

TECNORD



COILS

Standard Coils

Immersion proof coils

Accessories



Manufacturers of hydraulic cartridge valves
and electro-hydraulic systems

COILS DELTA POWER COMPANY



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W 7 / 2018

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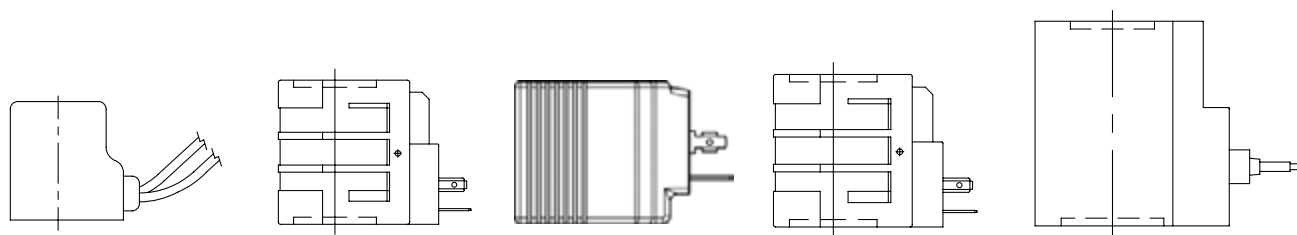


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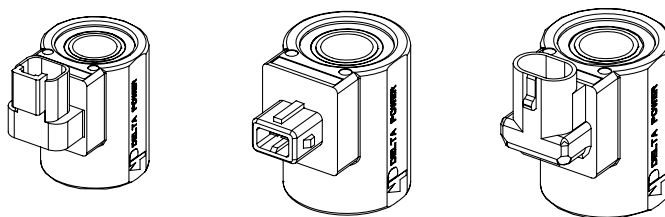
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COIL DATA



STANDARD COILS

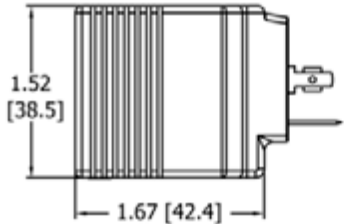
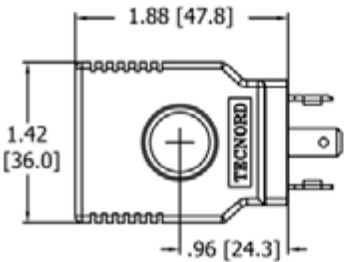
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PJ	1/2"	1.42"	1.52"	CD4
P	1/2"	1.25"	1.78"	CD6
D	1/2"	1.56"	2.03"	CD8
L	5/8"	1.56"	2.03"	CD10
T	3/4"	1.80"	2.38"	CD12
F	3/4"	1.45"	1.97"	CD14



IMMERSION PROOF "I" COILS

TYPE	ID	WIDTH	HEIGHT	PAGE
PI	1/2"	1.48"	1.70"	CD16
DI	1/2"	1.48"	1.97"	CD17
LI	5/8"	1.48"	1.97"	CD18

“P” TYPE “J” COIL



DESCRIPTION

1/2 inch (13 mm) I.D. Coil.

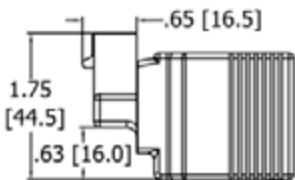
FEATURES

One piece encapsulated design that is:

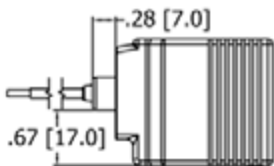
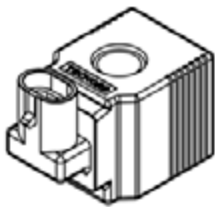
- Weatherproof (when applied with o-rings)
- No external metal shell

COIL SPECIFICATION

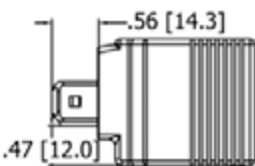
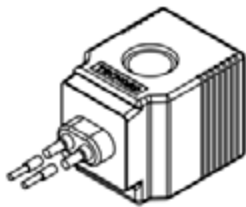
Wattage	21 Watts Nominal
Duty Rating	Continuous Duty ±10% rated voltage at 120°F (49°C) ambient
Min Current for Actuation	80% of rated current at room temperature
Magnet Wire Class	H or Better for all voltages
Temperature Range	-40 to 392 F (-40 to 200 C)
Encapsulation Material	Thermo-Plastic, resistant to moisture, caustic solutions, fungus and vibrations



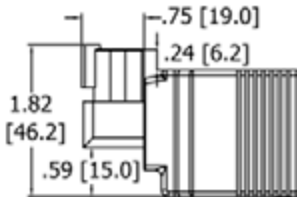
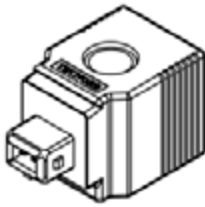
JA



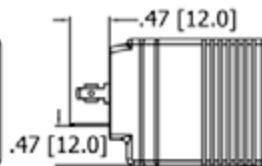
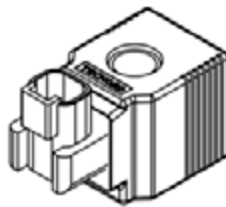
JL



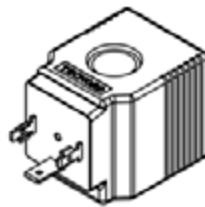
JJ



JD



JH



ORDERING INFORMATION

P	-	-	
TERMINATIONS			VOLTAGE
AMP Superseal - Integral	JA	12	12 VDC / 1.75 Amp
Double lead	JL	24	24 VDC / .875 Amp
AMP Jr. Timer - Integral	JJ		
Metri-Pack - Integral	JM		
Deutsch - Integral DT04-2P	JD		
DIN 43650 (Hirschmann)	JH		

Approximate Coil Weight: .43 lbs (.19 kg)

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STANDARD “P” TYPE COILS

DESCRIPTION

Standard coil data P-Type coil 1/2" I.D.

FEATURES

One piece water resistant encapsulated design.

Numerous terminals and voltages.

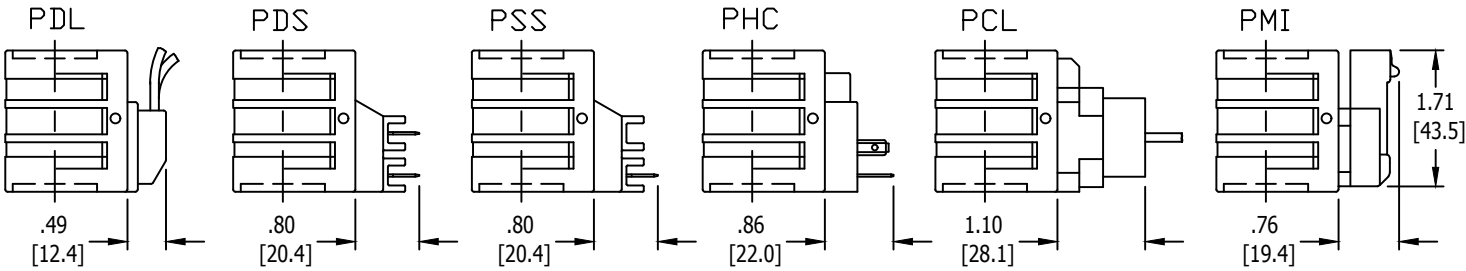
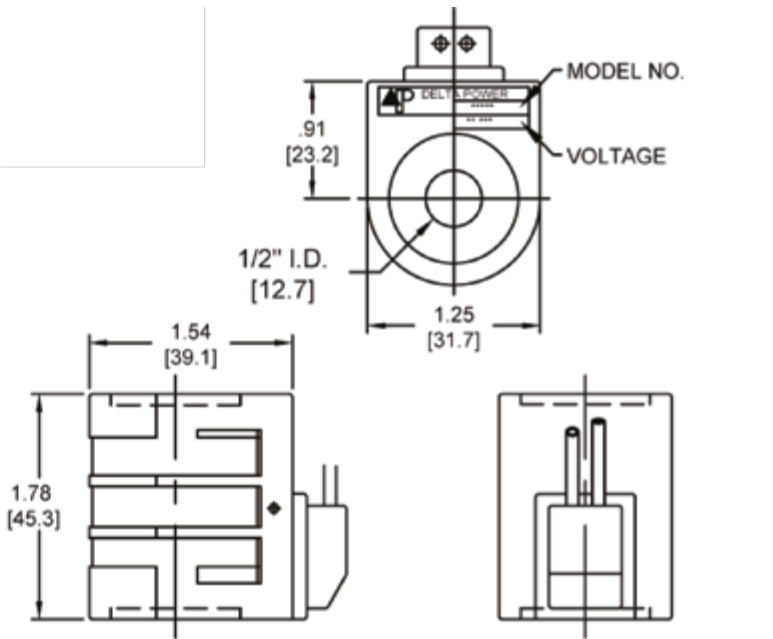
Coil interchangeability with Delta Series and Super Series valves.

