











Digital Counter/Timer

■ GE series Digital batch counter

■ Specification

Model	GE6-P4	GE6-P6	GE6-T6	GE4-P4	GE4-P6	GE4-T6
Appearance						
W×H×D(mm)	72 X 36 X 81 (W X H X D)			48 X 48 X 79.3 (W X H X D)		
Type	Preset		Totalizing	Preset		Totalizing
Display digits	4 Digits	6 Digits	6 Digits	4 Digits	6 Digits	6 Digits
Preset stages	1 or 2 Stages	1 or 2 Stages	—	1 or 2 Stages	1 or 2 Stages	—
Function	1 Stages : Preset counter/Timer (Selectable by the internal parameter) 2 Stages : Preset counter/Timer/Twin timer (Selectable by the internal parameter) Prescale setting, Batch output, Displaying unit decimal point setting, NPN input/PNP input (Selectable by the internal switch)					
Counting speed	1 cps, 30 cps, 1 kcps, 10 kcps (Selectable by the internal parameter) ※ Input levels : [High] 5 to 30 V d.c. [Low] 0 to 2 V d.c.					
Input action	UP, DOWN, UP/DOWN (Selectable by the internal parameter)					
Output action	N, F, C, R, K, P, Q, A (Selectable by the internal parameter)					
Prescale	Applicable only preset counter, 0.001 ~ 9999(4 digits), 0.00001 ~ 999999(6 digits)					
Power supply voltage	100 to 240 V a.c. (50 to 60 Hz), 24 to 60 V d.c./a.c. (50 to 60 Hz)					
External supplying power	12 V d.c. 100 mA max					
Control output	Contact : 250 V a.c. 3 A (NO), 250 V a.c. 2 A (NC) Solid-state : 30 V 100 mA max (Open collector)					
Communication	Protocol	ModbusRTU				
	Communication type	RS485				
	Communication method	2-wire half-duplex				
	Communication synchronization	Asynchronous				
	Communication speed	2,400 / 4,800 / 9,600 / 19,200 / 38,400 bps				
	Effective distance	Up to 800 m				
	Maximum number of connections	31 units (station number: 1 to 127)				
	Response waiting time	5 ~ 99 ms				
	Start bit	1bit (fix)				
	Stop bit	1bit (fix)				
Data bit	8 bit					
Parity bit	None / Odd / Even					

Digital Counter/Timer

Model	GE3-P6	GE3-T6	GE7-P6	GE7-T6
Appearance				
W×H×D(mm)	96 X 48 X 102.6 (W X H X D)		72 X 72 X 87 (W X H X D)	
Type	Preset	Totalizing	Preset	Totalizing
Display digits	6 Digits			
Preset stages	1 or 2 Stages	—	1 or 2 Stages	—
Function	1 Stages : Preset counter/Timer (Selectable by the internal parameter) 2 Stages : Preset counter/Timer/Twin timer (Selectable by the internal parameter) Prescale setting, Batch output, Displaying unit decimal point setting, NPN input/PNP input (Selectable by the internal switch)			
Counting speed	1 cps, 30 cps, 1 kcps, 10 kcps (Selectable by the internal parameter) ※ Input levels : [High] 5 to 30 V d.c. [Low] 0 to 2 V d.c.			
Input action	UP, DOWN, UP/DOWN (Selectable by the internal parameter)			
Output action	N, F, C, R, K, P, Q, A (Selectable by the internal parameter)			
Prescale	Applicable only preset counter, 0.001 ~ 9999(4 digits), 0.00001 ~ 999999(6 digits)			
Power supply voltage	100 to 240 V a.c. (50 to 60 Hz), 24 to 60 V d.c./a.c. (50 to 60 Hz)			
External supplying power	12 V d.c. 100 mA max			
Control output	Contact : 250 V a.c. 3 A (NO), 250 V a.c. 2 A (NC) Solid-state : 30 V 100 mA max (Open collector)			
Communication	Protocol	ModbusRTU		
	Communication type	RS485		
	Communication method	2-wire half-duplex		
	Communication synchronization	Asynchronous		
	Communication speed	2,400 / 4,800 / 9,600 / 19,200 / 38,400 bps		
	Effective distance	Up to 800 m		
	Maximum number of connections	31 units (station number: 1 to 127)		
	Response waiting time	5 ~ 99 ms		
	Start bit	1bit (fix)		
	Stop bit	1bit (fix)		
Data bit	8 bit			
Parity bit	None / Odd / Even			


