

# PROGRAMMABLE LOAD-CELL ISOLATED TRANSMITTER

MODEL  
TLP

CE



## ■ FEATURES

- Accuracy 0.1%F.S.
- Field-rangeable switchable load-cell input ranges from 3mV to 90mV, 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:TLP - □ □ □ □

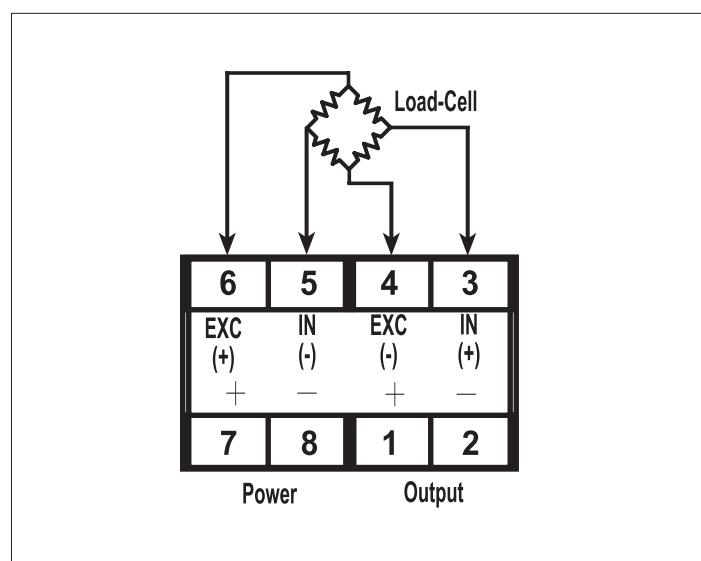
NO	Input Range	NO	Input Range	NO	Input Range	NO	Exciting Voltage	NO	Output Range	NO	Output Range	NO	Output Range	NO	Aux.Power
A	0~3mV	G	0~12mV	M	0~27mV	1	5V(<50mA)	A	0~0.5V	G	0~8V	M	1~5mA	A	AC/DC18~60V
B	0~4mV	H	0~15mV	N	0~30mV	2	10V(<50mA)	B	0~1V	H	0~10V	N	0~10mA	B	AC/DC90~260V
C	0~5mV	I	0~18mV	O	0~50mV	3	12V(<50mA)	C	0~2V	I	2~10V	O	0~16mA		
D	0~6mV	J	0~20mV	P	0~60mV	9	SPECIFIED	D	0~4V	J	0~1mA	P	0~20mA		
E	0~8mV	K	0~24mV	Q	0~90mV			E	0~5V	K	0~2mA	Q	4~20mA		
F	0~10mV	L	0~25mV	R	SPECIFIED			F	1~5V	L	0~5mA	R	SPECIFIED		

\*Input range=Input full range

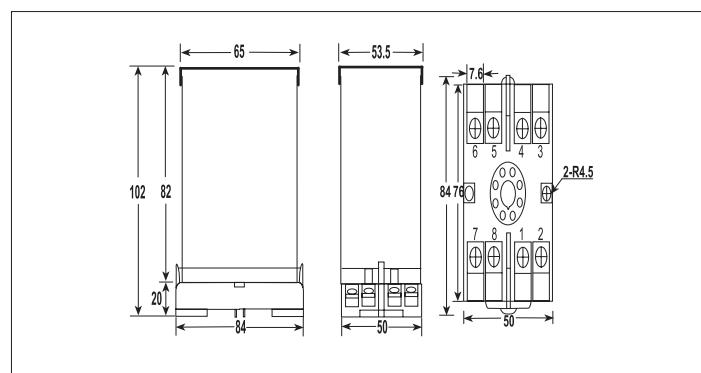
## 2. SPECIFICATION

- Measuring accuracy : 0.1% F.S. (23±5°C)
- Exciting voltage : 5V±3%(<50mA)  
10V±3%(<50mA)  
12V±3%(<50mA)
- 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/°C (0~50°C)
- 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°C (20 to 90% RH non-condensed)
- Storage condition : 0~70°C (20 to 90% RH non-condensed)
- Construction : Socket/plugin type with barrier terminals A
- CE EMC Certification : EN 55022:1998/A1:2000 Class  
EN 61000-3-2:2000  
EN 61000-3-3:1995/A1:2001  
EN 55024:1998/A1:2001

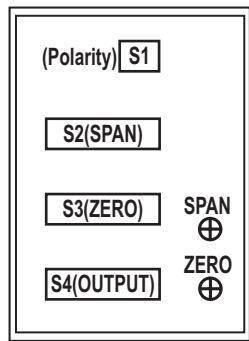
## 3. TERMINAL CONNECTION



## 4. DIMENSION(unit:mm)



## 5.FUNCTION SWITCHES(S1,S2,S3,S4)(開關功能)



•S1→input offset polarity selection

P P7=ON,P8=OFF(VL<0mV,-offset selection)  
P P7=OFF,P8=ON(VL>0mV,+offset selection)

•S2→Input range span (GAIN) selection

Span setting % -S2

N	%	1	2	4	8	10	20	40	80	ON(1)
P		1	2	3	4	5	6	7	8	OFF(0)
Status	off=enable									
All poles off	EN=165%									
All poles on	EN=-0%									

•S3→Input range offset (ZERO) selection

Offset setting % -S3

N	%	1	2	4	8	10	20	40	80	ON(1)
P		1	2	3	4	5	6	7	8	OFF(0)
Status	off=enable									
All poles off	EN=165%									
All poles on	EN=-0%									

•S4→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

VH/VL:input high/input low(unit:mV)

•Span→X=[500/(VH-VL)]%

•Offset→Y=(VL)%

Note:on field application,the required offset a no load status just  
switching S2 of 1%=1mV ffsset

## 7.APPLICATION

Example:TLP-R1QB

Exciting voltage:DC5V

Input range:DC-10mV~+10mV(VH=+10mV,VL=-10mV)

Output range:DC4-20mA

Aux.power:AC/DC90~260V

•SPAN→X=[500/(20-0)]%=25%

•ZERO→Y=(-10%)=-10%

S1→P7=ON,P8=OFF(VL<0mV,-offset selection)

S2		ON(1)
	(P1-P3-P6-off & the rest on→EN=25%)	OFF(0)

S3		ON(1)
	(P5-off & the rest on→EN=-10%)	OFF(0)

## 8.INPUT SWITCHING TABLE(S2)

(switching status off=enable 1=on ; 0=off )

Input range (VH-VL)	S2(SPAN)
3mV	△0-0-0-0-0-0-0
4mV	0-1-0-1-1-1-0
5mV	1-1-1-1-1-0-1
6mV	△0-0-1-1-1-1-0
8mV	△0-0-1-1-0-0-1
10mV	1-1-1-1-0-1-0
12mV	△1-0-1-1-1-1-0
15mV	△0-0-1-1-0-0-1
18mV	△1-1-1-0-1-0-1
20mV	0-1-0-1-1-0-1
24mV	△0-1-1-1-1-0-1
25mV	1-1-1-1-1-0-1
27mV	△0-1-1-0-0-1-1
30mV	△0-0-1-0-1-1-1
36mV	△1-1-0-1-0-1-1
40mV	△0-0-1-1-0-1-1
50mV	1-1-1-1-0-1-1
60mV	△1-1-1-0-1-1-1
90mV	△1-0-0-1-1-1-1

△Recalibrating to obtain linear output

## 9.OUTPUT SWITCHING TABLE(S4)

(switching status 1=on ; 0=off)

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