PROGRAMMABLE POTENTIOMETER TRANSMITTER

FEATURES

- Field-rangeable. Wide switchable input ranges 200 to 50KΩ, wide switchable output ranges over 20 standard process ranges
- Accuracy 0.1% F.S.
- Input/output isolation 1.6KVdc

1. MODEL: PF- [ ][ ][ ] - [ ][ ] - [ ] - [ ] - [N] → Non-programmable

KAP	Non-Isolating (input/output)
KBP	Isolating (input/output)

NO	Ranges RL~RH
10	0 ~ 10%
11	0 ~ 15%
12	0 ~ 20%
13	0 ~ 25%
14	0 ~ 30%
15	0 ~ 40%
16	0 ~ 50%
17	0 ~ 60%
18	0 ~ 70%
19	0 ~ 80%
20	0 ~ 90%
21	0 ~ 100%
22	5 ~ 95%
23	10 ~ 90%
24	10 ~ 100%
99	SPECIFIED

• Exciting voltage 2.5VDC (≤12.5mA)

NO	Output Ranges
A	0 - 0.5 V
B	0 - 1 V
C	0 - 2 V
D	0 - 4 V
E	0 - 5 V
F	1 - 5 V
G	0 - 8 V
H	0 - 10 V
I	2 - 10 V
J	0 - 1 mA
K	0 - 2 mA
L	0 - 5 mA
M	1 - 5 mA
N	0 - 10 mA
O	0 - 16 mA
P	0 - 20 mA
Q	4 - 20 mA
R	SPECIFIED

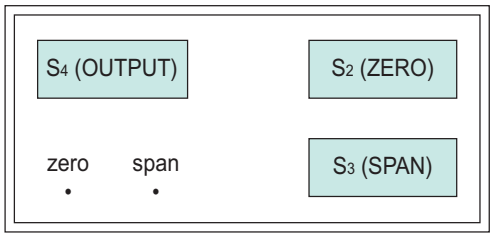
NO	Aux. Power
1	AC 110V (50/60Hz)
2	AC 220V (50/60Hz)
3	DC 24V
4	DC 48V
5	DC 110V
6	DC 220V
7	AC 90~260V
9	SPECIFIED

- ±20% of rate, less 2.5VA for AC input
- ±20% of rate, less 2WATT for DC input
- Switchable 110V/220V by jump internally
- ±10% of rate, less 2.5VA for AC switching input

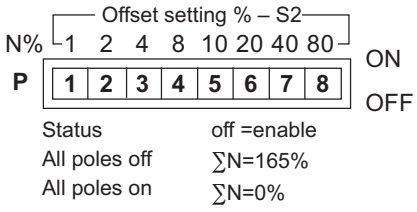
2. Specification

- Accuracy : 0.1% F.S. (23±5°C)
- Output ripple (p-p) : <0.1% F.S.
- Temp. coefficient : 100ppm/°C (0-50°)
- Dielectric strength : 1.5KVac/1 min. (power/input/output) 1600 Vdc (input/output)
- Output drive capability : ≤10mA for voltage mode ≤10V for current mode
- Response time : ≤250ms (0~90%)
- Operating condition : 0~55°C humidity 20~95% RH non-condensed
- Storage condition : 0~70°C humidity 20~95% RH non-condensed
- Construction : Socket/plug-in type with barrier terminals

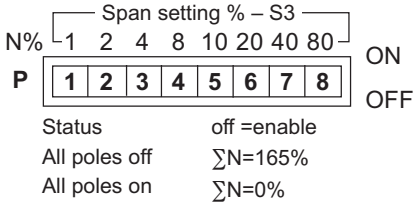
3. Function switches (S2, S3, S4)



• S2 → Input range offset (ZERO) selection



• S3 → Input range span (GAIN) selection



• S4 → P_1-P_2-P_3-P_4-P_5-P_6 output range selection
P_7-P_8 output mode: voltage/current selection
★ (ref. output switching table)

4. Programming formula

RH/RL: Percent input high / percent input low

- Span → X = [10/(RH-RL)]%
- Offset → Y = (100xRL)%

5. Application

Example : PF-KAP-21Q-1

Input range ..... (RH = 100%, RL = 0%)
Output ..... (DC 4-20mA)
Power ..... (AC 110V)

- (Span) X = [10/(100%-0%)]%
  = 10%
- (Offset) Y = (100x0%)%
  = 0%

• S2 → 1 2 3 4 5 6 7 8 ON / OFF

(All poles on → ∑N=0%)

• S3 → 1 2 3 4 5 6 7 8 ON / OFF

(P_5-off & the rest on → ∑N=10%)

