

Victaulic® 6-Way Valve

TA Series 76W



1.0 PRODUCT DESCRIPTION

Available Sizes

- ½ – ¾"/DN15 – DN20

Maximum Working Pressure

- 230 psi/1586 kPa/16 bar
- Maximum differential pressure: 30 psi/207 kPa/2 bar

Operating Temperature

- +14°F to +248°F/-10°C to +120°C

Application

- Hydronic heating and cooling (change-over) systems, using water, neutral fluids or water-glycol mixtures

Function

- Linear for on/off control
- Used in conjunction with the Victaulic Series 7MP pressure independent balancing and modulating control valve and the Slider 160 CO actuator, it provides EQM control to the coil for use in combination chilled water and hot water applications

2.0 CERTIFICATION/LISTINGS

Not applicable – contact Victaulic with any questions.

ALWAYS REFER TO ANY NOTIFICATIONS AT THE END OF THIS DOCUMENT REGARDING PRODUCT INSTALLATION, MAINTENANCE OR SUPPORT.

System No.		Location	
Submitted By		Date	

Spec Section		Paragraph	
Approved		Date	

3.0 SPECIFICATIONS – MATERIAL

TA Series 76W 6-Way Valve

Body: Brass CW602N (EN 12167) CuZn36Pb2As

Balls: Brass CW614N (EN 12165) CuZn39Pb3

Stems: Brass CW614N (EN 12164) CuZn39Pb3

Seats: Polytetrafluoroethylene (PTFE)

O-Rings: EPDM (Peroxide cured)

End Connections: Brass CW602N (EN 12167) CuZn36Pb2As

Surface Treatment: Chrome plated stems and balls (Body non-plated, yellow)

End Connection: Female NPT threads according to ANSI/ASME B1.20.1-2013

Connection to Actuator: F03 and F04 according to EN ISO 5211

Angle of Rotation: 90°

TA M106 CO Actuator

Functions

- Proportional control (in combination with TA-Slider 160 CO)
- 3-point control
- Manual override

Supply Voltage: 24 VAC +6% –10%

Frequency: 50/60 Hz ±5%.

Power Consumption: 3.5 VA

Input Signal: 3-point

Actuating Time: 130 s (at 50 Hz/90°)

Adjusting Torque: 5.90 lbf.ft/8 N-m

Temperature

- Medium temperature: Max. +176°F/+80°C
- Operating environment: +32°F to +122°F/0°C to +50°C

Ingress Protection: IP43

Protection Class

- EN 60730
- 24 VAC: III

End Position Switch-Off: Fixed at 90°

Cable

- 4.92 ft., three wire 20 AWG (0.5 mm²)
- With connector to TA-Slider 160 CO or TA-Slider 160 BACnet/Modbus CO

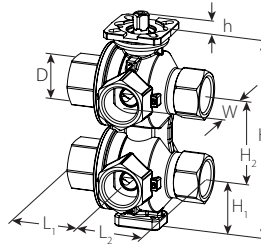
Color: Orange RAL 2011, grey RAL 7043

Connection to Valve: F04 according to EN ISO 5211

Angle of Rotation: 90°

4.0 DIMENSIONS

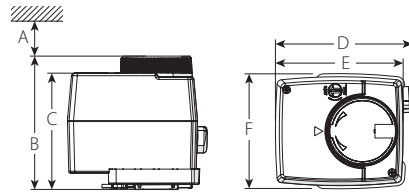
TA Series 76W 6-Way Valve



Size		Dimensions									Weight
Nominal inches DN	Actual Outside Diameter inches mm	D	L1 inches mm	L2 inches mm	H inches mm	H1 inches mm	H2 inches mm	h inches mm	W inches mm	Cv Kv	Approx. (Each) lb kg
1/2 DN15	0.840 21.3	1/2 NPT	1.52 39	1.50 38	4.61 117	1.14 29	1.97 50	0.37 9	1.34 34	1.45 1.25	2.2 1.0
3/4 DN20	1.050 26.9	3/4 NPT	1.87 47	1.89 48	5.55 141	1.50 38	2.36 60	0.37 9	1.57 40	3.24 2.80	4.2 1.9
3/4 DN20	1.050 26.9	3/4 NPT	1.87 47	1.89 48	5.55 141	1.50 38	2.36 60	0.37 9	1.57 40	4.62 3.99	4.2 1.9

