

Counters

48 x 48 Digital Preset Counter

Types FKC



FKC

- 6-digit for 2-line LCD display
- Adding / subtracting
- Programmable to operate as:
 - pulse counter
 - frequency meter
 - time meter
- User friendly programming
- 2 count inputs: PNP or NPN, selectable
- 1 preset and 1 output
- 48x48mm housing

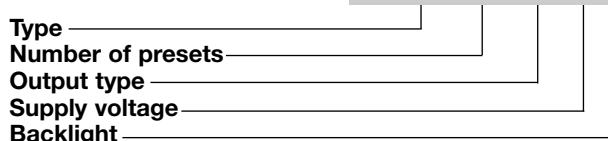
Product Description

48x48mm preset digital counter for flush mounting with 2 lines LCD display, programmable as impulse counter (with sign), frequency meter or time meter.

SPDT output relay, NPN, PNP or voltage free contact inputs. It can be used for simple piece or pulse counting or for position control with encoders.

Ordering Key

FKC 01 C9 2 4



Stock items: FK01C924

Approvals



Number of Presets

01	1 preset value, 1 output
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Supply Voltage

2	20÷250VAC, <4VA
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General Data

Display	6 digits (with sign) 2-line 7 segments LCD
Dimensions of count digits	H 9mm/0.35" (first line)
Dimensions of preset value digits	H 7mm/0.27" (second line)
Viewing angle	Frontal
Operating temperature (RH<90%)	+0...+50°C/32...122°F
Storage temperature (RH<90%)	-25...+70°C/-13...158°F
Mounting position	Panel mounting
Housing colour	RAL7021 (grey)
Dimensions	48x48 acc. to DIN 43700 STD
Weight	~240g/8.47oz
Panel cut-out HxL	45x45mm / 1.77"x1.77" 50x50mm / 1.97"x1.97"
Protection degree	IP65 (front)
Pollution degree	2
EMC	acc. to directive 89/36/EWG
emitted:	EN61000-6-3 EN550011 class B
immunity:	EN61000-6-2
Dielectric voltage (EN 61010-1)	
Supply to input	2.3kV/5s
Supply to output	2.3kV/5s
Input to output	2.3kV/5s

Output Type

C9	Relay
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Backlight

4	Without
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Measuring Specifications

Display range	-999999 to 999999
Number of decimal digits	2 or 3
Accuracy (temperature drift included)	0.015%

Input Specifications

Count inputs	2
Input modes	4 programmable
Polarities	Programmable
Resistance	~10kΩ
Frequency	30Hz or 10kHz separately selectable (DIP switch) for INP A or INP B. 7kHz max. for input mode E3 and E4 (quadrature modes), <900Hz without count losses (<500Hz for input mode E4)
Minimum pulse duration	5ms
Switching levels	
AC supply	Low 0 to 4VDC High 12 to 30VDC

Relay Output Specifications

Contact configuration	Out1 SPDT relay
Contact rated voltage	250VAC
Contact ratings (AgCdO)	
Resistive loads	AC1 3A @ 250VAC DC12 2A @ 24VDC
Small inductive loads	AC15 2.5A @ 250VAC DC13 2A @ 24VDC
Mechanical life	≥2 x 10 ⁶ ops.
Electrical life	≥5 x 10 ⁵ ops. (@ 3A, 250VAC)
Response time	Approx. 7ms
Dielectric strength	
Dielectric voltage	2 kVAC (rms)

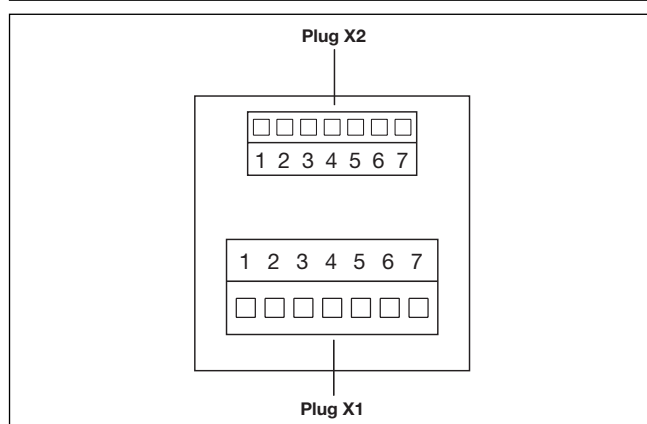
Transmitter Output Specifications

Output voltage	24VDC -40%~+15% unstabilised
Output current	100mA
AC type	FKC

Package Content

1	Instrument FKC
1	Panel mounting clip
1	Bezel for screw mounting, panel cut-out 50x50mm
1	Bezel for clip mounting, panel cut-out 50x50mm
1	Screw terminal plug 7 poles, 5.08 pitch
1	Screw terminal plug 7 poles, 3.81 pitch
1	Multilingual operating manual

Terminal Board Connections



Terminal Board Description

FKC01 Plug connection X1

Terminal No.	Designation	Description
1	not assigned	No function
2	not assigned	No function
3	C	Relay output common contact
4	NO	Relay output normally open
5	NC	Relay output normally closed
6	N or +	Power supply (neutral or positive)
7	L or -	Power supply (line or GND)

FKC01 and FKC02 Plug connection X2

Terminal No.	Designation	Description
1	20VDC	PNP/NPN sensor supply output
2	GND	0VDC reference voltage
3	INP A	Count input A
4	INP B	Count input B
5	RESET	Reset input
6	GATE	Gate input
7	KEY	Keyboard lock input

FKC02 Plug connection X1

Terminal No.	Designation	Description
1	not assigned	No function
2	not assigned	No function
3	OUT1 C	Relay common contact or optocoupler emitter
4	OUT1 NO	Relay normally open contact
5	OUT1 NC	Relay normally closed contact or optocoupler emitter
6	~ or +	VAC input or +VDC
7	~ or -	VAC input or -VDC (GND)





Warning!

