

# User & Installation Manual



## **GSW Water Solenoid Valves** Normally Closed 24VAC | 24VDC | 230VAC

# Contents

1. Product Overview	Page 2
2. Product Features	Page 2
3. Partcodes	Page 2
4. Approvals	Page 2
5. Technical Specifications	Page 3
6. Installation Instructions	Page 4
7. Wiring Instructions	Page 4
8. Troubleshooting	Page 4
9. Warranty	Page 4

## 1. Product Overview

Goldseal water solenoid valves are normally closed (N/C) and constructed with a durable brass body, two-way inlet and outlet ports. Available in 24VAC, 24VDC or 230VAC powered versions. EPDM diaphragm and lead free brass, suitable for potable water control.

## 2. Product Features

- Available in 230VAC, 24VAC or 24VDC (Other voltages available upon request)
- Coil rating - IP65
- Coil duty cycle - 100%
- Lead free brass body for potable water
- EPDM diaphragm

## 3. Partcodes

	24VAC	24VDC	230VAC
1/2"	GSW13-24VAC	GSW13-24VDC	GSW13-230VAC
3/4"	GSW20-24VAC	GSW20-24VDC	GSW20-230VAC
1"	GSW25-24VAC	GSW25-24VDC	GSW25-230VAC
1 1/4"	GSW35-24VAC	GSW35-24VDC	GSW35-230VAC
1 1/2"	GSW40-24VAC	GSW40-24VDC	GSW40-230VAC
2"	GSW50-24VAC	GSW50-24VDC	GSW50-230VAC

## 4. Approvals

GoldSeal GSW water solenoid valves hold the following notable approvals, accentuating their excellence in quality and regulatory compliance:

**ISO 9001 Certified:** GoldSeal's valves adhere to the rigorous standards of ISO 9001 certification, ensuring stringent quality management practices throughout their manufacturing process.

**WRAS Approval for Drinking Water Control:** Endorsed by the Water Regulations Advisory Scheme (WRAS), these valves meet strict regulatory criteria for use with drinking water, guaranteeing safety and suitability for potable water applications.

**CE Marking:** Bearing the CE mark, GoldSeal GSW valves comply with European Union directives, affirming their adherence to essential health, safety, and environmental standards. These approvals collectively testify to GoldSeal's dedication to delivering top-tier products that meet and exceed industry benchmarks.



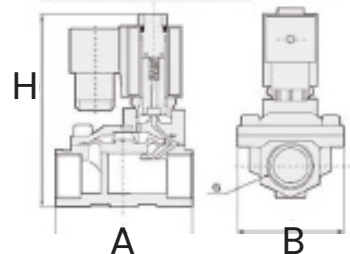
## 5. Technical Specifications

### 24VAC / 24VDC GSW Series

Port Size	Orifice	CV Value	Pressure Difference (Bar)				Max. Temp. (°C)	Volt.	VA	Partcode	Main Dimensions
			Min.	Max. Working Pressure							
				Air / Gas	Water / Hot Liquid	Light Oil •20CST				50/60Hz Brass	AxBxH(mm)
1/2"	13	4.5	0.5	16	16	120	24VAC	13	GSW13-24VAC	66x48x112	
1/2"	13	4.5	0.5	16	16	120	24VDC	13	GSW13-24VDC	66x48x112	
3/4"	20	7.6	0.5	16	16	120	24VAC	13	GSW20-24VAC	75x58x118	
3/4"	20	7.6	0.5	16	16	120	24VDC	13	GSW20-24VDC	75x58x118	
1"	25	12	0.5	16	16	120	24VAC	13	GSW25-24VAC	96x70x131	
1"	25	12	0.5	16	16	120	24VDC	13	GSW25-24VDC	96x70x131	
1 1/4"	35	22	0.5	16	16	120	24VAC	13	GSW32-24VAC	131x96x146	
1 1/4"	35	22	0.5	16	16	120	24VDC	13	GSW32-24VDC	131x96x146	
1 1/2"	40	30	0.5	16	16	120	24VAC	13	GSW40-24VAC	131x96x146	
1 1/2"	40	30	0.5	16	16	120	24VDC	13	GSW40-24VDC	131x96x146	
2"	50	48	0.5	16	16	120	24VAC	13	GSW50-24VAC	165x120x167	
2"	50	48	0.5	16	16	120	24VDC	13	GSW50-24VDC	165x120x167	

