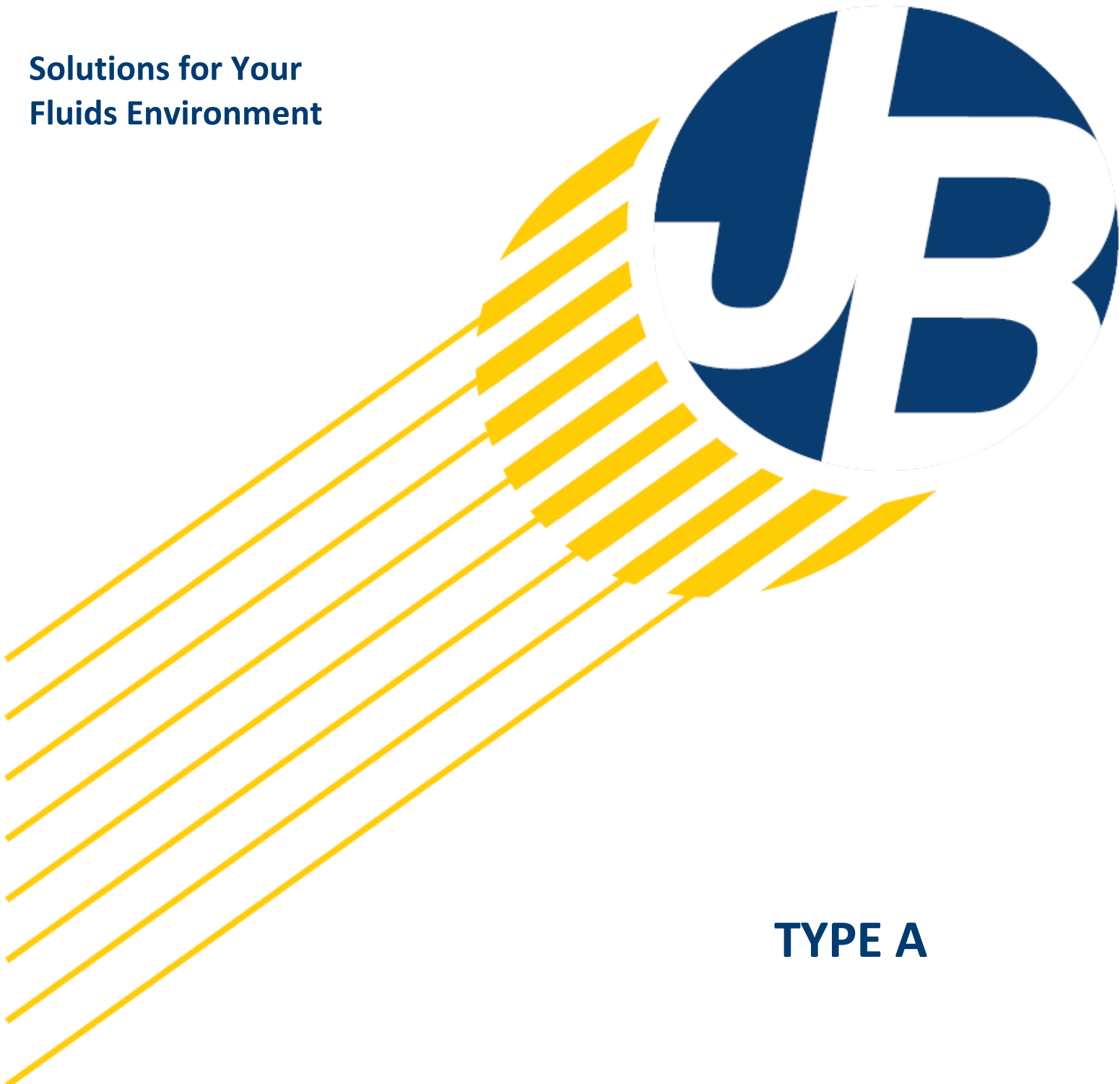


JO-BELL Products

Liquid Level Control

Solutions for Your
Fluids Environment



TYPE A

TYPE A

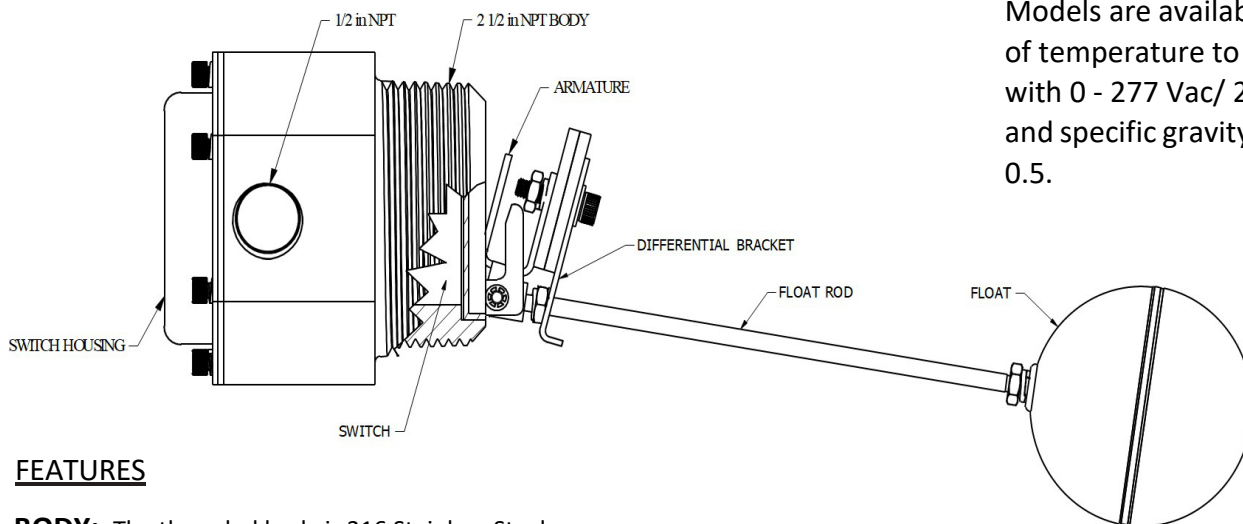
Liquid Level Control

Type A is an internal service, horizontal mounted liquid level control.

The control features include a field adjustable differential of 1" to 6" optional.

The 2-1/2" MNPT threaded control body will mount easily to the side of any tank or vessel.

Models are available for service of temperature to 500 degrees F with 0 - 277 Vac/ 250 Vdc switch and specific gravity as low as 0.5.



FEATURES

BODY: The threaded body is 316 Stainless Steel.

FLOAT: A 2-1/2" round float is 316 stainless steel with an optional copper float.

TRIM: The Float Rod and its related hardware are 300 & 400 series stainless steel.

MOUNTING: The connection is a 2-1/2" MNPT. The control must be installed through a pipe half-coupling. A full pipe coupling interferes with the operation of the float mechanism. Alternative option is our Type AF Level Controller, a pipe flange mounted method.

INSERTION LENGTH: The standard insertion is 8-3/4" as measured from the face of the control to the end of the float(s). Minimum insertion is 5-3/4".