4.1 DIMENSIONS

TA M106 CO Actuator

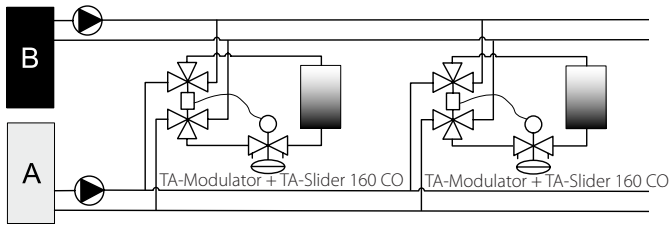


Dimensions						Weight
A inches mm	B inches mm	C inches mm	D inches mm	E inches mm	F inches mm	Approx. (Each) lb kg
7.87 200	3.78 96	3.27 83	3.96 101	3.78 96	3.35 85	1.1 0.5

5.0 PERFORMANCE

Application Example

Control via the TA-Slider 160 CO or TA-Slider 160 BACnet/Modbus CO actuator and the TA Series 7MP pressure independent control valve or the TA Series 7CP compact pressure independent balancing and control valve (see connection diagrams TA-Slider 160 CO + TA-M106 CO and TA-Slider 160 BACnet/Modbus CO + TA-M106 CO).

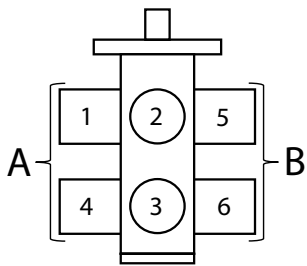
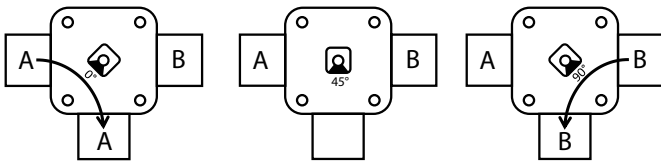
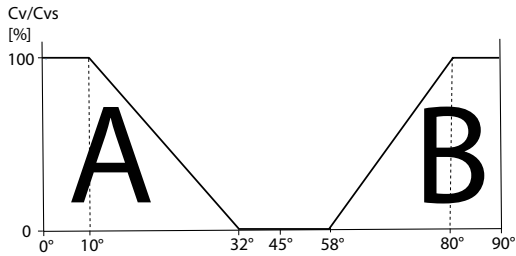


5.1 PERFORMANCE

Installation

The TA Series 76W 6-way valve should be installed with a TA Series 7MP or a TA Series 7CP pressure independent balancing and control valve.

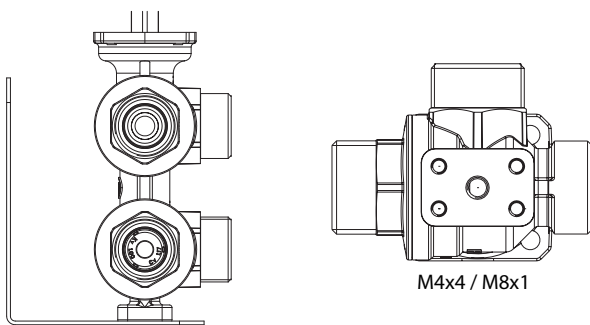
Flow Distribution



Pressurization

When changing the valve position from A to B, there may be some temporary cross connection between the two independent systems. It is not recommended to use this valve in contact with potable water supplies.

