

SENITEC

Position Indicating Devices

NEMA 3/4/4X/7/9



INSTALLATION & SETUP MANUAL

WARNING!

- THE INFORMATION CONTAINED IN THIS MANUAL IS INTENDED FOR QUALIFIED INSTALLATION PERSONNEL ONLY. USE OF THIS INFORMATION BY ANYONE ELSE COULD RESULT IN SERIOUS INJURY.
- TO PREVENT FIRE OR EXPLOSION WITH TYPE 4, 4X, 7 and 9 ENCLOSURES, INSTALL SEAL FITTINGS WITHIN 18 INCHES OF THE ENCLOSURE.
- USING THIS DEVICE IN A MANNER NOT SPECIFIED BY SENITEC MAY IMPAIR ITS INHERENTLY DESIGNED PROTECTION.



Setting Position Indicating Devices (PIDs) to Actuators

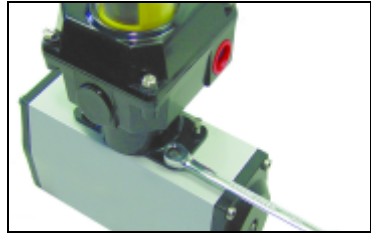
WARNING!

TO PREVENT POSSIBLE PERSONAL INJURY OR PROPERTY DAMAGE, TURN OFF ELECTRICAL POWER BEFORE INSPECTING, ADJUSTING OR REMOVING THE PID HOUSING COVER.

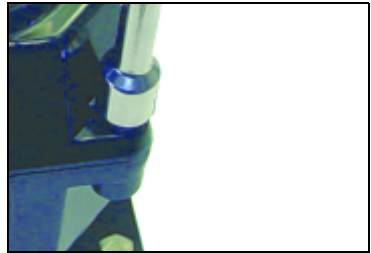
Caution!

To reduce the risk of igniting hazardous atmospheres, disconnect the PID from the supply circuit before opening. Keep assembly tightly closed during operation.

1. Attach the Position Indicating Device (PID) to the valve with the appropriate mounting hardware.



2. Remove the PID top housing cover by completely loosening its four corner captive screws.



3. After determining the actual operating rotating direction of the shaft assembly for your valve/actuator, set the Switch 1 cam (the lowest switch) to the desired position where it will trigger. To adjust, firmly grasp the cam with your fingers and rotate clockwise or counter-clockwise until it "clicks" into the desired position.



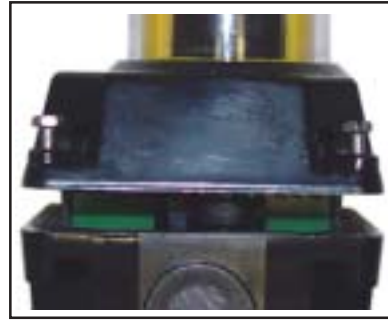
4. Verify the switch triggering point by placing ohmmeter (or other continuity-type tester) test leads across the proper Switch 1 wiring terminals. Refer to the wiring diagrams provided on page 6 of this manual, or to those inside the housing top cover.



5. Repeat steps 3 and 4 for all of the remaining switches.
6. Connect peripheral devices to the wiring block using the same diagrams discussed previously in step 4, as well as the device manufacturer's wiring instructions.

Adjusting the Visual Indicator (Co-Polyester Housings)

1. With the housing cover in place, determine the “true” valve position (Open or Closed) and compare it to the PID visual indication.
2. If adjustments are necessary, remove the housing cover and from the underside, lightly grasp the indicator’s internal tabs and rotate clockwise or counterclockwise to the appropriate setting.
3. Return the housing cover and check the setting once again. If necessary, repeat step 2 as many times as required to attain the correct setting.
4. With the housing cover properly seated to its original mounting position, tighten the four captive screws.



For Metal Housing PIDs...