DIFFERENTIAL: With the standard insertion, the field adjustable differential is 1" to 6". For greater differential, additional insertion length is required. Approximately 1/8" of additional differential can be achieved for each 1" added insertion length. High level actuation will occur at approximately 3/4" above the centerline of the controller. Differential adjustment changes the low-level point only.

SWITCH: The list below has the various switches available. There is a limit of One (1) switch per controller. Pneumatic switches are not available for this controller.

Switch/ Housing Model	Description	Contact Rating	Max. Temp.
ZA1P	SPDT (NO/NC)	15A @ 125/250/277 Vac; 1/2A @125 Vdc; 1/4A @250 Vdc	180° F
ZA2P	SPDT (NO/NC)	16A @ 125/250/277 Vac; 1/2HP,	250° F
ZA3P	SPDT (NO/NC)	6A@125/250 Vac, 1/8HP	350° F
ZD1P	DPDT (NO/NC)	15A @ 125/250/277 Vac; 1/2A @125 Vdc; 1/4A @250 Vdc	180° F
ZD2P	DPDT (NO/NC)	16A @ 125/250/277 Vac; 1/2HP,	250° F
ZA3PM/T	SPDT (NO/NC)	4A Resistive, 2A Inductive 28 Vdc Max	500° F
ZD3P	DPDT (NO/NC)	6A@125/250 Vac, 1/8HP	350° F

ALL SWITCH HOUSINGS ARE ENVIRONMENTALLY SEALED. ALL SWITCHES ARE UL Listed & CSA Approved

SWITCH HOUSING: A NEMA 4(water-tight and dust-tight or NEMA 7(explosion proof) housing are available

CONDUIT CONNECTION: 1/2" FNPT

SPECIAL CONSTRUCTION

LOW SPECIFIC GRAVITY: For applications with specific gravity of 0.5 to 0.8, two(2) 2-1/2" round floats are supplied. The insertion length is not increased.

