

# G10 SERIES

## ELECTRONIC PRESET COUNTER

- DIN 72 x 72
- LARGE LED DISPLAY
- 4,5 or 6 DIGIT MODELS
- 1 or 2 LEVEL PRESET
- HIGH COUNT SPEED
- ADD / SUBTRACT PRESET COUNTER



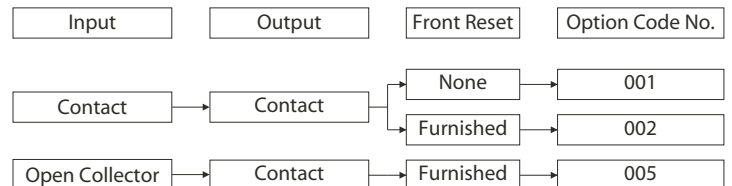
### MODEL SELECTION

MODEL	NO. of DIGITS	PRESET LEVELS	DISPLAY COLOR	MEMORY
G10-101	4	1	R(Red)	—
<del>G10-102</del>			G(Green) <i>Discontinued</i>	—
G10-103			R	○
<del>G10-104</del>			<i>Discontinued</i> G	○
G10-111	4	2	R	—
<del>G10-112</del>			<i>Discontinued</i> G	—
G10-113			R	○
<del>G10-114</del>			<i>Discontinued</i> G	○
G10-201	5	1	R	—
<del>G10-202</del>			<i>Discontinued</i> G	—
G10-203			R	○
<del>G10-204</del>			<i>Discontinued</i> G	○
G10-211	5	2	R	—
<del>G10-212</del>			<i>Discontinued</i> G	—
G10-213			R	○
<del>G10-214</del>			<i>Discontinued</i> G	○
G10-301	6	1	R	—
<del>G10-302</del>			<i>Discontinued</i> G	—
G10-303			R	○
<del>G10-304</del>			<i>Discontinued</i> G	○
G10-311	6	2	R	—
<del>G10-312</del>			<i>Discontinued</i> G	—
G10-313			R	○
<del>G10-314</del>			<i>Discontinued</i> G	○

\* Green LED is Discontinued

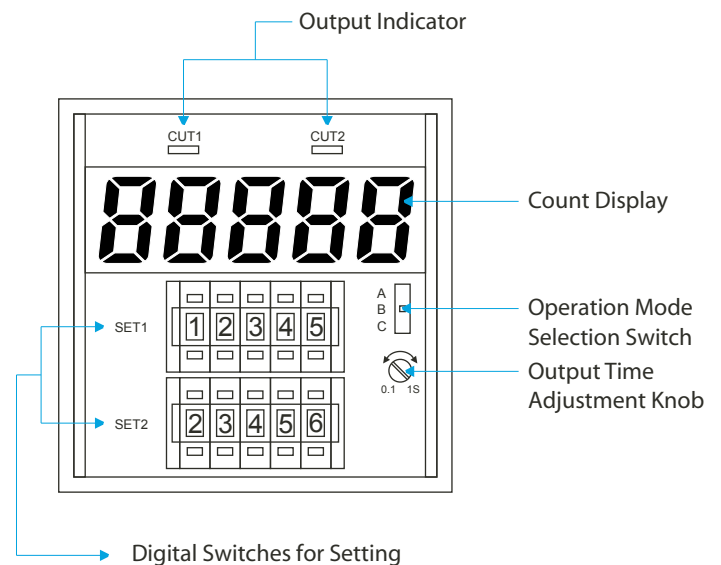
### FACTORY OPTIONS

The standard specifications of the G10 is Open Collector Input, Contact Output and Auto or Remote Reset. If optional specifications is desired, please indicate Option Code No. shown below when ordering.



Example : If you want to order the G10-101 with an Contact Input (Non Front Reset), order model no. G10-101-001.

### FRONT PANEL



## OPERATION MODE SELECTION



- A Auto-reset, one shot output
- B Overrun, one shot output
- C Overrun, latch output

Display and output modes must be set through the front panel slide switch prior to operation.