Suffix code

Model	Code	Information
GE-	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	Digital counter
Dimension	3	96 X 48 mm
	4	48 X 48 mm
	6	72 X 36 mm
	7	72 X 72 mm
Type	P	Pre-set counter
	T	Total counter (only for indication)
Displayable digit	4	4 digits (9999) ※ GE3 and GE7 are not selectable
	6	6 digits (999999)
Setting stage	1	1 Stage setting
	2	2 Stage setting
Power supply voltage	A	100 - 240 V a.c. 50 - 60 Hz
	D	24 - 60 V d.c./a.c. 50 - 60 Hz
Model	Code	Information
GE	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	Digital counter & timer
Appearance	3N	96 X 48 mm
	4N	48 X 48 mm
	6N	72 X 36 mm
	7N	72 X 72 mm
Type	P	Preset counter
	T	Total counter (Only for indication)
Displayable digit	4	4 digits (9999)
	6	6 digits (999999)
Setting stage	—	No setting
	1	1 Stage setting
	2	2 Stage setting
Power supply voltage	M	RS485(MODBUS-RTU)
	—	No setting

Digital Counter/Timer

■ LC1 LCD display digital counter

■ Specification

Model		LC1	LC1-F
Appearance			
Input type		Non-voltage input	Voltage input
Power supply voltage		Lithium battery built in	
Dimension		DIN 48 X 24 mm	
Input action		UP Count	
Computation speed		1/30/100/ 1K cps	20 cps
Input condition		Remaining voltage when breaks : 0.7 V Max impedance when breaks : max 10 kΩ Min impedance when opens : min 1 MΩ	HIGH : 24 – 240 V a.c. / 6 – 240 V d.c. LOW : 0 – 2 V a.c./d.c.
Reset	Input type	Non-voltage input	
	Min signal width	Min 20 ms	
Battery life expectancy		At least 7 years (approx. 25 °C) ※This is calculated value so it is not certified value (Replacing cycle reference value)	
External setting switch		Switch1 : internal power/front reset selectable Switch2 : computing speed selectable (4 kinds)	Switch1 : internal power/front reset selectable
External connection		Terminal (4P)	
Display method		7 segments LCD (character height : 8,7 mm)	
Displayable digits		8 digits	
Insulation resistance		Min 100 MΩ (500 V d.c.), conductive terminal non-recharging metal	
Dielectric strength		2,000 V a.c. 50/60 Hz for 1 min (conductive part-disposable metal)	
Vibration resistance		10 – 55 Hz, double amplitude 0,75 mm, each direction in 3 axis, 2h	
Shock resistance		300 %, each direction in 3 axis each 3 times	
Ambient temperature		-10 ~ 55 °C	
Ambient humidity		35 ~ 85 % RH	
Storage temperature		-20 ~ 65 °C	
Degree of protection		IP66 (Front side)	
Weight		58 g	


■ Suffix code

Model	Code	Information
LC1	<input type="checkbox"/>	Compact LCD display total counter (dimension : DIN 48 X 24 mm)
Input signal		Non voltage input
	F	Voltage input (24 – 240 V a.c., 6 – 240 V d.c.)

