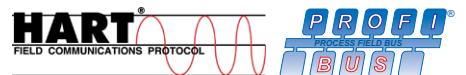


For continuous positioning,
rated torque 100 Nm,
with integrated or for separate electronic unit

- **Electrical actuator for continuous positioning or step control**
- **Stallproof without the need of position or torque dependent switch-off**
- **Robust gearing with high mechanical efficiency**
- **Adjustable mechanical limit stops for defined operating range**
- **Hand wheel for emergency operation**
- **Sensors for position and temperature integrated**
- **Signal and power input only via micro processor controlled power electronics (integrated at PME 120 AI)**
- **Voltage supply AC 115 V or AC 230 V only via special power electronics**



The concept

Compact actuator for the operation of final control elements with preferably 90° rotary movement such as flaps, cocks etc.

The torque is transferred via a lever / linkage bar assembly or the actuator is directly coupled to the cock flange.

A special power electronics controls the actuator. It is the interface between actuator and control system.

During continuous positioning the power electronic unit varies the motor torque steplessly until the actuator force and the restoring process forces are balanced. High response sensitivity and high positioning accuracy with short positioning time ensure an excellent control quality and a long actuator life.

Technical data

Actuator

Type	PME120-AN; PME120-AI
Rated torque [kN]	4 (adjustable to 0.5; 0.75 or 1x rated torque)
Starting torque	1.2 x rated torque (break-away torque in end positions 2 x rated torque for a short time)
Rated time for 90° (rated speed)	adjustable from 20...60s (4.5°/s ... 1.5°/s)
Operating angle	typically 90 ° (min. 35°; max. 300°), see manual for reduced angle with lever and limit stop
Associated electronic unit (data sheet)	PME120-AI: integrated electronics PME120-AN: suitable for field installation: EAN823 (10/68-8.26 EN) suitable for rack installation: EAS822 (10/68-8.23 EN)
Motor	24 V 3~ asynchronous motor for operation with electronic unit EAN 823 or EAS 822
Sensors	position and temperature sensor always available

Electronic unit (for PME120-AI)

Power supply	AC 115 V (94 V ... 130 V) or AC 230 V (190 V ... 260 V); 47,5 ... 63 Hz; 1Ph
Current (electronic unit) (AC 115 V / AC 230 V) max [A] (positioning)	1.0 / 0.5 (ca. 40 ... 50% of I _{max})
External fuse	16 A; slow
Analogue input*	0 / 4 ... 20 mA
Analogue output*	0 / 4 ... 20 mA, galvanically isolated
3 digital input*, BE1 ... BE3	digital 0: -3V ... + 5 V or open, galvanically isolated digital 1: +12 V ...+ 35 V, galvanically isolated
3 digital output*, BA1 ... BA3	relay contact potential free, max. 60 V, 150 mA
Digital communication	RS 232 for commissioning and service, optionally FSK / HART® or PROFIBUS DP
Standard settings	behaviour in 0/100% end position: hold with rated torque setpoint function: linear, setpoint = position value setpoint input: 4 ... 20 mA function selection: positioner, parameter: setpoint output for actual value: 4 ... 20 mA digital input: BE 1 M/A selection; BE 2 / BE 3 manual intervention +/- digital output: BA 1 ready for operation; BA 2/3 end position indication 0/100%
Voltage output U _v	24 V; 15 mA, galvanically isolated for contact scan or similar
Transmitter (optionally)	Supply of 2-wire transmitter with activated controller
Individual settings	see data sheet 68-2.40 or upon request

*analogue- / digital in-/ output not available with PROFIBUS communication

Electrical Part-Turn Actuator PME120-AI / -AN (Contract)

For continuous positioning, rated torque 100 Nm, with integrated or for separate electronic unit

