

**TYPE W24 SOLENOID COIL
INSTALLATION AND MAINTENANCE INSTRUCTIONS
IMPORTANT NOTES BEFORE INSTALLING**

Type W24 (24 Watt) solenoid coils, rated IP65 (weather proof and suitable for outdoors use) are designed to be used with Plast-O-Matic solenoid valves. The solenoid consists of the coil, plunger (AKA core), core tube housing and a few other parts. When energized, the solenoid creates a magnetic field that causes the core to move thus opening or closing the valve depending on the design of the valve. You, the end user, must apply the correct voltage for your particular valve/solenoid. This voltage (and part number) is imprinted on the coil.

IMPORTANT: these coils **MUST** be operated with the connector that was supplied by the factory, or the correct replacement connector if required. If used with the wrong connector, the valve will not operate. The coil, voltage and part numbers of the coil and connector are provided below. All connectors are designed for 1/2" NPT conduit connection. These connectors meet DIN 43650/ISO 4400 form A.

The reason the correct connector must be used is because the connector performs a special function. First it rectifies the voltage, and second it allows full voltage to the coil for a short time (less than 1 second), and then reduces the voltage to a lower holding value. Rectified voltage has several advantages:

1. It is much quieter than AC voltage, which tends to hum and occasionally buzz.
2. The coil can be on/off cycled without increasing the heating like AC coils will.
3. In case the coil is energized without being mounted on the valve, no harm is done.

The reason for dropping the voltage after the valve opens (or closes in the case of a normally open valve), is because once the valve has switched to its energized position, it no longer needs full voltage. Most of that energy is wasted in heat and the coil gets very hot. With this special connector the coil uses much less energy, and runs very cool even if energized indefinitely. If the solenoid is de-energized and energized again, the connector will perform the same sequence thus assuring the valve will always operate as required.

As a result of the connector function described above, the coil draws 24 watts for less than one second and as it remains energized it will draw less than 4 watts saving energy, and running much cooler.

COIL PART NUMBER	INPUT VOLTAGE	CONNECTOR PART NUMBER
8826W-240VAC	240 VAC	Z-COOL-DIN8944
8825W-24VAC	24 VAC	Z-COOL-DIN8945
8824W-120VAC	120 VAC	Z-COOL-DIN8943
8827W-24VDC	24 VDC	Z-COOL-DIN8946

SPECIFICATIONS

Insulation class	H
Watts (maximum)	24 (watts drop to approx. 4 watts after initially energized)
Duty Cycle	100% (may be energized indefinitely, or rapid on/off cycling is acceptable)
Max. Ambient temp	50° C (122° F)
Voltage tolerance	10% above or below rated voltage. **See note below
Current (amps)	See table below.
Enclosure Rating	IP65

**Note at 10% above rated voltage the coil will run a little warmer

COIL PART NUMBER	MAXIMUM CURRENT (LESS THAN 1 SECOND)	HOLDING CURRENT
8826W-240VAC	0.15	0.03
8825W-24VAC	0.85	0.22
8824W-120VAC	0.22	0.06
8827W-24VDC	1.1	0.3

INSTALLATION CAUTION: Electrical wiring shall be performed by qualified persons in accordance with all national and local electrical codes. Three wire (single phase, grounded) is required. A 1/2" NPT threaded connection and all gaskets supplied must be used to maintain IP65 weather tight rating.

SOLENOID REPLACEMENT PART NUMBERS

Z-W24-24VAC

24 VAC

	P/N	QTY	DESC
	8895-GPP	1	GL-FL POLYPRO CAP NUT FOR W24 COIL
	9148EP	1	EPDM CLOSED CELL GASKET FOR W24
	0209EP	1	O-RING
	Z-COOL-DIN8945	1	CONNECTOR
	8828	1	CORE TUBE ASSY
	8825W-24VAC	1	COIL
	8672-SS	1	CORE
	8820-PF	1	SOLENOID MOUNT MACHINED
	LC-024B-11-SS	1	SPRING for EASMT model
	LC026B-13-SS	1	SPRING for EASYMT model
	4310	1	CAP, SRING
	Y-INSTR-W24	1	INSTRUCTION SHEET

Z-W24-24VDC

24 VDC Exceptions to above

	Z-COOL-DIN8946	1	CONNECTOR
	8827W-24VDC	1	COIL

Z-W24-240VAC

240 VAC Exceptions to above

	P/N	QTY	DESC
	Z-COOL-DIN8944	1	CONNECTOR
	8826W-240VAC	1	COIL

Z-W24-120VAC

120 VAC Exceptions to above

	P/N	QTY	DESC
	Z-COOL-DIN8943	1	CONNECTOR
	8824W-120VAC	1	COIL

WIRING DIAGRAMS

