

**Electrical, explosionproof linear actuator for dampers in hazardous areas zone 1, 2, 21, 22 – Force 300 N - tested acc. to ATEX**

**Type EXP-3...**

**List 1.0  
EX-PLUS**

### APPLICATION

**EXP-3...** Damper actuator with linear motion. Explosionproofed in acc. with "flameproof enclosure" and dust ignition proof, PTB-tested. Installation in hazardous areas zone 1, 2, 21, 22. The actuator can be attached to a crank arm to change the linear motion into rotary of 90°. With a force of 300 N and a stroke of 100 mm, a torque of 15 Nm can be achieved. The actuator has integral limit switches and must not be stopped mechanically between end positions!

### TECHNICAL DATA

<b>Type</b>	<b>EXP-3230</b>	<b>EXP-3230-P</b>		
Supply voltage ± 10%	230 VAC	230 VAC		
<b>Type</b>	<b>EXP- 324</b>	<b>EXP- 324-P</b>	<b>EXP- 324-Y</b>	<b>EXP- 324-Y/I</b>
Supply voltage ± 10%	24 VAC	24 VAC	24 VAC	24 VAC
Power consumption	~9 VA	~9 VA	~9 VA	~9 VA
Force	300 N	300 N	300 N	300 N
Running time	~1 sec/mm	~1 sec/mm	~1 sec/mm	~1 sec/mm
Stroke	100 mm	100 mm	100 mm	100 mm
Control mode	on-off 3 pos	on-off 3 pos	2... 10 V	4... 20 mA
Input resistance			80 KΩ (~0,2 mA)	500 Ω
Feedback signal	-	1000 Ω	2... 10 V	2... 10 V
Endswitches	2 endswitches, <b>never stop the actuator between!</b>			
Ambient temperature	0... 40 °C, non condensing			
Housing material	Aluminium baked varnish			
Rod material	1.4034			
Weight	~3 kg			
Indication	CE Nr. 0158			
Permission	PTB-tested acc. to directive 94/9/EC (ATEX)			
Certificate	PTB 99 ATEX 1103			
Explosionproof	Ⓜ II2G EEx d IIC T6, CENELEC EN 50014/ EN 50018 Ⓜ II2D IP65 T95°C, CENELEC EN50281-1-1			
External PE-connector	Connectable lines: 4 mm <sup>2</sup> multiple-wire, 6 mm <sup>2</sup> single-wire			
Prot in acc. with EN 60529	IP 65			
Operating mode	S3 80%ED EN60034-1			
<b>Included</b>	Actuator with 1 m cable, II2G/D EEx e terminal box, mounting bracket, 2 linkages			
<b>Installation area</b>	hazardous areas zone 1, 2, 21, 22			

Ⓜ II2G EEx d IIC T6  
Zone 1, 2  
Ⓜ II2D IP65 T95°C  
Zone 21, 22



### ACCESSORIES

- /K** Heater for outdoor application and/or at high humidity for reducing water condensation. Power consumption of the heater ~16 W.
- 50... 100** Different strokes from 50mm up to 100 mm are continuously possible.
- 250** Stroke 250 mm.
- /2E** Not potential free endswitch feedback.
- MOL-NG 24** Battery power pack, standby unit, 24V, for mounting in safe area.
- MOL-EH 1** Electronic aux. switch, connectable to EXP-324-. actuators, panel mounting in safe area.

### DIMENSIONS

Type	A (mm)	B (mm)
EXP-3230 EXP-324	459	291
EXP-3230-P EXP- 324-P	509	341
EXP- 324-Y	509	341
EXP-3230-...-250 EXP- 324-...-250	649	481
	±3mm	

EEe e terminal box

mounting bracket

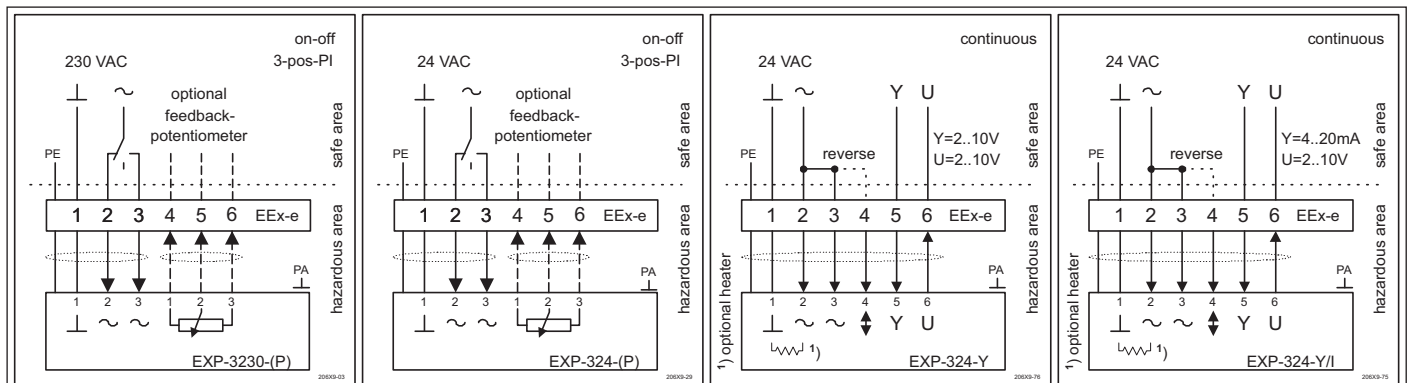
### ATTENTION!