Digital Counter/Timer

LT1 LCD display digital Timer

Specification

Model		LT1	LT1-F
Appearance			
Power supply voltage		Lithium battery built in	
Dimension		DIN 48 X 24 mm	
Operation type		UP Timer	
Time display		9999 h 59 m 59 s / 99999 h 59,9 m / 999999 h 59 m / 9999999,9 h	
Time accuracy		± 0.01 %	
Input condition		Remaining voltage when breaks : 0.7 V Max impedance when breaks : max 10 kΩ Min impedance when opens : min 1 MΩ	HIGH : 24 – 240 V a.c. / 6–240 V d.c. LOW : 0 – 2 V a.c./d.c.
Start	Input type	Non-voltage input	Voltage input
	Min signal width	Min 20 ms	
Reset	Input type	Non-voltage input	
	Min signal width	Min 20 ms	
Battery life expectancy		Expectancy : at least 10 years (approx. 25°C) ※This is calculated value so it is not certified value (Replacing cycle reference value)	
External setting switch		Switch 1 : internal power / front reset selectable Switch 2 : computing speed selectable (4 kinds) time range selectable	
External connection		Terminal (4P)	
Display method		7 segments LCD (character height : 8.7 mm)	
Displayable digits		8 digits	
Insulation resistance		Min 100 MΩ(500 V d.c.), conductive terminal–disposable metal	
Dielectric strength		2000 V a.c. 50/60 Hz for 1 min (conductive part–non–recharging metal)	
Vibration resistance		10 – 55 Hz, double amplitude 0.75 mm, each direction in 3 axis, 2h	
Shock resistance		300 %, each direction in 3 axis each 3 times	
Ambient temperature		–10 ~ 55 °C	
Ambient humidity		35 ~ 85 % RH	
Storage temperature		–20 ~ 65 °C	
Degree of protection		IP 66 (Front side)	
Weight		58 g	

Suffix code

Model	Code	Information
LT1	<input type="checkbox"/>	Compact LCD display total Timer (dimension : DIN 48 X 24 mm)
Input signal		Non voltage input
	F	Voltage input (24 – 240 V a.c., 6 – 240 V d.c.)

Digital Counter/Timer

GF series Digital counter / Timer

Specification

Model	GF7-P62 / GF7-P42	GF7-P61 / GF7-P41	GF7-T60	GF4-P41	GF4-P40	GF4-P41S
Appearance						
W×H×D(mm)	72 X 72 X 112			48 X 48 X 90,8		48 X 48 X 71,8
Type	Preset		Totalizing	Preset	Totalizing	Preset
Display digits	4 digits or 6 digits		6 digits	4 digits		
Preset stages	Double stage	Single stage	—	Single stage	—	Single stage
Function	Preset counter/Timer(selectble), Prescale setting, Displaying unit decimal point setting, NPN input/PNP input (Selectable by the dip switch)					
Counting speed	30 cps, 1K cps, 3K cps, 5K cps Select by using the volume (Located on the front panel) ※Input signal levels : [High] 5 to 30 V d.c. [Low] 0 to 2 V d.c.			30 cps, 5K cps (Select by using the dip switch) ※Input signal levels : [High] 5 to 30 V d.c. [Low] 0 to 2 V d.c.		
Input action	UP, DOWN, UP/DOWN (Selectable by the dip switch)			—		
Output action	N, F, C, R, K, P, Q, A (Selectable by the dip switch) ※With the totalizing counter, it is displayed as F, K output mode					
Prescale	Applicable only preset counter, 0,001 ~ 9999(4 digits), 0,00001 ~ 99999(6 digits)			Applicable only preset counter, 0,001 ~ 9999(4 digits)		
Timer range	4 digit : 99,99s, 999,9s, 9999s, 99m59s, 999,9m, 99h59m, 999,9h, 9999h 6 digit : 99999,9s, 999999s, 99m59,99s, 999m59,9s, 99999,9m, 99h59m59s, 9999h59m, 99999,9h					
Power supply voltage	100 – 240 V a.c. 50 – 60 Hz (Voltage fluctuation : ±10 % of the power supply voltage)					
External power supply	12 V d.c. 100 mA max					
Control output	Contact : 250 V a.c. 3A (Resistive load), ※(Out 1 / Out 2 : Form C) Solide state : 30 V 100 mA max (Open collector)		—	Contact : 250 V a.c. 3A (Resistive load) Solide state : 30 V 100 mA max (Open collector)		Contact : 250 V a.c. 3A (Resistive load)