## ADJUSTMENT OF OUTPUT TIME

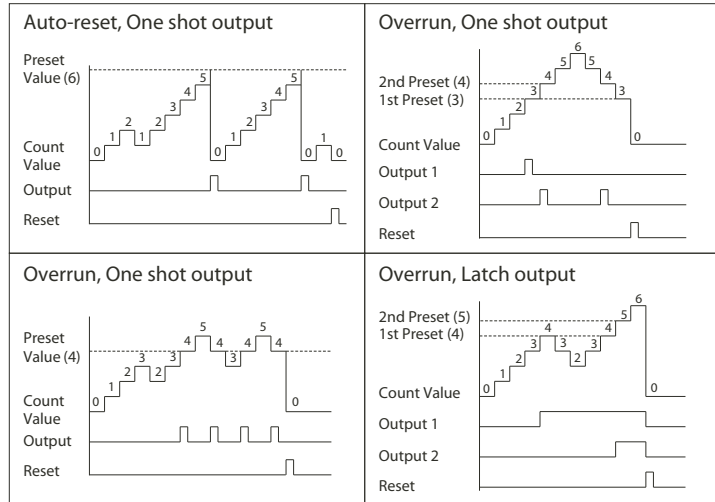


In case of A or B operation mode, output time can be adjusted with the front panel knob from 0.1 sec to 1 sec.

## OPERATION EXAMPLE

Examples: 1 Level Preset

Examples: 2 Level Preset



## CAUTION

- The counter will not accept counts or reset signals during the first 100 msec after power-up.
- The counter will not display, count or reset in case of power failure.
- Contact input feature is a factory option.
- Additive and subtractive signals cannot be input simultaneously.
- Shielded wire should be used for input leads.
- Input leads should be as much separated as possible from power leads.
- Wire used for short connections (jumpers) should be as short as possible.
- At least 300 msec should be allowed for power reset (in no-memory models).
- When noise is observed on input or power leads, noise-killer or power source noise filter should be used.

## TERMINALS

	1 Level Preset	2 Level Preset
1	Input A (Add)	- Open Collector
2	Input A (Subtract)	- Open Collector
3	DC12V	
4	GND	
5	External Reset (resets when shorted with GND)	
6	GND	
7	COM.	COM.
8	N. O.	N. O.
9	N. C.	N. C.
10	Input Selection (individual add/subtract input when connected to 11, 90° quadrature input when disconnected).	
11	GND for Input Selection	
12	(Not Used)	COM.
13		N. O.
14		N. C.
15	AC220/200V	
16	AC110/100V	
17	AC0V	

## SPECIFICATIONS

Display	4 & 5 digits models : 14.22 (H) x 7.80 (W) 6 digit models : 10.16 (H) x 5.54 (W)	7 segment LED (red or green)
Setting Method	Digital Switches	
Preset Levels	1 or 2 Preset Levels	
Setting Range	4 digits : 0 - 9999 * 5 digits : 0 - 99999 6 digits : 0 - 999999	
Count Input	Open collector Input (sink current 7mA maximum) L : 0 - 2V H : 6 - 30V (Contact input available as option) <sup>2</sup>	
Count Modes	90° Quadrature Input / Individual Add, Subtract Inputs (simultaneous input not possible)	
Count Speed	10kHz (Contact input : 20 Hz)	
Pulse Width	50 μsec. (Contact input : 25 msec)	
Duty	1 : 1	
Output	Relay Type 1C, 250 VAC, 2A (125 VA), 220 VDC 2A (60W) cos φ = 1 * for each output	
Output Display	Red LED, lighted when output is actuated	
Output Time	0.1 sec - 1 sec one shot (adjustable via front panel knob) or latch output on both preset levels.	
Output Delay Time	Contact Output 10000 Hz : < 10 msec Contact Output 20 Hz : < 25 msec	
Reset Input	Contact (min. 100ms) Open Collector (Sink Current 10mA maximum)	
Reset Modes	Remote Reset Auto-Reset Power Reset (only in no memory models) <sup>3</sup> Front Panel Reset (option) <sup>4</sup>	
Operation Modes	Auto-reset (display resets when preset value is reached) Overrun (counting continues after preset value is reached)	
Memory	Non-volatile (10,000 times, approx. 10 years/time retention)	
Power Source	AC100/110V or AC200/220V, 50/60 Hz	
Power Consumption	4.3 VA	
External Power Supply	DC12V, 60mA maximum	
Operating Temperature	-10 - +50°C (non-freezing)	
Operating Humidity	45 - 85 % RH (non-condensing)	
Hi-pot Test	AC1500V (1 minute)	
Dielectric Test	100 MΩminimum (500 VDC megger) (on Power leads and between non-chargeable metal parts)	
Noise Immunity	Pulse wave noise from Noise Simulator ±1.5kv (Power Terminals), ±500V (Input Terminals)	
Vibration Immunity	Operating : 10 - 55 Hz, double amplitude 0.5mm Storage : 16.7 Hz, double amplitude 4mm	
Shock Immunity	Operating : 100 m/s <sup>2</sup> (10G) Storage : 300 m/s <sup>2</sup> (30G)	
Weight	550 grams	

Note :

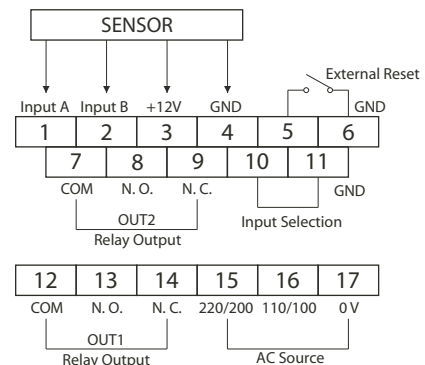
<sup>1</sup>When set to 0, counter will count down from displayed value to 0, when output signal will occur.