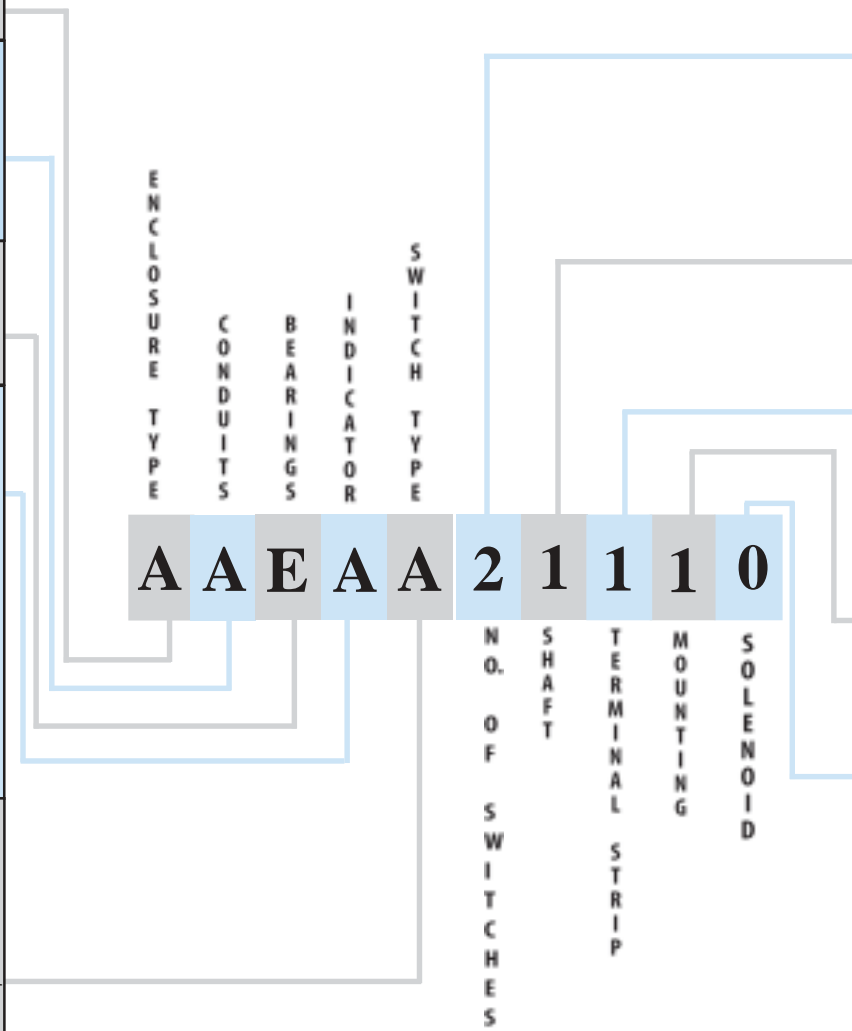
1. The indicator can be adjusted without removing the housing cover on metal enclosures.
2. Completely loosen the four captive screws on the clear indicator cover.
3. Remove the clear cover. The indicator itself can also be removed if desired.
4. Lightly grasp the indicator’s internal tabs and rotate clockwise or counterclockwise as necessary.
5. If indicator was removed, place it back on the enclosure cover, making sure it aligns with the notch in the lower shaft.
6. Replace the clear indicator cover to its original location over the indicator.
7. Tighten the four captive screws on the clear indicator cover.



SENITEC NEMA 4

Part Numbering Chart

ENCLOSURE TYPE A=SENTAR (SS inserts) B=ALUMINUM C=STAINLESS STEEL
CONDUITS / RECEPTACLES A=STD 2 1/2" FEMALE B=3 1/2" FEMALE C=2 1/2" FEMALE, 1 1/2" MALE D=MINI 5-PIN AC Receptacle E=MICRO AS-i RECEPTACLES F=MICRO 4-PIN DC Receptacle
BEARINGS E=STD EASTAR B=BRONZE S=STAINLESS STEEL T=TEFLON
INDICATOR A=STD 90 DEG BLACK/YELLOW B=90 DEG BLUE/WHITE C=90 DEG RED/WHITE D=90 DEG GREEN/WHITE E=90 DEG RED/GREEN F=90 DEG 3 WAY  G=90 DEG 3 WAY  H=90 DEG 3 WAY  I=180 DEG 3 WAY  J=180 DEG 3 WAY  K=90 DEG 4 WAY  L=DEFINED BY USER N=NONE
SWITCH TYPE A=STD 10 AMP MECHANICAL B=100 mA GOLD MECHANICAL C=3 AMP PROXIMITY D=1 AMP PROXIMITY E=2 AMP DPDT MECHANICAL F=SHADOW ACDC Term Chamber G=SHADOW AS-i Term Chamber



