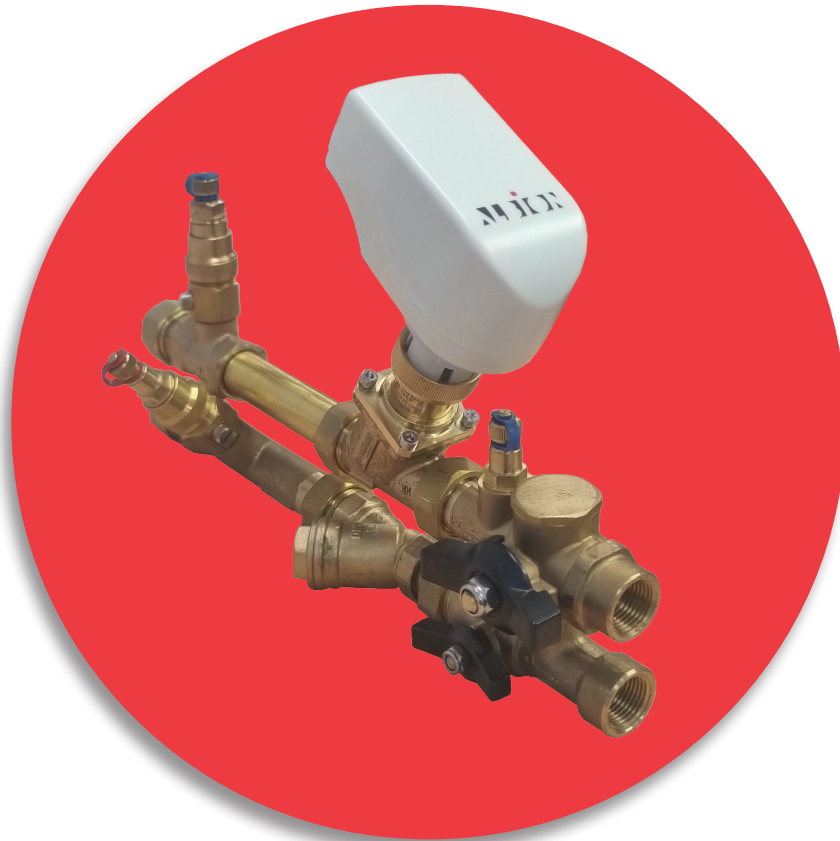


# **Installation & Operating Manual**



## **EasyLink PICV with Strainer / without Strainer**

**Albion Valves (UK) Ltd**  
[www.albionvalvesuk.com](http://www.albionvalvesuk.com)  
Email: [sales@albionvalvesuk.com](mailto:sales@albionvalvesuk.com)  
Tel: 01226 729900

## Contents

1. Introduction
2. Technical Data
3. Features
4. Installation
5. Approvals Classification
6. Troubleshooting
7. Warranty

### 1. Introduction

The EasyLink valve product is a compact and versatile valve system that combines dynamic flow, pressure and temperature control valves with integral capability for flushing and draining within a prefabricated, ready to install terminal bypass unit.

The EasyLink valve solution incorporates a compact Pressure Independent Control Valve (PICV) along with

- Isolation valves (both flow and return)
- Strainer (optional)
- Venturi metering station for accurate flow measurement
- Drain
- Integrated test points allowing  $\Delta P$  verification for both PICV and across the terminal unit.

The EasyLink has been designed in accordance with the BSRIA design guidelines for terminal unit installations.

The compact design allows the unit to be installed directly onto a fan coil unit (or other terminal units) and can fit over 'standard drip trays'

The unit comes with 40mm centres for supply and return lines.

### 2. Technical Data

Valve Type	Size Range	Connection Type	Temperature Rating	Pressure Rating (Max)
EasyLink PICV	DN15	BSP Female x Union Solder	0°C - 120°C	20 Bar
EasyLink PICV/S	DN15	BSP Female x Union Solder	0°C to 120°C	20 Bar

#### Available as:

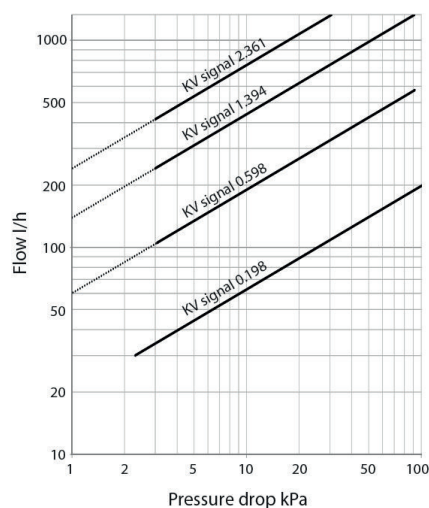
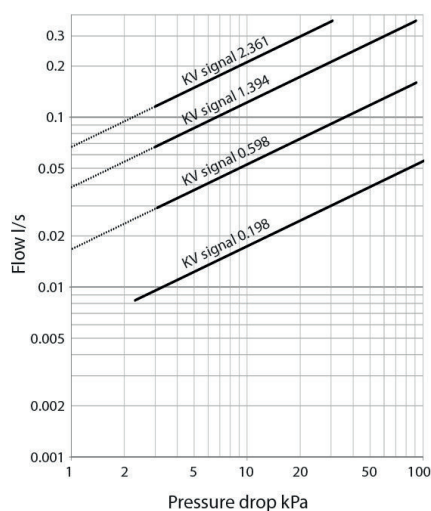
- DN15 Low Flow 2.5mm Stroke 0.198 kvs 30-200 l/hr (0.008-0.056 l/s)
- DN15 High Flow 2.5mm Stroke 0.598 kvs 100-575 l/hr (0.028-0.160 l/s)
- DN15 High Flow 5.0mm Stroke 1.394 kvs 220-1330 l/hr (0.061-0.369 l/s)
- DN15 High Flow 5.0mm Stroke 2.361 kvs 220-1330 l/hr (0.061-0.369 l/s)

