KCX-B6T

Features

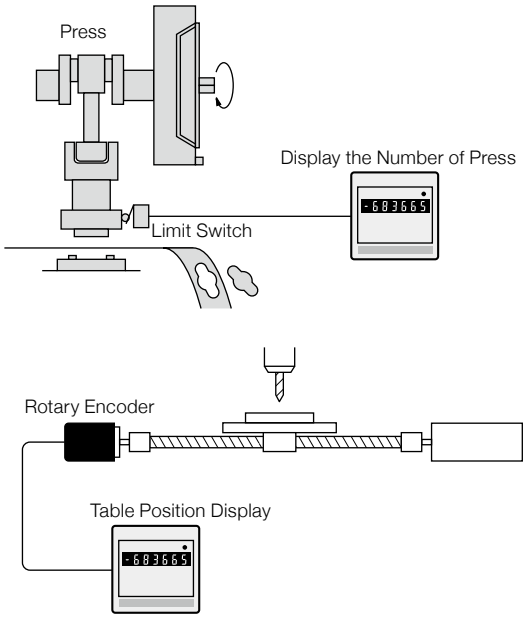
High Speed Increment-Decrement Total Counter

- Maximum counting speed: for both 10 Hz and 20 kHz
- The KCX-B6T is an increment-decrement type counter that enables counting from positive range to the negative range. The total counter with green display can be used for displaying the current position for positioning devices.
- The KCX-B6T is equipped with counting inhibit input and reset button function inhibit input, and supports the input of both positive logic and negative logic.

Features

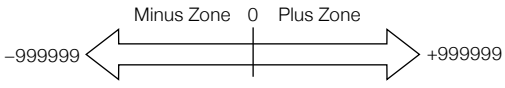
High Speed Increment-Decrement Total Counter of 20 kHz Response

The KCX-B6T has high speed response, which is exceptional as a total counter. Since the counting speed can be switched to a low speed of 10 Hz, the counter can be used for a wide range of applications.



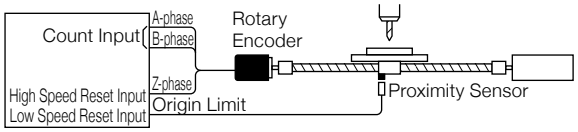
Counting Across from Positive Range to Negative Range is Possible

Since the KCX-B6T enables counting in the minus zone, it can display a range twice as large as counters that can count only in the plus zone.



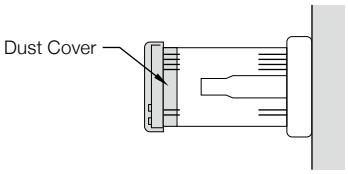
Equipped with High Speed and Low Speed Reset Input

The two reset inputs operate in AND conditions. Therefore, for example, the counter does not require an external circuit even when performing origin correction at high speed by combining the origin pulse of a rotary encoder and the origin limit switch of a machine.



Equipped with a Dust Cover as a Standard Feature

All models are equipped with the dust cover as a standard feature, and the reset button can be operated from outside the dust cover.

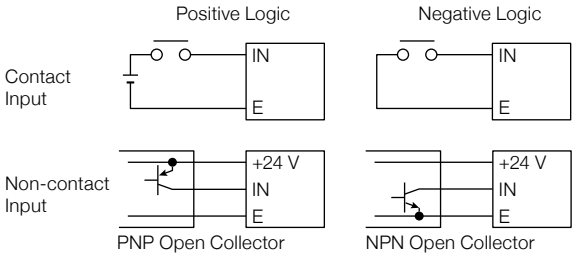


Supports 2-phase Phase Difference Input / Add-subtract Individual Input

Other than rotary encoders, input devices such as proximity sensors and relay contacts can be used. In the case of add-subtract individual input, since both increment input and decrement input can be simultaneously input, the KCX-B6T can be applied to manage the quantity of workpieces on conveyers and the numbers of cars in parking lots.

Input Logic Switching Functions that Operate for All Sensors

Since the input logic can be switched between positive logic and negative logic (only negative logic operation for low speed reset input), the KCX-B6T can use both PNP open collector output and NPN open collector output.



KCX-B6T
Specifications

Specifications

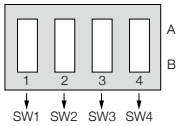
Model Number	KCX-B6T	
Digit	6 digits	
Counting Range	-999,999 to +999,999	
Count Input	Maximum counting speed	10 Hz 20 kHz Changed by switch
	Input resistance	Positive logic input: 2.2 kΩ Negative logic input: 3.3 kΩ
	Input voltage	"L" 0 to 6 V, "H" 16 to 30 V
Disabled Count Input	Response time	On delay: 25 μs or less Off delay: 25 μs or less
	Input resistance	Positive logic input: 2.2 kΩ Negative logic input: 3.3 kΩ
	Input voltage	"L" 0 to 6 V, "H" 16 to 30 V
High Speed Reset Input	Response time	On delay: 25 μs or less Off delay: 25 μs or less
	Input resistance	Positive logic input: 2.2 kΩ Negative logic input: 3.3 kΩ
	Input voltage	"L" 0 to 6 V, "H" 16 to 30 V
Low Speed Reset Input	Response time	On delay: 50 ms or less Off delay: 50 ms or less
	Input resistance	Only negative logic input: 3.3 kΩ
	Input voltage	"L" 0 to 6 V, "H" 16 to 30 V
Manual Reset	With the front button (Manual reset is prohibited by short-circuiting terminals ④ and ⑥.)	
Retentive Feature for Power Failure		EEPROM Number of overwrite cycles: 100,000 cycles or more
	Storage time	10 years
	Input gate response time when power failure occurs	20 to 500 ms
	Input gate response time when the power returns	50 to 500 ms
Power Source for Sensor	24 V DC (20 to 28 V) 80 mA	
Withstand Voltage	2kV AC 1 min (Between AC power supply terminal and E terminal)	
Vibration Resistance	Compliant with JIS C 0911. Endurance vibration: Displacement amplitude 0.5 mm 10 to 55 Hz, 3 axial directions Malfunction vibration: Displacement amplitude 0.35 mm 10 to 55 Hz, 3 axial directions	
Noise Resistance	1 μs width, square-wave pulse, 1 kV	
Supply Voltage	90 to 132 V AC, 180 to 264 V 14 VA	
Use Ambient Temperature	-10 to +50˚C	
Storage Temperature	-20 to +50˚C (Can be stored at -20 to +70˚C for about 1 week during transport)	
Use / Storage Ambient Humidity	35 to 85% RH (No condensation)	
Weight (g)	Approx. 350 g	

