

# BP HD MOT

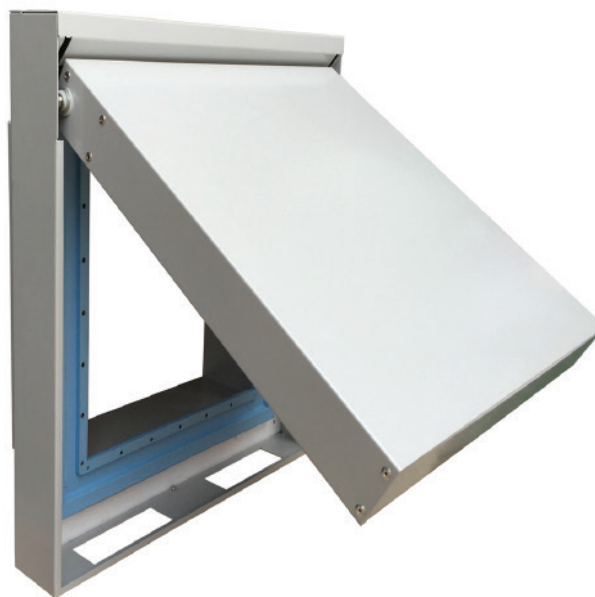
## Motorised Blast Panel Heavy Duty

# DATA SHEET

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The BPHD MOT is a motorised heavy duty blast panel with an IP rated 100% gas, dust and weather seal. For use with inert gas systems, electrical switchgear and transformer building protection and explosive atmosphere building protection. Ideal for extreme environments and applications. Also used for large FVA ventilation requirements in buildings with gas suppression systems, such as transformer bays, where extremely low leakage is required when closed for gas agent concentration duration whilst maintaining a very high level of blast protection.

### PRODUCT SPECIFICATION

Product Code	BP300 HD MOT	BP500 HD MOT	BP700 HD MOT	BP1000 HD MOT
100% Free Vent Area	0.3m <sup>2</sup>	0.25m <sup>2</sup>	0.49m <sup>2</sup>	1.0m <sup>2</sup>
WxHxD	480x495x75mm	680x695x75mm	880x895x75mm	1180x1195x75mm
Hole cut out WxH	360x350mm	560x550mm	760x750mm	1060x1050mm
Weight	TBC	TBC	25.5kg	35kg

## PRODUCT INFORMATION

- Has a vDC of 1.15 but due to unique design won't open below 200pa when wind force is applied.
- A vDc of 1.15 means the BP conforms to a similar performance to the BRE certified performance of the SHX range.
- Can be installed into walls up to 190mm. Above this an WLX extension sleeve takes this to 390mm.
- For security a variety of low to high security grilles can be supplied.
- Can be installed with the SHX range of vents for fire rating of 4 hours
- Superior efficiency for blast protection vDc of 1.15 for gas suppression systems
- 100% Free Vent Area
- Superior sound insulation due to insulation and full air seal
- Superior performance for high energy blasts from switchgear and transformer protection
- Unbeatable gas retention for suppressions systems being 100% sealed when closed
- Fully tested in the AFP Blast simulator for all types of blast protection
- The BP range comes in RAL9006 Grey as standard
- The BPHD MOT uses a motor limit switch indicator multi voltage motor
- The products carry a 5-year guarantee

## PRODUCT INFORMATION

- IP Certified to IP5X Cat II & IPX3 by CSA Group

## TECHNICAL DATA

**Spring-return actuator with emergency control function for adjusting dampers in technical building installations**

- Air damper size up to approx. 4 m<sup>2</sup>
- Nominal torque 20 Nm
- Nominal voltage  
AC 24...240 V / DC 24...125 V
- Control Open-close
- with 2 integrated auxiliary switches



## TECHNICAL DATA

<b>Electrical data</b>	Nominal voltage	AC 24...240 V / DC 24...125 V
	Nominal voltage frequency	50/60 Hz
	Nominal voltage range	AC 19.2...264 V / DC 21.6...137.5 V
	Power consumption in operation	7 W
	Power consumption in rest position	3.5 W
	Power consumption for wire sizing	18 VA
	Auxiliary switch	2 x SPDT, 1 x 10% / 1 x 11...90%
	Switching capacity auxiliary switch	1 mA...3 (0.5 inductive) A, AC 250 V
	Connection supply / control	Cable 1 m, 2 x 0.75 mm <sup>2</sup>
	Connection auxiliary switch	Cable 1 m, 6 x 0.75 mm <sup>2</sup>
	Parallel operation	Yes (note the performance data)
<b>Functional data</b>	Torque motor	Min. 20 Nm
	Torque spring return	Min. 20 Nm
	Direction of motion motor	Selectable by mounting L / R
	Direction of motion emergency control function	Selectable by mounting L / R
	Manual override	By means of hand crank and locking switch
	Angle of rotation	Max. 95°
	Angle of rotation note	can be limited by adjustable mechanical end stop
	Running time motor	75 s / 90°
	Running time emergency control position	<20 s / 90°
	Running time emergency setting position note	<20 s @ -20...50°C / <60 s @ -30°C
	Sound power level motor	45 dB(A)
	Spindle driver	Universal spindle clamp 10...25.4 mm
	Position indication	Mechanical
	Service life	Min. 60,000 emergency positions
<b>Safety</b>	Protection class IEC/EN	II Protective insulated
	Protection class UL	II Protective insulated
	Protection class auxiliary switch IEC/EN	II Protective insulated
	Degree of protection IEC/EN	IP54
	Degree of protection NEMA/UL	NEMA 2, UL Enclosure Type 2
	EMC	CE according to 2014/30/EU
	Low voltage directive	CE according to 2014/35/EU
	Certification IEC/EN	IEC/EN 60730-1 and IEC/EN 60730-2-14
	Certification UL	cULus according to UL 60730-1A, UL 60730-2-14 and CAN/CSA E60730-1:02
	Mode of operation	Type 1.AA.B
	Rated impulse voltage supply / control	4 kV
	Rated impulse voltage auxiliary switch	2.5 kV
	Control pollution degree	3
	Ambient temperature	-30...50°C
	Non-operating temperature	-40...80°C
	Ambient humidity	95% r.h., non-condensing
	Maintenance	Maintenance-free
<b>Weight</b>	Weight	2.4 kg