### 230VAC GSW Series

Port Size	Orifice	CV Value	Pressure Difference (Bar)				Max. Temp. (°C)	VA AC 230V	W DC 24V	Partcode	Main Dimensions
			Min.	Max. Working Pressure							
				Air / Gas	Water / Hot Liquid	Light Oil •20CST				230VAC 50/60Hz Brass	AxBxH(mm)
1/2"	13	4.5	0.5	16	16	120	13	13	GSW13-230VAC	66x48x112	
3/4"	20	7.6	0.5	16	16	120	13	13	GSW20-230VAC	75x58x118	
1"	25	12	0.5	16	16	120	13	13	GSW25-230VAC	96x70x71	
1 1/4"	35	22	0.5	16	16	120	13	13	GSW32-230VAC	131x96x146	
1 1/2"	40	30	0.5	16	16	120	13	13	GSW40-230VAC	131x96x146	
2"	50	48	0.5	16	16	120	13	13	GSW50-230VAC	165x120x167	



## 6. Installation Instructions

- Prior to installation, it is crucial to verify the voltage, pressure, media, and temperature parameters of the product to ensure compatibility with the intended operating conditions.
- If chemicals are being used to clean the water pipework. Please refer to the manufacturer for specific limitations on chemical types and concentrations allowed.
- Valves are best suited for horizontal pipework installation, with the coil positioned upright and never below the pipework's centerline to mitigate the risk of water ingress from condensation.
- Installation at alternative angles increases the likelihood of pilot holes becoming blocked, compromising service life and functionality.
- Flow direction alignment with the marked indicator on the valve body is imperative for proper valve operation.
- Single flow direction only, non-return flow.
- Before installing the valve, ensure the media is devoid of particles or debris, particularly in new pipework systems where flushing and cleaning are necessary to remove foreign bodies.
- Consider fitting a strainer upstream to shield against dirt ingress.
- Proper installation of connecting pipework is vital to prevent undue stress on the valve, while precautions must be taken to prevent media freezing in colder environments.
- Electrical connections should be carried out by qualified personnel, ensuring adherence to safety standards.
- GoldSeal GSW solenoid valves are not designed for explosive environments.
- Electromagnetic coils may experience temperature rise; hence, insulation is rated to withstand temperatures up to 155°C.
- Under no circumstances should the coil be powered when not mounted on the valve stem or without water pressure as this could result in coil burnout (Minimum 0.5bar pressure required). Refer to the below wiring instructions below for correct coil wiring procedures.
- It is essential that upon installation, a torque wrench is used to avoid overtightening of the bolt above the coil. Over tightening can cause damage to the main shaft of the valve and invalidate the warranty. Please follow the manufacturers guidance based on the sizes below: **15mm** (7NM) **20mm** (9NM) **25mm** (15NM) **32mm** (18NM) **40mm** (18NM) **50mm** (30NM)

## 7. Wiring Instructions

Connection (1) is live for 230VAC or + for 24VAC/DC versions

Connection (2) is neutral for 230VAC or - for 24VAC/DC versions

## 8. Troubleshooting

S&S Northern Ltd ensure prolonged trouble-free performance when standard operating practices are observed. In the event of any operational concerns, please reach out to S&S for prompt assistance. It is incumbent upon the installer to ensure proper drainage and depressurization of the system before conducting any maintenance on the valve. Prior to commencing any maintenance activities, a comprehensive risk assessment must be conducted.

## 9. Warranty

For further information on warranty, please visit the S&S Northern Ltd website, or alternatively contact S&S.

### S&S Northern Ltd

Units 1-4 Barnes Wallis Way, Buckshaw Village, Chorley, Lancashire, PR7 7JN  
**01257 470983 | info@snsnorthern.com | www.snsnorthern.com**