For settings \sqcup and \sqcap the connections of terminal 4 and 5 change as follows:

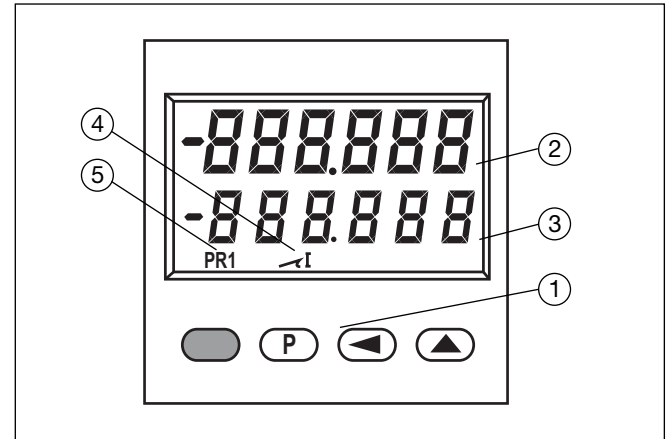
Terminal No.	Designation	Description
4	NC	Relay output normally closed
5	NO	Relay output normally open

Front Panel Description

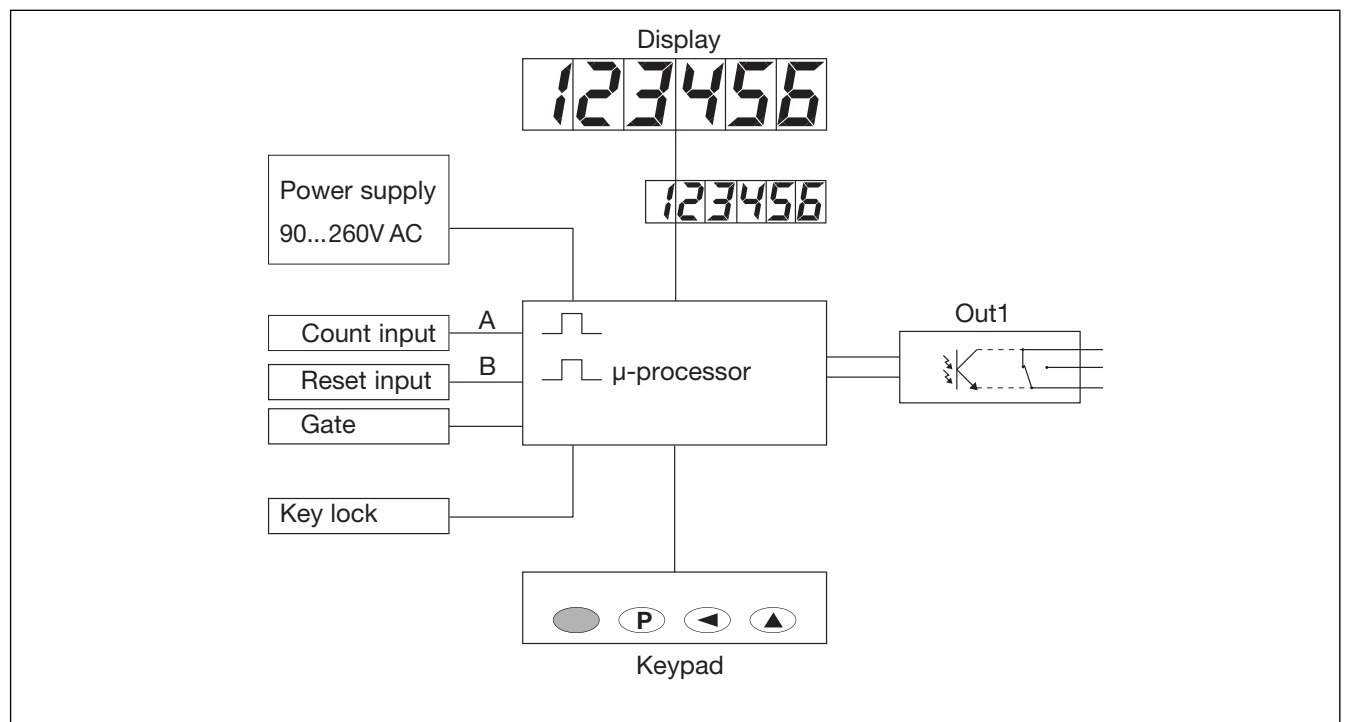
1. Front keys

- 4 keys:
-  To show the functions and steps in the programming routine; to modify the scaling factor; to modify the gate time; to increase the preset value; to eliminate the sign of the preset value.
 -  To select the sign of the preset value; to scroll the digits on the "preset value".
 -  To confirm the selected step on the routine program.
 -  To set the counter to zero (add. mode) or to the preset value (subtr. mode).

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|---------------------------------------|--------------|
| 2. Count value display | 6 LCD digits |
| 3. Preset value display | 6 LCD digits |
| 4. Indicator for activated output | |
| 5. Indicator for current preset value | |



Block Diagram



Dimensions (mm/inches)