Example Valve + Bracket (see section 5.4 Accessories)

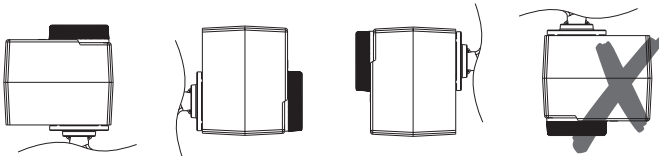


TA-M106 CO

IP43

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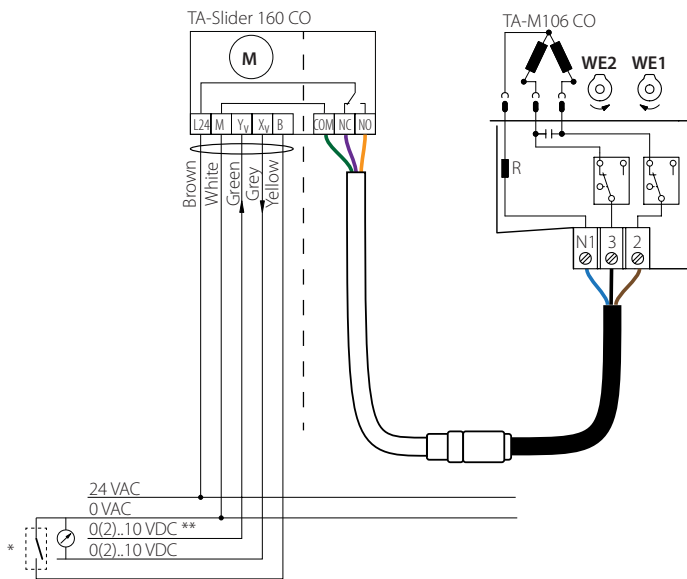
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5.2 PERFORMANCE

Connection Diagram – Terminal/Description

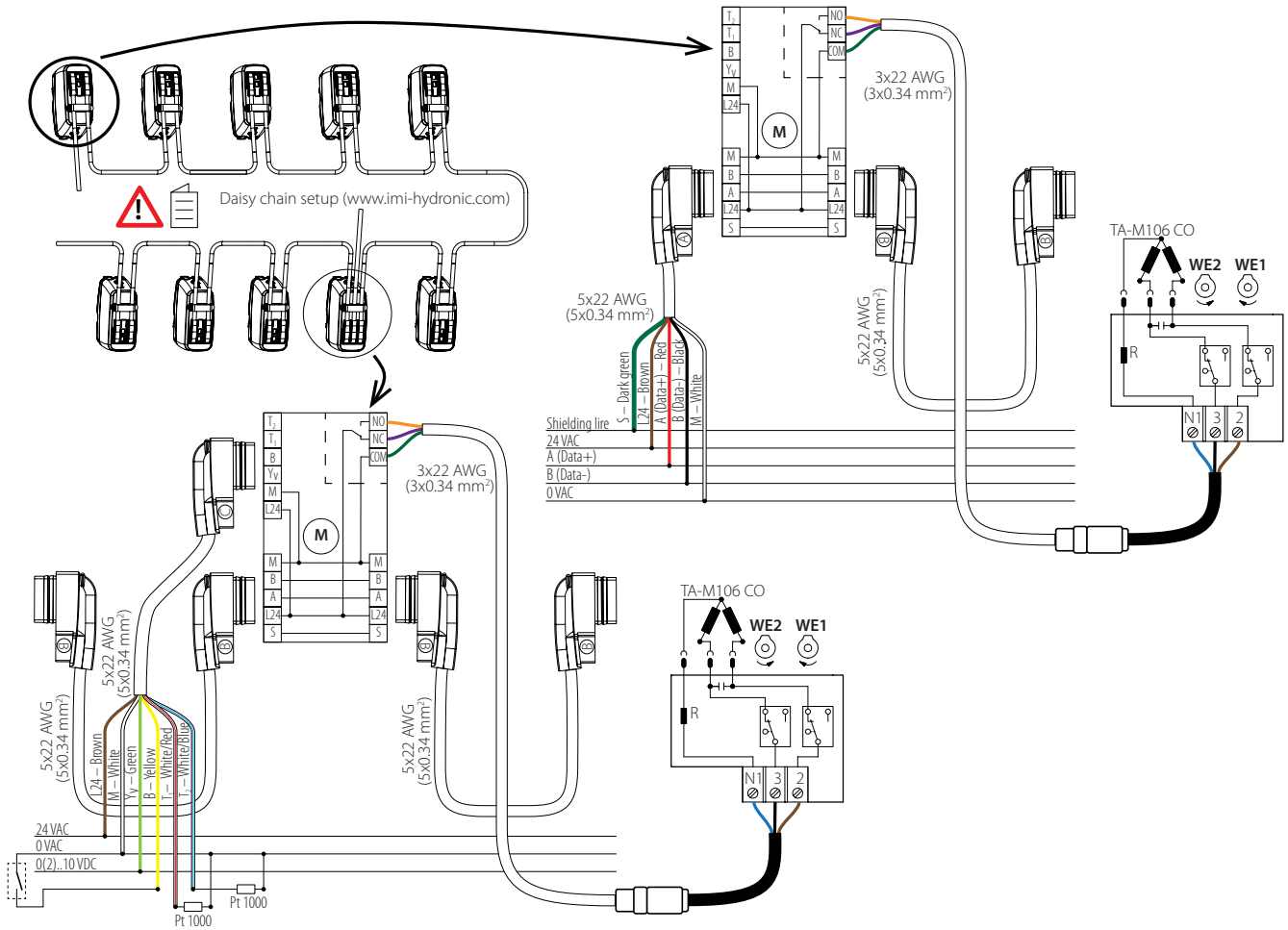
Terminal	Description
S	Shielding; Line should be connected at one end to a specific shielding terminal connected itself to EARTH.
L24	Power supply 24 VAC
M	Neutral for power supply 24 VAC and signals
A (Data+)	Data+ (RS 485)
B (Data-)	Data- (RS 485)
YV	Input signal for proportional control 0(2)-10 VDC, 47 kΩ
XV	Output signal 0(2)-10 VDC, max. 8 mA or min. load resistance 1.25 kΩ
B	Connection for potential free contact (e.g. open window detection), max. 100 Ω, max. 32.8 ft (10 m) cable or shielded
T1	Connection for Pt1000 temperature sensor, to be connected between T1 and M, max. 32.8 ft (10 m) total cable length between actuator and sensor head
T2	Second connection for Pt1000 temperature sensor, to be connected between T2 and M, max. 32.8 ft (10 m) total cable length between actuator and sensor head
COM	Common relay contact; To connect TA-M106 CO actuator
NC	Normally closed contact for relay
NO	Normally open contact for relay