Heavy gauge color coded lead wire.

Reversible coil (can be installed on cartridges in both directions with equal efficiency).

Note:

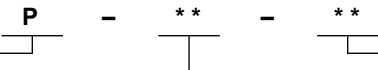
- 1. For coil selection in extreme conditions, please look at our “I” coil line of environmental coils.
- 2. For PB-S2I, HB-S2C & HB-S2D use nut 36202090.



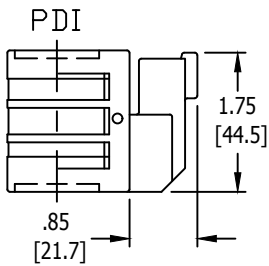
ORDERING INFORMATION

WHEN ORDERING
FILL IN ALL BOXES

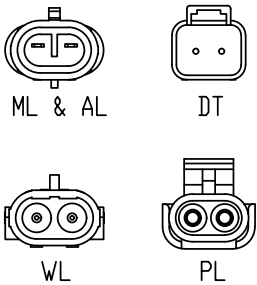
Approximate Coil Weight: .72 lbs (.32 kg)



BASIC MODEL NO.	TERMINATION	VOLTAGE
P-Type One Piece Encapsulated Coil	(ALL COILS DC VOLTAGE EXCEPT AS NOTED)	
	DL Double Lead	06 6VDC
	DT Deutsch on Leads DT04-2P, mates w/DT06-2S	12 12VDC
	DI Deutsch - Integral DT04-2P, mates w/DT06-2S	24 24VDC
	ML Metri-Pack 150 Series on Leads (12162000), mates w/12052641	36 36VDC
	MI Metri-Pack 150.2 Series - Integral (12066016), mates w/12162193	48 48VDC
	PL Packard on Leads (12015792), mates w/12010973	25 24VAC
	WL Weather-Pack on Leads (12010973), mates w/12015792	11 110VAC
	AL Amp Superseal 1.5 on Leads (282104.1), mates w/Amp 282080.1 & Metri-pack 12052641	13 125VAC
	SS Single Spade	22 220VAC
	DS Double Spade	23 250VAC
	HC DIN 43650 (Hirschman) - (AC/DC)	44 440VAC
	CL Conduit Lead - (AC ONLY)	
19 WATT STD. COIL		



LEAD WIRE CONNECTORS



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STANDARD "P" TYPE COILS

COIL MODEL NUMBERS:

Termination	PDL	PSL	PDS	PSS	PHC	PCL		
Description	Double Lead	Single Lead	Double Spade	Single Spade	Hirschmann Connector	Double Lead Conduit	Lead Wire Color	AC Voltage Range
Voltage Amp	6VDC 3.5						ORANGE	
Voltage Amp	12VDC 1.6	12VDC 1.6	12VDC 1.6	12VDC 1.6	12VDC 1.6		YELLOW	
Voltage Amp	24VDC .78		24VDC .78	24VDC .78	24VDC .78		BLUE	
Voltage Amp	36VDC .57				36VDC .57		GREEN	
Voltage Amp	48VDC .40		48VDC .40				BROWN	
Voltage Amp			24VAC .92		24VAC .92	24VAC .92	BLUE/ BLACK	
Voltage Amp					110VAC * .19	110VAC * .19	RED/ WHITE	* 100VAC 115VAC
Voltage Amp					125VAC * .17	125VAC * .17	RED	* 115VAC 130VAC
Voltage Amp					220VAC * .10	220VAC * .10	BLACK/ WHITE	* 200VAC 230VAC
Voltage Amp					250VAC * .08	250VAC * .08	VIOLET/ WHITE	* 225VAC 260VAC
Voltage Amp					440VAC * .05	440VAC * .05	VIOLET	* 400VAC 460VAC

SPECIFICATIONS

WATTAGE: 19 watts nominal.

DUTY RATING: continuous duty $\pm 10\%$ rated voltage at 120°F (49°C) ambient.

MINIMUM CURRENT FOR ACTUATION: 80% of rated current at room temperature.

MAGNET WIRE CLASS: N for all voltages.

TEMPERATURE RANGE: -40°F (-40°C) to 392°F (200°C)

LEAD WIRES: 18 gauge, 24" long, 600 Volt rating, with strain relief.

ENCAPSULATING MATERIAL: glass filled polyester, resistant to moisture, caustic solutions, fungus and vibration.

Temperature range is -40°F (-40°C) to 392°F (200°C).

COLOR IDENTIFICATION: black

NOTE: Delta Power A.C. Coils incorporate integrally molded full wave rectifiers which are rated for reverse voltage peaks of 1000 volts maximum.

A.C. Coils are rated 50/60 HZ.

* Optimum operating voltage noted.

Conduit connectors on A.C. coils have a maximum torque spec of 3 Ft. Lbs.

Arc Suppression Diode Available

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STANDARD “D” TYPE COILS

DESCRIPTION

Standard coil data D-Type coil 1/2" I.D.

FEATURES

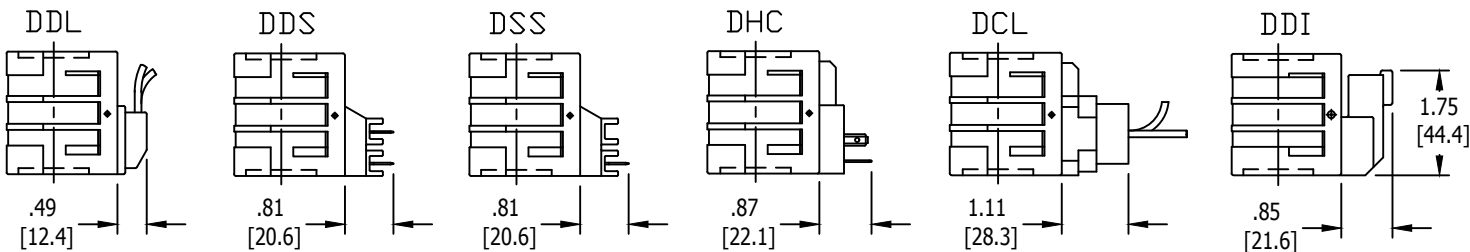
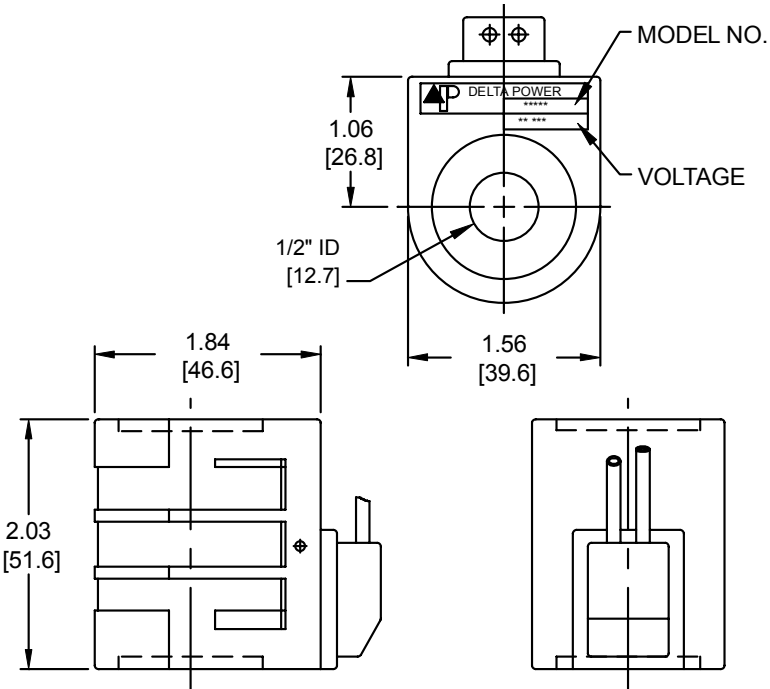
One piece water resistant encapsulated design.

