



**Spring return actuator with ETR (Electro Thermal Release). 60 second reset.**

**24V AC/DC and 230V AC**

### Application

The spring-return actuator is intended for the operation Actionair Smoke/Shield PTC™, Vent/Shield PTC™ and A-60 Marine dampers.

It can be fitted to dampers (up to and including 400mm wide AND 400mm high). Above this size, the PTC Regular actuator is used.

### Mode of operation

The actuator motors the damper to the reset position whilst simultaneously tensioning the return spring. If the power supply is interrupted, the energy stored in the spring, moves the damper back to the released position to give fail-safe operation

The ETR incorporates a safety feature that ensures the fail-safe status of the damper if the ETR is not fitted to the ductwork.

The ETR probe has a replaceable 72°C Thermal trip

An LED on the ETR housing indicates:

- ✓ Unit receiving power
- ✓ ETR correctly fitted
- ✓ Thermal fuse intact

[NOTE: thermal fuse (Tf1) in the ETR housing will operate (permanently) at 71°C].

An electrical test switch is provided on the ETR

### Signalling

There are two fixed internal micro-switches for indicating the end-positions of the damper.

Intermediate positions of the damper blade are visible by the use of a mechanical pointer.

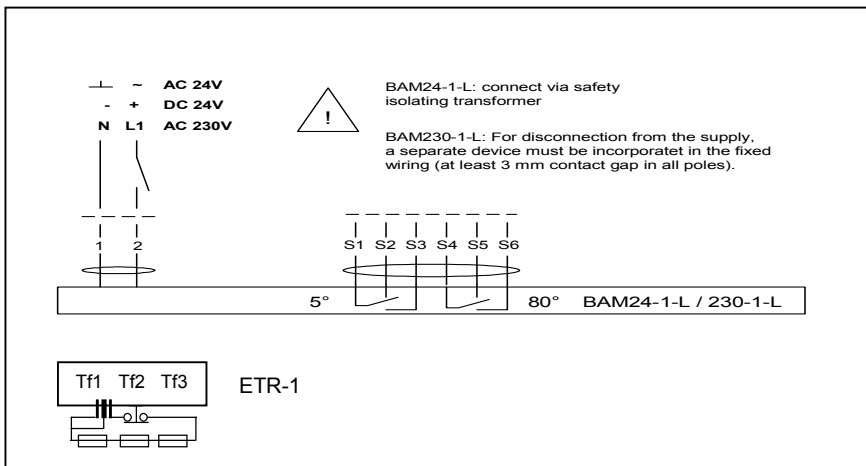
### Manual operation

The damper can be operated manually and fixed in any required position. Release of the locking mechanism can be achieved manually or automatically by applying the supply voltage.

### Testing.

A test switch is incorporated in the ETR.

### Wiring Diagram



Technical Data	Mode 5 COMPACT (BAM24-1-L)	Mode 6 COMPACT (BAM230-1-L)
Nominal Voltage	AC 24V 50/60 Hz DC 24V	AC 230V 50/60 Hz -
Nominal voltage range	AC 19,2...28.8V DC 21,6...28.8V	AC 198...264V -
For wire sizing	7 VA (Imax. 5,8A @ 5ms)	7 VA (0,15 A @ 5ms)
Power consumption		
- motoring	ca. 5 W	ca. 5 W
- holding	ca. 2,5 W	ca. 3 W
Connecting cable (LSF quality)		
- Motor	1 m 2 x 0.75 mm <sup>2</sup>	1 m 2 x 0.75 mm <sup>2</sup>
- Aux. switch	1 m 6 x 0.75 mm <sup>2</sup>	1 m 6 x 0.75 mm <sup>2</sup>
Auxiliary switches	2 x SPDT 6(3)A, AC 250V	
- Switching points	5° / 80°	
Torque		
- Motor	Min. 6 Nm	
- Spring	Min. 6 Nm	
Angle of rotation	95°	
Damper rotation	Form-fit 14 mm hexagonal	
Direction of rotation	Selected by mounting L/R	
Running time		
- Motor	<60s	
- Spring	~20s, @ -20...+50°C / max. 60s @ -30°C	
Sound power level		
- Motor	max. 45 dB(A)	
- Spring	~ 62 dB(A)	
Position indication	mechanical with pointer	
Protection class	III	II
Degree of protection	IP 54	
Ambient temperature range		
- Normal duty	-30...+ 50° C	
- Safety duty	-30...+ 60° C (24h)	
- Non-operating temperature	-40...+ 60° C	
Humidity test	To EN60335-1	
EMC	CE according 89/336/EEC and 92/31/EEC, 93/68/EEC	
Low voltage directive	CE according 73/23/EEC	
Service life	maintenance free	
Weight	1630 g	1730 g

