

Counters

24 x 48 digital counters

Types FKA



- 8 digit LCD display
- 8mm digits
- Reset button with locking function
- 8 years battery lifetime
- Up-down counting mode (through electrical control)
- For front panel mounting
- 24 x 48mm housing
- Filter function for bounce-free counting with mechanical contacts

Product Description

24x48mm up to 2 inputs up-down counters for flush mounting. NPN, PNP or voltage inputs allow connection to any type of sensors or open collector output. The front key, which can be locked, allows fast and easy counting reset.

Ordering Key

FKA 01 A12 8 5 0

Model _____
 Input mode _____
 Housing _____
 Number of digit _____
 Backlight 5= no
 6= yes

Input type _____
 Stock items: FKA01A12850
 FKA01A12852
 FKA01A12853

Approvals



Input Modes

Input Mode	Operating Mode	Counting Inputs					
		Input A			Input B		
01	Count	0...0.7VDC	NPN	7kHz	0...0.7VDC	NPN	30Hz
01		4...30VDC	PNP	12kHz	0...0.7VDC	NPN	
01		10... 260V	AC/DC	30Hz	10...260V	AC/DC	-
02	Count direction up/down	0...0.7VDC	NPN	7kHz	0...0.7VDC	NPN	7kHz
02		4...30VDC	PNP	12kHz	4...30VDC	PNP	12kHz
02	up / down	10... 260V	AC/DC	30Hz	10... 260V	AC/DC	30Hz
03	Count direction	10... 260V	AC/DC	30Hz	10... 260V	AC/DC	30Hz
04	Quad / Quad2	0...0.7VDC	NPN	3kHz	0...0.7VDC	NPN	3kHz
04		4... 30VDC	PNP	6kHz	4...30VDC	PNP	6kHz

Input Type

Input Type	Input A			Input B		
	Value	Polarity	Max. Freq.	Value	Polarity	Max. Freq.
0	0...0.7VDC	NPN	7kHz	0...0.7VDC	NPN	30Hz
1 ¹	4...30VDC	PNP	12kHz	4...30VDC	PNP	12Hz
2 ²	4...30VDC	PNP	12kHz	0...0.7VDC	NPN	30Hz
3	10...26VAC/DC	AC/DC	30Hz	10...260VAC/DC	AC/DC	Reset

1: Only used for input mode 02 and 04
 2: Only used for input mode 01

DC Input Operating Modes

Count	Input A Input B	Fast counting input Slow counting input
Counting direction	Input A Input B	Counting input Counting direction input
Up/Down	Input A Input B	Adding counting input Subtracting counting input
Quad (phase discriminator)	Input A Input B	0° counting input 90° counting input
Quad (phase discriminator with pulse doubling)	Input A Input B	0° counting input 90° counting input

AC Input Operating Modes

Count	Input A Input B	AC/DC counting input AC/DC reset input
Counting direction	Input A Input B	Counting direction input Counting input
Up/Down (phase discriminator)	Input A Input B	AC/DC subtracting counting input AC/DC adding counting input

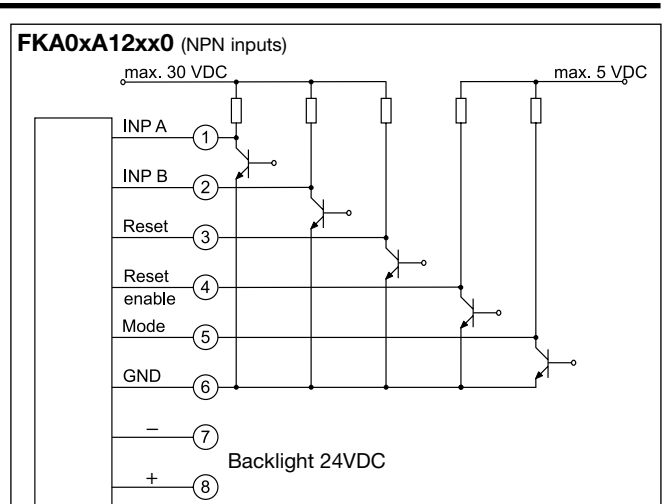
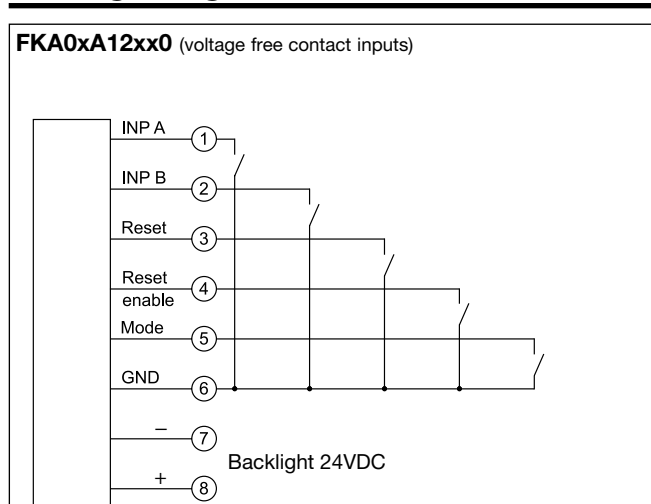
General Specifications