CORROSION-RESISTANT COATING: To provide added protection in corrosive applications, the float and/or magnetic armatures are available with a Teflon coating.

DOG-LEGGED FLOAT ROD: The float rod is bent so the high level point is below the face of the controller. Typically, the Type A should not be used with liquids containing magnetic particles and/or liquids which will build up on the face of the controller.

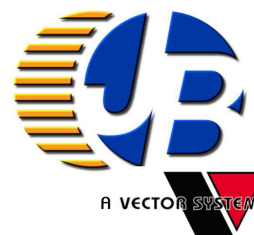
FLANGE MOUNTING: The controls can be supplied with flanged process connection to mount to a companion flange on the side of a tank or vessel. The minimum standard flange sizes are 3" 150# ANSI flange.

OPTIONAL FEATURES:

- Insertion length from 4" to 26-1/2"
- Corrosion- Resistant Coating of Float and Armature
- Dog-Legged Float Rod
- Minimum Specific Gravity of 0.5

OPERATION:

Starting in the unactuated position, a rising liquid level will lift the float and rod, pivoting the magnetic armature toward the barrier plate. A permanent magnet, located within the switch canister, snaps armature forward from the magnetic attraction. In doing so, the plunger is depressed by actuating the switch. When the level decreases, the float falls away, pulling the armature to its original position, releasing the armature from the permanent magnet, resetting the switch to its unactuated position.



