Datasheet

- Absolute distance and angle measurement in combination with magnetic and optical measuring systems
- Digital position determination in mechanical and plant engineering
- Industry 4.0 can be networked via an interface

LED-Display; 6-digits

LED-Display; 8-digits (optional)

Functions

Functions (freely programmable via front keys) Scaling factor 2 counting inputs/ differential measurement	• incremental measurement function (ABS-/REL) • freezing function • offset value, selectable • mm/Inch switchover programmable (on request)
Suitable for	• absolute encoders series SCA, SCM, SAG • magnetic encoders series AMS2, AHP1, MAT

Mechanical Data

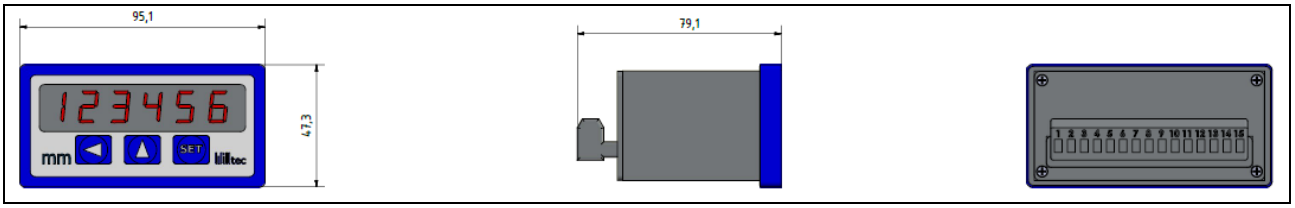
Display	LED-Display; 6-digits or LED-Display; 8-digits (optional)
Digit height	~ 14 mm
Dimensions (installation housing) Dimensions (control panel cut-out) Dimensions (mounting housing)	47 x 95 x 79 mm (L x W x H) 46 x 94 x 75 mm (L x W x H) 62 x 117 x 136 mm (L x W x H)
Measuring range	999.999; -99.999 (6-digits) 99999.999; -9999.999 (8-digits)
Accessories	• mounting housing (single, double, or triple) • mounting brackets

Electrical Data

Power supply Encoder supply	15 - 30 VDC or 115/230 VAC (on request) 5 VDC or 24 VDC
Current consumption no-load operation	 30 mA <130 mA
Electrical connection	Connector
Interface	RS485; RS232 and USB via adapter (optional)
Protection class	IP40 (installation housing front side); further protection classes on request

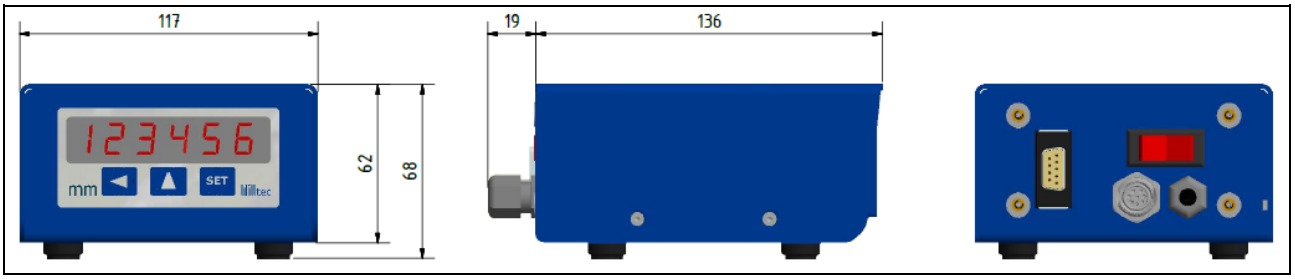
Dimensions

Measurement indicator EP2/2-absolute-SSI in installation housing



Dimensions

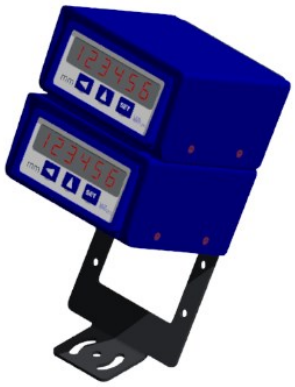
Measurement indicator EP2/2-absolute-SSI in mounting housing (with housing feet)



