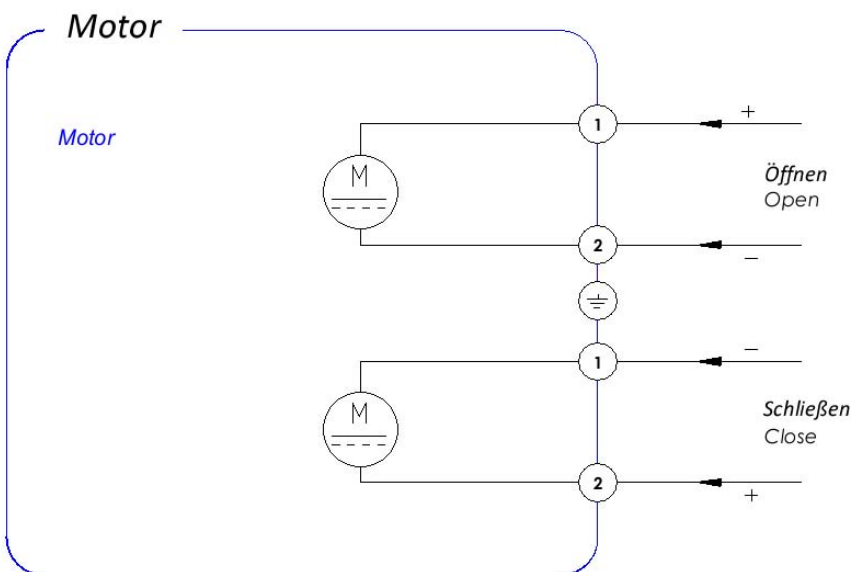
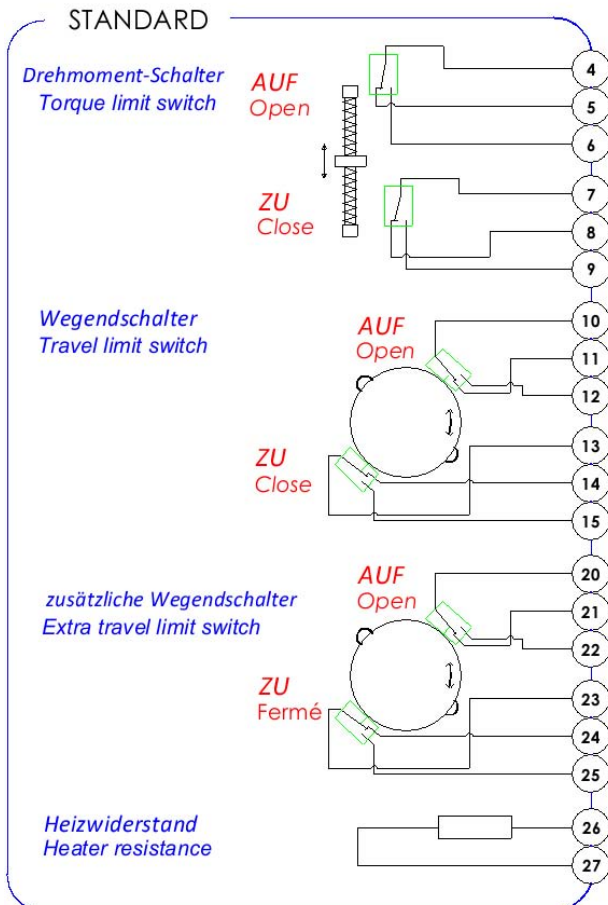
Empfohlene kundenseitige Verdrahtung
Recommended Customer wiring



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Wiring diagram electrical 90° quarter-turn actuators Series AQ 25 (250 Nm)

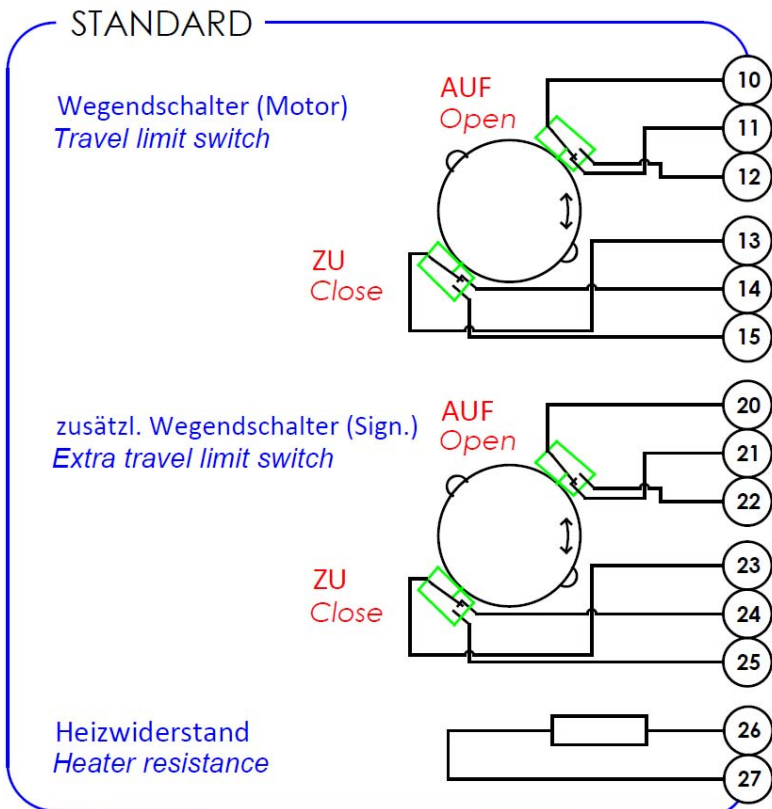
Voltage supply 24V DC (DC)