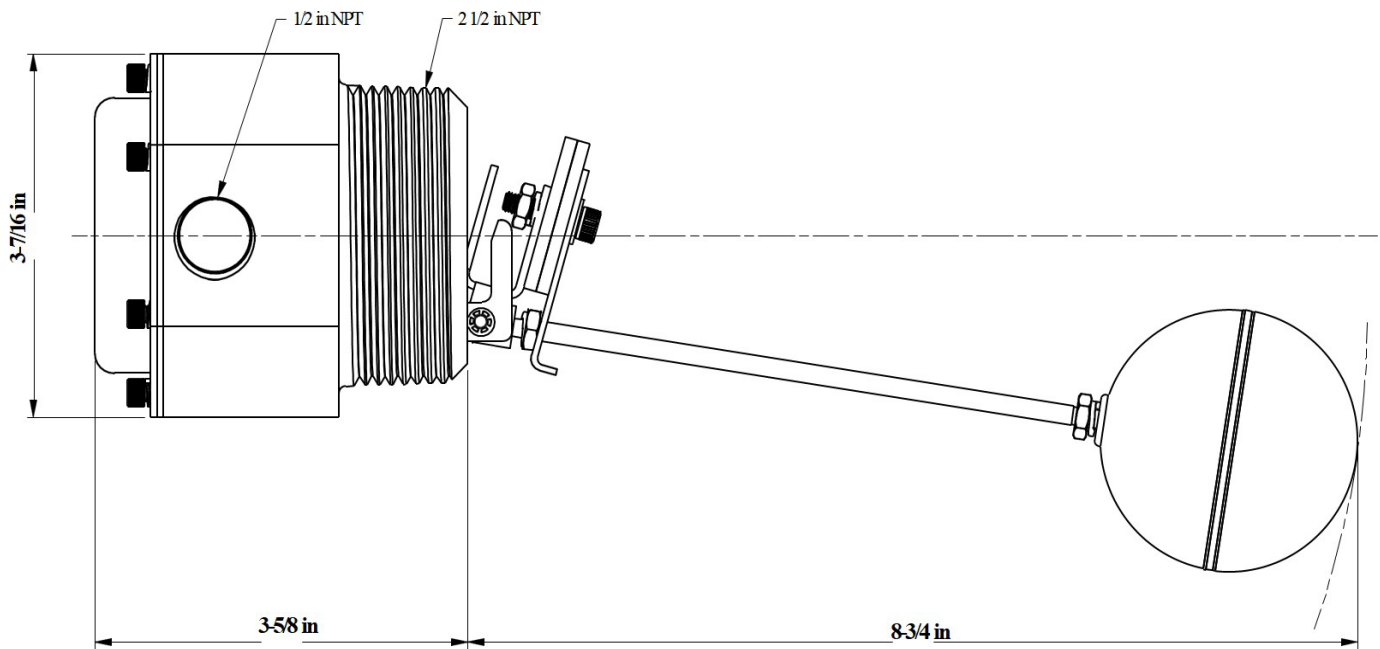


Figure 1 TYPE A, NEMA 4 SWITCH HOUSING

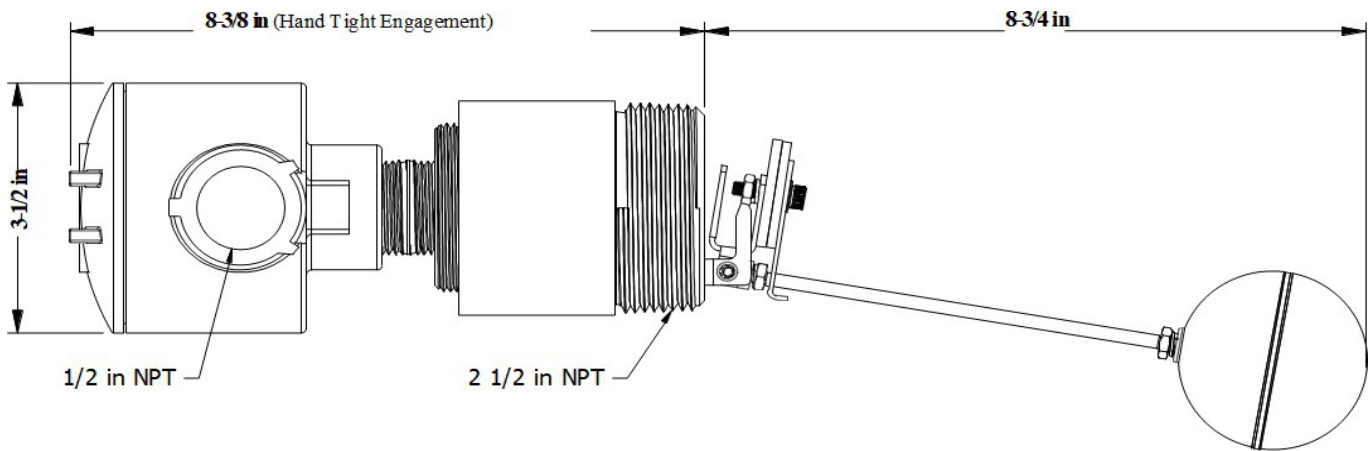


Figure 2 TYPE A, NEMA 7 SWITCH HOUSING

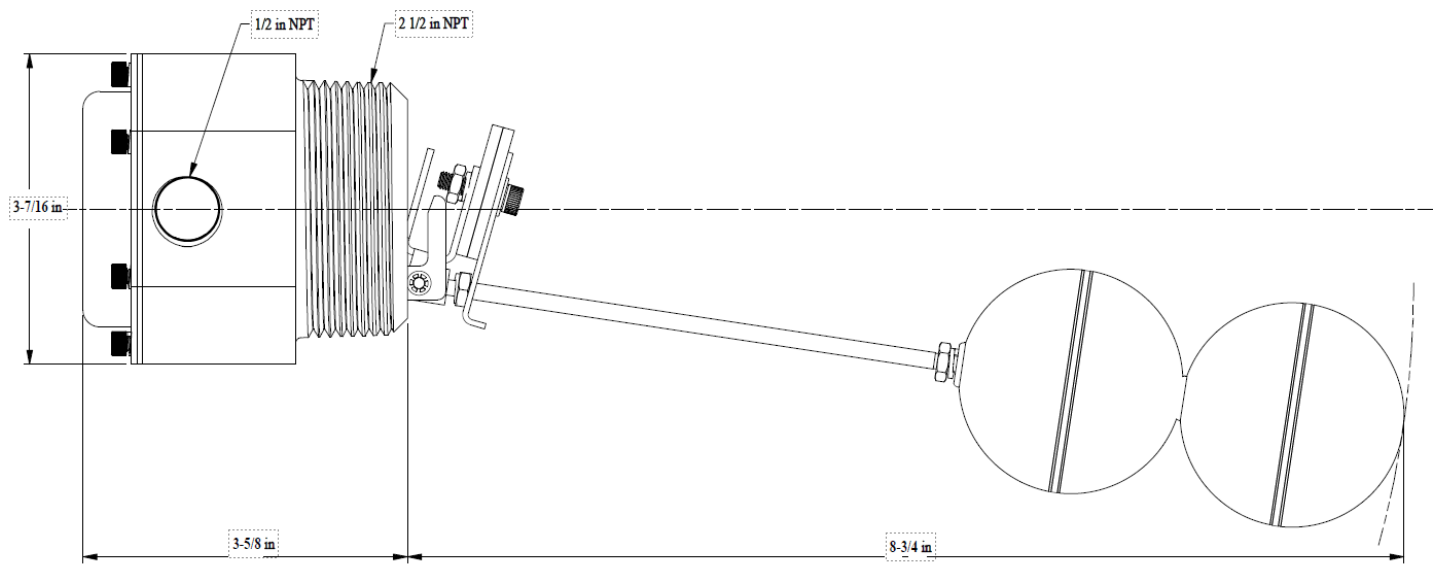


Figure 3 Type A, LOW SPECIFIC GRAVITY (0.5)

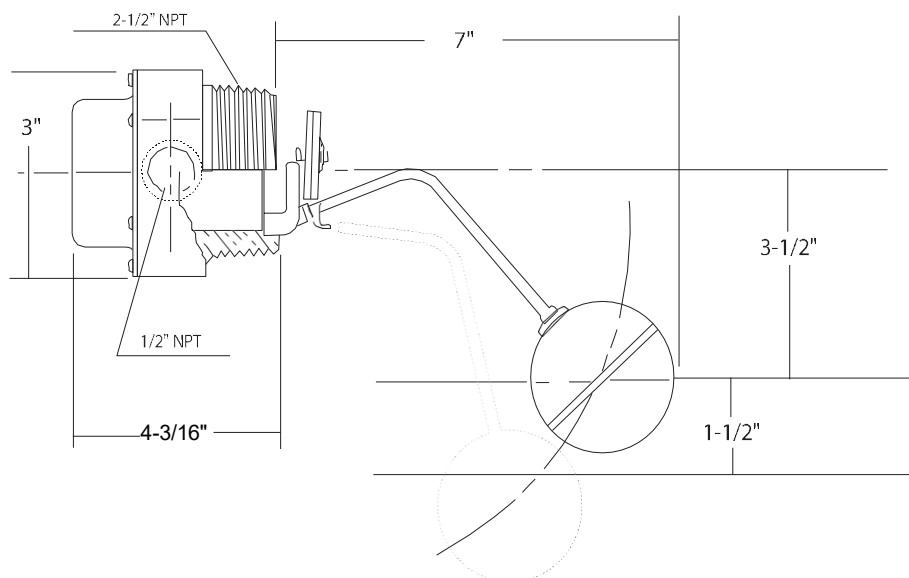


Figure 4 Type A, DOG-LEGGED FLOAT ROD

SAMPLE ORDER ENTRY:

A - 253 - 4 - ZA2P - (specify)
TYPE Model SWITCH SWITCH
HOUSING FEATURES OPTIONAL

Model No.	APPLICATION			Switch	Switch Electrical Housing	CONSTRUCTION MATERIALS		
	Maximum Pressure (PSIG)	Minimum Specific Gravity	Maximum Temperature (°F)			STANDARD		
						Body	Float	Trim
A-253	30	0.8 See Options	180-400	See Switch Table	NEMA 4 or NEMA 7	Brass	Copper	Brass
