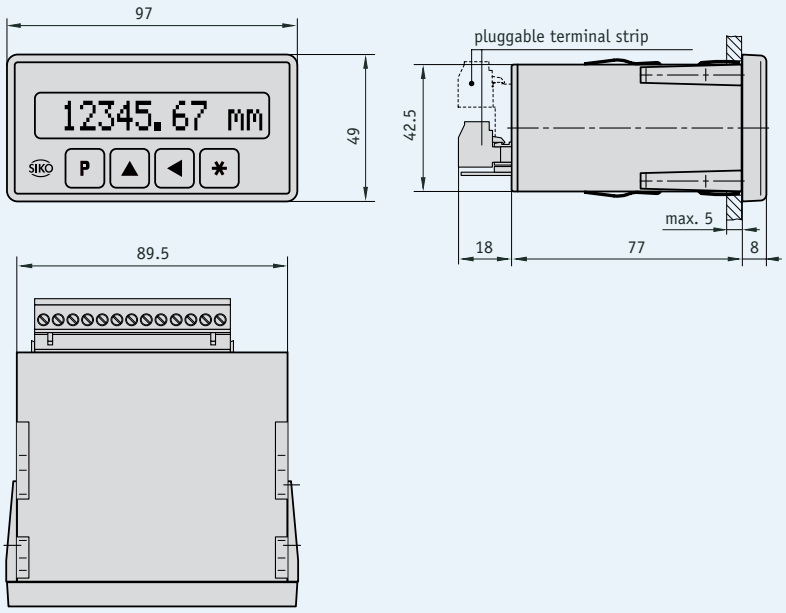
Electronic Display MA10/4

Incremental or absolute, length, angle, speed or number of pieces measurement

Profile

- High contrast LCD readout (1 line of 12 digits)
- Display of units
- Inputs for incremental or absolute encoder (SSI), length and angle measurement, speed or number of pieces
- Free programming via front keyboard
- With reference connection
- Optional: RS232 or RS485 interface
- Optional: Switching outputs



Mechanical data

Feature	Technical data	Additional information
Operating temperature	0 ... +50 °C	
Storage temperature	-20 ... +85 °C	
Condensation	inadmissible	
Protection category	IP40 whole device IP60 front with switchboard mounting	DIN 40050
Connection	13-pin connector strips	
Keyboard	membrane keys with pressure point	
Housing	plastic	switchboard cutout 92 x 45 mm, DIN 43700
Weight	0.4 kg 0.25 kg	with 230 V and 110 V with 24 V

Electrical data

Feature	Technical data	Additional information
Operating voltage	24 V DC ±20 % 24 V AC ±10 % 115 V AC ±10 % 230 V AC ±10 %	
Current consumption	120 mA	with 24 V, without encoder
Switching outputs	≤30 V/100 mA	2 freely programmable outputs
Display	12-digit LCD dot matrix	
Display range	-9 999 999 ... +9 999 999	additionally sign and unit of measurement
Encoder input	PP, OC, OP, LD5, LD24, SSI/5, SSI/24 DREH/PP, DREH/OC, S/PP, S/OC	length and angle measurement speed measurement number of pieces measurement
Encoder input frequency	max. 500 kHz	
Encoder supply	24 V DC (200 mA) 5 V DC (200 mA)	
Counter capacity	$\pm 2^{23}$ increments	
Pulse analysis	quadruple	incremental encoder
Interference protection class	EN61000-6-2, EN6100-6-4	

Pin assignment

Incremental PP, OC, OP, LD5, LD24	Speed/number of pieces speed/PP, speed/OC, S/PP, S/OC	Absolute SSI/5, SSI/24	PIN
+Ub encoder supply	+Ub encoder supply	+Ub encoder supply	1
A	A	clock+	2
B		data+	3
Index signal			4
GND, screen encoder supply	GND, screen encoder supply	GND, screen encoder supply	5
24 V DC out	24 V DC out	24 V DC out	6
RFS	RFS	CAL	7
N.C.	N.C.	N.C.	8
GND	GND	GND	9
N.C.	N.C.	N.C.	10
PE	PE	PE	11
0 V GND	0 V GND	0 V GND	12
+ Ub operating voltage	+ Ub operating voltage	+ Ub operating voltage	13
Encoder supply	encoder supply	encoder supply	14
/A (LD, OP)		clock-	15
/B (LD, OP)	/I (LD, OP)	data-	16
/I (LD, OP)			17
GND	GND	GND	18
N.C.	N.C.	N.C.	19
GND	GND	GND	20
N.C.	N.C.	N.C.	21
DÜA/TXD/A1	DÜA/TXD/A2	DÜA/TXD/A1	22
DÜB/RXD/A2	DÜB/RXD/A3	DÜB/RXD/A2	23
N.C.	N.C.	N.C.	24
N.C.	N.C.	N.C.	25
N.C.	N.C.	N.C.	26

Order

Order table

Feature	Order data		Specifications	Additional information
Operating voltage	1	A	230 V AC ±10 %	
	2		115 V AC ±10 %	
	3		24 V AC ±10 %	
	4		24 V DC ±20 %	
Encoder input	PP	B	push-pull	
	OC		open collector	
	OP		PP invertiert	
	LD/5		line driver/5 V DC encoder supply	
	LD/24		line driver/24 V DC encoder supply	
	SSI/5		SSI/5 V DC encoder supply	
	SSI/24		SSI/24 V DC encoder supply	
	DREH/PP		speed/24 V DC encoder supply	push-pull
	DREH/OC		speed/24 V DC encoder supply	open collector
	S/PP		number of pieces/24 V DC encoder supply	push-pull
	S/OC		number of pieces/24 V DC encoder supply	open collector
Counting frequency (kHz)	25	C		
	250			
	500			
Switching output	SO	D	without	
	SM		with	
Interface/protocol	XX/XX	E	without	
	S1/00		RS232/standard	
	S3/00		RS485/standard	
Front foil	BS	F	blue	
	BN		blue neutral	without company logo
Software	S	G	length measurement	
	SW02		angle measurement, 0–360°	

Order code

MA10/4 – EG – [A] – [B] – [C] – [D] – RM – [E] – [F] – [G]

Scope of delivery: *MA10/4, User information, Mating connectors*

Additional information:
General information and areas of application *Page 90 cont.*