



WEIGHT TRANSMITTER **Y100**

User Manual

v.201811

Value Each Gram

1. INTRODUCTION

Applicable to strain gauge load cell
Adopting standard socket type base
Analog output: 4-20mA/1-5V
Serial output: RS232/RS485 command type or continuous type
Can be fixed with remote display
The calibration and parameters resetting can be made through serial interface
With the ZERO input function, you can make ZERO through the press button
Fixed to the converter

2. MAIN SPECIFICATIONS

Power;	DC24V 0.3A
Stimulating voltage:	5V
Load cell sensitivity:	2mV/V
A/D converting rate:	200 times/second
Maximum analog output sensitivity:	0.004mA (12bit)
Maximum digital output sensitivity:	>30000
Zero tracking range:	none、0.4d、0.8d、1.2d、... 3.6d
Zero range at turning on:	none、1%、2%、5%、10%、20%、... 60%
Filter parameter range:	00-99
Baud rate:	2400bps
Communication:	8 digits data、no odd /even verifying digit、1 bit stop

3. CONNECTION DESCRIPTION

1. GND
2. Zero input
3. Current output positive
4. Current output negative
5. Load cell stimulation positive
6. Load cell signal positive
7. Load cell signal negative
8. Load cell stimulation negative
9. Serial output mode: continuous/command
10. RS232 GND
11. RS232 RxD
12. RS232 TxD
13. Power input positive (DC24V)
14. Power input negative
15. RS485 A
16. RS485 B

4. INDICATION LED

Power: it is on when the converter is switched on.
Zero: it is on when it is at the zero level.
Continuous/Command: it is on when it outputs data through serial interface

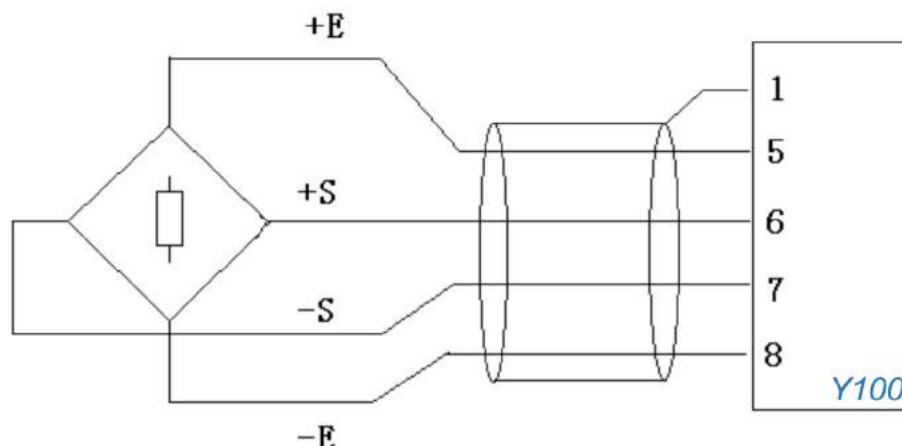
5. SWITCH ON

When you turn on the converter, the power light will be on, at the same time, the serial interface has the following outputs:

Ver8.00
Addr=XX

The first line means the version no. of the software, the second line means the address of the converter, and XX is the address.

6. LOAD CELL CONNECTION



6. PARAMETERS

Maximum weighing: the maximum weighing range: 000010-999999

Filter parameter: make the output smooth, the bigger the value is, the more stable, the output will be, the slower the response of the converter will be. The smaller the value is, the quicker the converter response will be, and the output stability will be decreased accordingly.

Value range: 00-99

Resolution parameter: 00-07

resolution parameter	0	1	2	3	4	5	6	7
resolution	1	2	5	10	20	50	100	200

ZERO parameter: ranging: 00-99, the first digit means the zero range at turning on, the second digit means zero tracking range.

value	0	1	2	3	4	5	6	7	8	9
first digit: zero range at turning on, the percentage of the maximum weighing	none	1%	2%	5%	10%	20%	30%	40%	50%	60%
second digit, zero tracking range,	none	0.4	0.8	1.2	1.6	2.0	2.4	2.8	3.2	3.6

Decimal position: ranging: 00-03

value	00	01	02	03
data format	000000	00000.0	0000.00	000.000

Parameters Setting:

Address setting: short connect 1, 2, switch the converter on, it will receive the address setting command from RS232 or RS485, the command - WADR□XX

□ represents blank XX represents address (00-99)

You should press Enter key each time after each command (0D0A–Hex) .

If you want to set the converter address as 12, you can send WADR□12 to the converter.

The command for reading the converter address: RADR

If you want to read the above address, you can send RADR, the converter will answer: AR=12

Notice: you only need to connect 1 and 2, and turn it on, when you read the address; you need not to connect 1 and 2, when you make other operations.

Other settings: (taking no. 12 converter for example)

Set max weighing	WRFU(12)□003000	Set max weighing =3000
Set filter parameter	WRFL(12)□05	Set filter parameter =5
Set division parameter	WRDV(12)□01	Set division =2
Set zero parameter	WRZR(12)□00	No zero at turning on, no zero tracking
Set decimal position	WRPT(12)□01	Set 1 digit decimal

Read converter data (taking no. 12 converter for example)

note	Converter input	Converter output
Read internal code	RDAD(12)	AD(12)=123456
Read weight	RDDT(12)	W=±00123.4
Read max weighing	RDFU(12)	FU=003000
Read filter	RDFL(12)	FL=05
Read division	RDDV(12)	DV=01
Read zero	RDZR(12)	ZR=00
Read decimal position	RDPT(12)	PT=01

7. CALIBRATION (No.12 for example)

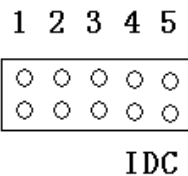
Zero calibration: When the load is empty, send SETZ (12) to the No. 12 converter.
Full capacity calibration: When the load is at full capacity, send CALI (12) to the No. 12 converter.