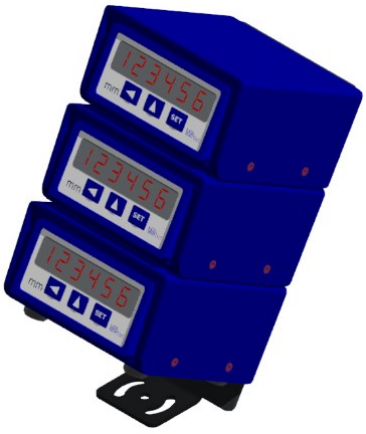
Accessories

Mounting brackets for measurement indicator in mounting housing / borehole interval for mounting

mounting housing (simple)
with retaining plate

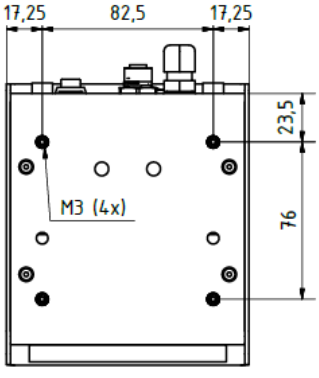


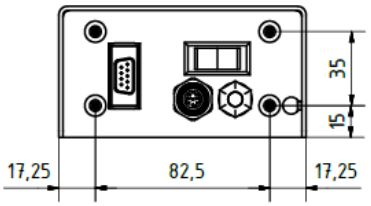
mounting housing (double)
with retaining bracket (angel)



mounting housing (triple)
with retaining bracket (angel)

mounting housing (simple)
with ball join





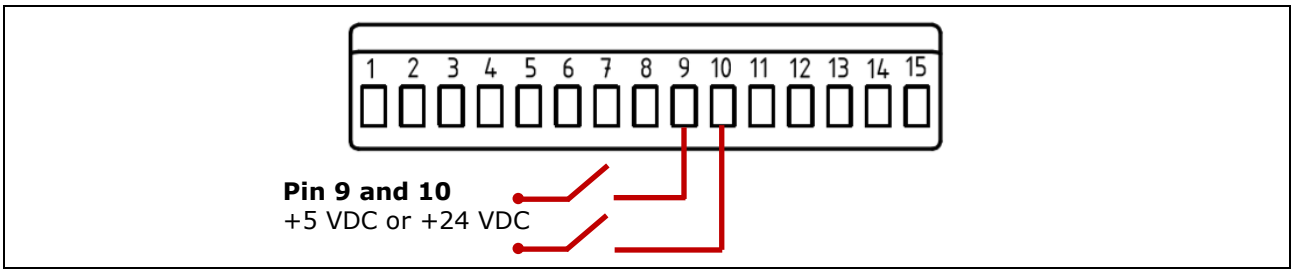
Pin assignment

Measurement indicator EP2/2-absolute-SSI in installation housing: 15-pole terminal strip, rear

PIN	Function	Note
1	Encoder supply +5 VDC or +24 VDC	max. 100 mA Change of encoder supply from +5 VDC or +24 VDC via solder bridge.
2	Data +	
3	Data -	
4	Clock +	
5	Clock -	
6	Not connected	
7	Not connected	
8	GND	
9	RESET-Input +	5/24 VDC plus-switching
10	Special input/output +	5/24 VDC plus-switching or open collector (optional)
11	RS485 - DÜB	
12	RS485 - DÜA	
13	PE	protective conductor
14	Power supply +15 - 30 VDC	optional 115/230 VAC
15	Power supply +15 - 30 VDC	

External circuit

External switch attached by the customer.
Submitted to external reset: menu item 9 setting to rFS.



Pin assignment

Magnetic encoder – absolute (example): AMS2

Function/Signal	PIN Encoder input
Terminal strip 15-pole at enclosure housing	CO8 8-pole
Encoder supply +5 VDC or +24 VDC	8
Data +	6
Data -	5
Clock +	3
Clock -	4
GND	7

Datasheet

Ordering example Measurement indicator EP2/2-A absolute

Type/Display	**EP2/2**	-	**A**	-	**SSI5**	-	**24**	-	**X**	-	**X**

EP2

Type**/Display**

/2 = Display; 6-digits

/28 = Display; 8-digits

Absolute

Encoder input

SSI5 = 5 VDC

SSI24 = 24 VDC

Power supply

24 = 15 - 30 VDC

230 = 230 (115) VAC

Interface

X = none

RS485 (terminal clamp)

RS232 (adapter if version is EG, installation housing)

USB (adapter if version is EG, installation housing)

Function

X = none

Inch = mm/Inch switchover
(without incremental measurement function)

MSF = multi-scaling

OFF = multi-offset value, selectable

Further functions (optional) on request:

- 2 counting inputs/differential measurement

* Extension ordering example if version is mounting housing (AG) and accessories (electrical connections and mounting brackets) refer to the following page.