## KV values for Flow Measurement and Pump Sizing

KV values		
KV signal* for flow measurement	KV max	KV total for pump dimensioning
0.198	0.262	0.307
0.598	0.723	0.601
1.394	2.309	1.909
2.361	4.399	2.667

\*Accuracy KV-signal: +/-5%

## Flow Graphs for Venturi Metering Station

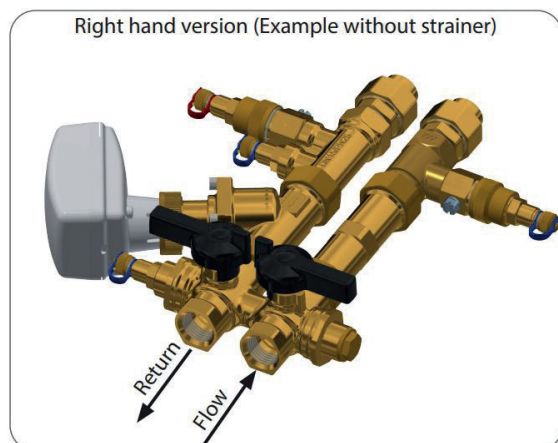


### 3. Features

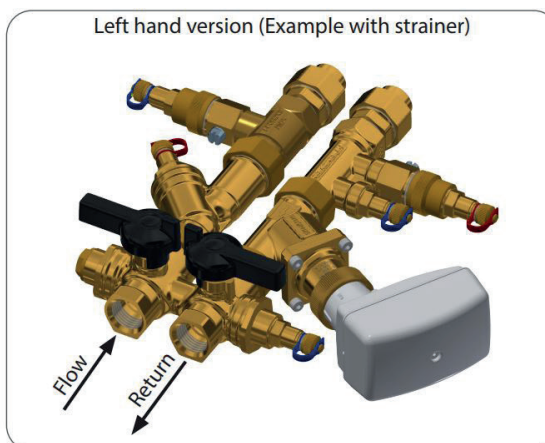
- Temperature Range: 0°C to +120°C
- Max Pressure Rating (Bar): 20 Bar
- Flow Rate Range: 0.008l/s to 0.369l/s (30 - 1,330 l/h)
- ½" x DN15 Solder Unions
- Integral Venturi metering station for accurate flow verification.
- Kv- signal values; 0.198 - 0.598 – 1.394 – 2.361
- Compact 40mm supply/return centres
- Strainer on the flow side (optional)
- Integrated union joints for easy valve alignment
- Two T-handle isolation valves for control of flow, return and by-pass
- Drains on the flow and return
- PT plugs across the PICV to measure differential pressure
- PT plug on the flow for measuring the differential pressure across the terminal unit
- Manufactured in DZR brass, CW602N