Power supply	Non-replaceable lithium battery (lifetime up to 8 years at 20°C)
Display	-9999999 to 99999999 with overflow display
Housing	24x48mm (0.94"x1.89") (acc. to DIN43700)
Colour	RAL 7021
Backlight consumption	24VDC ±50mA
Weight	50g (1.76oz)
Screw terminals	
Tightening torque	Max 0.5Nm acc. to IEC EN 60947
Connection wires	0.4...2.3mm single wire AWG28...AWG12
Environment (acc. to EN 60529)	
Degree of protection	IP 65 front
Pollution degree	2
Operating temperature	-10...+55°C (14...131°F), R.H.<85%
Storage temperature	-20...+70°C (-4...158°F)
Low voltage directive (Input type 3 only)	Overvoltage category II contamination cat. 2 (acc. to EN 61010 Part 1)
EMC Electromagnetic compatibility	
emitted:	Acc. to EN55011 class B
immunity:	Acc. to EN61000-6-2

Package Content

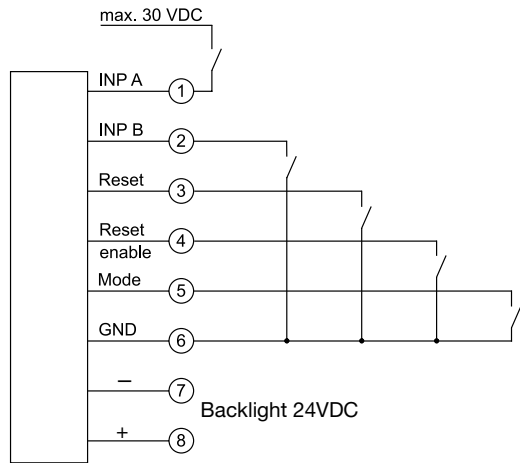
1	Instrument FKA
1	Panel mounting clip
1	Bezel for screw mounting (56x40mm/2.205x1.575"), panel cut-out (50x25mm/1.969x0.984)
1	Bezel for clip mounting (53x28mm/2.087x1.103"), panel cut-out (50x25mm/1.969x0.984)
1	Seal
1	Multilingual operating manual

Wiring Diagram

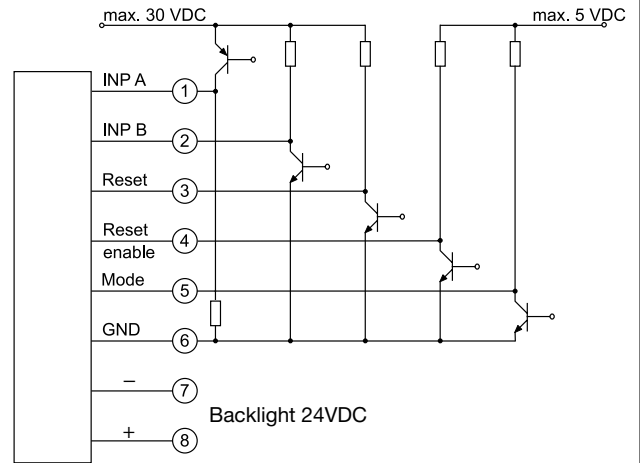


Wiring Diagram (cont.)

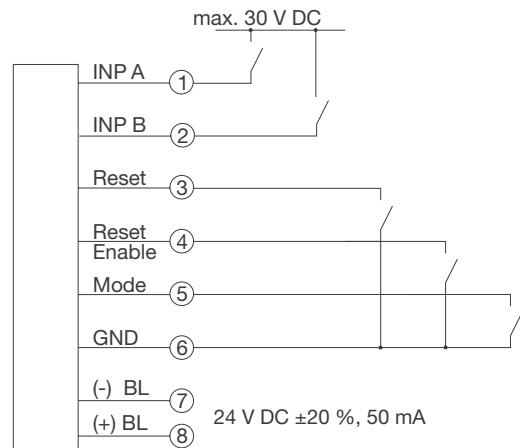
FKA01A12xx2 (voltage free contact inputs, except for INP A)



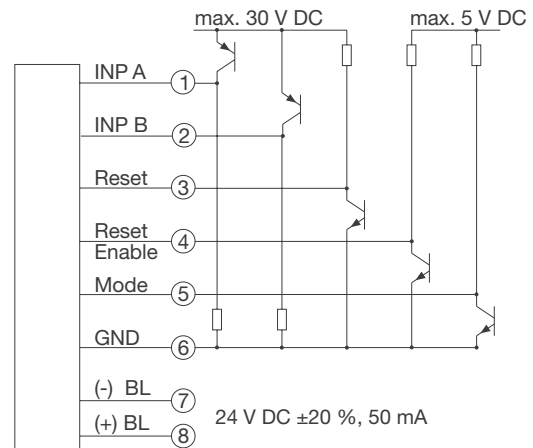
FKA01A12xx2 (NPN inputs, except for INP A (PNP))