**SFA-S2**

Spring-return actuator, Open-close,  
AC 24...240 V / DC 24...125 V, 20 Nm, with 2 auxiliary switches

**SAFETY NOTES**

- The device must not be used outside the specified field of application, especially not in aircraft or in any other airborne means of transport.
- Outdoor application: only possible in case that no (sea)water, snow, ice, insolation or aggressive gases interfere directly with the actuator and that is ensured that the ambient conditions remain at any time within the thresholds according to the data sheet.
- Caution: Power supply voltage!
- Only authorised specialists may carry out installation. All applicable legal or institutional installation regulations must be complied during installation.
- The device may only be opened at the manufacturer's site. It does not contain any parts that can be replaced or repaired by the user.
- Cables must not be removed from the device.
- To calculate the torque required, the specifications supplied by the damper manufacturers concerning the cross-section, the design, the installation site and the ventilation conditions must be observed.
- The two switches integrated in the actuator are to be operated either on power supply voltage or at safety extra-low voltage. The combination power supply voltage/ safety extra-low voltage is not permitted.
- The device contains electrical and electronic components and must not be disposed of as household refuse. All locally valid regulations and requirements must be observed.

**PRODUCT FEATURES**

<b>Mode of operation</b>	The actuator is equipped with a universal voltage feed module that can utilise supply voltages of AC 24 ... 240V and DC 24 ... 125V. The actuator moves the damper to the operating position at the same time as tensioning the return spring. The damper is turned back to the emergency position by spring force when the supply voltage is interrupted.
<b>Simple direct mounting</b>	Simple direct mounting on the damper spindle with an universal spindle clamp, supplied with an anti-rotation device to prevent the actuator from rotating.
<b>Manual override</b>	By using the hand crank the damper can be actuated manually and engaged with the locking switch at any position. Unlocking is carried out manually or automatically by applying the operating voltage.
<b>High functional reliability</b>	The actuator is overload protected, requires no limit switches and automatically stops when the end stop is reached.
<b>Adjustable angle of rotation</b>	Adjustable angle of rotation with mechanical end stops.
<b>Flexible signalisation</b>	The actuator has one auxiliary switch with a fixed setting and one adjustable auxiliary switch. They permit a 10% or 11...90% angle of rotation to be signaled.

## ACCESSORIES

	Description	Type
Electrical accessories	Auxiliary switch, 2 x SPDT	S2A-F
	Feedback potentiometer, 200 Ohm, incl. installation accessories	P200A-F
	Feedback potentiometer 1 kOhm, incl. installation accessories	P1000A-F
	Description	Type
Mechanical accessories	Shaft extension 250 mm, for damper spindles Ø 8...25 mm	AV8-25
	End stop indicator for NF..A / SF..A	IND-AFB
	Spindle clamp set for NF..A/SF..A (1", 3/4", 1/2")	K7-2
	Straight ball joint with M8, suitable for damper crank arms KH8	KG10A
	Angled ball joint with M8, suitable for damper crank arms KH8	KG8
	Damper crank arm, for damper spindles	KH8
	Damper crank arm for NF..A / SF..A, for 3/4" spindles	KH-AFB
	Form fit insert 10x10 mm, for spring return actuators NG	ZF10-NSA-F
	Form fit insert 12x12 mm, for spring return actuators NG	ZF12-NSA-F
	Form fit insert 16x16 mm, for spring return actuators NG	ZF16-NSA-F
SFA-S2 • en-gb • 2016-03-03 • subject to changes		
	Description	Type
	Damper crank arm, for spring return actuators NG	ZG-AFB
	Base plate extensions for NF..A/SF..A	Z-SF