A-257	30	0.8 See Options	180-400	See Switch Table	NEMA 4 or NEMA 7	316 SS	316 SS	316 SS
A-307	300	0.8 See Options	180-400	See Switch Table	NEMA 4 or NEMA 7	316 SS	316 SS	316 SS

Elec. Housing Order Entry	Description
4	NEMA 4 - Water-tight, Dust-tight
7	NEMA 7, Class 1, GRPS, B,C,D Type 4x

Switch/ Housing Model	Description	Contact Rating	Max. Temp.
ZA1P	SPDT (NO/NC)	15A @ 125/250/277 Vac; 1/2A @125 Vdc; 1/4A @250 Vdc	180° F
ZA2P	SPDT (NO/NC)	16A @ 125/250/277 Vac; 1/2HP,	250° F
ZA3P	SPDT (NO/NC)	6A@ 125/250 Vac, 1/8HP	350° F
ZD1P	DPDT (NO/NC)	15A @ 125/250/277 Vac; 1/2A @125 Vdc; 1/4A @250 Vdc	180° F
ZD2P	DPDT (NO/NC)	16A @ 125/250/277 Vac; 1/2HP,	250° F
ZA3PM/T	SPDT (NO/NC)	4A Resistive, 2A Inductive @28 Vdc Max	500° F
ZD3P	DPDT (NO/NC)	6A@ 125/250 Vac, 1/8HP	350° F

