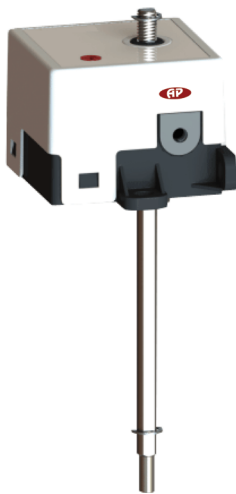




# Linear Damper Actuator for modulating control of dampers

PPD 010

Oct. 15



PPD 010

## Technical Data

Nominal voltage	24Vac/dc
Nominal voltage range	19...29Vac/dc
Power consumption	2,5W
Power consumption standby (end position)	5.0VA
Wire sizing	25 mm/min
Continuous Control	0(2)...10Vdc / Ri > 100 kΩ 0(4)...20mA / Rext. = 500 Ω
Position feedback	0(2)...10Vdc/max 0.5mA
Force	150 N
Synchronised speed	±5%
Spindle	Trapezoidal screw threads
Stroke	Depending on adjustable spindle
Feed	35 mm/min (0.58 mm/s)
Sound power level	< 35 dB(A)
Entrainment	Fixed by thread
Protection class	III (low voltage safety current)
Weight	230 g
Degree of protection	IP 42
EMC	CE (2004/108/EG)
LVD	CE (2006/95/EG)
RoHS	CE (2011/65/EU)
Ambient temperature normal operation	- 20 °C...+50 °C
Storage temperature	- 30 C...+80 °C
Ambient humidity	5...95 % r.H. non-condensing (EN 60730-1)
Maintenance	Maintenance free
Dimensions	70 x 72 x 56 mm
Weight without spindle	Approx. 400 g

## Features

- Male or female entrainment
- Feedback signal 150 N
- Adjustable spindle
- Maintenance free
- Modulating control signal

## Application

The linear actuator can be mounted on air-handling units and ceiling outlets.

It is used for control of 0.5mA volume regulators and ceiling outlets in VAV systems and for damper adjustments in induction units or mixing boxes.

Another application is under floor diffusers, spin air diffusers and jet nozzles for ventilation, heating and cooling of closed rooms.

## Design Features

The rotary action of the reversible synchronous motor is converted via a drive gear into the linear movement of the spindle.

The drive gear is mounted between two metal plates protected from dust by a plastic sleeve.

The drive gear incorporates a magnetic overload clutch, so that end switches, and the associated time-consuming adjustments, are not required.

The clutch protects the actuator for brief periods against overload.

However, operating the actuator in a continuously stalled condition will considerably reduce its service life.

## Ordering Codes

M=male thread; F=female thread	Stroke length
PPD 010/SL3M	30mm
PPD 010/SL8M	80mm
PPD 010/SL13M	130mm
PPD 010/SL20M	200mm
PPD 010/SL3F	30mm
PPD 010/SL8F	80mm
PPD 010/SL13F	130mm
PPD 010/SL20F	200mm

## Operating mode

Through connecting the power supply to BU+BN (1+2) and a reference signal Y to BK (3) of (0)2...10VDC, driving the spindle in the direction normal (N) position "1" and inverse (I) direction "0" at the specified position.

The actual spindle position is a feedback signal U (4) (0)2...10Vdc. If the power supply is interrupted the spindle stays in the current position.

Each closing operation, moves the spindle on your reference position "0".

## Mounting

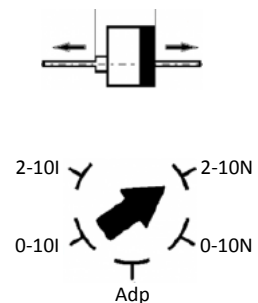
Easily attach with mounting tabs on the device. There are no transverse forces.

Position = "0"  
Inverted      Position = "1"  
Normal

## Mode- switch

Mode- switch with five positions at the housing

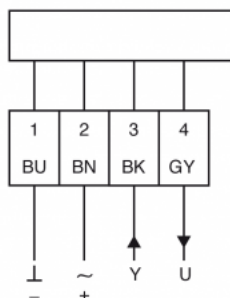
- position 0...1 normal 2-10 V
- position 0...1 normal 1-10 V
- Adp = Adaption
- position 1...0 inverse 0-10 V
- position 1...0 inverse 2-10 V



## Adaptation

- Adaptation on the spindle hub
- Actuator power-on
- Adaptation to enable
- Spindle drive to reference position (0)
- Spindle drive towards position (1)
- Adaptation to disable if desired
- Reached stroke
- "Y" refers to the measured stroke