Output current calibration: the output current was calibrated when it was dispatched from the factory, if you want to make the calibration on the current again, you have two choices:

Command calibration: taking no. 12 converter for example, you need to add the load or take the load away.

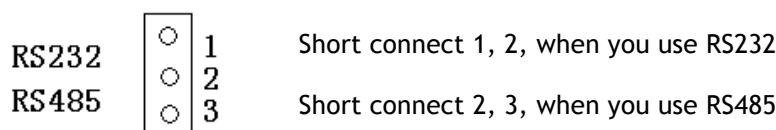
Read the zero level with RDIL (12) (4mA current).
 Input the verified value with WRIL (12) □HHHH, HHHH is the 16 digits data: (0000-0FFF)
 If the output current is lower than 4mA, you can increase HHHH; otherwise, you can decrease HHHH.
 The same as above, you can use RDIH (12) and WRIH (12) □HHHH to adjust the current output when is at full load.

Calibration by opening the case: (you need not to add or take away the load in this case)



4mA (empty load), insert the short circuit loop on position 3, if you short connect the two pins on position 1, you can increase the current, if you short connect the two pins on position 2, you can decrease the current, when the adjusting is finished, you can take away the short circuit loop from position 3, the converter will keep the verified value.
 20mA (full load), insert the short circuit loop on position 4, if you short connect the two pins on position 1, you can increase the current, if you short connect the two pins on position 2, you can decrease the current, when the adjusting is finished, you can take away the short circuit loop from position 4, the converter will keep the verified value.

7. RS232/RS485 SETTING



8. CONTINUOUS SERIAL OUTPUT

Short connect 9, 10, the converter outputs the weight data continuously, at this time; the Continuous/Command light is on, the data format:

=SXXXXXX
=SXXXXXX

S- (SYMBOL): positive weighing, BLANK: negative weighing
X-weight

Examples:

Weight =+123.45kg the output data from converter: =□0123.45
Weight =+12345kg the output data from converter: =□012345
Weight = -123.45kg the output data from converter: = -0123.45

9. 4-20mA CURRENT OUTPUT

When the converter is on, pin 3 and pin 4 outputs the continuous current, which varies according to the changing of the loaded weight. When the weighing is less than zero level, the current is fixed on 4mA, when the weighing is bigger than max capacity; the current is fixed on 20mA.

10. COMMAND

The commands are in READ and WRITE format, all in ASCII CODE.

The converter will output the data when it receives the correct READ command.

The converter will receive the following data, when it receives the correct WRITE command, and outputs cmdOK, which means the receiving is successful.

READ command format : AAAA (BB) C

AAAA—command

BB—address

C—Enter (CR=0AHex)

The converter answers : XX (BB) =DDDDDC

XX—data name

DDDDDC—data, the digit number is determined by the actual data.

READ address command: RADR Enter

The converter answers: AR=BBC

WRITE command format: AAAA (BB) □DDDDDC

AAAA—command

BB—address

C—Enter (CR=0AHex)

DDDDDC—data, the digit number is determined by the actual data.

WRITE command format: WADR□BB Enter

Command List:

Contents	Command	Converter Output	
Read internal code	RDAD(BB)	AD(BB)=HHHHHH	H—16 digits data
Read max weighing	RDFU(BB)	FU(BB)=NNNNNN	N—10 digits data
Read weight	RDDT(BB)	W=SNNNNNN	BB—address
Read filter	RDFL(BB)	FL(BB)=NN	S—Symbol
Read division	RDDV(BB)	DV(BB)=NN	□—Blank
Read zero	RDZR(BB)	ZR(BB)=NN	
Read decimal position	RDPT(BB)	PT(BB)=NN	
Read (4mA) DAC	RDIL(BB)	IL(BB)=HHHH	
Read (20mA) DAC	RDIH(BB)	IH(BB)=HHHH	
Read Gain	RDGA(BB)	GA(BB)=0	
Read address	RADR	AR=NN	
Write max weighing	WRFU(BB)□NNNNNN	cmdOK	
Write filter	WRFL(BB)□NN	cmdOK	
Write division	WRDV(BB)□NN	cmdOK	
Write zero	WRZR(BB)□NN	cmdOK	
Write decimal position	WRPT(BB)□NN	cmdOK	

Write (4mA)DAC	WRIL(BB)□HHHH	cmdOK	
Write (20mA)DAC	WRIH(BB)□HHHH	cmdOK	
Write address	WADR	cmdOK	
Write Gain	WRGA(BB)□00	cmdOK	
Set zero	SETZ(BB)	ZERO□OK	
Calibration at full range	CALI(BB)	CAL□OK	

Example:

If you want to set the converter address = 12 and max value =3000, you can send the commands as follows:

Set address command: W ADR□12 Enter

The corresponding 16 digit data: 57 41 44 52 20 31 32 0A

Set the max value command: WRFU (12□003000 Enter

The corresponding 16 digit data: 57 52 46 55 28 31 32 29 20 30 30 33 30 30 0A



v.201811
User Manual
Y100