## Additional available options

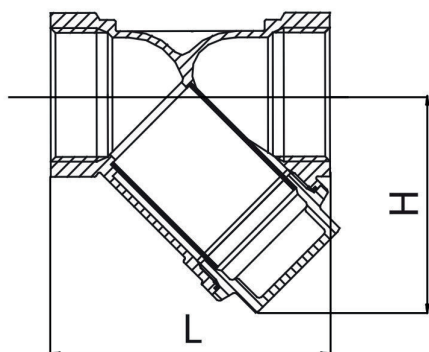
### Right Handed



### Left Handed



### With Strainer



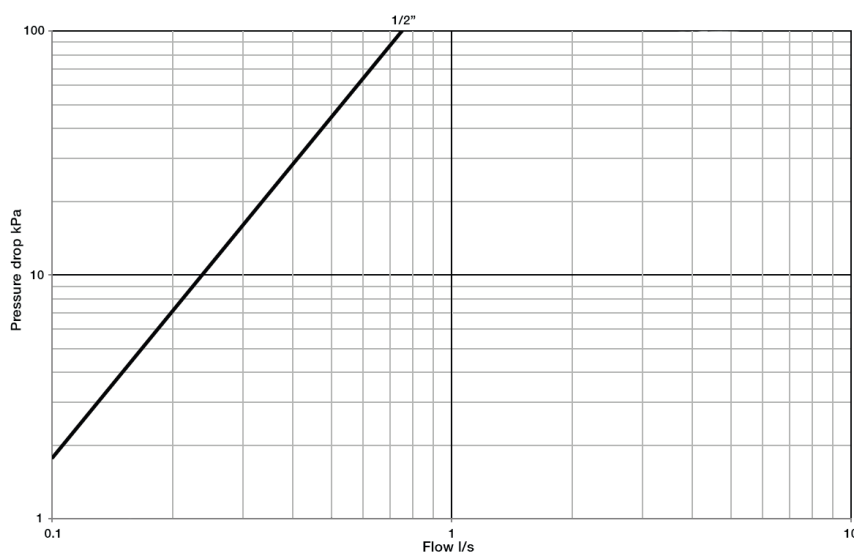
#### Features

- Excellent corrosion resistance - DZR Body and Stainless Steel Filter.
- Filter Mesh (32, hole size 0.5mm) ensures high filtering performance.
- The filter can be easily replaced without removing the body of the strainer from the H Block arrangement.

DN	DN15
L	56
H	41
Kv	2.7
Kgs	0.158

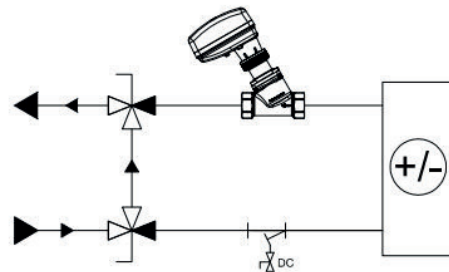
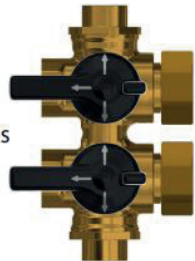
Part Name	Material
Body	DZR Brass CW602N
Filter Mesh	Stainless Steel

#### Differential Pressure (kPa)

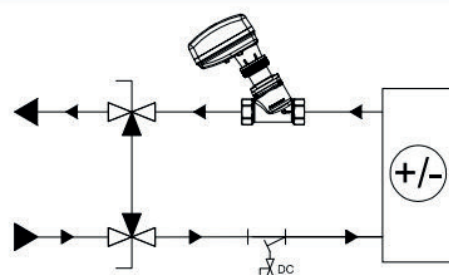
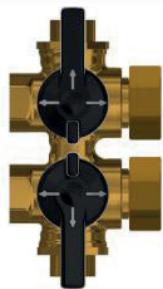


## Modes of Operation - Right Hand Version

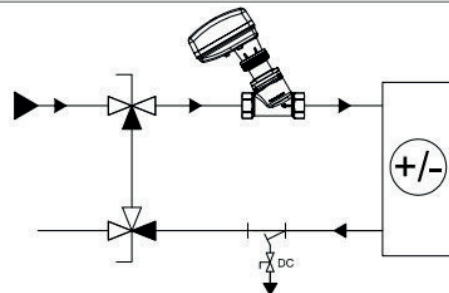
Mode 1  
Isolation & Flushing bypass



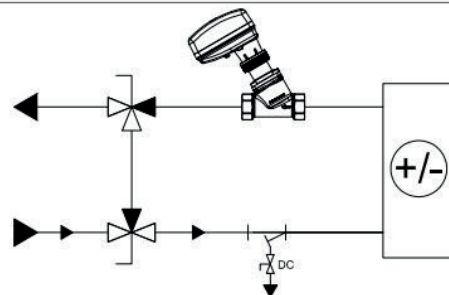
Mode 2  
Normal operation



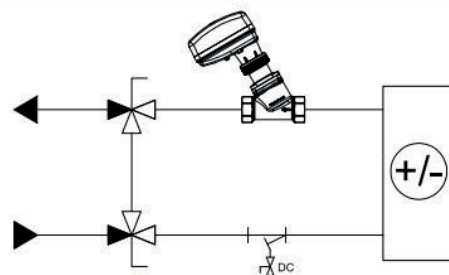
Mode 3  
Back flushing



Mode 4  
Forward flushing

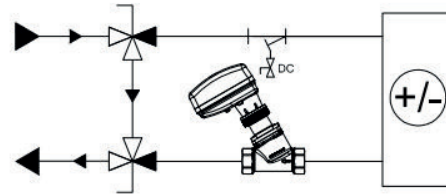
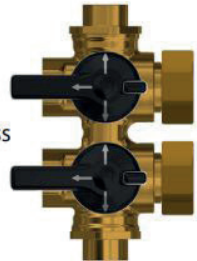


Mode 5  
Isolation & Maintenance

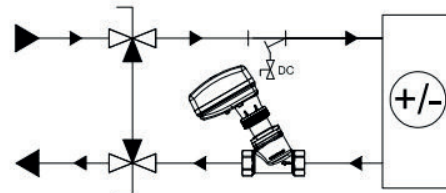
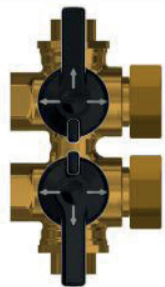