Numerous terminals and voltages.

Heavy gauge color coded lead wire.

Reversible coil (can be installed on cartridges in both directions with equal efficiency).

Note:
For coil selection in extreme conditions, please look at our “I” coil line of environmental coils.



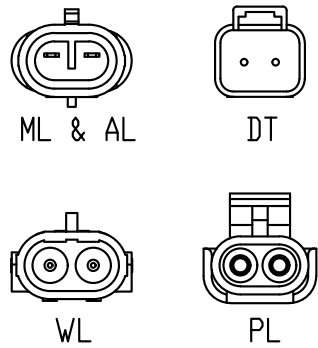
ORDERING INFORMATION

WHEN ORDERING
FILL IN ALL BOXES

Approximate Coil Weight: .72 lbs (.32 kg)

BASIC MODEL NO.	D - ** - **	
	TERMINATION	VOLTAGE
D-Type One Piece Encapsulated Coil	(ALL COILS DC VOLTAGE EXCEPT AS NOTED)	
	DL Double Lead	06 6VDC
	DT Deutsch on Leads DT04-2P, mates w/DT06-2S	12 12VDC
	DI Deutsch - Integral DT04-2P, mates w/DT06-2S	24 24VDC
	ML Metri-Pack 150 Series on Leads (12162000), mates w/12052641	36 36VDC
	PL Packard on Leads (12015792), mates w/12010973	48 48VDC
	WL Weather-Pack on Leads (12010973), mates w/12015792	25 24VAC
	AL Amp Superseal 1.5 on Leads (282104.1), mates w/Amp 282080.1 & Metri-pack 12052641	11 110VAC
	SS Single Spade	13 125VAC
	DS Double Spade	22 220VAC
	HC DIN 43650 (Hirschman) - (AC/DC)	23 250VAC
	CL Conduit Lead - (AC ONLY)	44 440VAC
	22 WATT STD. COIL	

LEAD WIRE CONNECTORS



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STANDARD “D” TYPE COILS**COIL MODEL NUMBERS:**

Termination	DDL	DSL	DDS	DSS	DHC	DCL		
Description	Double Lead	Single Lead	Double Spade	Single Spade	Hirschmann Connector	Double Lead Conduit	Lead Wire Color	AC Voltage Range
Voltage Amp	6VDC 3.7	6VDC 3.7	6VDC 3.7	6VDC 3.7	6VDC 3.7		ORANGE	
Voltage Amp	12VDC 1.8	12VDC 1.8	12VDC 1.8	12VDC 1.8	12VDC 1.8		YELLOW	
Voltage Amp	24VDC .90	24VDC .90	24VDC .90	24VDC .90	24VDC .90		BLUE	
Voltage Amp	36VDC .62	36VDC .62	36VDC .62	36VDC .62	36VDC .62		GREEN	
Voltage Amp	48VDC .47	48VDC .47	48VDC .47	48VDC .47	48VDC .47		BROWN	
Voltage Amp			24VAC 1.2		24VAC 1.2	24VAC 1.2	BLUE/ BLACK	
Voltage Amp					110VAC * .23	110VAC * .23	RED/ WHITE	* 100VAC 115VAC
Voltage Amp					125VAC * .17	125VAC * .17	RED	* 115VAC 130VAC
Voltage Amp					220VAC * .11	220VAC * .11	BLACK/ WHITE	* 200VAC 230VAC
Voltage Amp					250VAC * .10	250VAC * .10	VIOLET/ WHITE	* 225VAC 260VAC
Voltage Amp					440VAC * .05	440VAC * .05	VIOLET	* 400VAC 460VAC

SPECIFICATIONS**WATTAGE:** 22 watts nominal.**DUTY RATING:** continuous duty $\pm 10\%$ rated voltage at 120°F (49°C) ambient.**MINIMUM CURRENT FOR ACTUATION:** 80% of rated current at room temperature.**MAGNET WIRE CLASS:** N for all voltages.**TEMPERATURE RANGE:** -40°F (-40°C) to 392°F (200°C)**LEAD WIRES:** 18 gauge, 24" long, 600 Volt rating, with strain relief.**ENCAPSULATING MATERIAL:** glass filled polyester, resistant to moisture, caustic solutions, fungus and vibration.

Material temperature range is -40°F (-40°C) to 392°F (200°C).

COLOR IDENTIFICATION: black**NOTE:** Delta Power A.C. Coils incorporate integrally molded full wave rectifiers which are rated for reverse voltage peaks of 1000 volts maximum.

A.C. Coils are rated 50/60 HZ.

* Optimum operating voltage noted.

Conduit connectors on A.C. coils have a maximum torque spec of 3 Ft. Lbs.

Arc Suppression Diode Available

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STANDARD “L” TYPE COILS

DESCRIPTION

Standard coil data L-Type coil 5/8" I.D.

FEATURES

One piece water resistant encapsulated design.

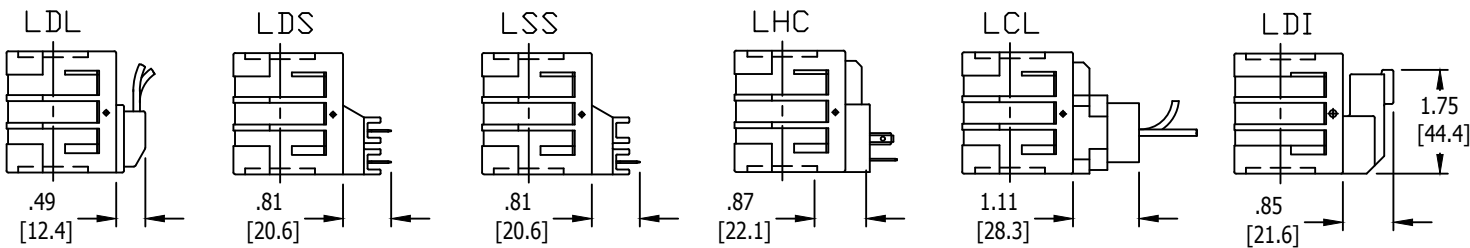
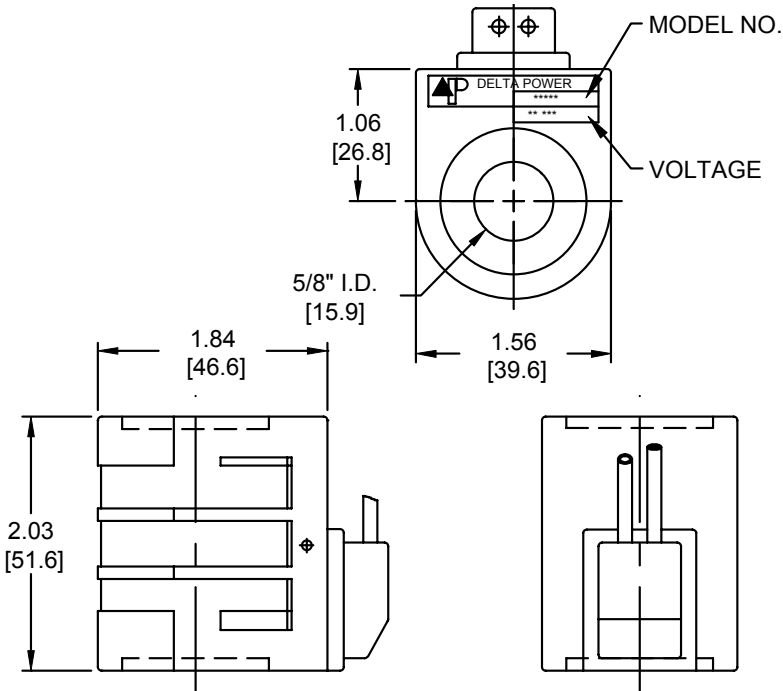
Numerous terminals and voltages.