<sup>2</sup>Contact input feature (microswitch or relay) is a factory option.

<sup>3</sup>Front panel reset feature (push button) is a factory option.

<sup>4</sup>In case of power reset, min. 300 msec is needed for off time.

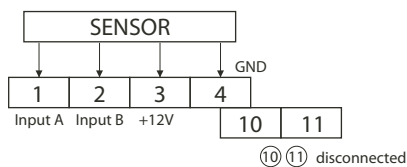
## TERMINAL WIRING



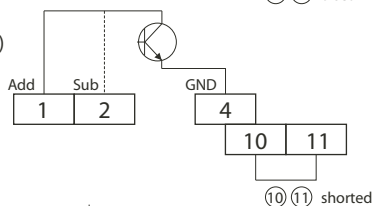
## WIRING

### INPUT

(1) 90° Quadrature Input  
(from rotary encoder, etc.)

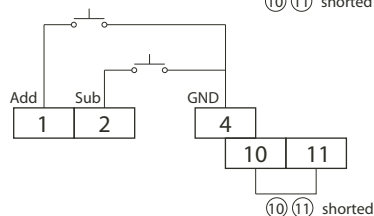


(2) Individual Add / Subtract  
Input (Open Collector Input)



(3) Individual Add / Subtract  
Input (Contact Input) \*

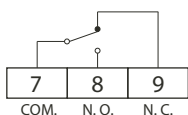
\* Contact input (relay, microswitch, push button, switch, etc.) is a factory option.



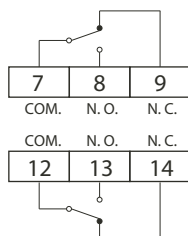
### OUTPUT

(1) Contact Output (Relay Output)

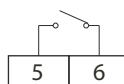
1 Level Preset



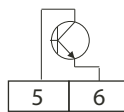
2 Level Preset



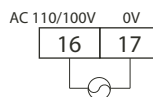
### EXTERNAL RESET



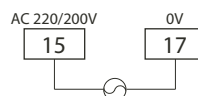
Resets when ⑤ & ⑥ are shorted  
(via microswitch, open collector, etc.)



### POWER SOURCE



In case of 110/100V AC ⑩ & ⑪ should be connected



In case of 220/200V AC ⑩ & ⑪ should be connected

## DIMENSIONS

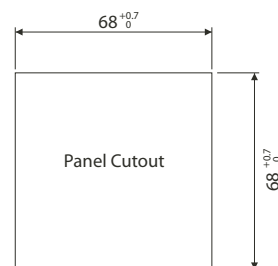
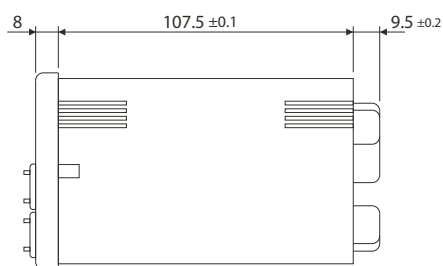
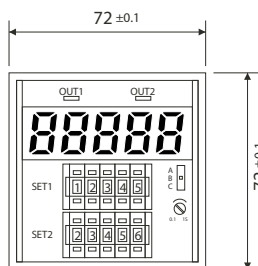
Digit Size



4 & 5 Digits

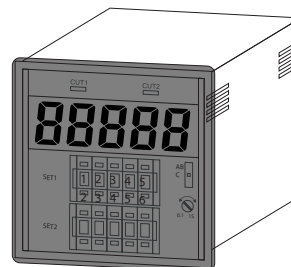


6 Digits



## DUSTPROOF COVER (OPTION)

In case the counter will be used in a bad environmental conditions (e.g. dust / splash), a dustproof cover should be used. The cover provided is soft as to allow setting the counter without the necessity of removing it from the counter. If the cover is to be used, the panel cutout should be 70 x 70 mm.



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\*Subject to change without prior notice.  
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