## ELECTRICAL INSTALLATION

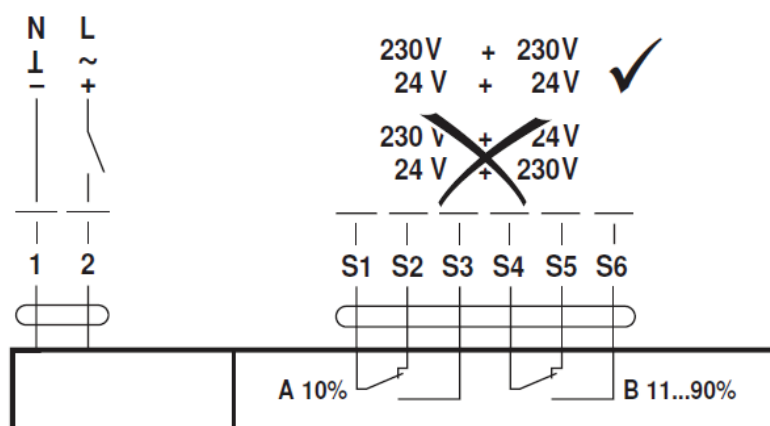


## Notes

- Caution: Power supply voltage!
- Parallel connection of other actuators possible. Observe the performance data.

## Wiring diagrams

AC 24...240 V / DC 24...125 V, open-close



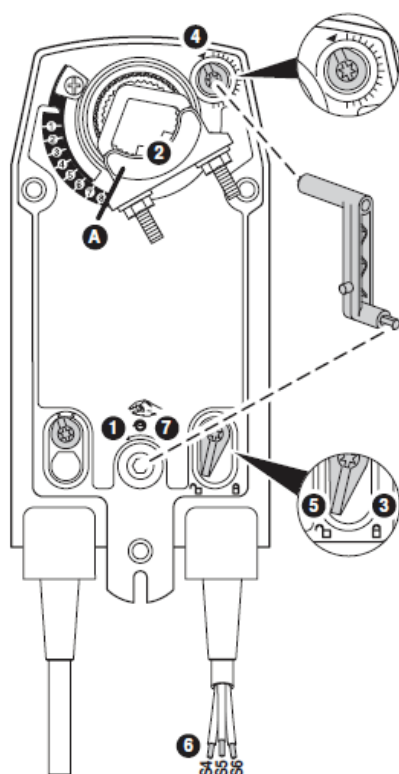
## Cable colours:

- 1 = blue
- 2 = brown
- S1 = violet
- S2 = red
- S3 = white
- S4 = orange
- S5 = pink
- S6 = grey



## OPERATING CONTROLS AND INDICATORS

### Auxiliary switch settings



**Note** Perform settings on the actuator only in deenergised state.

- 1 Manual override**  
Turn the hand crank until the desired switching position is set.
- 2 Spindle clamp**  
Edge line **A** displays the desired switching position of the actuator on the scale.
- 3 Fasten the locking device**  
Turn the locking switch to the "Locked padlock" symbol.
- 4 Auxiliary switch**  
Turn rotary knob until the notch points to the arrow symbol.
- 5 Unlock the locking device**  
Turn the locking switch to the "Unlocked padlock" symbol or unlock with the hand crank.
- 6 Cable**  
Connect continuity tester to S4 + S5 or to S4 + S6.
- 7 Manual override**  
Turn the hand crank until the desired switching position is set and check whether the continuity tester shows the switching point.

## DIMENSIONS (MM)

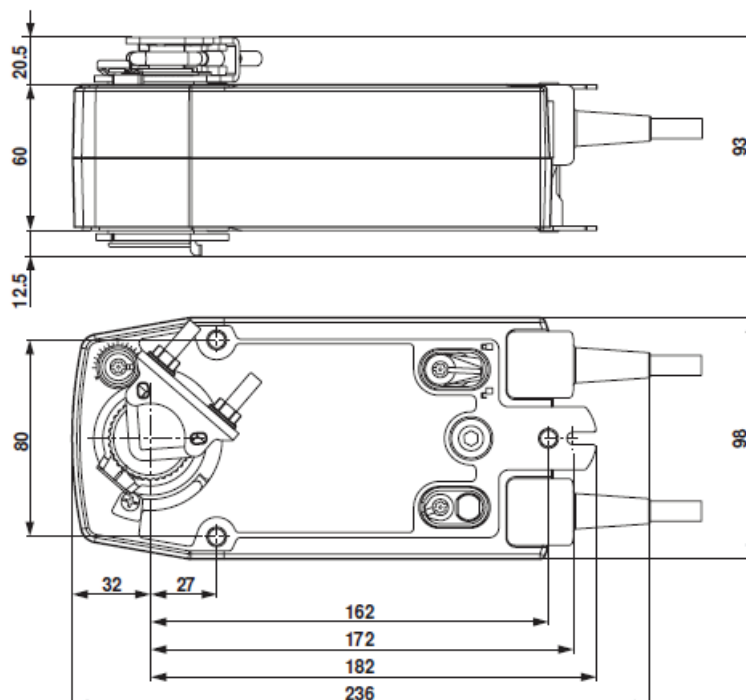
### Spindle length

	Min. 85
	Min. 15

### Clamping range

10...22	10	14...25.4	
19...25.4	12...18		

### Dimensional drawings



## VIDEO

<https://www.youtube.com/watch?v=Q3c7LfTEmeM>