Heavy gauge color coded lead wire.

Reversible coil (can be installed on cartridges in both directions with equal efficiency).

Note:

For coil selection in extreme conditions, please look at our “I” coil line of environmental coils.



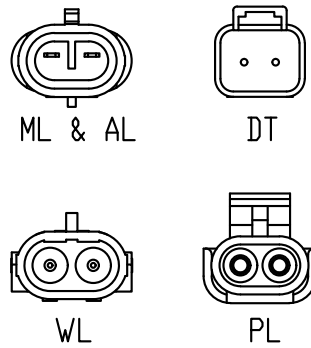
ORDERING INFORMATION

WHEN ORDERING
FILL IN ALL BOXES

Approximate Coil Weight: .72 lbs (.32 kg)

BASIC MODEL NO.	TERMINATION	VOLTAGE
	(ALL COILS DC VOLTAGE EXCEPT AS NOTED)	
L-Type One Piece Encapsulated Coil	DL Double Lead	06 6VDC
	DT Deutsch on Leads DT04-2P, mates w/DT06-2S	12 12VDC
	DI Deutsch - Integral DT04-2P, mates w/DT06-2S	24 24VDC
	ML Metri-Pack 150 Series on Leads (12162000), mates w/12052641	36 36VDC
	PL Packard on Leads (12015792), mates w/12010973	48 48VDC
	WL Weather-Pack on Leads (12010973), mates w/12015792	25 24VAC
	AL Amp Superseal 1.5 on Leads (282104.1), mates w/Amp 282080.1 & Metri-pack 12052641	11 110VAC
	SS Single Spade	13 125VAC
	DS Double Spade	22 220VAC
	HC DIN 43650 (Hirschman) - (AC/DC)	23 250VAC
	CL Conduit Lead - (AC ONLY)	44 440VAC
	22 WATT STD. COIL	

LEAD WIRE CONNECTORS



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STANDARD “L” TYPE COILS

COIL MODEL NUMBERS:

Termination	LDL	LDS	LHC	LCL		
Description	Double Lead	Double Spade	Hirschmann Connector	Double Lead Conduit	Lead Wire Color	AC Voltage Range
Voltage Amp	12VDC 1.8	12VDC 1.8	12VDC 1.8		YELLOW	
Voltage Amp	24VDC .9	24VDC .9	24VDC .9		BLUE	
Voltage Amp					GREEN	
Voltage Amp					BROWN	
Voltage Amp					BLUE/ BLACK	
Voltage Amp			110VAC *.16	110VAC *.16	RED/ WHITE	* 100VAC 115VAC
Voltage Amp					RED	* 115VAC 130VAC
Voltage Amp			220VAC *.08	220VAC *.08	BLACK/ WHITE	* 200VAC 230VAC
Voltage Amp					VIOLET/ WHITE	* 225VAC 260VAC
Voltage Amp					VIOLET	* 400VAC 460VAC

Data in this chart reflects current usage. Additional terminations, connections and suppression devices are available. Consult the factory for special applications.

SPECIFICATIONS

WATTAGE: 22 watts nominal.

DUTY RATING: continuous duty $\pm 10\%$ rated voltage at 120°F (49°C) ambient.

MINIMUM CURRENT FOR ACTUATION: 80% of rated current at room temperature.

MAGNET WIRE CLASS: N for all voltages.

TEMPERATURE RANGE: -40°F (-40°C) to 392°F (200°C)

LEAD WIRES: 18 gauge, 24" long, 600 Volt rating, with strain relief.

ENCAPSULATING MATERIAL: glass filled polyester, resistant to moisture, caustic solutions, fungus and vibration.

Material temperature range is -40°F (-40°C) to 392°F (200°C).

COLOR IDENTIFICATION: black

NOTE: Delta Power A.C. Coils incorporate integrally molded full wave rectifiers which are rated for reverse voltage peaks of 1000 volts maximum.

A.C. Coils are rated 50/60 HZ.

* Optimum operating voltage noted.

Conduit connectors on A.C. coils have a maximum torque spec of 3 Ft. Lbs.

STANDARD “T” TYPE COILS

DESCRIPTION

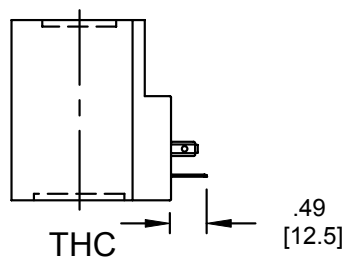
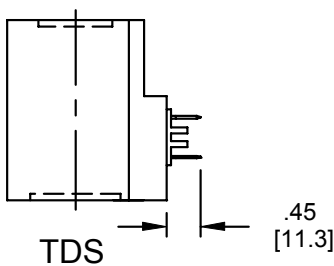
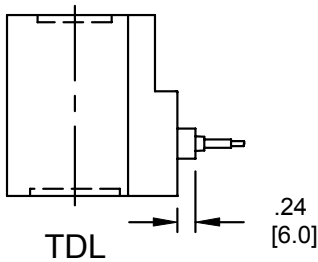
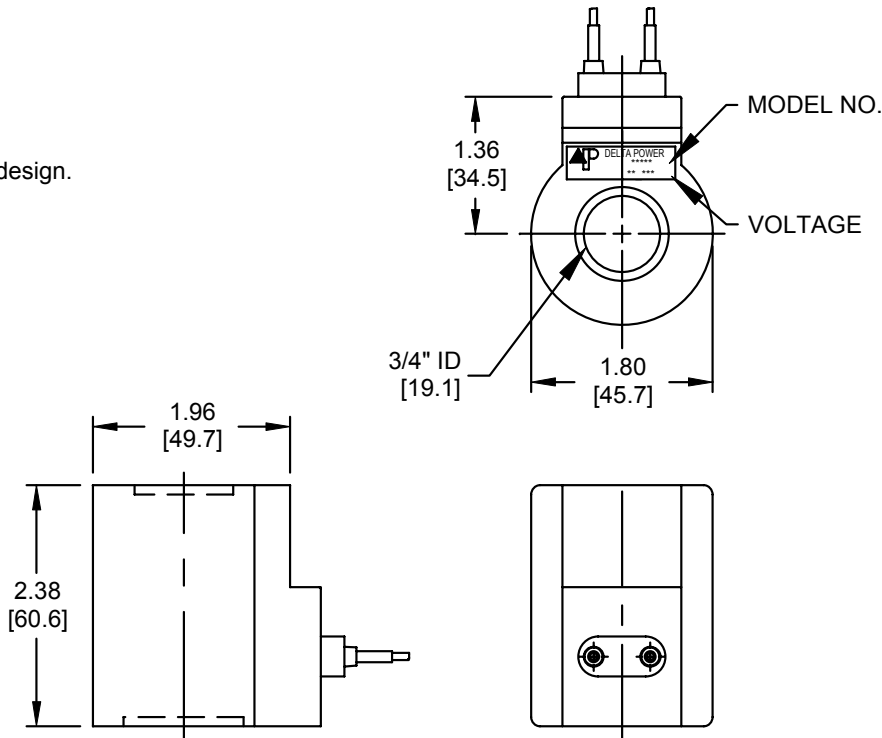
T-Type coil 3/4" I.D.

FEATURES

One piece water resistant encapsulated design.

Numerous terminals and voltages.

Each coil is not reversible.