## Modes of Operation - Left Hand Version

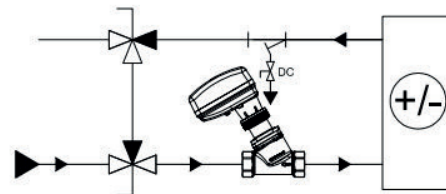
Mode 1  
Isolation & Flushing bypass



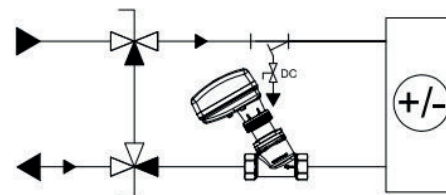
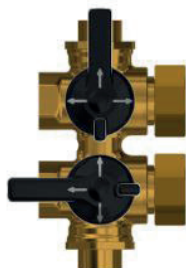
Mode 2  
Normal operation



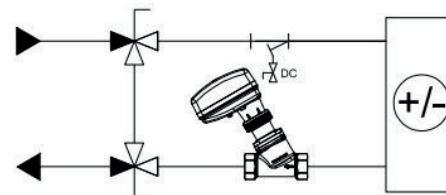
Mode 3  
Back flushing



Mode 4  
Forward flushing



Mode 5  
Isolation & Maintenance



#### 4. Installation

The EasyLink Valve product comes complete with capillary 'soldered' union connectors on both the flow and return as standard.

Please ensure that fittings are properly cleaned before soldering.

The capillary solder fittings (DN15) contain an EPDM flat faced washer that should be removed during the soldering process as this may be damaged through exposure to heat.

Tightening Torque: 30 Nm

Other fitting options are available

- Copper Compression
- Flat Faced Male Adaptors

In order to ensure that the correct selection of EasyLink is made, the following information should be provided to Albion before the final order is placed.

1. The intended terminal unit manufacturer and model number identifying coil connection details.
2. The required flow rates

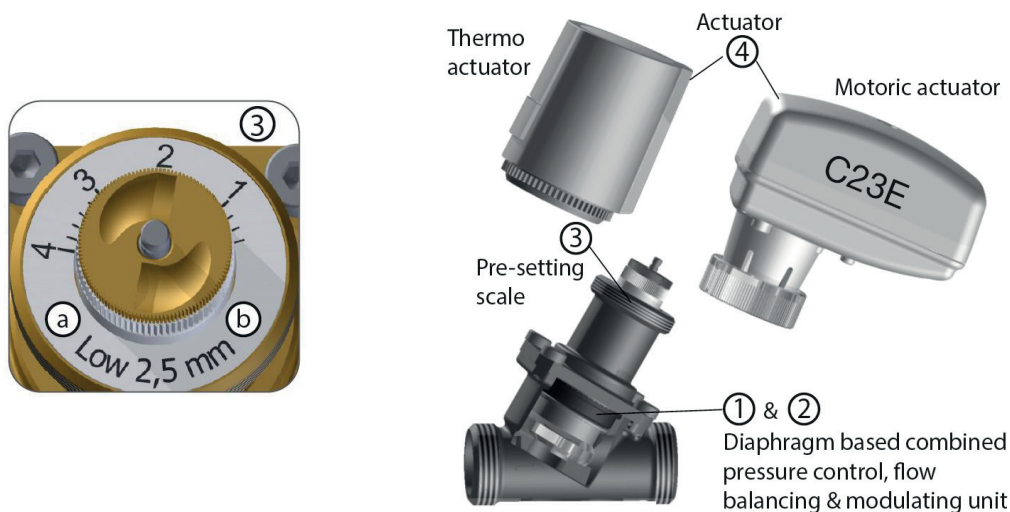
Please note: The EasyLink valve selections are based on the flow rate information provided to us. Please review our selection against the source data provided to ensure correct interpretation of your requirements.

Please be advised, it is the responsibility of the M&E contractor to ensure correct project design data is provided when selecting these valves.



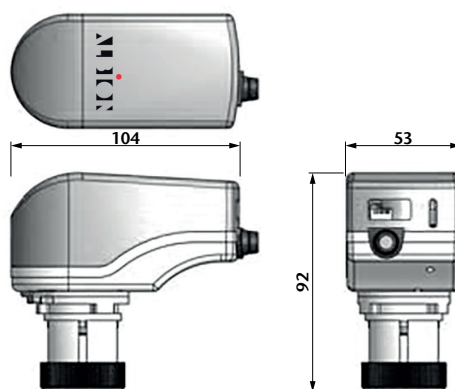
1. Differential pressure control
2. Modulating control component
3. Presetting scale (not accessible when the actuator is mounted)
  - a. Flow range: Low-High
  - b. Stroke: 2.5 - 5.0
4. Actuator

The Albion EasyLink can be combined with both motoric and thermal actuators.