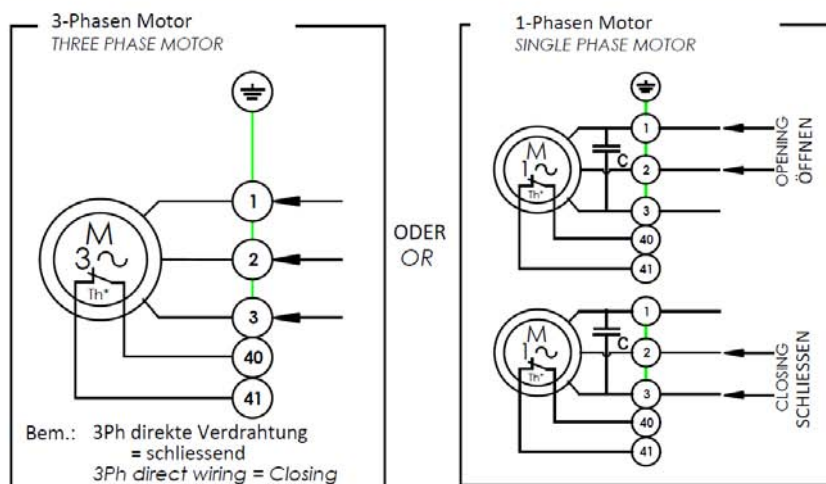
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Wiring diagram electrical 90° quarter-turn actuators Series AQ 5 / AQ 10 / AQ 15 (50 Nm- 150 Nm)

Voltage supply 1ph/3ph STANDARD



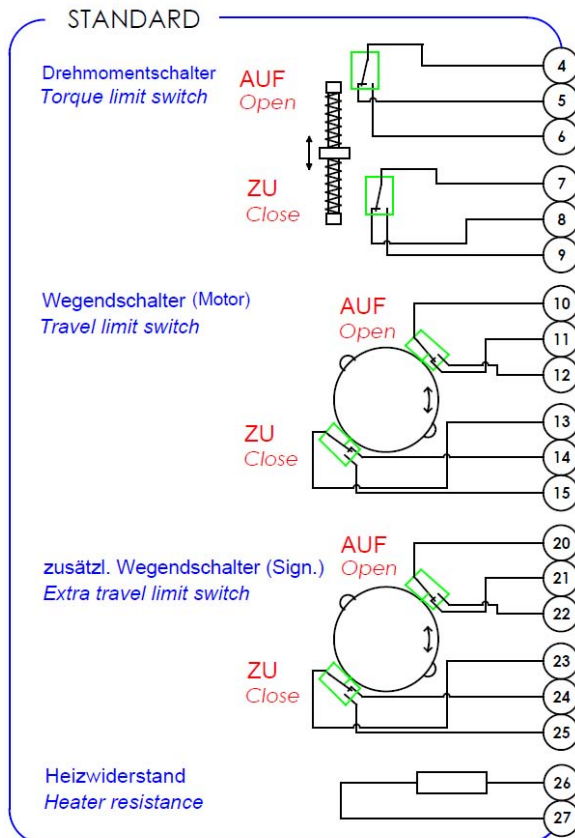
MOTOR



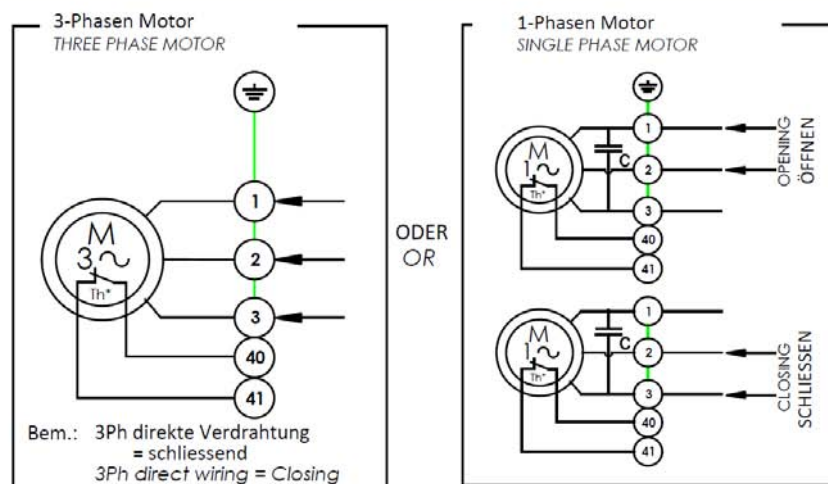
Th* : thermischer Motorschutz / motor thermal protection

Wiring diagram electrical 90° quarter-turn actuators Series AQ 25 / AQ 30 / AQ 50 (250 Nm- 500 Nm)

Voltage supply 1ph/3ph STANDARD



MOTOR



Th* : thermischer Motorschutz / motor thermal protection