NUMBER OF SWITCHES 2=2 3=3 4=4 0=NONE
SHAFT 1=303 SS NAMUR 2=316 SS NAMUR 3=303 SS 1/4 DD 4=316 SS 1/4 DD
TERMINAL STRIP 1=8 POLE FIXED 2=8 POLE PLUG IN 3=14 POLE FIXED 4=14 POLE PLUG IN 5=AS-i
MOUNTING (L x W x H) 1=80 X 30 X 20mm NAMUR 2=80 X 30 X 30mm NAMUR 3=130 X 30 X 30mm NAMUR 4=130 X 30 X 20mm NAMUR 5=2.25 SQ W/4 5/16-18 (no brkt) 6=80 X 30 X 10mm NAMUR
SOLENOID 0=NONE 1=3 WAY 24VDC 0.2 AMP 2=4 WAY 24VDC 0.2 AMP 3=24 VDC Low Power (80ma)



SHADOW LoProfile
AS-i / DeviceNet / AC-DC / DC









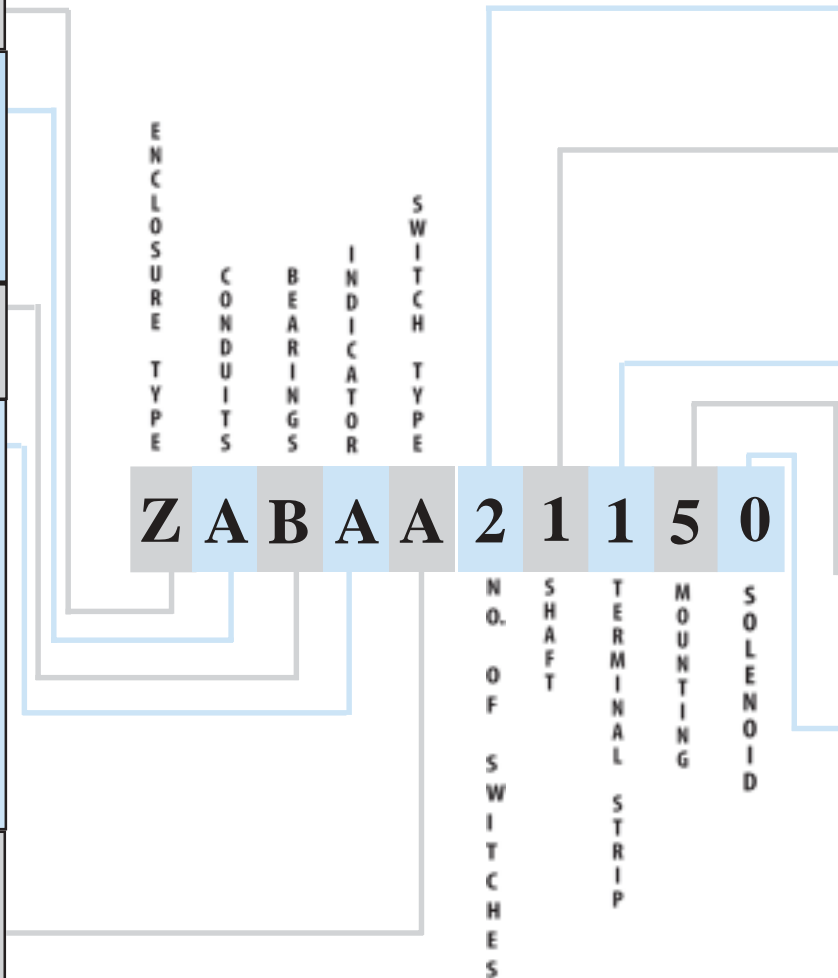
SENTAR NEMA4

SENITEC

NEMA 7

Part Numbering Chart

ENCLOSURE TYPE Z=ALUMINUM
CONDUITS / RECEPTACLES A=STD 2 3/4" FEMALE B=3 3/4" FEMALE C=2 3/4" FEMALE, 1 1/2" MALE D=MINI 5-PIN AC Receptacle E=MICRO AS-i RECEPTACLES F=MICRO 4-PIN DC Receptacle
BEARINGS B=BRONZE S=STAINLESS STEEL
INDICATOR A=STD 90 DEG BLACK/YELLOW B=90 DEG BLUE/WHITE C=90 DEG RED/WHITE D=90 DEG GREEN/WHITE E=90 DEG RED/GREEN F=90 DEG 3 WAY  G=90 DEG 3 WAY  H=90 DEG 3 WAY  I=180 DEG 3 WAY  J=180 DEG 3 WAY  K=90 DEG 4 WAY  L=DEFINED BY USER N=NONE
