

APL-2N Series

Valve Position Monitor Manual

APL series limit switch box is designed to provide accurate and reliable valve position signaling and indicating of most valves or actuators manufactured.

Supplier: Hiya Mechanical Equipment Co., Ltd. (China); Web: www.mechmall.com; www.mech-mall.com;

E-mail: info@mechmall.com; fax: 086-0371-85228155

1. Ordering Information

APL – 2 1 0 N
 ① ② ③

① Enclosure type

■ 2 : Weather proof

② Switch type

■ 10 : 2-SPDT (V-152-1C25)

■ 13 : 2-SPST (V-152-1C25)

■ 20 : Proximity Sensor (P&F : NJ2-V3-N)

■ 23 : Proximity Sensor (P&F : NBB2-V3)

③ Enclosure Material

■ N : Aluminum Die-casting

2. Standard specification

Model	APL-2..N
Enclosure Rated	Weatherproof IP67 / NEMA4&4X (Standard) IP68 (Option)
Enclosure	High grade aluminum alloy
Ambient Temperature	-20 °C ~ +80 °C
Conduit Entries	Standard: Two 1/2" NPT, Option: PF 1/2", PT 1/2", M20, PG13.5
Travel Angle	90 degree + / - 10%
Position Indicator	Open : Yellow, Close : Red Language : English (option : French, German)
Switch	Mechanical switch : ZINGEAR / Omron Proximity sensor : P&F
Terminal Strip	8 point (option : 9~14P)
External Coating	Thermally hardened polyester powder coating, KARUMEL PX8576

3. Mounting bracket

There are two options for the bracket: carbon steel bracket; 304 stainless steel bracket.



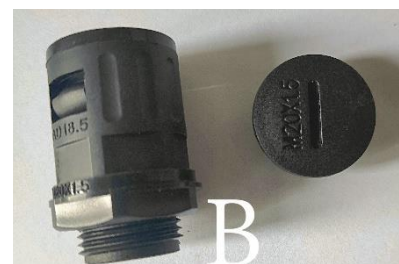
4. Waterproof connector

Free dust cover and cable joint;

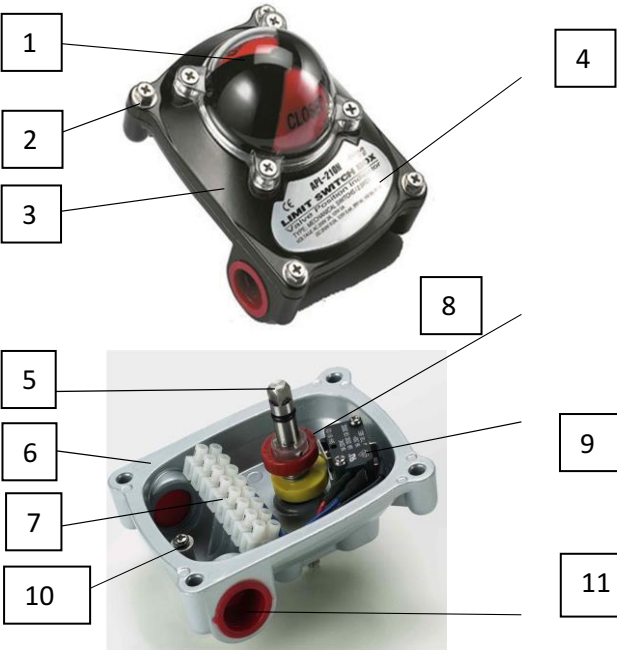
A: cable waterproof joint;

B: bellows joint;

If there is no description, the A connector will be sent by default.