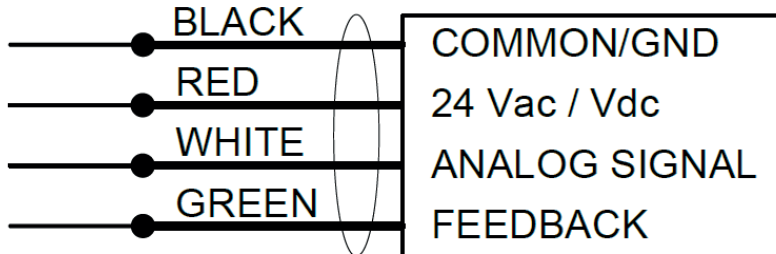
### With ART C23E Control Actuator

Model	C23E Modulating
Technical code	ADPI20C23EN
Voltage	24V AC
Control signal	0-10Vdc/4-20mA
Frequency	50 Hz
Power	5 VA
Closing and opening times	18.5 sec/mm
Degree / Class of protection	IP54
Actuator stroke	6.5mm
Actuating force	200 N
Cable length	1m
Connection	M30x1.5





## Wiring ART C23E



## With Thermic Actuator

Characteristics	Thermic Actuators, NC or NO
Protection Class	IP54 to EN 60529
Frequency	50/60Hz or DC
Control Signal	0-10V DC or On/Off
Force	100N
Stroke	2.5 - 5.0
Running Time	120s 0-10V / 180s On/Off
Ambient Conditions	0°C to 60°C
Cable Length	1.0m
Weight	100g

## Normally Closed (NC) Variants

Types	Valve Dim.	Control Signal	Feedback Signal / AUX switch	Running Time (50 Hz)	Supply Voltage	Power Consumption	For Valve Stroke
48-5525	DN10-DN20	On/Off	-	180s	AC/DC 24V	1W / 300mA*	2.5mm
48-5526	DN10-DN20	On/Off	-	180s	AC 230V	1W / 300mA*	2.5mm
48-5527	DN10-DN32	On/Off	-	180s	AC/DC 24V	1.2W / 300mA*	5.0mm
48-5528	DN10-DN32	On/Off	-	180s	AC 230V	1.2W / 550mA*	5.0mm
48-5529	DN10-DN32	DC 0-10V	-	30 s/mm	AC 24V	1.2W / 320mA*	2.5 - 5.0mm
48-5529-1	DN10-DN32	DC 0-10V	-	30 s/mm	DC 24V	1.2W / 320mA*	2.5 - 5.0mm
48-5542	DN10-DN32	DC 0-10V	DC 0-10V	30 s/mm	AC/DC 24V	1.2W / 320mA*	2.5 - 5.0mm
48-5532	DN10-DN20	On/Off	-	180s	AC/DC 24V	2W / 250mA*	2.5mm
48-5533	DN10-DN20	On/Off	-	180s	AC 230V	2W / 350mA*	2.5mm
48-5539	DN10-DN32	On/Off	AUX switch	240s	AC 230V	1W / 300mA*	2.5 - 5.0mm
48-5540	DN10-DN32	On/Off	AUX switch	240s	AC/DC 24V	1W / 300mA*	2.5 - 5.0mm

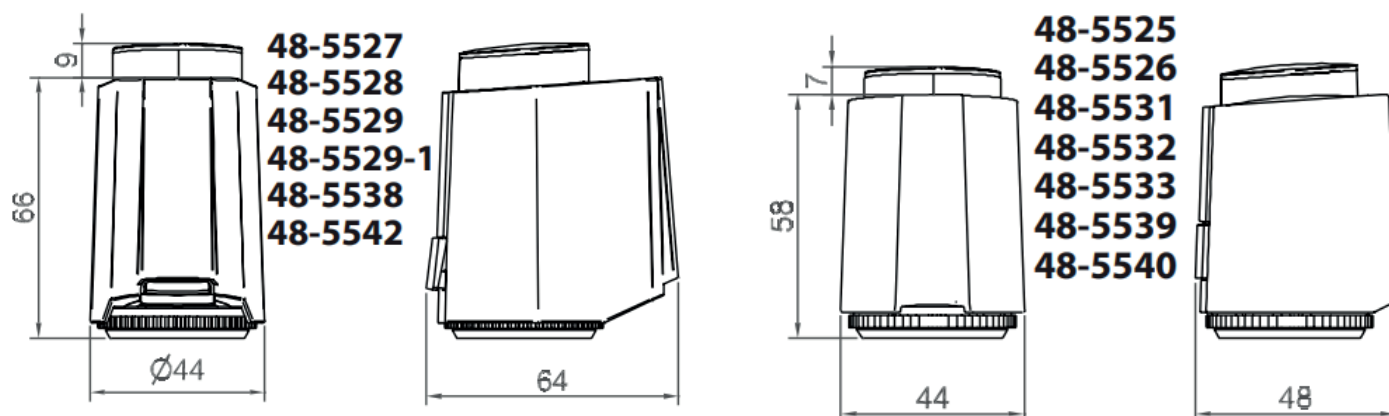
## Normally Open (NO) Variants

Types	Valve Dim.	Control Signal	Feedback Signal / AUX switch	Running Time (50 Hz)	Supply Voltage	Power Consumption	For Valve Stroke
48-5531	DN10-DN20	On/Off	-	180s	AC/DC 24V	1W / 300mA*	2.5mm
48-5538	DN10-DN32	On/Off	-	180s	AC/DC 24V	1.2W / 300mA*	5.0mm