- The cable of the actuator must be installed in a fixed position and protected against mechanical damage.
- For installation, use and maintenance the official standards and rules must be applied.
- **The EEx actuators may only be opened by the manufacturer to guarantee explosionproof and for warranty.**
- The actuators have a capacitor start (synchronous motor), therefore in parallel operation, separate contacts are required.
- Reverse operation at type EXP-3...-Y, by using an additional connection between terminal 3 and 4.
- Actuators with integral end switches, may not be stopped mechanically between end positions!
- For outdoor installation a heater and a weather protective housing against rain, snow and sun is required.
- After installation all components must fulfil the protection class IP65 acc. EN60529.

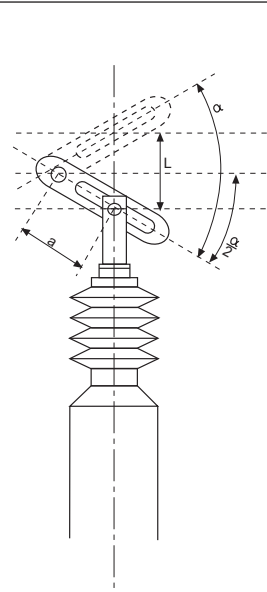
### ELECTRICAL CONNECTION

**Attention:**

- Voltage at terminal 2: rod is extending. (3-Pkt.PI)
- For type .../2EE see reverse.



## MONTAGE/MOUNTING



- **Abschaltung wegababhängig**  
Not overload protected
- **Einbaulage beliebig**  
Can be mounted in any position
- **Nicht gegen Hubstange kontern!**  
(Interne Verdrehsicherung kann zerstört werden)
- **Do not counter against rod!**  
(if force applied internal damage will occur)

Hebellänge "a" und Stellweg "L" bei  $\alpha$   
length "a" and travel "L" acc. to  $\alpha$

$\alpha$	Stellweg "L" travel "L"	
	100	250
	Länge von Maß "a" / Length of "a"	
90°	72	178
80°	79	196
70°	88	219
60°	100	250
55°	109	272
50°	119	297
45°	132	328
30°	194	484

- **Die Anschlußleitung des Antriebes fest verlegen und vor mechanischer Beschädigung schützen!**
- **The cable of the actuator must be installed in a fixed position and be protected against mechanical damage!**

Winkelgelenk WG8  
ball joint

Mutter M8  
Nut M8

Gummibalg  $\varnothing 70$   
rubber gaiter

Gehäuse  
housing

Kabeldurchführung  
Cable gland

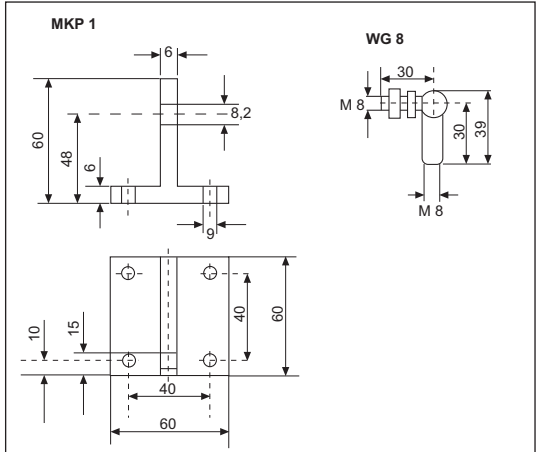
EEEx-e  
Klemmenkasten  
terminal box

Montagekonsole MKP1  
Mounting bracket

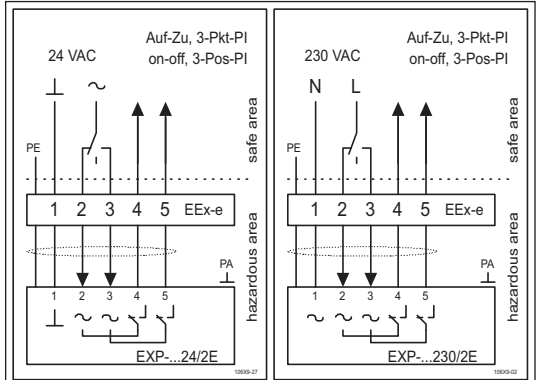
\* Potentialausgleich  
potential equalization

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	$\pm 3\text{mm}$	

## MONTAGEBAUTEILE/COMPONENTS



## ELEKTRISCHER ANSCHLUSS .../2E ELECTRICAL CONNECTION



## Zwangssteuerungen Compulsion control EXP-324-Y