KCX-B6T

Operation

Operation

Various operation modes can be selected using the 4 DIP switches on the back of the case.



Input Operation Switching (SW1 to 4)

The 4 DIP switches are used for setting the input operation of the counter, enabling the switching of input speed, counting method, and logic.

Switch Number	Function	Position	Operation
1	Counting input speed IN A	A	10 Hz
		B	20 kHz
2	Counting input speed IN B	A	10 Hz
		B	20 kHz
3	Counting system	A	Add-subtract individual input
		B	2-phase phase difference input
4	Input logic	A	Negative logic
		B	Positive logic

Terminal Assignment

Terminal Number	Symbol	Description
1	24 V DC 80 mA	Power source for sensor
2	IN A	Count input A
3	IN B	Count input B
4	E	Input common
5	IN H	Disabled count input
6	RD	Manual reset prohibition input
7	RH	External reset input: High speed
8	RL	External reset input: Low speed
9	—	(Not connected)
10	—	(Not connected)
11	—	(Not connected)
12	180 to 264 V AC	Power source input
13	90 to 132 V AC	
14	0 V AC	

KCX-B6T
Connection

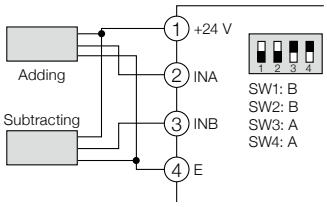
Terminal Connections

Connection of Counting Input

1. In the case of a proximity sensor / photoelectronic sensor

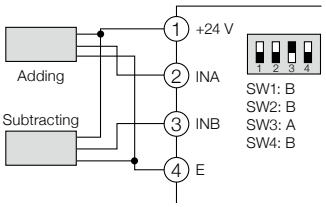
《Negative logic》

The sensor output is an NPN open collector.



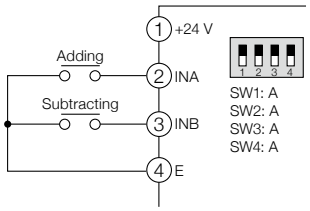
《Positive logic》

The sensor output is an PNP open collector.

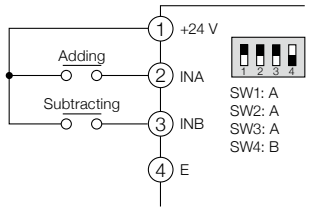


2. Switch / relay

《Negative logic》

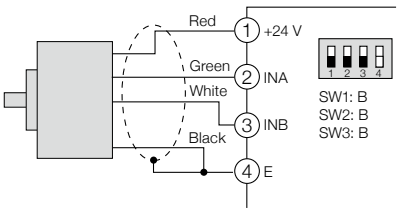


《Positive logic》



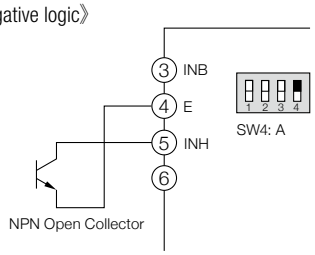
3. Rotary encoder

When the TRD-J□-RZ is used, SW4 can be in either position A or position B.

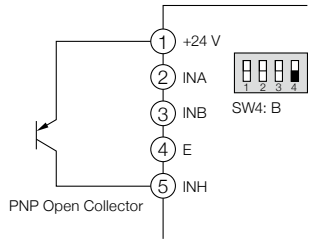


Connection of a Counting Prohibit Input

《Negative logic》

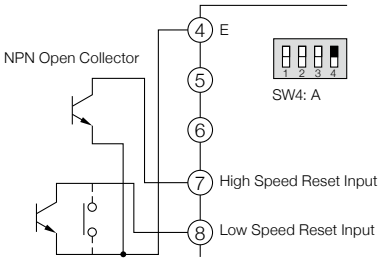


《Positive logic》

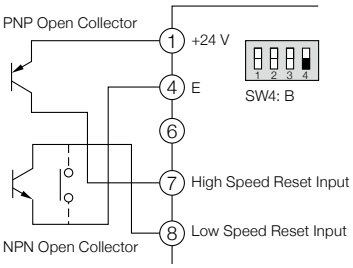


Connection of the Reset Input

《Negative logic》



《Positive logic》



The specifications and prices described in this catalog were valid when the catalog was issued.
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