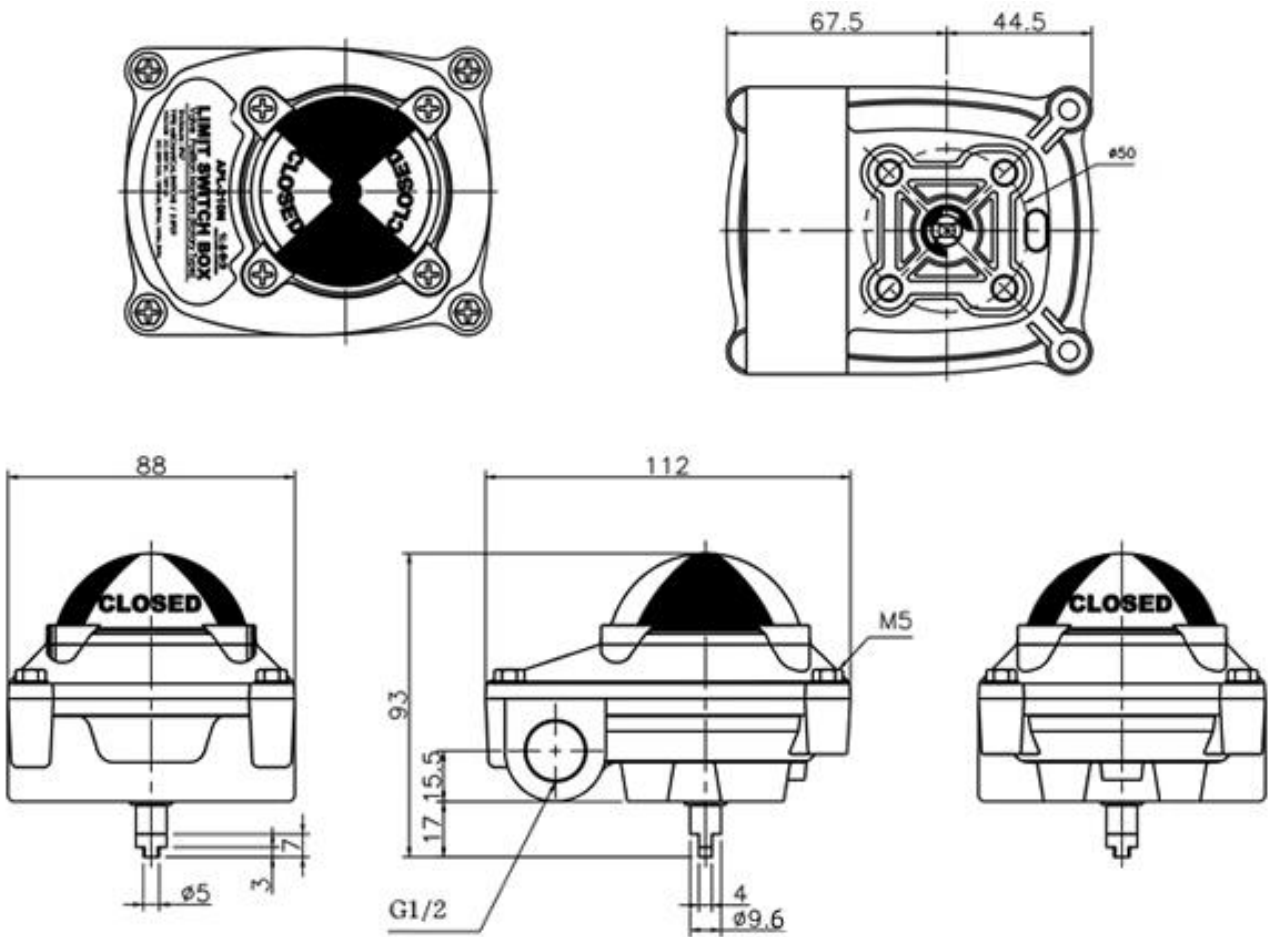


5. Standard Features

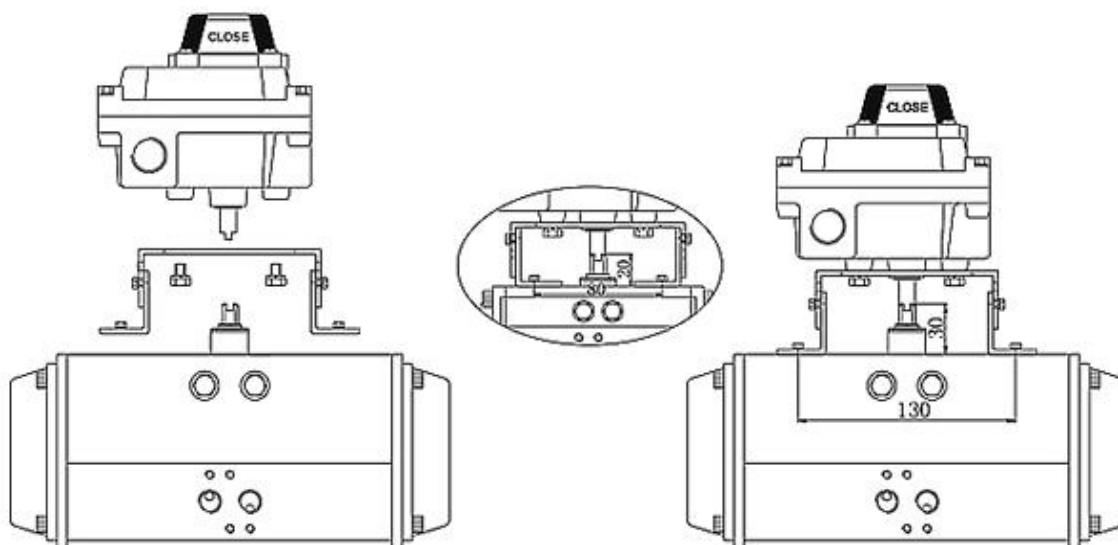


No	Part Name	Q'ty	Description
1	Window / Indicator	1	PC / ABS
2	Captive Cover Bolt	4	Stainless steel
3	Cover	1	Stainless steel
4	NamePlate	1	Sticker
5	Shaft	1	Stainless steel
6	Body	1	Aluminum Diecasting
7	Terminal Strip	2	8P (9~14Pavailable)
8	Cam	1	PC
9	Limit Switch	1	Mechanical or Proximity type
10	EarthLug	1	Stainless steel
11	Blanking Element	2	PC

Size:



6. Installation



7. Setting cam

The color of cams harmonized with position indicator help us to set the cams easily without wiring diagram. Cams shall be easily set without tool. APL series cams are splined and can be setting lift up or push down the cam from gear by hand in a seconds without setting tools. Self-locking, spring loading make never slip out of adjustment.

Note :

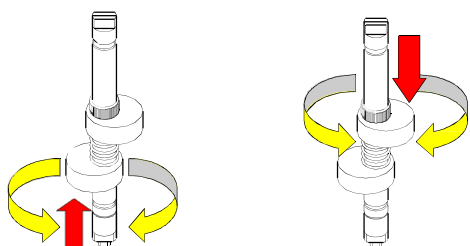
- Basically, cams shall be set by manufacturer before shipment.
- Un-tighten the captive cover bolts with an applicable tool. ([Spanner](#). + [Driver recommended](#))
- Remove the cover carefully.

Open cam setting

1. Electric power or air supply of valve actuator on to operate the actuator fully open
2. Lift the bottom yellow cam up and rotate it until the switch is activated.
3. And then release it. Cam shall be back into a stable position by itself.

Close cam setting

1. Electric power or air supply of valve actuator off to operate the actuator fully close
2. Push the upper cam down and rotate it until the switch is activated.
3. And then release it. Cam shall be back into a stable position by itself.



