Ucontrol Actuator
DB100 and SB100

utonomy

Highlights

- Certified for use in ATEX & UKEX Zone 0 hazardous areas
- Certified for use with hydrogen
- IP68 rated for below ground installation
- Single and dual motor options
- Mechanical range limiter
- Simple retrofit to existing regulator equipment
- High precision control accuracy

Ucontrol DB100 and SB100 Actuator

The Ucontrol DB100 and SB100 Actuators are UtonomyOne components.

Actuators are interfaced with pilot regulators, typically installed on auxiliary (control) rails, in order to control the set-point pressure of pressure regulation sites. The linear motion of the Actuator is used to compress or extend the control spring located within the pilot regulator.
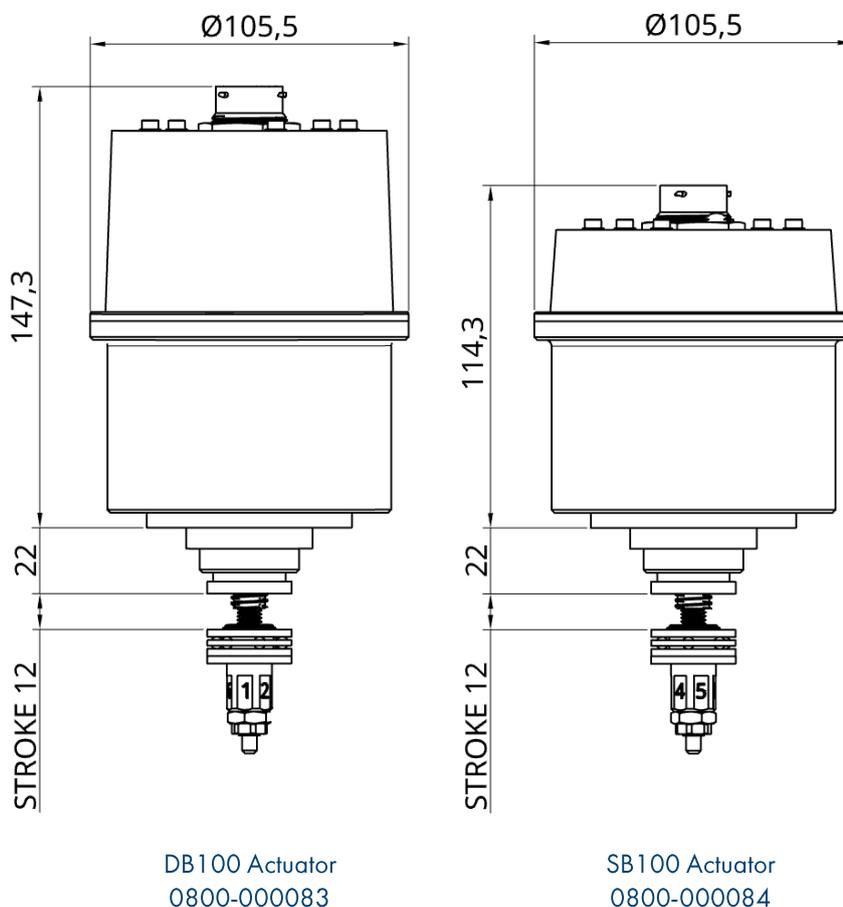
The Actuator concept has been specifically designed to retrofit to existing gas distribution equipment with almost no modification.

DB100 and SB100 Actuators have been rated for submerged use at a depth of 1.5m for a duration of 30 days to allow installation into below ground environments.

Actuators are available with either one or two motors, giving flexible deployment options to single- or twin-stream sites. All Actuators are intrinsically safe, with ATEX & UKEX Zone 0 certification, for installation in hazardous gas environments, including hydrogen. Actuators feature a mechanical range limiter to accurately constrain the pressure control range for additional network security.

Used in conjunction with the Ucontrol Controller, and within the wider UtonomyOne system, the DB100 and SB100 Actuators facilitate standalone set-point scheduling, remote pressure control, and autonomous set-point optimisation based on machine-learning predictive demand models.

Dimensions (mm)

DB100 Actuator
0800-000083

SB100 Actuator
0800-000084

Ucontrol DB100 and SB100 Actuator

Technical Specifications

Linear Control	
Maximum Stroke	≥12.0 mm (Stroke can be reduced to any value below maximum by a Range Limiter)
Hysteresis	± 0.5 %
Actuator Speed	8 mm/min
Position Accuracy	± 0.12 %
Environmental	
Operating Temperature [1]	-20 °C ≤ Ta ≤ 48/58 °C
Storage Temperature	-20 °C ≤ Ta ≤ 60 °C
Ingress Protection [2]	IP68 (1.5 meters depth, 30 days duration) as per IEC 60529
Mechanical	
Weight	1.4 kg (0800-000083) 1.1 kg (0800-000084)
Construction	Aluminium, Stainless Steel, Brass, Neoprene, Polyamide, Silicone
Approvals & Standards	
ATEX & UKEX [1]	II 1 G, Ex ia IIC T4 Ga, Ex h IIC T4 Ga, -20 °C ≤ Ta ≤ 48/58 °C
EMC	Emissions: EN 55011 Immunity: EN 61326-1
Safety	EN IEC 61010-1, EN ISO 12100
RoHS	EN IEC 63000, Compliant with exemptions 6 b, 6 c, 7 a, 7 c (I)

[1] The upper limit for the operating ambient temperature depends on the battery pack fitted in the Ucontrol Controller
[2] When fitted to regulator using UtonomyOne BG Adaptor Kit, installed within 30° of vertical, with cable attached

Ordering Information

Actuator Part Number	Model	Description
0800-000083	DB100	Dual drive, Below ground, 100N nominal force
0800-000084	SB100	Single drive, Below ground, 100N nominal force
Adaptor Kits		
0800-000009	Donkin 226K BG Adaptor Kit	
0800-000024	Elster 1203 BG Adaptor Kit	
Ancillary Equipment		
0800-000067	Ucontrol Installation Tool (UIT)	
0400-000022-*xxx*	Below Ground Actuator Cable *xxx* (cable length): 018 — 1.8m 030 — 3.0m 050 — 5.0m 100 — 10.0m 150 — 15.0m	

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