10/68-1.51 EN

General data

	PME120-AI (integrated electronic unit)	PME120-AN (separate electronic unit)
Operating mode	S9 - stallproof acc. to DIN IEC 2/915/CDV	
Protection class	IP 66	
Humidity	≤ 95% average; condensation not permitted	
Ambient temperature	-10° C ... +55°C or -25° C ... +55° C	-10° C ... +65°C or -25° C ... +55° C
Mounting position	any position; preferably IMB 3 acc. to IEC 34	
Coating	2 component epoxy (RAL 9005; black)	
Anti condensation heater	---	optionally (supplied by electronic unit)
Power supply for motor and sensors	only via Contract electronic unit (see data sheet of electronic unit)	
Cable between actuator- electronic unit	---	optionally 5 m; 10 m or 20 m
Weight; approx.	32 kg	36 kg

Plug 24-pole at the actuator

		Crimp pins	Terminals (Option)
PME120-AN	cable gauge:	motor, heater: 1.5 mm ² signals: 0.5 mm ²	2.5 mm ²
	contact surface	gold plated	motor, signals: gold plated heater: silver plated
PME120-AI	cable gauge:	mains: 2.5 mm ² (terminals) signals: 0.5 mm ²	mains: 2.5 mm ² signals: 2.5 mm ²
	contact surface	gold plated	mains: silver plated signals: gold plated

Tapped holes for cable glands

tapped holes for cables	optional adapters*	
M20 x 1.5 (2x)	PG 16 (2x)	NPT 1/2" (2x)
M25 x 1.5 (1x)	PG 21 (1x)	NPT 3/4" (1x)

* adapter for PG or NPT thread only available if additionally ordered

Electrical Part-Turn Actuator PME120-AI / -AN (Contrac)

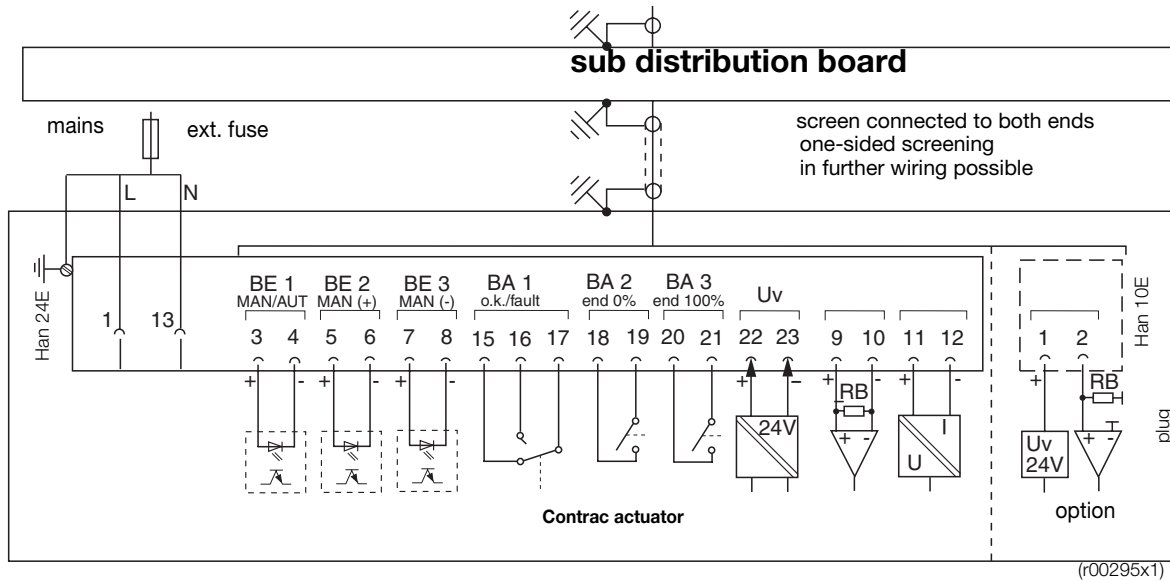
For continuous positioning, rated torque 100 Nm, with integrated or for separate electronic unit