SWITCH TYPE A=STD 10 AMP MECHANICAL B=100 mA GOLD MECHANICAL C=3 AMP PROXIMITY D=1 AMP PROXIMITY E=2 AMP DPDT MECHANICAL F=SHADOW ACDC Term Chamber G=SHADOW AS-i Term Cham5er



NUMBER OF SWITCHES 2=2 3=3 4=4 0=NONE
SHAFT 1=303 SS NAMUR 2=316 SS NAMUR 3=303 SS 1/4 DD 4=316 SS 1/4 DD
TERMINAL STRIP 1=8 POLE FIXED 2=8 POLE PLUG IN 3=14 POLE FIXED 4=14 POLE PLUG IN 5=AS-i
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SOLENOID 0=NONE 1=3 WAY 24VDC 0.2 AMP 2=4 WAY 24VDC 0.2 AMP 3=24 VDC Low Power (80ma)



Aluminum NEMA7

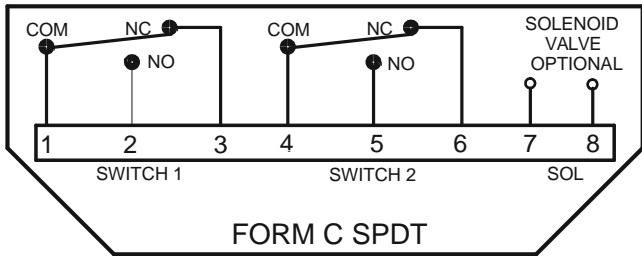
Switch Type Electrical Specifications

CODE	SWITCH TYPE	CONTACTS	RATING
A	Mechanical - Silver	SPDT, Form C	10A - 250V
B	Mechanical - Gold	SPDT, Form C	0.1A - 125V
E	Mechanical - Silver	DPDT	2A - 120VAC; 75VDC
C	Proximity - Tungsten	SPDT, Form C	3A - 120V
D	Proximity - Rhodium	SPDT, Form C	1A - 150V
F	Inductive		
G	AS-I		
I	Intrinsically Safe		

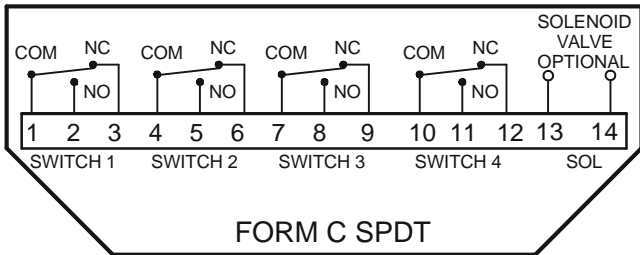
Switch Wiring Diagrams

Switch Types A, B, C, and D

8-Pole Terminal Block

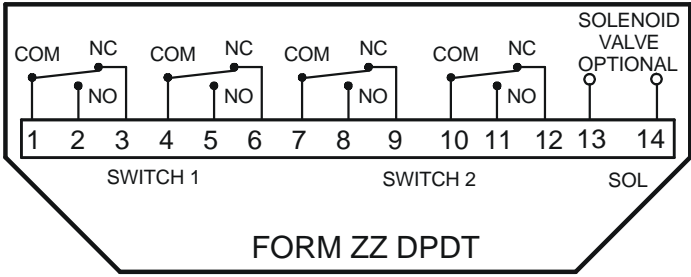


14-Pole Terminal Block



Switch Type E

14-Pole Terminal Block



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