\*) Inrush current

\*\*) When mounted to valves with 5.0 stroke, the flow will be reduced by 20%

## Dimensions (mm)

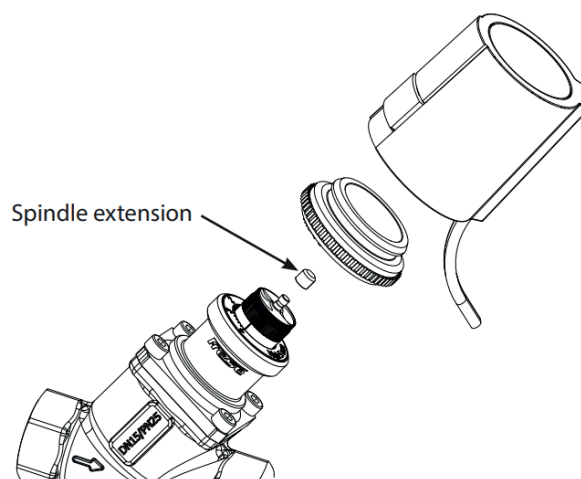


## Mounting of thermic actuators with AUX-switch

When actuators with AUX-switch are mounted on valves with 5.0 stroke, the spindle extension delivered with the actuator must be mounted (clicked on) to the spindle of the valve.

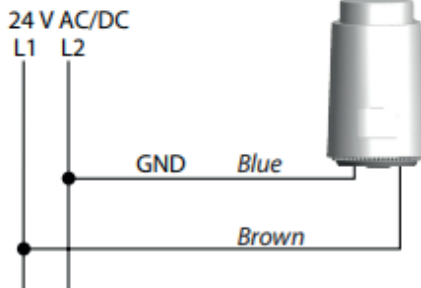
**Please note:** The flow will be reduced by 20%.

Valves with 2.5mm stroke shall not be mounted with the spindle extension and the flow will remain unchanged.

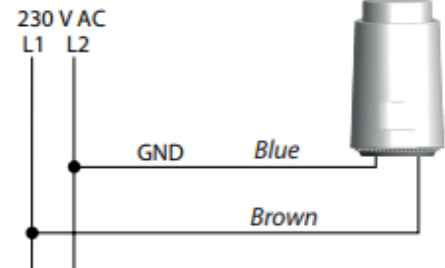


## Connection Diagrams for thermic actuators

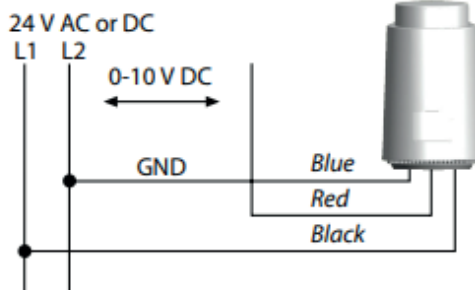
**48-5525**  
**48-5527**  
**48-5531**  
**48-5532**  
**48-5538**  
On/Off 24V



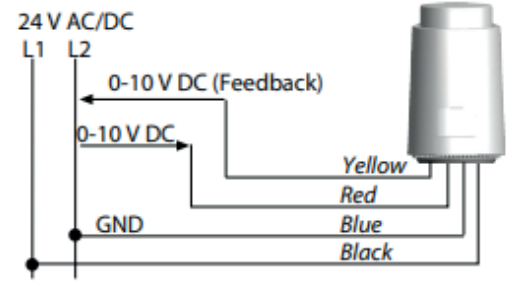
**48-5526**  
**48-5528**  
**48-5533**  
On/Off  
230V



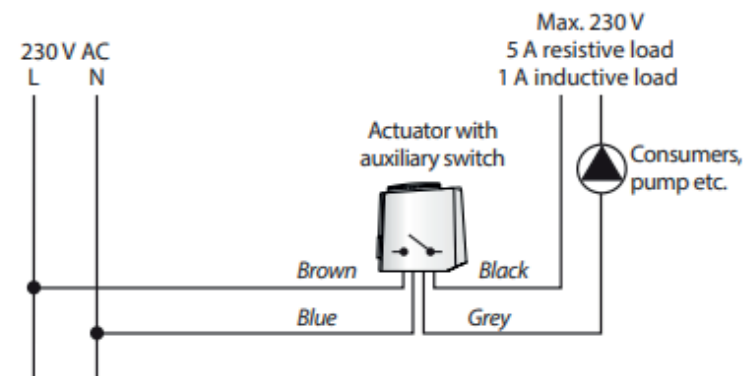
**48-5529**  
**48-5529-1**  
0-10 V 24V