10/68-1.51 EN

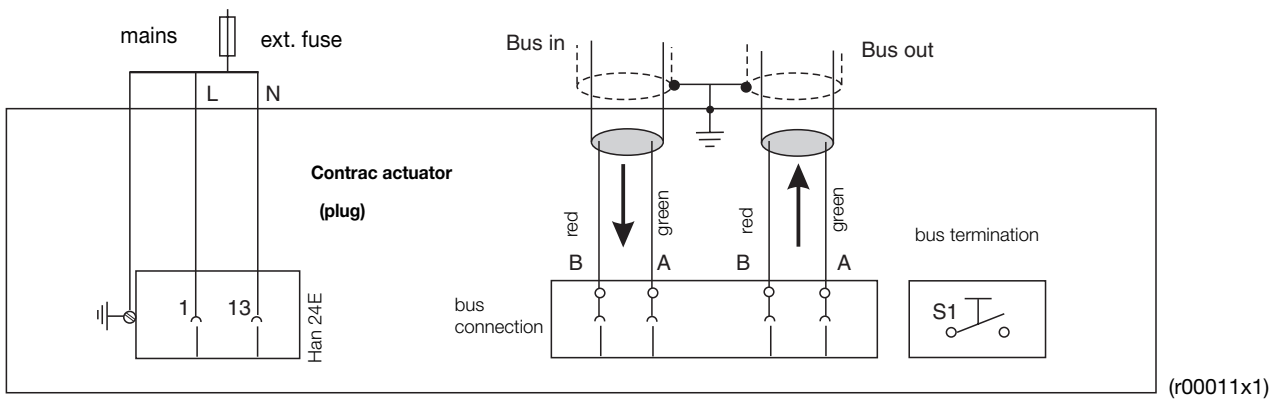
Electrical connection PME120-AI (integrated electronic unit)

The electrical connection is done via a plug at the actuator and via terminals at the electronics.

Electrical connection: standard analog / digital



Electrical connection: Option PROFIBUS DP



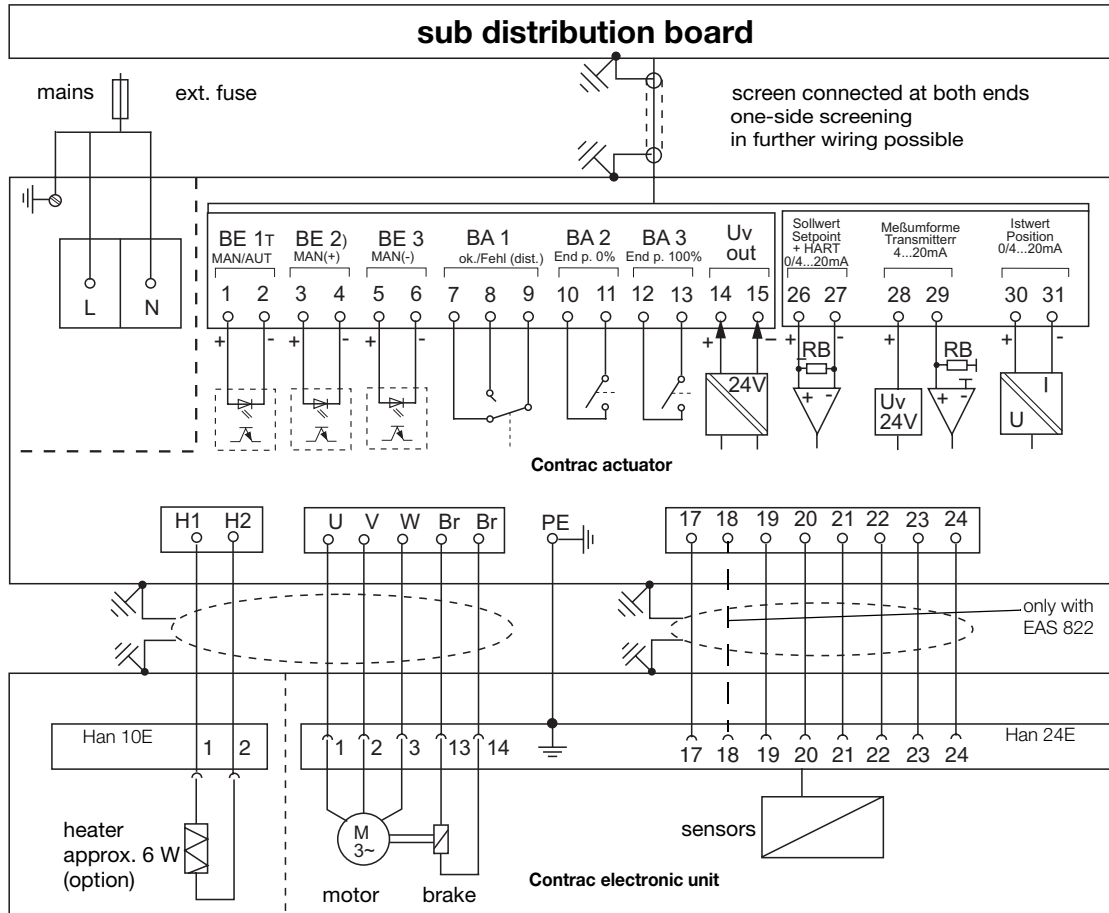
Electrical Part-Turn Actuator PME120-AI / -AN (Contrac)