Suffix code




Model	Code	Information
GF7-	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	Digital counter / Timer (72 X 72 mm)
Type	P	Preset counter
	T	Total counter
Displayable digits	4	4 digits (9999)
	6	6 digits (999999)
Setting stage	1	1st stage setting
	2	2nd stage setting
	0	Total counter
Pre-scale function	E	Pre-scale function built in (Preset counter)
	N	No Pre-scale (Total counter)

Model	Code	Information
GF4-	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	Digital counter / Timer (48 X 48 mm)
Type	P	Preset counter
	T	Total counter
Displayable digits	4	4 digits (9999)
Setting stage	0	None (total counter)
	1	1st stage setting (Preset counter)
Terminal structure	N	Terminal
	S	8 pin structure (suitable for 8 pin socket)

Digital Counter/Timer

TT series Digital dual Timer

Specification

Model	TT7H	TT4-P42A	TT4-P42B	
Appearance				Temperature Controller Recorder Digital Counter Timer
W×H×D(mm)	72 X 72 X 87	48 X 48 X 100	48 X 48 X 100	
Power supply	100 – 240 V a.c., 50 – 60 Hz			Analog Timer
Voltage Regulation	±10 % of Power supply voltage			
Power Consumption	About 9.6 VA (220 V a.c. 60 Hz)	Below 9.1 VA (at 220 V a.c. 60Hz)		
Display method	ON time display : Red color 4 digits (alphabet height 18,7mm) OFF time display : Red color 4 digits (alphabet height 14,5mm)	PV : 11 mm, SV : 8 mm		Panel Meter
External Connection type	Terminal	Plug 11 Pin	Plug 8 Pin	Multi Pulse Meter
Min. signal amplitude	START	Min. 1s	Min. 20 ms	-
	RST/INH			
Control	Contact	Output : Instantaneous SPDT (1c)	OUT A : Specified time SPDT (1c), OUTB : Specified time SPDT(1c)	
	Construction capacity	NO contact : 250 V a.c. 5 A resistive load, NC contact 250 V a.c. 2 A resistive load		
Life	Mechanical	Min. 10 million		
	Electrical	Min. 100,000 times (250 V a.c. 3 A resistive load)		
Dielectric strength	2,000 V a.c. 50/60Hz for 2 min	2,000 V a.c. 50 / 60 Hz for 1 minute		
Noise Immunity	±2 kV (Between unit's power terminals), square wave by noise simulator (pulse width : 1)			
Insulation resistance	Min. 100 MΩ (500 V d.c. mega standard)			
Vibration (Durability)	10 – 55 Hz (cycle for 1min) Peak amplitude 0,75 mm for 1 hour each in X, Y and Z direction			
Shock	Mechanical Durability	300 % 3 times each in X, Y and Z direction		
	Malfunction Resistance	100 % 3 times each in X, Y and Z direction		
Ambient temperature	-10 ~ 55 °C (Without condensation)			
Storage temperature	-20 ~ 65 °C (Without condensation)			
Ambient humidity	30 ~ 85 % RH			

Suffix code


Model	Code	Information	
TT4	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	Digital dual timer (48 X 48 mm)	
Setting division	P	Exclusive for setting	Push Button / Main Switch
Displayable digit	4	4 digits (9999)	Cam Switch / Limit Switch
Setting stage	2	2nd stage setting	Micro / Hoist Switch
External connection	A	11 pins plug type	Foot / Mono Lever Switch
	B	8 pins plug type	

Model	Code	Information	
TT7H-	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	Digital twin timer, 72 (W) × 72 (H) mm	Signal Light
Setting division	P	Preset (Exclusive for setting)	
Displayable digit	4	4 digits (9999)	Terminal Block / Power Buzzer / Fuse Holder / Control Box
Control output	1	1 level output	
External connection	A	9 pin terminal type (external input)	

