



DS10-1V MultiFunction
DIGITAL READOUTS

Operation Manual

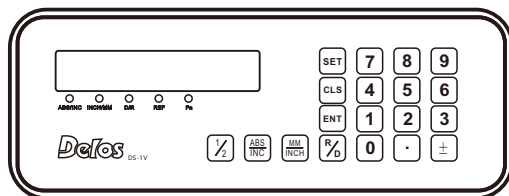
(Version 1.0)

Contents

1. Operation Instructions	
1.1 Illustration of Panel and keyboard	2
1.2 General Operations.....	2
1. Zeroing	2
2. Toggle Unit between inch and mm	2
3. Absolute / Incremental	3
4. Enter coordinate	3
5. Linear compensation	3
6. 1/2 Function	3
7. Toggle Between R/D display Mode.....	3
2. Parameters settings	
2.1 PA-00 Encoder type setting.....	4
2.2 PA-01 Resolution setting.....	4
2.3 PA-02 Direction setting	4
2.4 PA-03 UART mode setting	4
2.5 PA-04 Accuracy of imperial unit	5
2.6 PA-05 Limit Enable / disable	5
2.7 PA-06 Soft lower Limit value.....	5
2.8 PA-07 Soft Upper Limit value	6
2.9 PA-08 Restore Factory Settings	6
3. Appendix	7

1. Operation Instructions

1.1 Illustration of Panel and key board



Key to realize processing operation and parameter programming On the operation panel; According to different processing operations, the single key has double functions, some functions need to be two key combination for achieve different operation; Specific operation, please see the processing operation and parameter programming;

1.2 General Operations

1、Zeroing

Press [CLS], Zeroing is to set the current point in normal display ;

2、Toggle Unit between inches and mm

Press [mm/inch], Display unit can be toggled between mm and inch, a mm/inch LED will be appear of the right at the same time; Light indicator is the inches unit; Otherwise, is mm;

3、Absolute/Incremental

Press [ABS/INC], Display coordinate can be toggled between ABS to INC coordinate, A ABS/INC LED will appear of the right; Light indicator is the ABS coordinate; otherwise, is the INC coordinate.

1. Operation Instructions

4、 Enter coordinate

Preset a value to current position for a designated axis in normal display state; Press [SET] key to input state ; then press data key, Input data value;

5、 Linearity Compensation

Press [SET], then [MM/INCH], which indicates the step is to Linear Compensation, then Input the Linear Compensation value . Compensate the linear error to make display value equals to standard value;

The calculation of compensation rectifying coefficient:
(Measurement I Standard value) x 1000.000

Coefficient[^]

Standard value Example for X axis:

Measurement 200.020mm Standard value 200.000mm

Rectifying coefficient

$$= (200.020-200) * 1000 /200 =-0.01 \text{ mm/m}$$

6、 1/2 Function

Set the center of work piece as datum by halving the displayed value. Press [SET], then Press [1/2], in turn to value the axis display value , The position is the work-piece's center.

7、 Toggle Between R/D Display Mode

Press[SET], then press [R/D], Display the data will be radius and diameter of processing mode, A D/R LED will be appear of the right; Light indicator is the diameter; Otherwise, is the radius.

1. Operation Instructions

4、 Enter coordinate

Preset a value to current position for a designated axis in normal display state; Press [SET] key to input state ; then press data key, Input data value;

5、 Linearity Compensation

Press [SET], then [MM/INCH], which indicates the step is to Linear Compensation, then Input the Linear Compensation value . Compensate the linear error to make display value equals to standard value;

The calculation of compensation rectifying coefficient:
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Set the center of work piece as datum by halving the displayed value. Press [SET], then Press [1/2], in turn to value the axis display value , The position is the work-piece's center.

7、 Toggle Between R/D Display Mode

Press[SET], then press [R/D], Display the data will be radius and diameter of processing mode, A D/R LED will be appear of the right; Light indicator is the diameter; Otherwise, is the radius.

2. Parameters setting

2.4 PA-03 UART mode type:

Parameters: UArt-0 (BIN format) or UArt-1 (ASCII format)

Operations:

Windows displays PA-03 , Press [Enter] key to enter ;

Press [CLS] key to toggle UArt-0 or UArt-1 ,

Press the [Enter] to confirm your choice

and Windows displays PA-03,

Press the [MM/INCH] key to the last step;

Press the [R/D] key to the next step;

2.5 PA-04 Accuracy adjustment of imperial unit:

Parameters: INCH-4 (4 bits decimal points)

or INCH-5 (5 bits decimal points)

Operations:

Windows displays PA-04 , Press [Enter] key to enter ;

Press [CLS] key to toggle INCH-4 or INCH-5 ,

Press the [Enter] to confirm your choice

and Windows displays PA-04,

Press the [MM/INCH] key to the last step;

Press the [R/D] key to the next step;

2.6 PA-05 Enable soft Limit function:

Parameters: ON (for enable) or OFF(for disable)

Operations:

Windows displays PA-05 , Press [Enter] key to enter ;

Press [CLS] key to toggle ON or OFF ,

Press the [Enter] to confirm your choice

and Windows displays PA-05,

Press the [MM/INCH] key to the last step;

Press the [R/D] key to the next step;

2.7 PA-06 input lower Soft Limit value:

Parameters:

Operations:

Windows displays PA-06 , Press [Enter] key to enter ;

Press [SET] key then press numeric number

to input lower soft limit value;

Press the [Enter] to confirm your choice

and Windows displays PA-06,

Press the [MM/INCH] key to the last step;

Press the [R/D] key to the next step;

2.Parameters setting

2.8 PA-07 input Upper Soft Limit value

Parameters:

Operations:

Windows displays PA-07 , Press [Enter] key to enter ;

Press [SET] key then press numeric number
to input upper soft limit value;

Press the [Enter] to confirm your choice
and Windows displays PA-07,

Press the [MM/INCH] key to the last step;

Press the [R/D] key to the next step;

2.9 PA-08 Restore factory default (PINCoder: 2019)

Parameters:

Operations:

Windows displays PA-08 ,

Press [Enter] key to enter ;

Windows display : “ PinCode”

input : 2019 then press [Enter];

Windows display: “CLS---”

and then Windows displays PA-08,

Press the [MM/INCH] key to the last step;

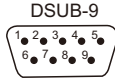
Press the [R/D] key to the next step;

Default Parameters;

4. Appendix

Mechanical Electrical Features

pin	PP	EIA422
	signal	signal
1	—	\bar{A}
2	OV	OV
3	—	\bar{B}
4	GND	GND
5	—	\bar{R}
6	A	A
7	5V	5V
8	B	B
9	R	R



Resolutions for Linear Scale	10--0.1um
Resolutions for Rotary Encoder	0.001--1"
Power Supply	100VAC--230VAC±10% / 15 VA
Axis Display	7 Segment LED H = 17mm
Signal input per axis	A / B quadrature signals
Maximum input frequency	500KHz
Operating Temperature	0° – 50°
Storage Temperature	-20° – 70°
Relative Humidity	95% (not condensed)
Vibration Resistance	25 m/s ² (55 – 2000Hz)
Protection Class(EN60529)	IP42
Weight	2.1 Kg

DIMENSIONS