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Datasheet

Ordering example Measurement indicator EP2/2-A absolute

* Measurement indicator EP2/2-A absolute in mounting housing (if version is AG) and accessories

Type/Display	**AG1**	-	**BL**	-	**24PG**	-	**CO8**	-	**X**	-	**H1**
EP2											
Enclosure housing											
AG1 = mounting housing (simple)											
AG2 = mounting housing (double)											
AG3 = mounting housing (triple)											
Color (housing)											
BL = blue											
SG = slate grey											
UV											
PG = PG cable gland											
230 = 230 VAC connector 3-pole, On/Off switch											
24 = 24 VDC connector 4-pole, On/Off switch											
Encoder connection											
PG = PG cable gland											
CO8 = socket 8-pole											
Individual											
Interface											
X = none (with housing feet)											
SubD = Sub-D											
Mounting bracket											
X = none											
H1 = retaining plate											
H2 = retaining bracket (angel)											
KG = ball join											

Ordering example:
Measurement indicator in installation housing (EG): **EP2/2-A-SSI5-24-X-X-EG**
Mounting housing (AG) and accessories: **AG1-BL-24PG-CO8-X-H1**

Please note:
If the measurement indicator is ordered together with the mounting housing (AG) and accessories, they will be delivered as assembled.

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Instruction manual - compact

Display

Key position	Left	Center	Right
Symbol /Key function	 Arrow left /selection key „position”	 Arrow up /selection key „value”	 SET /selection key „menu” and save key
Display mode	Resetting the displayed ABS-/REL-values to zero or press SET-value for 1 to 10 seconds; depending on the programming (7 tSE).	Switching ABS-/REL-value, REL-value is displayed by the flashing decimal point.	Switch to programming mode by pressing the SET-key for 30 seconds. By pressing the SET-key once, freezes the display for a moment; this requires the Efr function to be switched on (see menu item 15 Efr). If Efr=OFF, an offset value (≠zero) can be added. The decimal point flashes when functions are activated.
Programming mode	Change one digit to the left.	Increase the selected digit by one or change parameter.	Adopt value and switch to the next menu item.
Startup sequence: display test (88.888.888), version display, measuring value			

Programming

Menu	Designation	Selectable range	Default	Menu
1 rEF	Reference value	-99999 … 999999	0	Value (reference value) on which is set during reset
2 OFF	Offset value	-99999 … 999999	0	Can be switched on (see display mode above)
3 SF	Scaling factor	0,00001 … 9,99999	1,00000	Example: encoder 1000, spindle 5 mm, display 1/100 mm -> scaling factor = 500/(4x1000) = 0,1250
4 Sdi	Divisor	1, 10, 100, 1000	1	Additional divisor to set the scale more precisely
5 dP	Decimal places	0; 0.0; 0.00; 0.000	0.0	Setting the decimal point to up to 3 decimal places
6 dir	Counting direction	UP, dn	UP	Counting direction of the measuring system: UP = positive counting in clockwise direction; dn = negative counting in counterclockwise direction
7 tSE	Release RESET button	OFF 1, 3, 5, 10 SEC	5 SEC	Switched off or the number of seconds you must press the Arrow left/selection key "position" to reset the display
8 trE	Release ABS-/REL-button	On, OFF	On	REL-value is indicated by flashing decimal points
9 Gbit	Number of encoder-Bits	8 … 30	25	
10 SBit	Number of single-turn-Bits	5 … 13	13	
11 AuS	Coding of the encoder	GraY, bin	GraY	
12 For	Format of the code	no, trEE	no	No formatting or „trEE-tree-format"
13 bri	Display brightness	1 … 5	5	1= darkest level 5= brightest level
14 Adr	Device address	001 … 255	001	For interface only
15 Efr	Freezing function	OFF, 3, 5, 10 SEC	OFF	By pressing the SET-key once, freezes the display for a moment; the internal counter continues to count.
16 dc	Device code	00000 ... 99999	00000	For internal use only