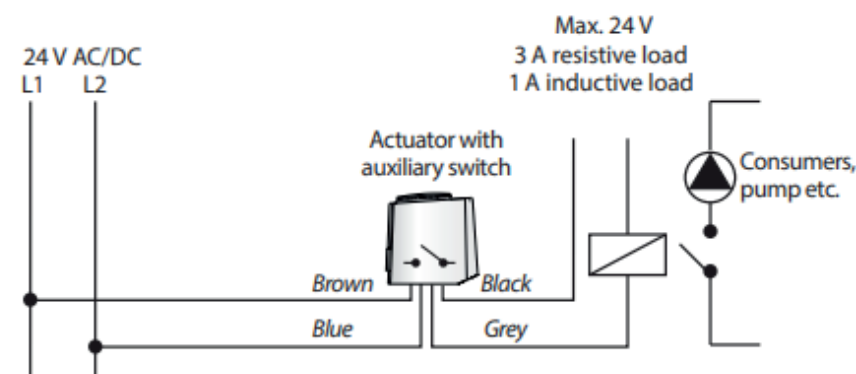
**48-5542**  
0-10 V 24 V  
Feedback



**48-5539**  
On/Off 230V  
AUX-switch



**48-5540**  
On/Off 24V  
AUX-switch

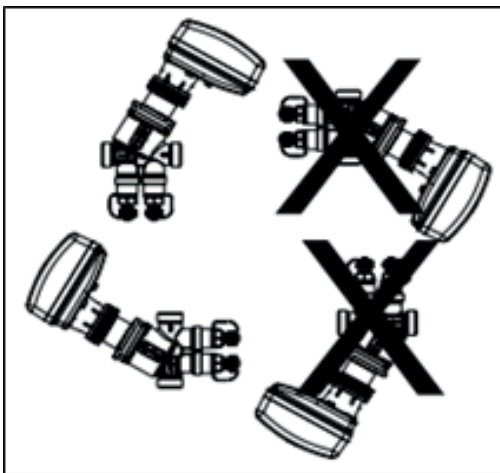


### Actuator head Orientation

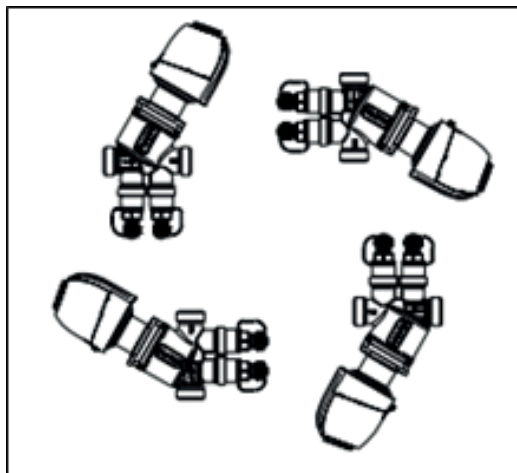
Actuator heads when fitted are best suited when mounted vertically or as close to vertical as possible.

The Electromechanical actuator needs to be mounted / orientated in this way, whilst the Thermal Actuator can be mounted universally.

Electromechanical Actuator



Thermal Actuator



Note;

In pumped systems, pump vibration is carried by the liquid, and also regenerated by liquid turbulence and may reappear as noise at any location in the system where there is hard contact between the pipe and the structure. Vibration transmission occurs along pipes and ducts, despite the use of flexible connectors so it is recommended to use flexible attachments to the structure and/or terminal unit as detailed within CIBSE Guide B4 Noise and Vibration Control for Building Service Systems.

### 5. Approvals Classification

- Albion Valves (UK) Ltd EasyLink product has been designed in accordance with the design guidelines from BSRIA for terminal unit installations
  - o BSRIA Guide BG29:2021 Pre-commission Cleaning of Pipework Systems

### 6. Troubleshooting

- Albion Valves (UK) Ltd EasyLink product have been rigorously tested during product development. Should you encounter any operational issues with the valve unit, then please contact Albion Valves (UK) Ltd for further assistance.

### 7. Warranty

- Albion Valves (UK) Ltd EasyLink Valve modules are supported by a 5 year warranty. Further details can be found on our website.
- Albion Valves (UK) Ltd are not liable for any damage resulting from use other than in the designated application. Such risk lies entirely with the user.

### Operating Pressure

The EasyLink PICV (DN15) can operate to a maximum differential pressure of 800kPa (8 bar).

