

# Coil Reference

Coil Portfolio and Solenoid Enclosures  
(Integrated Modular Coils and Replacement  
Coils for Non-integrated)



## General Description:

### Solenoid Enclosure and Coil Information

Coils are electrical devices that produce magnetic flux when electrical power is applied to the windings. Surrounding the coil is the metal solenoid enclosure and frame. Together with the plunger and stop, it forms the magnetic circuit that operates the valve. Without the enclosure, the magnetic circuit is not complete. Without a complete magnetic circuit, the magnetic field is reduced and valve performance suffers. Depending on the coil voltage and power rating, the pressure rating of the valve can vary.

Solenoid enclosures come in a variety of constructions offering varying levels of protection against the elements and other forces. NEMA identifies the different enclosures as "Types" and NEC sets standards for their safety and performance.

Integrated coils have an epoxy or thermoplastic "over-molding" creating a one-piece coil/enclosure for modularity and protection from the environment.

The National Electrical Manufacturers Association (NEMA) recommends suitable materials and components to meet each enclosure type. The enclosures listed here will only meet the applicable NEMA recommendations when properly installed and operated to NEMA specifications and in accordance with the NEC.



## Electrical Characteristics:

### Standard Voltages:

AC –24/60  
120/60 110/50  
240/60 220/50  
DC –12, 24 &120  
For other Voltages – Consult Factory

### Coil Classification:

Class F Standard  
Class H Available

### Agency Approvals:

Standard valves with NEMA Type 4X or Explosion Proof solenoid enclosures are UL Listed and CSA Certified. DIN coils are UL Recognized. For additional details, consult factory. Optional coils feature ATEX and IECEx Approvals.

### Ultra Low Power Coils (Coil Chart 12)

are used on valves with a unique solenoid operator designed to keep current draw to a minimum, thus achieving the extremely low power consumption of 0.6 watts with no refresh time required for subsequent energization. These valves are ideally suited for use in automated control systems, applications where minimizing energy consumption is critical or where heat rise in the coil must be kept to a minimum. Due to the low power consumption, an increased number of solenoid valves can be driven from the same power source, reducing the overall installation cost.



## Integrated Coil Offering

Part Number	Type of Termination*	Voltage	Wattage	Class
<b>CHART 7 (Continued)</b>				
H111B2**	UL Hazardous Locations NEMA Type 7/9 w/ 18" Leaded Coil	24/60	10	F
H111P3		120/160, 110/50		
H111Q3		240/60, 220/50		
H111C1		12VDC		
H111C2		24VDC		
H111C6**		120VDC		
H222B2**	UL Hazardous Locations NEMA Type 7/9 w/ 18" Leaded Coil	24/60	10	H
H222P3		120/60, 110/50		
H222Q3		240/60, 220/50		
H222C1**		12VDC		
H222C2		24VDC		
H222C6		120VDC		



\* Hazardous location coil approvals: Class I, Div 1 & 2, Groups A, B, C, D; Class II, Div 1 & 2, Groups E,F,G; Class III, Div 1.