ORDERING INFORMATION

WHEN ORDERING
FILL IN ALL BOXES

Approximate Coil Weight: .90 lbs (.41 kg)

<div>T - ** - **</div>		
BASIC MODEL NO.	TERMINATION	VOLTAGE
T-Type One Piece Encapsulated Coil	(ALL COILS DC VOLTAGE EXCEPT AS NOTED)	
	DL Double Lead	06 6VDC
	DT Deutsch on Leads DT04-2P	12 12VDC
	ML Metri-Pack on Leads (12162000)	24 24VDC
	PL Packard on Leads (150 Series)	36 36VDC
	WL Weatherpack on Leads (12010972)	48 48VDC
	DS Double Spade	25 24VAC
	HC DIN 43650 (Hirschman) - (AC/DC)	11 110VAC
		22 220VAC
	28 WATT STD. COIL	

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STANDARD "T" TYPE COILS

COIL MODEL NUMBERS:

Termination	TDL	TDS	THC		
Description	Double Lead	Double Spade	Hirschmann Connector	Lead Wire Color	AC Voltage Range
Voltage Amp	12VDC 2.33	12VDC 2.33	12VDC 2.33	BLACK	
Voltage Amp	24VDC 1.17	24VDC 1.17	24VDC 1.17	RED	
Voltage Amp	36VDC .78	36VDC .78	36VDC .78	BLUE	
Voltage Amp	48VDC .58	48VDC .58	48VDC .58	GREEN	
Voltage Amp			25VAC 1.75	RED/ BLUE	25VAC
Voltage Amp					
Voltage Amp			120VAC .31	RED/ BLUE	115VAC 130VAC
Voltage Amp					
Voltage Amp			240VAC .15	RED/ BLUE	225VAC 260VAC
Voltage Amp					

Data in this chart reflects current usage. Additional terminations, connections and suppression devices are available. Consult the factory for special applications.

SPECIFICATIONS

WATTAGE: 28 watts nominal.

DUTY RATING: continuous duty $\pm 10\%$ rated voltage at 120°F (49°C) ambient.

MINIMUM CURRENT FOR ACTUATION: 80% of rated current at room temperature.

MAGNET WIRE CLASS: N for all voltages.

TEMPERATURE RANGE: -40°F (-40°C) to 392°F (200°C)

LEAD WIRES: 18 gauge, 24" long, 600 Volt rating, with strain relief.

ENCAPSULATING MATERIAL: glass filled polyester, resistant to moisture, caustic solutions, fungus and vibration.

Material temperature range is -40°F (-40°C) to 392°F (200°C).

COLOR IDENTIFICATION: black

NOTE: Delta Power A.C. Coils incorporate integrally molded full wave rectifiers which are rated for reverse voltage peaks of 1000 volts maximum.

A.C. Coils are rated 50/60 HZ.

* Optimum operating voltage noted.

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STANDARD “F” TYPE COILS

DESCRIPTION

T-Type coil 3/4" I.D.

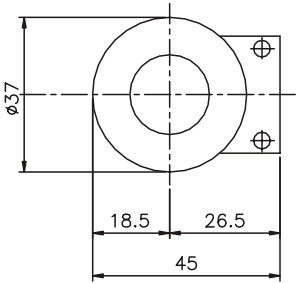
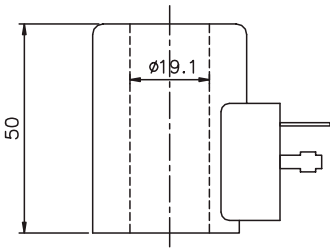
FEATURES

One piece water resistant encapsulated design.

Numerous terminals and voltages available.

Internal arc suppression diodes available on request.

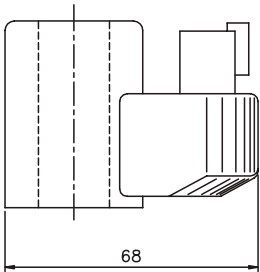
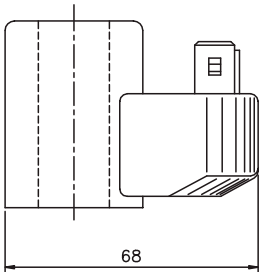
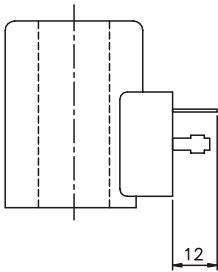
Color identification: metallic envelope.



FHC

FJT

FDT



ORDERING INFORMATION

WHEN ORDERING
FILL IN ALL BOXES

Approximate Coil Weight: .49 lbs (.22 kg)

<div>F - ** - **</div>		
MODEL	TERMINATION	VOLTAGE
F (proportional coil type)	(ALL COILS DC VOLTAGE EXCEPT AS NOTED)	
	HC DIN 43650 (Hirschman)	12 12VDC
	DI Deutsch – Integral DT04-2P	24 24VDC
	JT Amp Junior Timer	22 220VAC
		without internal rectifier (for HC termination only)

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STANDARD "F" TYPE COILS

COIL MODEL NUMBERS:

<i>Termination</i>	<i>FHC</i>	<i>FDI</i>	<i>FJT</i>
<i>Description</i>	<i>Hirschmann connector</i>	<i>Deutsch Integral</i>	<i>Amp Junior Timer</i>
<i>Voltage / Amp</i>	12 V / 1,66 A	12 V / 1,66 A	12 V / 1,66 A
<i>Voltage / Amp</i>	24 V / 0,83 A	24 V / 0,83 A	24 V / 0,83 A
<i>Voltage / Amp</i>	220 VAC rectified / 0,10 A		

SPECIFICATIONS

WATTAGE: 20 watts nominal.

DUTY RATING: continuous duty $\pm 10\%$ rated voltage at 120°F (49°C) ambient.

MINIMUM CURRENT FOR ACTUATION: 80% of rated current at room temperature.

MAGNET WIRE INSULATION: class H (200°C).

HEAT INSULATION: class H (180° C).

AMBIENT TEMPERATURE RANGE: -30°C +60°C

PROTECTION DEGREE: IP 65 (with connector and suitable seals).

LEAD WIRES: 600 Volt rating, with strain relief.

ENCAPSULATING MATERIAL: glass filled polyester, resistant to moisture, caustic solutions, fungus and vibration.

Metallic parts protected against oxidation.

A.C. coils do not include the rectifier, supply voltage must be externally rectified

IMMERSION PROOF “P” TYPE “I” COILS

DESCRIPTION

1/2 inch (13 mm) I.D. Short Immersion Proof Coil.

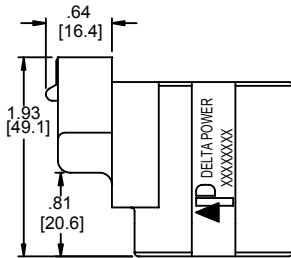
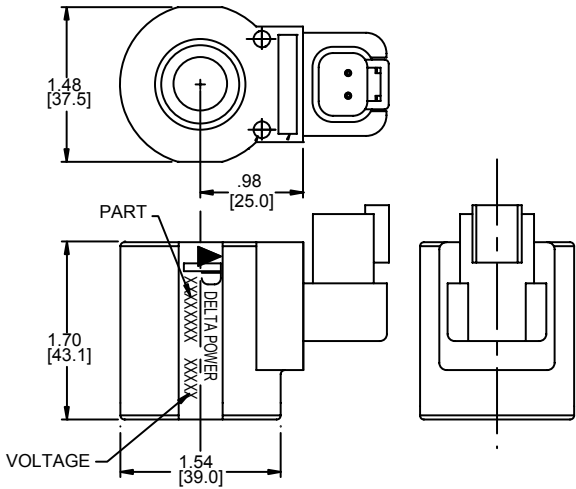
FEATURES

One piece encapsulated design that is:

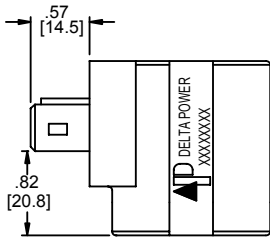
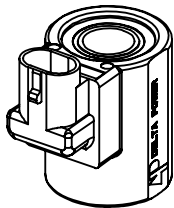
- Weatherproof
- Immersion proof
- Thermal shock / dunk tested
- No external metal shell