### Close Off Pressure

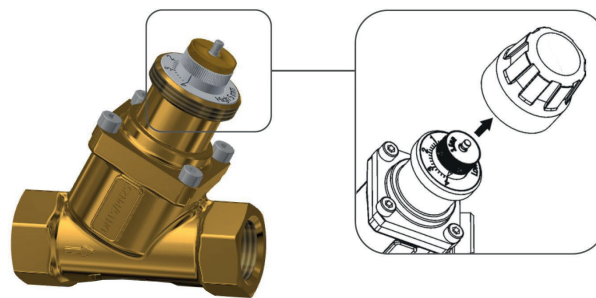
The EasyLink is capable of closing against the following differential pressures to EN 1349 Class IV:

DN15: 600kPa (6 Bar) - based on 100N actuator force

DN15: 800kPa (8 Bar) - based on 160N actuator force

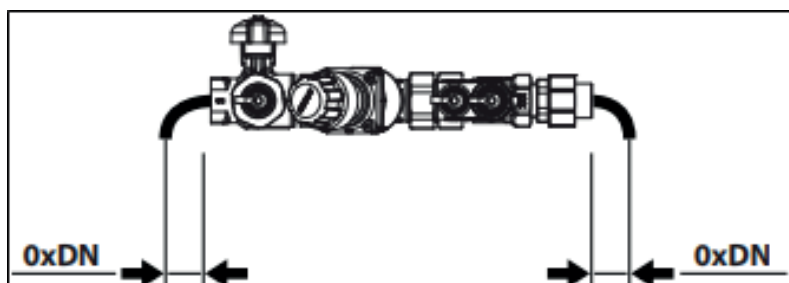
### Isolation

When fitted with the isolation cap (DN15) the EasyLink is capable of isolation to a maximum of 10 bar.



### Position

With the EasyLink product there is no need to allow for free, uninterrupted flow both prior and post the installation. These lengths are accommodated within the unit.



## Setting and Flow

Valve size	Low 2.5 - DN10/DN15			
Pre-set	Flow l/h	Flow l/s	Flow gpm	Min.Δp kPa
0.5	30	0.008	0.13	14
0.6	35	0.010	0.15	14
0.8	45	0.012	0.20	14
1.0	54	0.015	0.24	14
1.2	64	0.018	0.28	15
1.4	74	0.020	0.32	15
1.6	83	0.023	0.37	15
1.8	93	0.026	0.41	15
2.0	103	0.029	0.45	15
2.2	113	0.031	0.50	15
2.4	122	0.034	0.54	15
2.6	132	0.037	0.58	15
2.8	142	0.039	0.62	15
3.0	151	0.042	0.67	15
3.2	161	0.045	0.71	15
3.4	171	0.047	0.75	16
3.6	181	0.050	0.79	16
3.8	190	0.053	0.84	16
4.0	200	0.056	0.88	16

Valve size	High 2.5 - DN15/DN20			
Pre-set	Flow l/h	Flow l/s	Flow gpm	Min.Δp kPa
0.6	100	0.028	0.44	15
0.8	128	0.036	0.56	15
1.0	156	0.043	0.69	15
1.2	184	0.051	0.81	16
1.4	212	0.059	0.93	16
1.6	240	0.067	1.06	16
1.8	268	0.074	1.18	16
2.0	296	0.082	1.30	17
2.2	324	0.090	1.42	17
2.4	351	0.098	1.55	17
2.6	379	0.105	1.67	17
2.8	407	0.113	1.79	17
3.0	435	0.121	1.92	18
3.2	463	0.129	2.04	18
3.4	491	0.136	2.16	18
3.6	519	0.144	2.29	18
3.8	547	0.152	2.41	18
4.0	575	0.160	2.53	19

Valve size	High 5.0 - DN15/DN20			
Pre-set	Flow l/h	Flow l/s	Flow gpm	Min.Δp kPa
0.6	220	0.061	0.97	16
0.8	285	0.079	1.26	17
1.0	351	0.097	1.54	17
1.2	416	0.116	1.83	17
1.4	481	0.134	2.12	18
1.6	546	0.152	2.41	18
1.8	612	0.170	2.69	19
2.0	677	0.188	2.98	19
2.2	742	0.206	3.27	20
2.4	808	0.224	3.56	20
2.6	873	0.242	3.84	20
2.8	938	0.261	4.13	20
3.0	1004	0.279	4.42	21
3.2	1069	0.297	4.71	21
3.4	1134	0.315	4.99	21
3.6	1199	0.333	5.28	21
3.8	1265	0.351	5.57	21
4.0	1330	0.369	5.85	22





## About Albion Valves (UK) Limited

Albion Valves (UK) Limited has been in the industrial heating and valve market for over 40 years, with this comes a wealth of knowledge and expertise that allows us to support our network of independent distributors and their customers.

Albion aims to supply a readily available, complete, quality valve solution alongside excellent cradle-to-grave support and service.

That is why we say, 'It's all at Albion'.

### Quality

Whatever you need, you can rest assured that if it comes from Albion it has been designed and manufactured to deliver optimum performance and is accredited with the necessary approvals. Our in-house quality and technical departments are always on hand too!

### Service

Our cradle-to-grave approach means you will never be on your own. Whether you need assistance with your system designs, an industry-leading turnaround time on your quote, or some help with commissioning after installation, we have a team to help!

### Delivery

We know that time is money, and when a priority project depends on a part, you can trust Albion to deliver. We deliver 95% of products the next day with 99.98% accuracy!

### Choice

We may have started with a single brass ball valve, but our range has grown substantially since and we can now offer a full building services valve solution, alongside a comprehensive range of valves for the industrial and process markets.

It is becoming more and more apparent to the industry, that it really is, all at Albion.