Digital Counter/Timer

TF series Digital Timer

Specification

Model	TF4-A	TF4-B	TF4-C
Appearance			
W×H×D (mm)	48 X 48 X 95,6		
Terminal type	8 pin Plug		
Control method	Up, Down		
Display method	LED Height 7 Segment LED : 8 mm		
Display digit	4 digits		
Time setting range	999,9 sec / 9999 sec	9 m 59,9 sec / 59 m 59 sec	59 hours, 59 minute
Input signal	External reset, inhibit: Min, input signal width 0.02 sec. Power reset: Min, power opening time 0.5 sec.		
Power voltage	100 – 240 V a.c. 50/60 Hz		
Power consumption	Approx. 4,8 VA (220 V a.c. 60 Hz)		
Control output	Contact output : 1c 250 V a.c. 3 A (resistance load) Non-Contact output: 30 V d.c. 100 mA Max.		
Insulation resistance	Min,100 MΩ (At 500 V d.c.) Part of conduction terminal and exposed non-electrified metal part		
Dielectric strength	2,000 V a.c. 50/60 Hz for 1 minute (Between terminal)		
Vibration	Malfuction Resistance	10 – 55 Hz, X:Y:Z each position for 10 minutes	
	Mechanical Durability	10 – 55 Hz, 0.76mm, X:Y:Z each position for 2 hours	
Shock	Malfuction Resistance	100 % 6 positions, each 3 times	
	Mechanical Durability	300 % 6 positions, each 3 times	
Life	Mechanical	Min. 10 million operations (Relay type)	
	Electrical	Min. 100,000 million operation (Relay type)	
Ambient temperature & humidity	0 ~ 50 °C, 30 ~ 85 % RH		


Suffix code

Model	Code	Information
TF4-	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	Digital timer 48(W) X 48(H)
Time specification	A	999,9sec / 9999sec
	B	9min 59,9sec / 59min 59sec
	C	999,9min / 59hour 59min
Display method	U	Up display
	D	Down display
Power supply voltage	A	100 – 240 V a.c. 50 – 60 Hz
	D	24 – 60 V d.c.
Control output	R	Relay
	T	Open collector

Digital Counter/Timer

■ LF4N series Digital Timer

Specification

Model	LF4N-A	LF4N-B	LF4N-C	LF4N-D
Appearance				
W×H×D(mm)	48 X 48 X 75.5			
Terminal type	8 pin Plug			11 pin Plug
Control method	Up, Down			
Display method	LCD			
Display digit	3 digits			
Time setting range	0,01 s ~ 9990 h			
Counting input	Reset, start, inhibit			
Input signal	<ul style="list-style-type: none"> • Non voltage input • Impedance in a short circuit : Max. 2 kΩ • Residual voltage in a short circuit : Max. 0.7 V d.c. • Impedance in open : Min. 100 kΩ 			
Power voltage	24 – 240 V a.c./d.c. 50 / 60 Hz			
Power consumption	Approx. 4.4 VA (240 V a.c.), Approx. 1.5 W (240 V d.c.)		Approx. 7.2 VA (240 V a.c.), Approx. 2.2 W (240 V d.c.)	
Control output	Contact output : 1c 250 V a.c. 3A (Resistive load)			
Insulation resistance	Min.100 MΩ (At 500 V d.c.) Part of conduction terminal and exposed non-electrified metal part			
Dielectric strength	2,000 V a.c. 50/60 Hz for 1 minute (Between terminal)			
Vibration	Malfunction Resistance	10 – 55 Hz, X:Y:Z each position for 10 minutes		
	Mechanical Durability	10 – 55 Hz, 0.76mm, X:Y:Z each position for 2 hours		
Shock	Malfunction Resistance	100 % 6 positions, each 3 times		
	Mechanical Durability	300 % 6 positions, each 3 times		
Life	Mechanical	Min. 10 million operations (Relay type)		
	Electrical	Min. 100,000 million operation (Relay type)		
Ambient temperature & humidity	0 ~ 50 °C 30 ~ 85 %RH			