For continuous positioning, rated torque 100 Nm, with integrated or for separate electronic unit

Electrical connection PME120-AN (separate electronic unit)

The electrical connection is done via a plug at the actuator and via terminals at the electronics.

Electrical connection: standard, analogue / digital



r00350x1

For further information about electronic units for mounting rack see instruction 42-68-821 and data sheet 10/68-8.23.

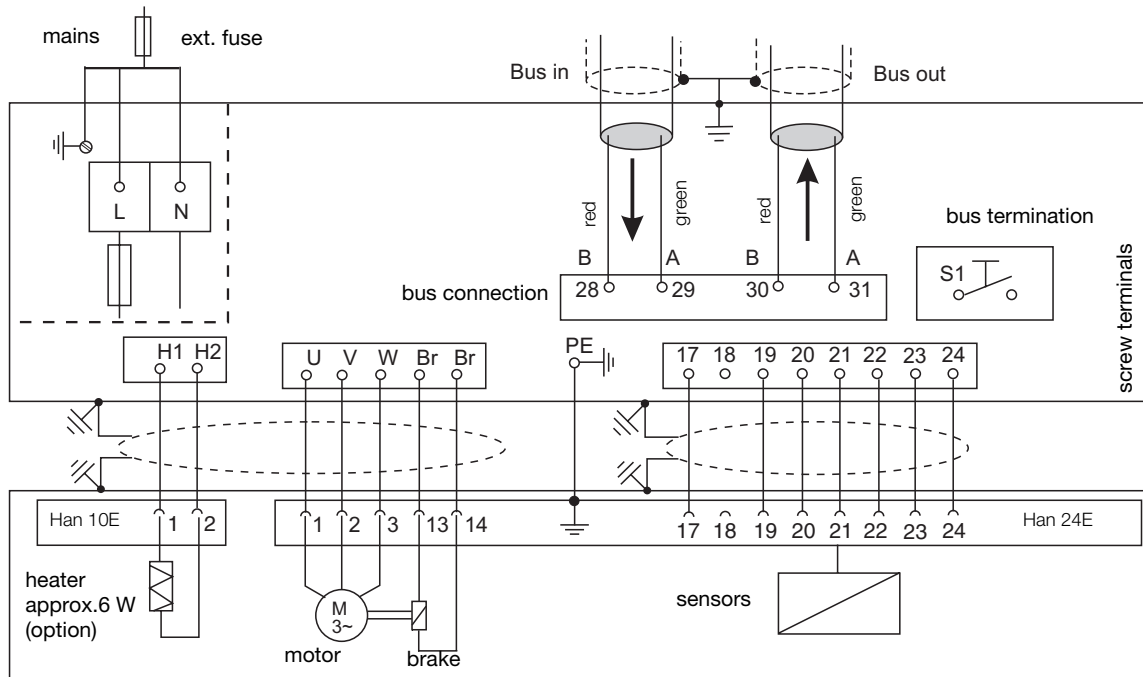
Electrical Part-Turn Actuator PME120-AI / -AN (Contract)

For continuous positioning, rated torque 100 Nm, with integrated or for separate electronic unit

10/68-1.51 EN

Electrical connection: Option PROFIBUS DP

(not for electronic unit EAS822)



