

# ABSOLUTE LENGTH AND ANGLE MEASURING

## Digital display EP1-A - absolute



The digital display EP1-A series is in combination with analog encoders a very cost effective and safe solution for data acquisition in machine and plant construction, especially in combination with Willtec analog sensors.

- LED display, 5-digit, digit height 10 mm
- 36mm x 72mm x 60mm DIN housing, installation depth 66 mm
- Power supply 10 - 30 VDC sensor supply including
- Protection class IP4x to IP5x, front side (with sealing IP6x possible on request)
- Display value freely parametrizable "teach-in"
- 3 variants, input, voltage, current or resistance
- Accessories: Housing, brackets, etc.

### Pin assignment - digital display EP1-A

		1	2	3	4	5	6	7	8	9	10	11	12		
		Fig.: Connections backside													
<b>EP1-A</b> (Version potentiometer)	<b>No.</b>	<b>Function</b>												<b>Function</b>	
	<b>1</b>	Encoder supply +5 VDC (Potentiometer), max. 100 mA											<b>1</b>	N.C.	
	<b>2</b>	Upper potentiometer - stop, Pin 1 and 2 are connected											<b>2</b>	Input U+ / I+	
	<b>3</b>	N.C.											<b>3</b>	GND mass U / I	
	<b>4</b>	Potentiometer slider											<b>4</b>	N.C.	
	<b>5</b>	N.C.											<b>5</b>	N.C.	
	<b>6</b>	Lower potentiometer - stop (GND)											<b>6</b>	N.C.	
	<b>7</b>	N.C.											<b>7</b>	N.C.	
	<b>8</b>	N.C.											<b>8</b>	N.C.	
	<b>9</b>	RS485 - DÜB											<b>9</b>	RS485 - DÜB	
	<b>10</b>	RS485 - DÜA											<b>10</b>	RS485 - DÜA	
	<b>11</b>	Power supply +10 to 30 VDC											<b>11</b>	Power supply +10 to 30 VDC	
<b>12</b>	Power supply mass											<b>12</b>	Power supply mass		

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Operation - digital display EP1-A			
Key position	Left	Middle	Right
Symbol	Reset-/reference-symbol (arrow left)	Star (arrow up)	Set-value symbol (SET)
Display mode		Switchover ABS/REL value, REL value is indicated by blinking decimal points.	Press and hold 15 sec. to switch over to the programming mode
Programming mode	Change digit 1 to the left	Increase digit by 1 or change parameter	Accept value and next menu item

Start up sequence: display test (88888888), version display

Programming menu - digital display EP1-A				
Menu item	Designation	Selectable range	Default value	Note
1 AP1	Value adjustment position 1	-9999 up to 99999	0	Value that should be displayed with adjustment position 1
2 AP2	Value adjustment position 2	-9999 up to 99999	1000	Value that should be displayed with adjustment position 2
3 SE1	Adjustment pos. 1	---, SEt		Set adjustment point 1
4 SE2	Adjustment pos. 2	---, SEt		Set adjustment point 2
5 dP	Decimal places	0, 0.0, 0.00, 0.000	0,0	
6 trE	Release ABS-/REL-button	On, OFF	On	
7 bri	Display brightness	1 up to 5	5	1=darkest level 5=brightest level

## Teach in adjustment (example) - digital display EP1-A

For example: It should be displayed 100.0 mm at left potentiometer stop and 500.0 mm at right potentiometer stop.

Of course it can be chosen any point, it needn't be the potential stop.

The adjustment point should be as far away from each other as possible (higher accuracy).

1. Put EP1-A with Poti /e.g. 10k) into operation and change into programming menu.
2. At menu item " 1 Ap1" enter value " 100.0.
3. At menu item " 2 Ap2" enter value " 500.0.
4. Turn Potentiometer (Sensor) until left stop, at menu item "3 SE1" change to "Set".
5. Turn potentiometer (Sensor) until righth stop, at menu item "4 SE2" change to "Set".
6. At menu item "5 dP" enter value "0.0".

## Ordering example - digital display EP1-A