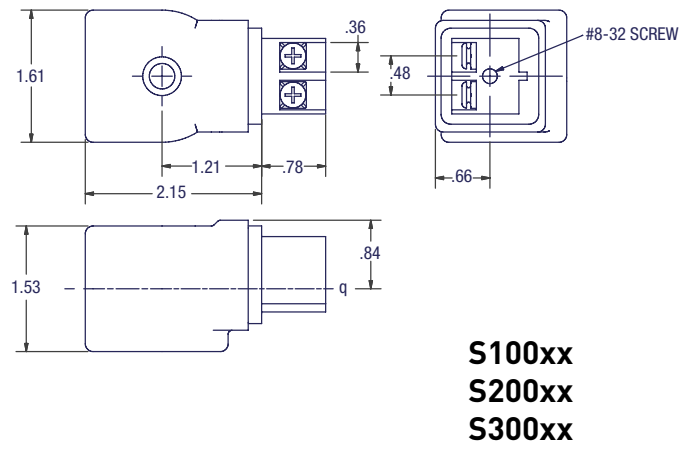
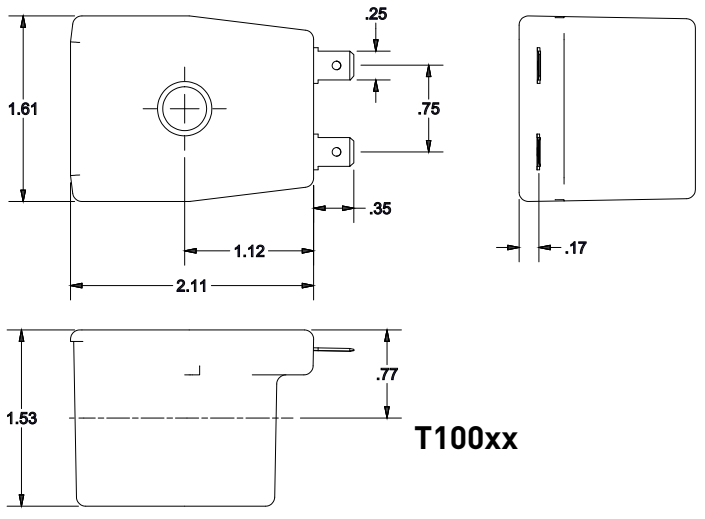
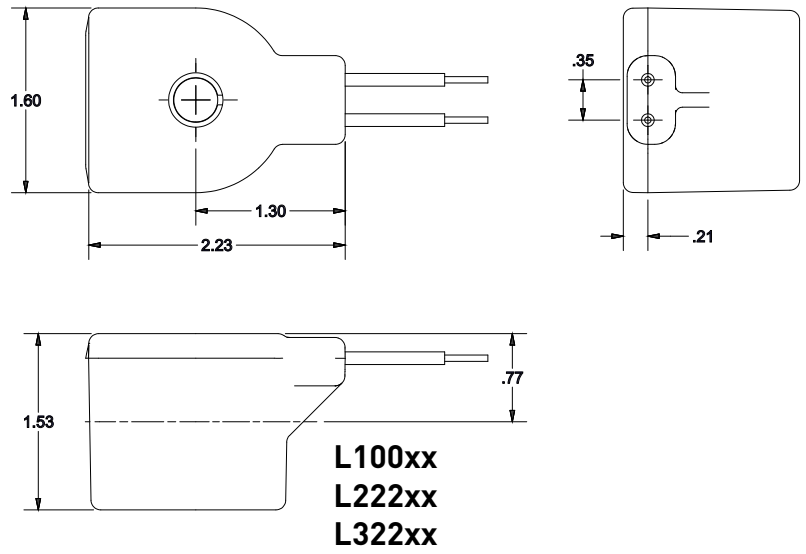
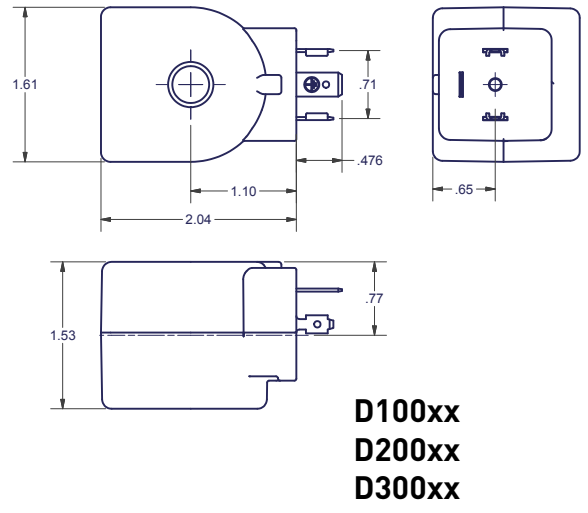
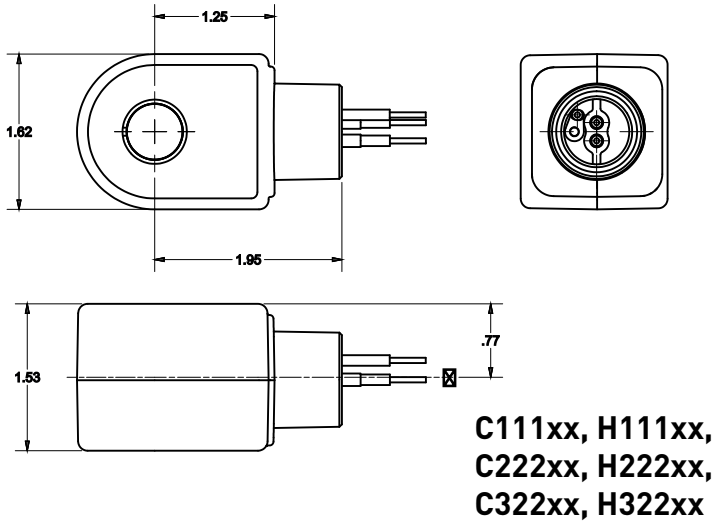
## Additional Coil Options for Chart 7 (Below are replacement coils only, no enclosures)

Part Number	Type of Termination	Voltage	Wattage	Class
J111B2	Molded coil w/ 18" Leads	24/60	10	F
J111P3		120/60, 110/50		
J111Q3		240/60, 220/50		
J111C1		12VDC		
J111C2		24VDC		
J111C6**		120VDC		
J222B2**	Molded coil w/ 18" Leads	24/60	10	H
J222P3		120/60, 220/50		
J222Q3**		240/60, 220/50		
J222C1		12VDC		
J222C2**		24VDC		
J222C6**		120VDC		



\*\* Not in list price book. Minimum order quantities may apply. Consult factory.

# Coil Charts 7, 8, 10 & 11 Integrated Coil Dimensional Values



Coil Reference  
Coil Charts 7-8