COIL SPECIFICATION

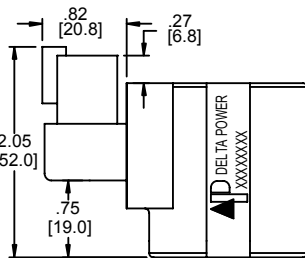
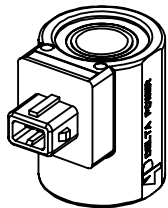
Wattage	20 Watts Nominal
Duty Rating	Continuous Duty ±10% rated voltage at 120°F (49°C) ambient
Min Current for Actuation	80% of rated current at room temperature
Magnet Wire Class	H or Better for all voltages
Temperature Range	-40° to 392°F (-40° to 200°C)
Protection degree	Up to IP 65 (with connector and suitable seals)
Encapsulation Material	Thermo-Plastic, resistant to moisture, caustic solutions, fungus and vibrations



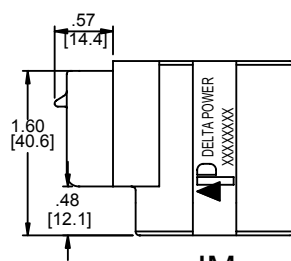
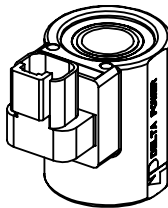
IA



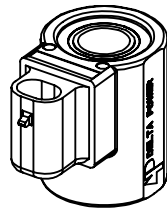
IJ



ID



IM



ORDERING INFORMATION

P - - -

TERMINATIONS

AMP Superseal 1.5 – Integral (282104.1),
mates w/282080.1 & Metri-pack 12052641
Deutsch – Integral DT04-2P, mates w/DT06-2S
AMP Jr. Timer – Integral (84-9419)
Metri-pack 150.2 Series – Integral (12066016),
mates w/12162193

IA 12
ID 24
IJ
IM

VOLTAGE

12 VDC / 1.6 Amp Yellow Lettering
24 VDC / .80 Amp Blue Lettering

NOTE: pull type valves require nut 36202073 in lieu of standard nut.
Push type valves require nut 36202071 in lieu of standard nut.

Approximate Coil Weight: .43 lbs (.19 kg)

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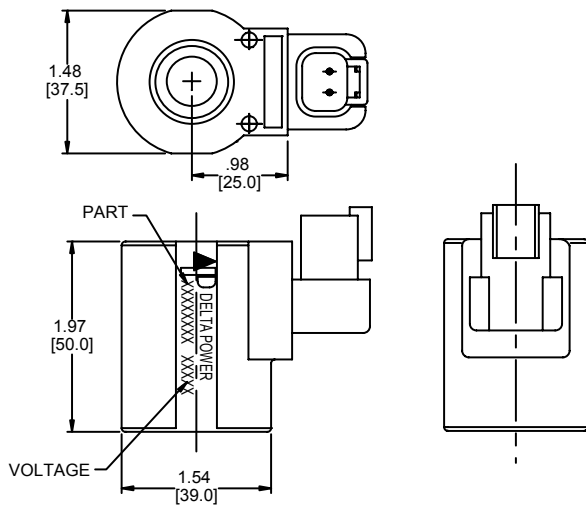


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IMMERSION PROOF "D" TYPE "I" COILS



DESCRIPTION

1/2 inch (13 mm) I.D. Immersion Proof Coil.

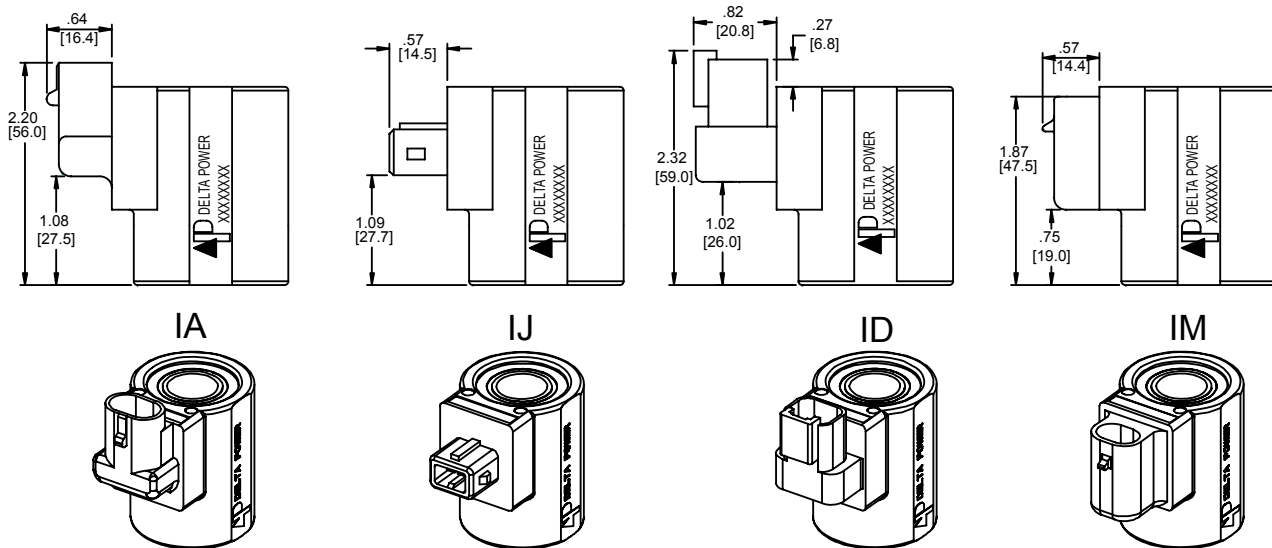
FEATURES

One piece encapsulated design that is:

- Weatherproof
- Immersion proof
- Thermal shock / dunk tested
- No external metal shell

COIL SPECIFICATION

Wattage	24 Watts Nominal
Duty Rating	Continuous Duty $\pm 10\%$ rated voltage at 70°F (21°C) ambient
Min Current for Actuation	90% of rated current at room temperature
Magnet Wire Class	H or Better for all voltages
Temperature Range	-40° to 392°F (-40° to 200°C)
Encapsulation Material	Thermo-Plastic, resistant to moisture, caustic solutions, fungus and vibrations



ORDERING INFORMATION

	D	-	-	
TERMINATIONS				
AMP Superseal 1.5 – Integral (282104.1), mates w/282080.1 & Metri-pack 12052641	IA			12
Deutsch – Integral DT04-2P, mates w/DT06-2S	ID			24
AMP Junior Timer - Integral (84-9419)	IJ			
Metri-pack 150.2 Series – Integral (12066016), mates w/12162193	IM			

Approximate Coil Weight: .49 lbs (.22 kg)

VOLTAGE

12 VDC / 2.0 Amp Yellow Lettering
24 VDC / 1.0 Amp Blue Lettering

NOTE: pull type valves require nut 36202073 in lieu of standard nut.
Push type valves require nut 36202071 in lieu of standard nut.

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IMMERSION PROOF “L” TYPE “I” COILS

DESCRIPTION

5/8 inch (16 mm) I.D. Immersion Proof Coil.

