PROGRAMMABLE POTENTIOMETER ISOLATED TRANSMITTER

MODEL TKP

■FEATURES

- Accuracy 0.1%F.S.
- Field-rangeable switchable potentiometer input ranges from 100ohm to 100Kohm,wide switchable DC output ranges over 20 standard process signal
- Dielectric strength 2KVac/1 min.(input/output/power)
- Wide input range for auxiliary power
- Dimension small & High stability

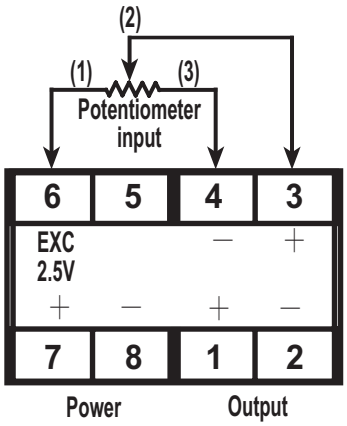
1.MODEL:TKP - □□ □ □

NO	Input Range	NO	Input Range	NO	Input Range	NO	Output Range	NO	Output Range	NO	Output Range	NO	Aux.Power
10	0~10%	16	0~50%	22	5~95%	A	0~0.5V	G	0~8V	M	1~5mA	A	AC/DC 18~60V
11	0~15%	17	0~60%	23	10~90%	B	0~1V	H	0~10V	N	0~10mA	B	AC/DC 90~260V
12	0~20%	18	0~70%	24	10~100%	C	0~2V	I	2~10V	O	0~16mA	•Less 3VA for AC/DC input •AC input frequency (45~65Hz)	
13	0~25%	19	0~80%	29	SPECIFIED	D	0~4V	J	0~1mA	P	0~20mA		
14	0~30%	20	0~90%	•Exciting Voltage 2.5VDC(<25mA)		E	0~5V	K	0~2mA	Q	4~20mA		
15	0~40%	21	0~100%			F	1~5V	L	0~5mA	R	SPECIFIED		

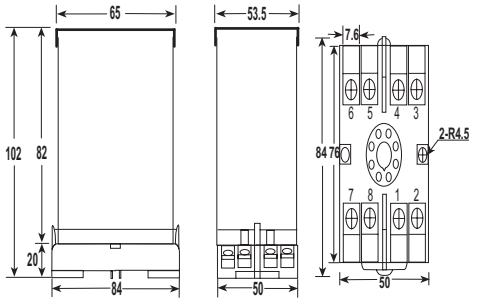
2.SPCIFICATION

- Measuring accuracy : 0.1% F.S. (23±5℃)
- Exciting voltage(current) : 2.5VDC(<25mA)
- Potentiometer input range: 100 ohm~100Kohm
- Response time : <250ms (0~90%)
- Output drive capability : <10mA for voltage mode
<10V for current mode
- Output ripple(p-p) : <0.1% F.S.
- Zero (offset) range : 0~±165% F.S.(DIP-switches)
0~±5% F.S.(VR adjustable)
- Span (scale) range : 0~165% F.S.(DIP-switches)
0~±10% F.S.(VR adjustable)
- Temp. coefficient : 100ppm/℃ (0~50℃)
- Isolation : Input/Output/Power/Case
- Insulation Resistance : >100M ohm with 500V DC
- Dielectric strength : 2KVac/1 min. (input/output/power)
1600Vdc (input/output)
- Operating condition : 0~60℃(20 to 90% RH non-condensed)
- Storage condition : 0~70℃(20 to 90% RH non-condensed)
- Construction : Socket/plugin type with barrier terminals
- CE EMC Certification : EN 55022:1998/A1:2000 Class A
EN 61000-3-2:2000
EN 61000-3-3:1995/A1:2001
EN 55024:1998/A1:2001

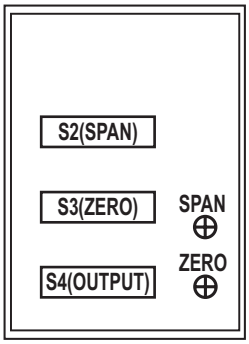
3.TERMINAL CONNECTION



4.DIMENSION(unit:mm)

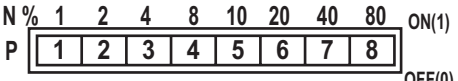


5.FUNCTION SWITCHES(S2,S3,S4)(開關功能)



•S2→Input range offset (ZERO) selection

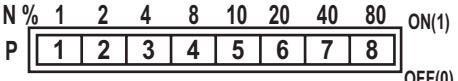
Offset setting % -S2



Status off=enable
All poles off EN=165%
All poles on EN=-0%

•S3→Input range span (GAIN) selection

Span setting % -S3



Status off=enable
All poles off EN=165%
All poles on EN=-0%

•S3→P1-P2-P3-P4-P5-P6:output range selection
P7-P8:output mode of voltage or current selection
(Refer,output switching table)

6.PROGRAMMING FORMULA

RH:percent input high range
RL:percent input Low range

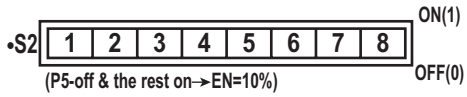
•Span→X=[10/(RH-RL)]%

•Offset→Y=(100xRL)%

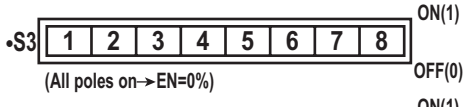
(unit=%)

7.APPLICATION

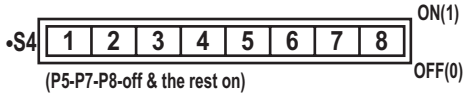
Example:TKP-21Q2
Input range→RH=100%,RL=0%
Output range→DC4-20mA
•SPAN→X=[10/(100%-0%)]%=10%
•ZERO→Y=(100x0%)%=0%



(P5-off & the rest on→EN=10%)



(All poles on→EN=0%)



(P5-P7-P8-off & the rest on)

8.INPUT SWITCHING TABLE(S2,S3)

(switching status 1=on ; 0=off)

Input range	S_3(ZERO)	S_2(SPAN)
	1-2-3-4-5-6-7-8	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

△Recalibrating to obtain linear output

9.OUTPUT SWITCHING TABLE(S4)

(switching status 1=on ; 0=off)

	O/P Range	O/P Mode
Output range	1-2-3-4-5-6	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