Suffix code

Model	Code	Information		
LF4N-	<input type="checkbox"/>	Digital timer 48(W) X 48(H) mm		
Device selection	A	Time limit : 1c	Operation mode (10 kinds)	8pin socket type
	B	Time limit : 1c, Constantaneous : 1c	ON Delay output (A mode fixed)	
	C	Time limit : 2c	Operation mode (10 kinds)	11pin socket type
	D	Time limit : 1c		
Power supply voltage	24 – 240 V a.c./d.c. dual usage 50 – 60 Hz			

Digital Counter/Timer

LY series LCD weekly yearly timer switch

Specification

Model		LY4	LY7
Appearance			
W×H×D(mm)		DIN 48 X 48 mm	DIN 72 X 72 mm
Power supply voltage		100 – 240 V a.c. 50/60 Hz (Dual usage)	
Allowable voltage variation		±10 % of the power supply voltage	
Power consumption		Approx 2.6 VA (220 V a.c. 60 Hz)	Approx 4.2 VA (220 V a.c. 60 Hz)
Display method		LCD display method (displayable digit : 4 digits, 2 lines) 1st display: character height 7.8 mm, 2nd display : character height 5.2 mm	LCD display method (displayable digit : 4 digits, 2 lines) 1st display : character height 12 mm, 2nd display : character height 7 mm
1 cycle time		Weekly setting : for 1 week (7days), Yearly setting : for 1 year (calendar until 2099)	
Backup time		More than 5 consecutive years (25 °C)	
setting steps	Number of program setting	Weekly program : 64 step, yearly program : 32 step	
	Number of season setting	4 seasons (Spring, summer, fall, winter)	
	Number of holidays in one year	16 times	
Installation type (external connection)		Flush panel mount type, and exposed panel mount type(dual usage) (Din rail installation and screw fixing)	
Cycle error		±15 sec/mon (25 °C)	
Time error		Less than ±0.01% ±0.05 sec (Setting error, Power error, Temperature error)	
Control output	Contact composition	OUT : SPST (1a)	2 independent circuits, OUT1 : SPDT (1c), OUT2 : SPDT (1c)
	Contact capacity	15A 250 V a.c. (resistive load)	
	Life Expectancy(mechanically)	Above 10 million times	
	Life Expectancy(electrically)	Above 50 thousand times (250 V a.c. 15 A resistive load)	
Insulation resistance		100 MΩ min (500 V d.c. mega standard, actuator terminal and exposed non-charged metal part)	
Dielectric strength		2000 V a.c. 50/60 Hz for 1 min (actuator terminal and exposed non-charged metal part)	
Noise immunity		±2 kV (between the actuating power terminal), square wave shape noise by the noise simulator (Pulse width = 1 us).	
Vibration	Mechanical Durability	10 – 55 Hz (for cycle 1 min) 0.75 mm double amplitude for 1 hrs each in X, Y and Z	
	Malfunction Resistance	10 – 55 Hz (for cycle 1 min) 0.5 mm double amplitude for 10 minutes each in X, Y and Z	
Storage	Mechanical Durability	300 % 3 times each in X, Y and Z directions	
	Malfunction Resistance	100 % 3 times each in X, Y and Z directions	
Ambient temperature		-10 ~ 55 °C (with no icing)	
Storage temperature		-20 ~ 65 °C (with no icing)	
Ambient humidity		35 ~ 85 % RH	
Weight		Approx. 100 g (excluded the weight of box)	Approx. 275 g (excluded the weight of box)

Suffix code

Model	Code	Information
LY-	<input type="checkbox"/>	LCD weekly, Yearly time switch
Dimension	4	DIN 48 × 48 mm
	7	DIN 72 × 72 mm
Power supply voltage		100 – 240 V a.c. 50/60 Hz (Dual usage)