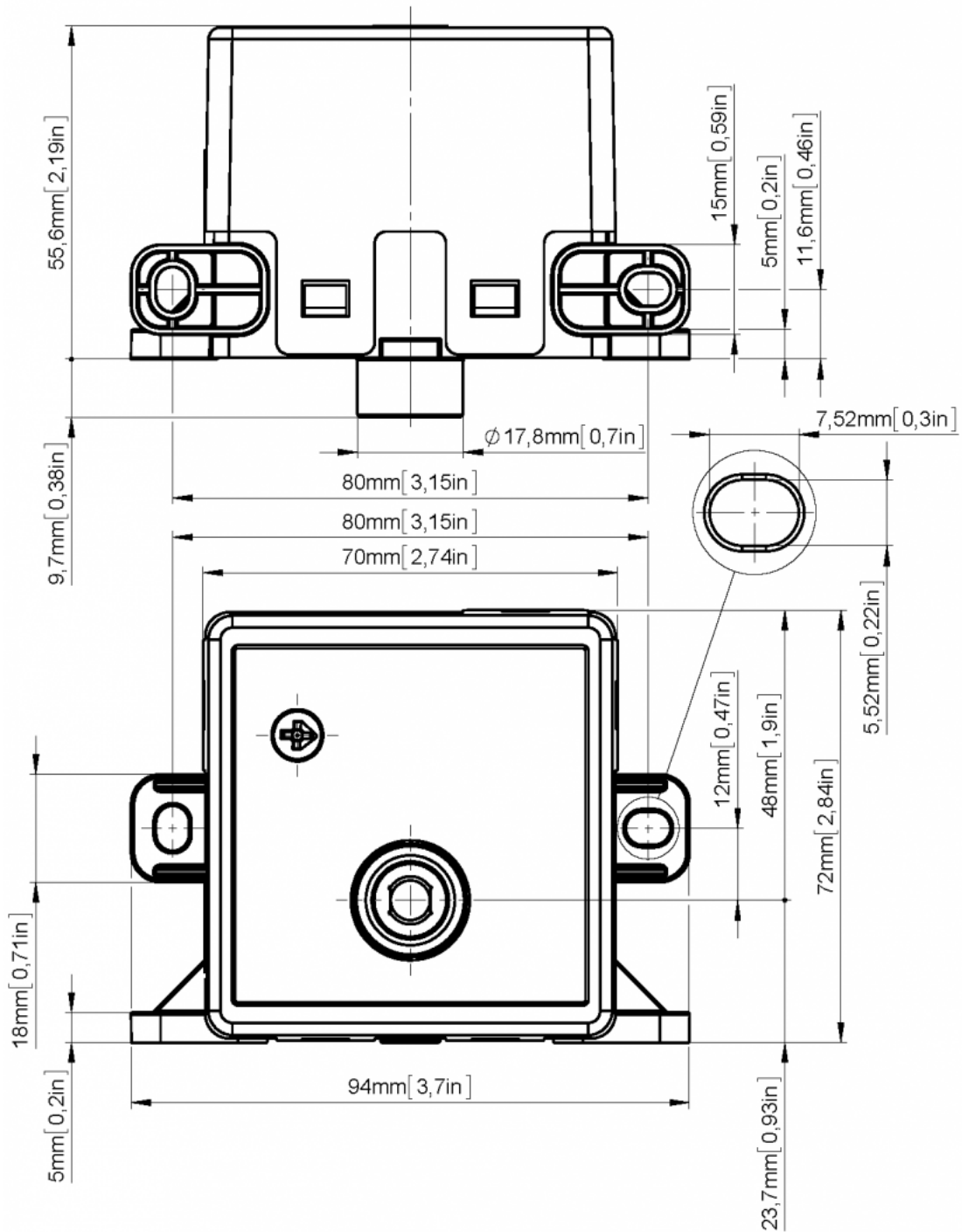
## Connection/Safety remarks



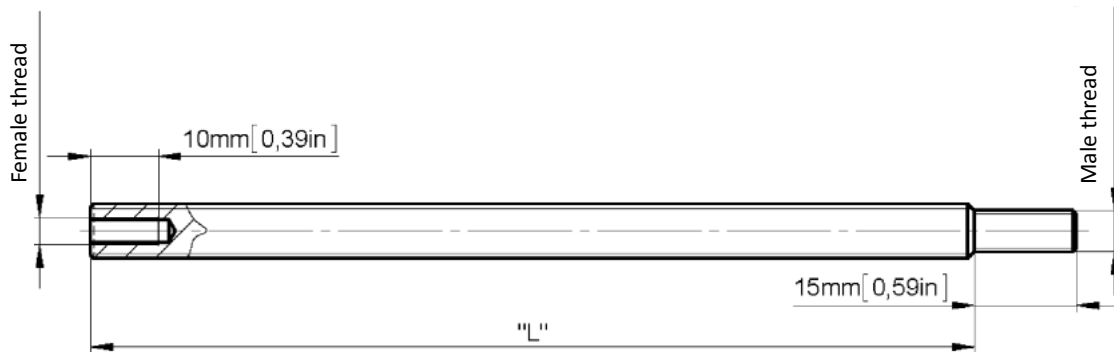
## Safety remarks

- Connect via safety isolation transformer
- The spindle actuator is not allowed to be used outside the specified field of application, especially in airplanes.
- It may only be installed by suitably trained personnel. Any legal regulations or regulations issued by authorities must be observed during assembly.
- The device may only be opened at the manufacturer's site.
- When calculating the lift and thrust force, the specifications supplied by the manufacturers for under floor diffusers (cross-section, design, installation site), and the air flow conditions must be observed.
- The actuator is not allowed to be disposed of as household refuse. All locally valid regulations and requirements must be observed.

Technical Drawing



### Dimensions



Length "L"	Stroke length*	Male thread	Female thread
130	30	M6	-
180	80	M6	-
230	130	M6	-
300	200	M6	-
375	280	M6	-
130	30	M6	M4
180	80	M6	M4
230	130	M6	M4
300	200	M6	M4

\* with 4 nuts