• S4 → 1 2 3 4 5 6 7 8 ON / OFF

(P_5-P_7-P_8-off & the rest on)

6. Input switching table (S2, S3)

(switching status 1 = on; 0 = off)

Input Range	S2 (ZERO) 1-2-3-4-5-6-7-8	S3 (SPAN) 1-2-3-4-5-6-7-8
0 ~ 10%	1-1-1-1-1-1-1-1	1-1-1-1-1-0-1-0
0 ~ 15%	1-1-1-1-1-1-1-1	* 0-0-0-1-1-0-0-1
0 ~ 20%	1-1-1-1-1-1-1-1	1-1-1-1-0-1-0-1
0 ~ 25 %	1-1-1-1-1-1-1-1	1-1-1-1-1-1-0-1
0 ~ 30%	1-1-1-1-1-1-1-1	* 0-0-1-1-0-0-1-1
0 ~ 40%	1-1-1-1-1-1-1-1	0-1-0-1-1-0-1-1
0 ~ 50%	1-1-1-1-1-1-1-1	1-1-1-1-1-0-1-1
0 ~ 60%	1-1-1-1-1-1-1-1	* 0-0-0-1-0-1-1-1
0 ~ 70%	1-1-1-1-1-1-1-1	* 1-1-0-1-0-1-1-1
0 ~ 80%	1-1-1-1-1-1-1-1	* 0-0-1-1-0-1-1-1
0 ~ 90%	1-1-1-1-1-1-1-1	* 0-1-1-1-0-1-1-1
0 ~ 100%	1-1-1-1-1-1-1-1	1-1-1-1-0-1-1-1
5 ~ 95%	0-1-0-1-1-1-1-1	* 0-1-1-1-0-1-1-1
10 ~ 90%	1-1-1-1-0-1-1-1	* 0-0-1-1-0-1-1-1
10 ~ 100%	1-1-1-1-0-1-1-1	0-1-1-1-0-1-1-1

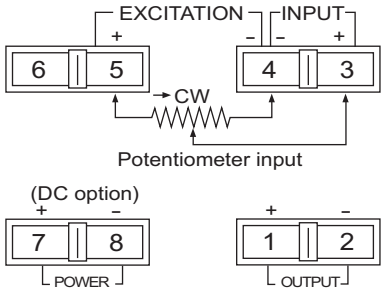
* recalibration to obtain linear output

7. Output switching table (S4)

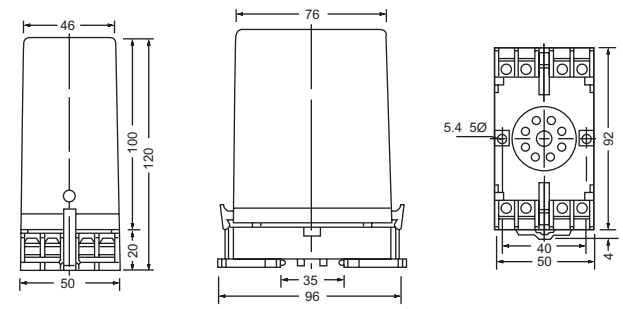
(switching status 1 = on; 0 = off)

Output Range	O/P Range 1-2-3-4-5-6	O/P Mode 7-8
0 ~ 0.5V	0-1-1-1-1-0	1-1
0 ~ 1V	1-0-1-1-1-0	1-1
0 ~ 2V	1-1-0-1-1-0	1-1
0 ~ 4V	1-1-1-0-1-0	1-1
0 ~ 5V	1-0-1-0-1-0	1-1
1 ~ 5V	1-1-1-0-1-1	1-1
0 ~ 6V	1-1-0-0-1-0	1-1
0 ~ 8V	1-1-1-1-0-0	1-1
0 ~ 10V	1-1-0-1-0-0	1-1
2 ~ 10V	1-1-1-1-0-1	1-1
0 ~ 1mA	0-1-1-1-1-0	0-0
0 ~ 2mA	1-0-1-1-1-0	0-0
0 ~ 5mA	0-1-0-1-1-0	0-0
1 ~ 5mA	1-1-0-1-1-1	0-0
0 ~ 10mA	1-0-1-0-1-0	0-0
2 ~ 10mA	1-1-1-0-1-1	0-0
0 ~ 16mA	1-1-1-1-0-0	0-0
0 ~ 20mA	1-1-0-1-0-0	0-0
4 ~ 20mA	1-1-1-1-0-1	0-0

8. Terminal connection



9. Dimension:



Note: 1. Socket drawing type
2. Mounting: either rail mounting or general screw mounting