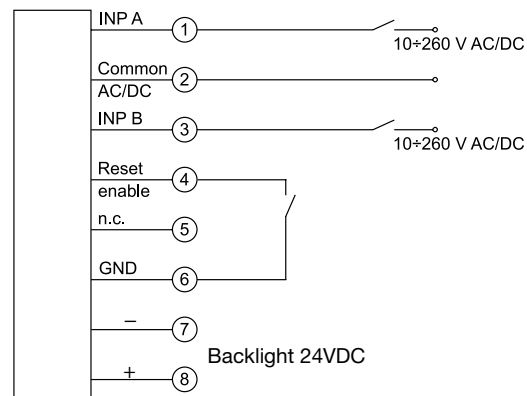
FKA02A12xx1 + FKA04A12xx1



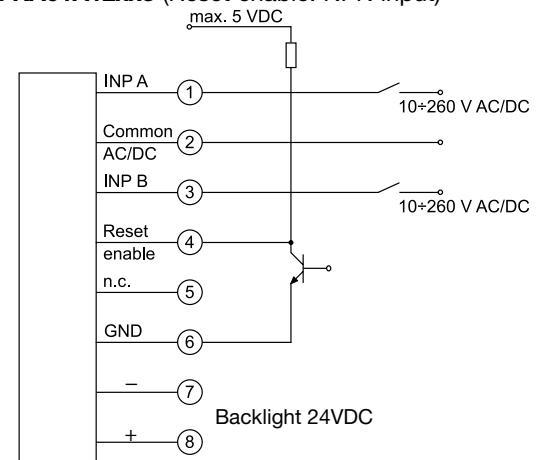
FKA02A12xx1 + FKA04A12xx1



FKA01A12xx3 (Reset enable: voltage free contact input)

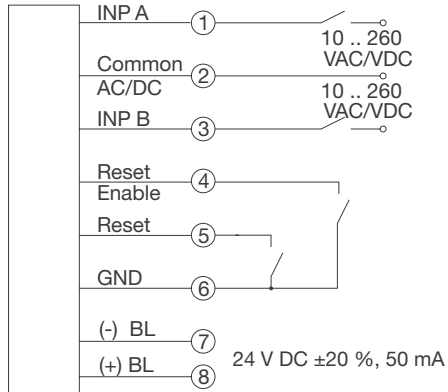


FKA01A12xx3 (Reset enable: NPN input)



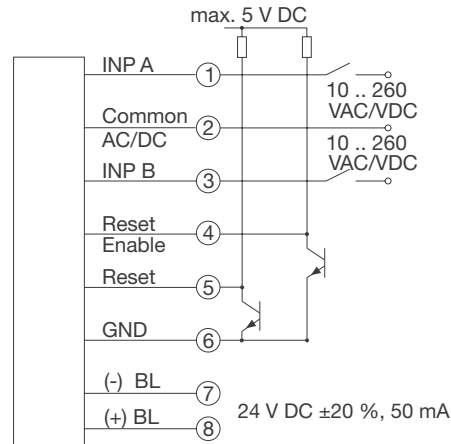
Wiring Diagram (cont.)

FKA02A12xx3 + FKA03A12xx3



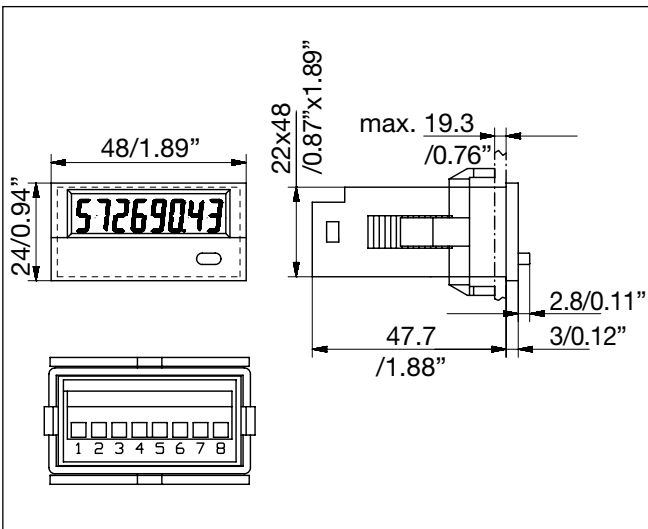
BL = backlight

FKA02A12xx3 + FKA03A12xx3



BL = backlight

Dimensions (mm/inches)



Dimensions for Bezels (mm/inches)