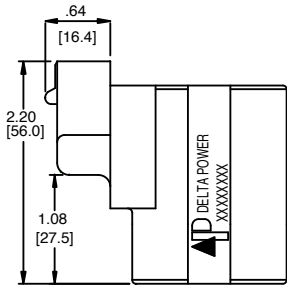
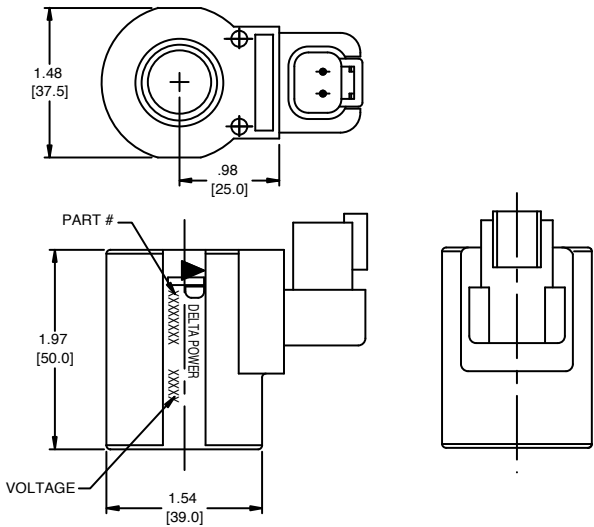
FEATURES

One piece encapsulated design that is:

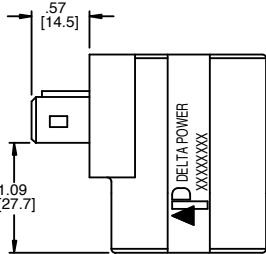
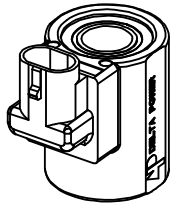
- Weatherproof
- Immersion proof
- Thermal shock / dunk tested
- No external metal shell

COIL SPECIFICATION

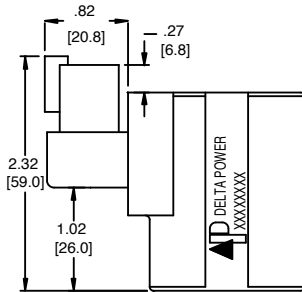
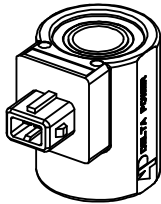
Wattage	26 Watts Nominal
Duty Rating	Continuous Duty ±10% rated voltage at 120°F (49°C) ambient
Min Current for Actuation	80% of rated current at room temperature
Magnet Wire Class	H or Better for all voltages
Temperature Range	-40° to 392°F (-40° to 200°C)
Encapsulation Material	Thermo-Plastic, resistant to moisture, caustic solutions, fungus and vibrations



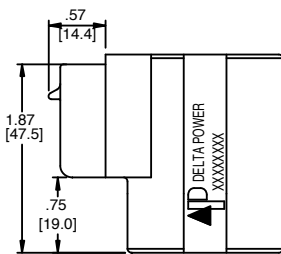
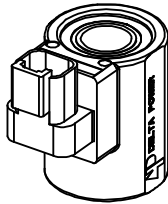
IA



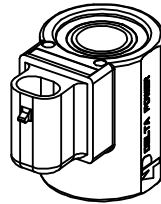
IJ



ID



IM



ORDERING INFORMATION

L	-	-	-
TERMINATIONS			
AMP Superseal 1.5 – Integral (282104.1), mates w/282080.1 & Metri-pack 12052641	IA	12	
Deutsch – Integral DT04-2P, mates w/DT06-2S	ID	24	
AMP Jr. Timer – Integral (84-9419)	IJ		
Metri-pack 150.2 Series – Integral (12066016), mates w/12162193	IM		

Approximate Coil Weight: .49 lbs (.22 kg)

VOLTAGE

12 VDC / 2.2 Amp Yellow Lettering
24 VDC / 1.1 Amp Blue Lettering

NOTE: Pull type valves require nut 36202073 in lieu of standard nut.
Push type valves require nut 36202071 in lieu of standard nut.

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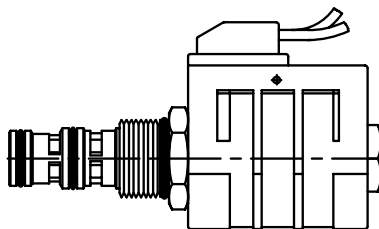


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GENERAL CARTRIDGE VALVE INSTALLATION NOTES

**CARTRIDGES**

Inspect the cartridge to assure there is no external contaminant present.

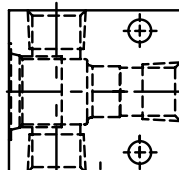
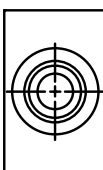
Check O-rings and back-up rings to assure they are intact and in the correct position. The O-rings should always be toward the high pressure port or between doubled back-up rings on bi-directional applications.

COILS

It is sometimes easier to remove the coil from the cartridge valve to install terminations or make connections with conduit, etc. If this is the case, reinstall the coil by tightening the coil nut to 4-6 ft lbs per spec sheet.

CAUTION: DO NOT OVER TORQUE

Tube will be stretched and damaged, causing valve to fail.

**VALVE BODIES**

Check the cartridge brochure to assure correct plumbing.

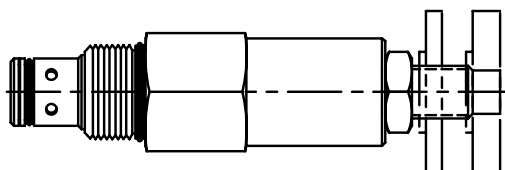
Inspect the cavity for burrs and any irregular machining which would damage O-rings at assembly.

Shims may be required behind the block for panel mounting.

ASSEMBLY

Dip the cartridge in clean oil before installing.

Screw the cartridge in by hand until the top O-ring is touching the manifold, then wrench tighten to the proper torque specification given below.

**TORQUE SPECIFICATIONS**

Final Cartridge Tightening:

Series	Torque
5/8 MINI	10-15 ft-lbs
3/4 POWER	20-25 ft-lbs
7/8 DELTA	25-30 ft-lbs
1 1/16 TECNORD	60-70 ft-lbs
1 5/16 SUPER	80-90 ft-lbs

Adjusting Holding Parts:

Part	Torque
Nut	3-5 ft-lbs
Knob	3-5 ft-lbs
Cap	2-3 ft-lbs

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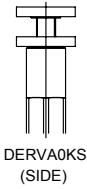
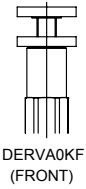
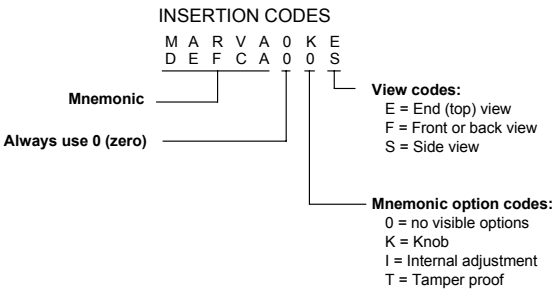
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CAD INSERTION CODES - 2D

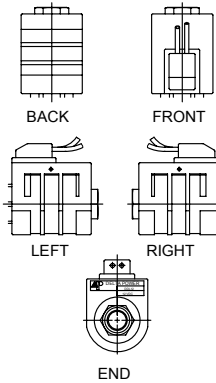
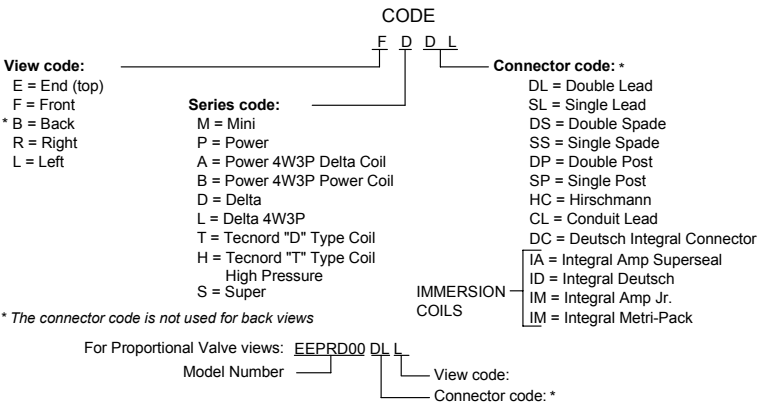
MECHANICAL VALVES

The insertion codes for mechanical valves are based on the first seven digits of the valve mnemonic code number. The eighth digit represents the direction of the view.