- * The binary input can be used to toggle between heating and cooling mode as an alternative to the dual-range signal.
- ** Dual range signal 0-3.3/6.7-10 VDC, 2-4.7/7.3-10 VDC, 0-4.5/5.5-10 VDC or 2-5.5/6.5-10 VDC.

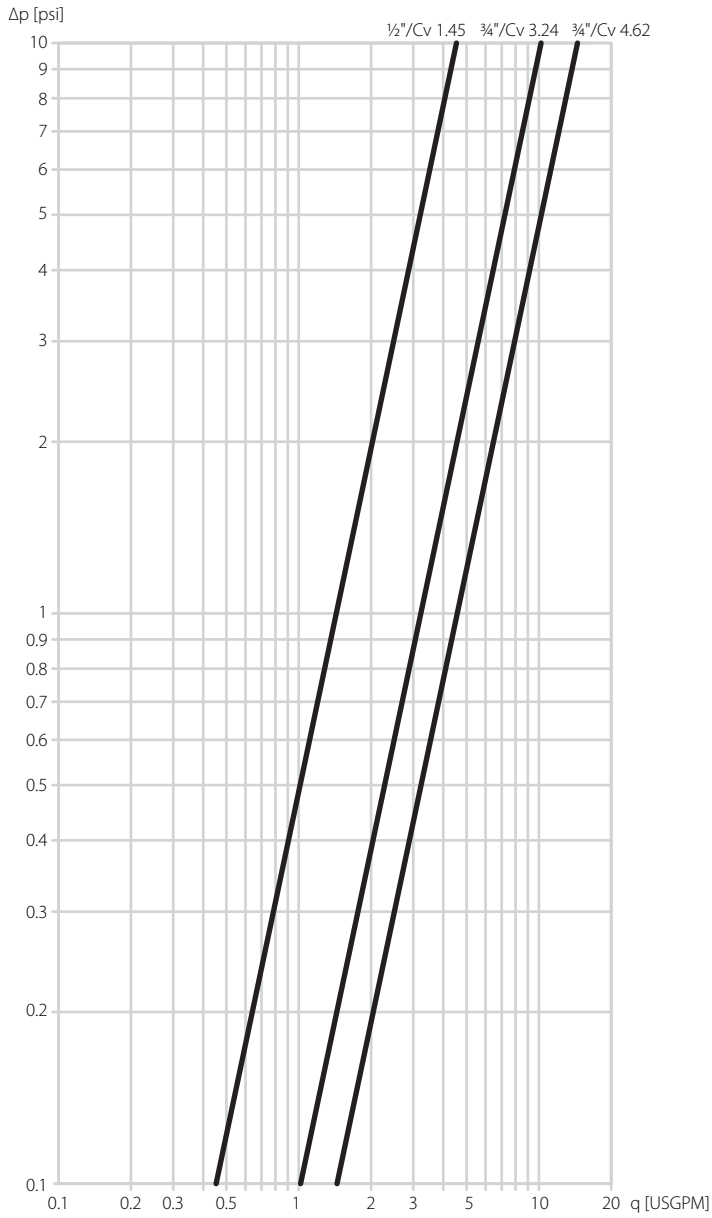
5.2 PERFORMANCE (CONTINUED)

TA-Slider 160 BACnet/Modbus CO + TA-M106 CO – Control by BACnet/Modbus



5.3 PERFORMANCE

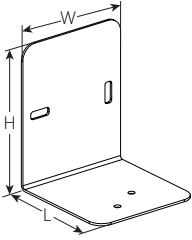
Flow Data



5.4 PERFORMANCE

Accessories

Bracket

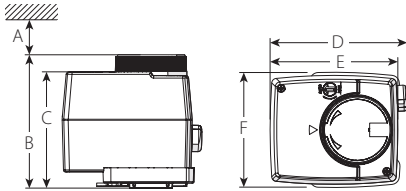


For easier mounting on walls or ceilings.

Two (2) pcs of M4 screws for fixing the valve to the bracket are included in the package.

L in	H in	W in	Part Code
3.15	3.94	3.15	P00076WBRK

TA-M106 CO Actuator



Supply Voltage	Input Signal	Weight lb	Part Code
24VAC	3-point	1.1	P00076W060

6.0 NOTIFICATIONS

Not applicable. Contact Victaulic with any questions.

7.0 REFERENCE MATERIALS

[08.30: Victaulic KOIL-KIT™ Coil Packs](#)

[08.55: Pressure Independent Balancing and Modulating Control Valve: TA Series 7MP](#)

User Responsibility for Product Selection and Suitability

Each user bears final responsibility for making a determination as to the suitability of Victaulic products for a particular end-use application, in accordance with industry standards and project specifications, and the applicable building codes and related regulations as well as Victaulic performance, maintenance, safety, and warning instructions. Nothing in this or any other document, nor any verbal recommendation, advice, or opinion from any Victaulic employee, shall be deemed to alter, vary, supersede, or waive any provision of Victaulic Company's standard conditions of sale, installation guide, or this disclaimer.

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Note

This product shall be manufactured by Victaulic or to Victaulic specifications. Victaulic recommends all products to be installed in accordance with current IMI TA installation/assembly instructions. Victaulic and IMI TA reserve the right to change product specifications, designs and standard equipment without notice and without incurring obligations.

Installation

Reference should always be made to the current IMI TA installation/assembly instructions for the product you are installing. For coupling and strainer installation, reference should always be made to the I-100 Victaulic Filed Installation Handbook for the product you are installing. Handbooks are included with each shipment of Victaulic products for complete installation and assembly data, and are available in PDF format on our website at www.victaulic.com

Warranty

Refer to the Warranty section of the current Price List or contact Victaulic for details.

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