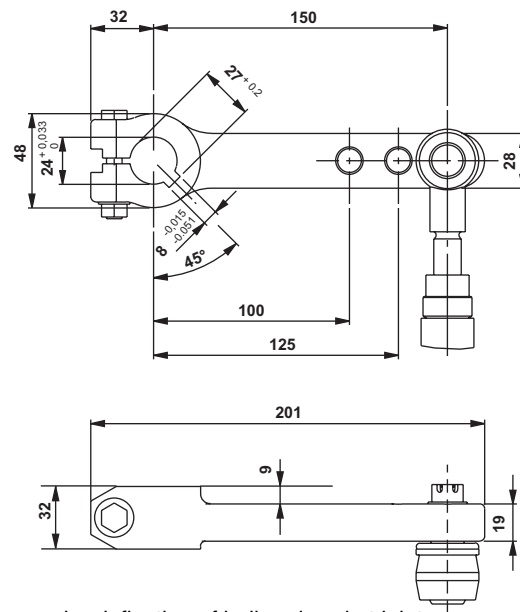
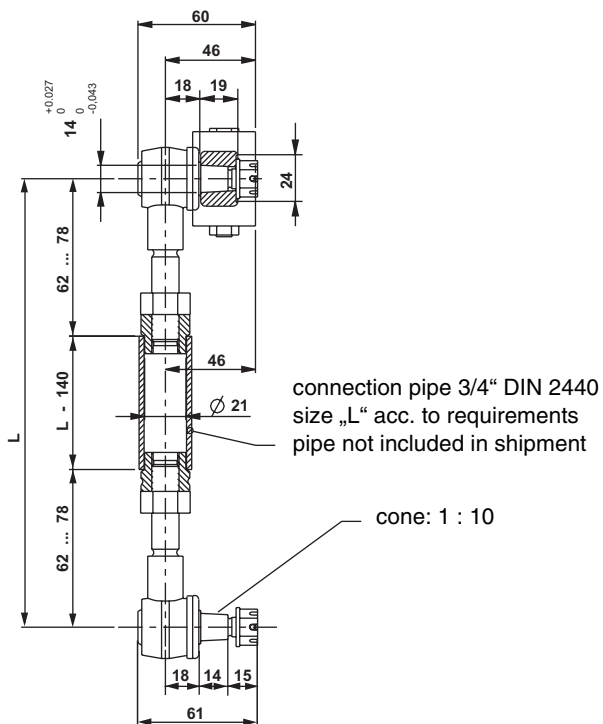
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Electrical Part-Turn Actuator PME120-AI / -AN (Contrac)

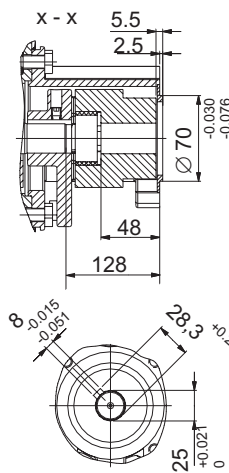
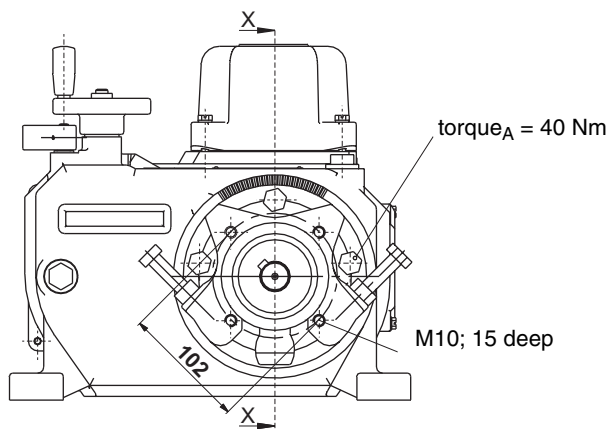
For continuous positioning, rated torque 100 Nm, with integrated or for separate electronic unit

10/68-1.51 EN

Dimensions (Lever)



Dimensions (Direct adapter)



(r00048x1)

Electrical Part-Turn Actuator PME120-AI / -AN (Contract)