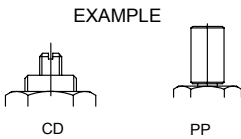
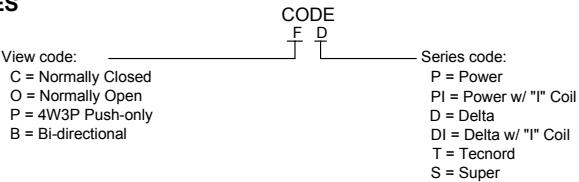


SOLENOID VALVES

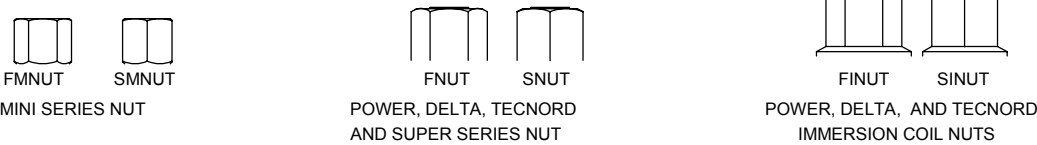
COIL VIEWS



MANUAL OVERRIDES



NORMALLY OPEN VALVE COIL NUTS



HYDRAULIC SYMBOLS



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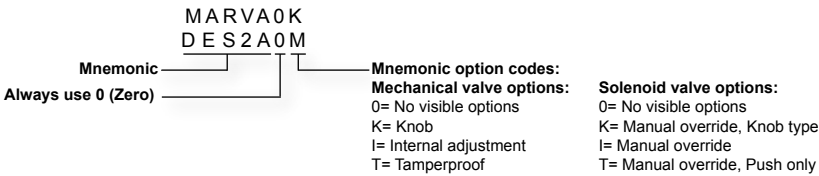
CAD INSERTION CODES - 2D

CAVITIES		PORTS																										
<p>View code: E 0 0 0 0</p> <p>E = End (top) S = Side H = Hidden (side)</p> <p style="text-align: right; margin-right: 50px;">Last four digits of form tool P/N.</p> <div style="display: flex; justify-content: space-around; align-items: center; margin-top: 20px;"> </div> <div style="display: flex; justify-content: space-around; margin-top: 10px;"> E0000 S0000 </div>	<div style="display: flex; justify-content: space-between;"> <div style="width: 45%;"> <p>Port code: S E 1 2 N E 3 - 4</p> <p>S = SAE N = NPT</p> <p>View code: E = End (top) S = Side H = Hidden (side)</p> </div> <div style="width: 45%;"> <p>Size code</p> <p>NPT Examples: 1/16-27 = 1-16 3/4-14 = 3-4 1 1/4-11 1/2 = 11-4</p> </div> </div> <div style="display: flex; justify-content: space-around; align-items: center; margin-top: 20px;"> </div> <div style="display: flex; justify-content: space-around; margin-top: 10px;"> NE3-4 NS3-4 </div> <div style="display: flex; justify-content: space-between; margin-top: 20px;"> <div style="width: 48%;"> <p style="text-align: center;">SAE SIZES AVAILABLE</p> <table style="width: 100%; font-size: small;"> <tr><td>#2 SAE</td><td>#8 SAE</td><td>#20 SAE</td></tr> <tr><td>#3 SAE</td><td>#10 SAE</td><td>#24 SAE</td></tr> <tr><td>#4 SAE</td><td>#12 SAE</td><td>#32 SAE</td></tr> <tr><td>#5 SAE</td><td>#14 SAE</td><td></td></tr> <tr><td>#6 SAE</td><td>#16 SAE</td><td></td></tr> </table> </div> <div style="width: 48%;"> <p style="text-align: center;">NPT SIZES AVAILABLE</p> <table style="width: 100%; font-size: small;"> <tr><td>1/16" NPT</td><td>1" NPT</td></tr> <tr><td>1/8" NPT</td><td>1 1/4" NPT</td></tr> <tr><td>1/4" NPT</td><td>1 1/2" NPT</td></tr> <tr><td>3/8" NPT</td><td>2" NPT</td></tr> <tr><td>1/2" NPT</td><td></td></tr> </table> </div> </div>			#2 SAE	#8 SAE	#20 SAE	#3 SAE	#10 SAE	#24 SAE	#4 SAE	#12 SAE	#32 SAE	#5 SAE	#14 SAE		#6 SAE	#16 SAE		1/16" NPT	1" NPT	1/8" NPT	1 1/4" NPT	1/4" NPT	1 1/2" NPT	3/8" NPT	2" NPT	1/2" NPT	
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<div style="display: flex; justify-content: space-between;"> <div style="width: 45%;"> <p>Series code: D 2 W S M 3 W N</p> <p>M = Mini P = Power D = Delta T = Tecnord S = Super</p> </div> <div style="width: 45%;"> <p>Port code: S = SAE N = NPT</p> <p>Style code: 2W = two way 3W = three way 4W = four way 5W = five way</p> </div> </div> <div style="display: flex; justify-content: space-around; align-items: center; margin-top: 20px;"> </div> <div style="display: flex; justify-content: space-around; margin-top: 10px;"> D2WS M3WN </div>																												
CONSULT FACTORY FOR FORMAT AVAILABILITY																												

CAD INSERTION CODES - 3D

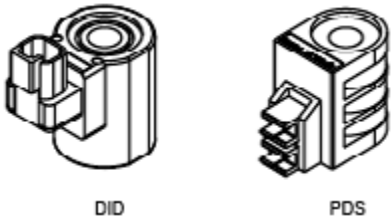
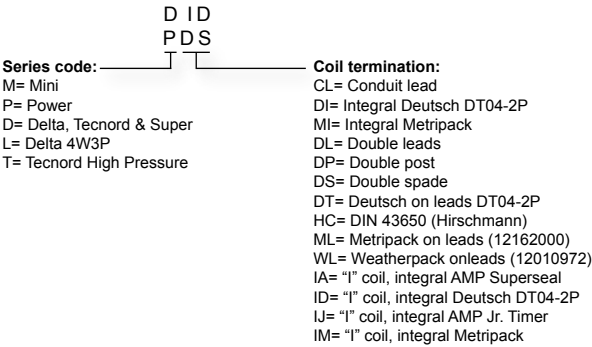
CARTRIDGE VALVES

INSERTION CODES



COILS

INSERTION CODES



COIL NUTS

MINI Series:
Normally open: 36202005
Normally closed: 36202018

POWER, DELTA, TECNORD & SUPER Series:
Normally open: 36202020
Normally closed: 36202017
Normally open w/"I" coil: 36202071
Normally closed w/"I" coil: 36202073

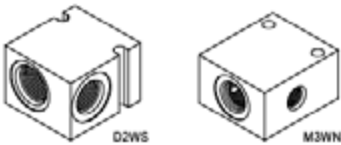
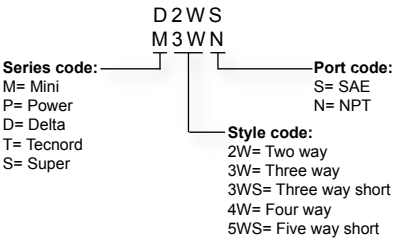
TECNORD High Pressure Series:
Normally closed: 36202059

4W3P Coil nuts:
Power Series: 36202047
Delta Series: 36202046



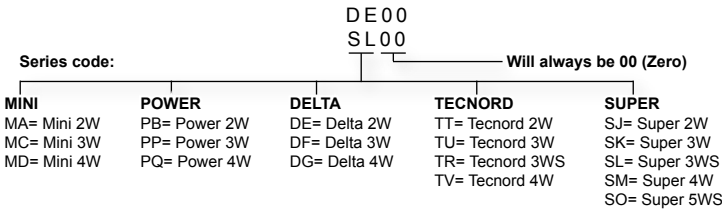
BODIES

INSERTION CODES



CAVITY PLUGS

INSERTION CODES



WARNING: the specifications/application data shown in our catalogs and data sheets are intended only as a general guide for the product described (herein). Any specific application should not be undertaken without independent study, evaluation, and testing for suitability.



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