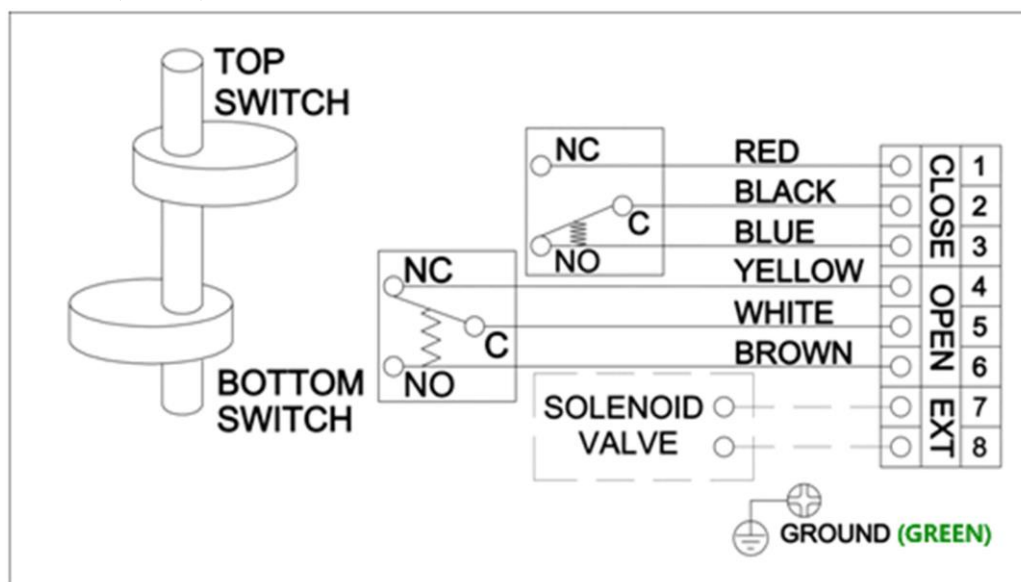
8. Wiring diagram

APL limit switch box enclosure feature prewired switches. All user connections are made at a numbered terminal strip. A wiring diagram, located inside the cover, indicates which terminal numbers correspond to switch contacts, such as normally open (NO), normally closed (NC), etc. Follow the wiring diagram and electrical code to connect the switches to your system.

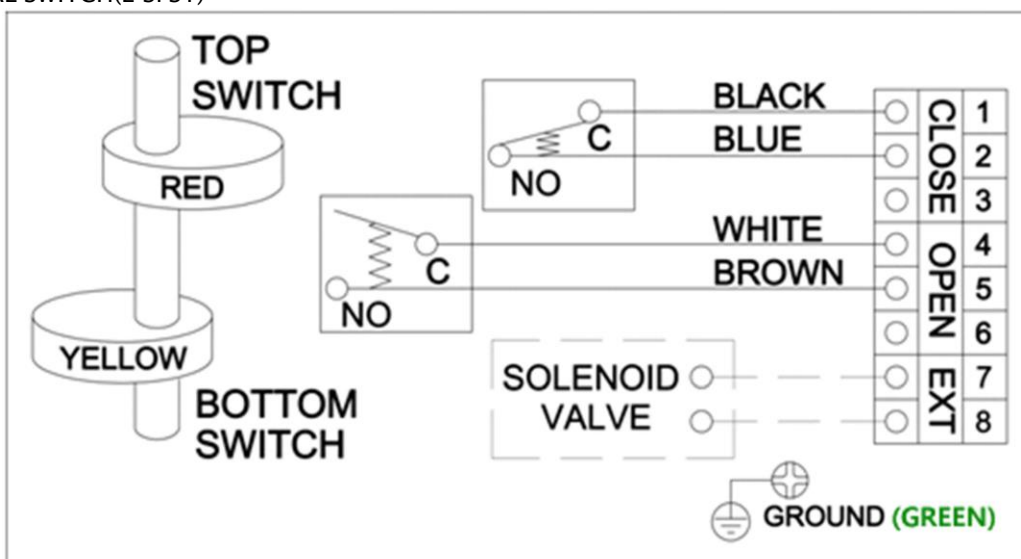
Solenoid valve may also be wired through the APL enclosure. Two auxiliary terminals are included as standard. APL limit switch box has two cable entries on the body and supply a blanking plug not a cable gland which meet the type of protection. Cable gland shall be applied by installer or user.

Mechanical switches	Proximity sensors	Splined cam

MECHANICAL SWITCH(2 SPDT)



MECHANICAL SWITCH(2 SPST)



Note : Grounding should be connected until all wiring have been completely.

9. APL-2N Series, optional list

No.	Model	Configuration parameter
1	APL-210N Standard Type	2SPDT mechanical switches, carbon steel bracket
2	APL-210N Silver contact switch	2SPDT mechanical switches, carbon steel bracket
3	APL-210N High configuration	2SPDT Omron mechanical switches, 304 stainless steel bracket
4	APL-220N 2-Wire NC/NO	proximity switch; 2-wire NO / NC; 3-wire NPN / PNP
5	APL-220N 2-Wire NC 8.2VDC	proximity switch
6	APL-220N P+F NJ2-V3-N NC 8.2V	P+F brand proximity switch, NJ2-V3-N
7	APL-223N P+F NBB2-V3	P+F brand proximity switch, NBB2-V3
8	APL-211N	3 SPDT mechanical switches
9	APL-212N	4 SPDT mechanical switches
10	APL-213N	2SPST mechanical switches
11	APL-214N	2DPDT mechanical switches
12	APL-221N	PS17-5DNU proximity switch