For continuous positioning, rated torque 100 Nm, with integrated or for separate electronic unit

10/68-1.51 EN

Order information PME120-AI (with integrated electronic unit)

			Catalog No.	Code		
Part-Turn Actuator PME120-AI			V68122A-	0	0	0
Rated torque 100 Nm (adjustable to 50%/75%/100%)						
Rated speed 4.5°/s (adjustable to 4.5 ... 0.1°/s)						
Special actuator features						
Select at least one feature per group						
adjusted to:	Nm	°/s	s/90°			
	100	4,5	20	310		
	100	3,0	30	311		
	100	1,5	60	312		
	50	3,0	30	313		
	50	1,5	60	314		
Shaft with key				370		
Lever set				371		
Direct adapter				372		
Electrical connection		plug (24-pole) complete, crimped		277		
		plug (24-pole) complete, terminals		278		
Supply voltage		AC 230 V 1 Ph		380		
		AC 115 V 1 Ph		381		
Frequency		50 Hz		382		
		60 Hz		383		
Digital communication		RS 232		384		
		RS 232 + HART		385		
		PROFIBUS DP		386		
Standard settings for electronic unit (see techn. data)				390		
Customer specific settings for electronic unit (see data sheet 10/68-2.40 EN)				391		
Ambient temperature		-10°C ... +55°C		342		
		-25°C ... +55°C		343		

Additional ordering information						
				Code		
Electrical connection thread		Set NPT adapter (junction metric / NPT thread)		680		
		Set PG adapter (junction metric / PG thread)		681		
Identification on data label		(alphanumeric, max. 32 characters)		294		
Accessories		cover for male plug (24 pole)		337		
Accessories		plug holder		338		
Factory certificate 2.1 acc. to EN 10204				291		
Certificate B acc. to EN 10204				292		
Assembly with valve at ABB		(order and pos. no. of valve required)		481		
Operating instruction (specify total quantity required, 1 copy without extra charge)						
German (no specification for 1 copy)				Z1D		
English (always state Code-No.)				Z1E		

Electrical Part-Turn Actuator PME120-AI / -AN (Contract)

For continuous positioning, rated torque 100 Nm, with integrated or for separate electronic unit

10/68-1.51 EN

Order information PME120-AN (for separate electronic unit)

		Catalog No.	Code			
Part-Turn Actuator PME120-AN Rated torque 100 Nm (adjustable to 50%/75%/100%) Rated speed 4.5°/s (adjustable to 4.5 ... 0.1°/s)		V68120A-	0	0	0	0
Special actuator features Select at least one feature per group						
Shaft with key			370			
Lever set			371			
Direct adapter			372			
Electrical connection	plug (24-pole) complete, crimped		277			
	plug (24-pole) complete, terminals		278			
	plug bottom part covered	1)	279			
Connection to electronic unit	EAN820, EAN823 (supply voltage AC 230 V)		280			
	EAN820, EAN823 (supply voltage AC 115 V)		281			
	EAS822 (supply voltage AC 230 V)		282			
	EAS822 (supply voltage AC 115 V)		283			
Ambient temperature	-10°C ... +65°C		344			
	-25°C ... +55°C		343			

Additional ordering information					
		Code			
Electrical connection thread	Set NPT adapter (joint metric / NPT thread)	680			
	Set PG adapter (joint metric / PG thread)	681			
Anti condensation heater		360			
Identification on data label	(alphanumeric, max. 32 characters)	294			
Accessories	cover for male plug (24 pole)	337			
Accessories	plug holder	338			
Factory certificate 2.1 acc. to EN 10204		291			
Certificate B acc. to EN 10204		292			
Assembly with valve at ABB (order and pos. no. of valve required)		481			
Operating instruction (specify total quantity required, 1 copy without extra charge)					
German (no specification for 1 copy)		Z1D			
English (always state Code-No.)		Z1E			

1) female plug with cables to be ordered with Electronic Unit

Attention!

Electronic Unit to be ordered separately

Electrical Part-Turn Actuator PME120-AI / -AN (Contract)

For continuous positioning, rated torque 100 Nm, with integrated or for separate electronic unit

10/68-1.51 EN

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