LINE SEIKI

F90 SERIES

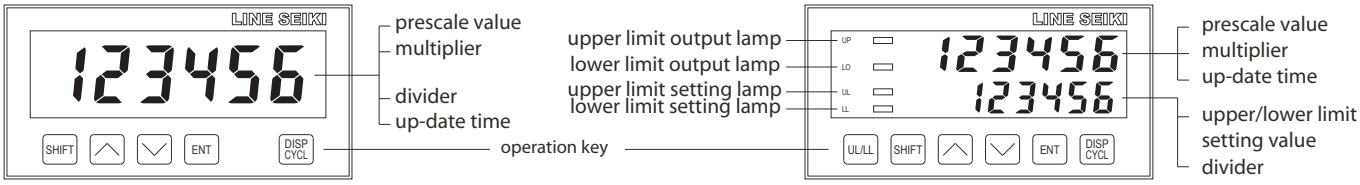
RATE INDICATORS / CONTROLLERS

- DIN 48 X 96 Size
- 1/TAU MEASURING, HIGH PRECISION
- MONITOR TYPE OR PRESET TYPE
- ANALOG OUTPUT (OPTION)
- PRESCALE FUNCTION, DECIMAL POINT POSITION, KEY LOCK

MODELS

Models	Type	Digits	Preset Digits	Output Type
F90-101	Monitor	6	———	———
Discontinued F90-103				Analog Output
F90-201	Upper/Lower Limit		6	———
Discontinued F90-203				Analog Output

FRONT PANEL PARTS



UL/LL : Alternate display of upper limit and lower limit value.

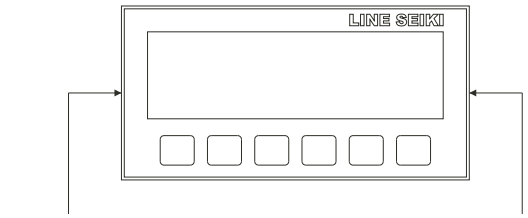
SHIFT : Enter to mode and change digit for editing. Call of the prescale value. Used for the decimal point positioning.

: Increase the numerical value of the setting digit. Used for the decimal point positioning.

: Decrease the numerical value of the setting digit. Used for the decimal point positioning.

ENT : Memory of the selected numbers. Call of the prescale value.

DISP CYCL : Call of the up-date time.



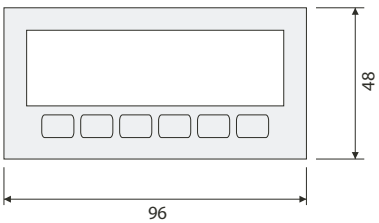
Dip-switch (Black)
For changing of
analog output range

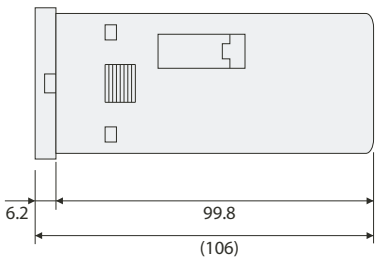
Dip-switch (Black)
For changing of input type

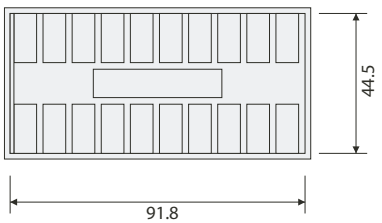
SPECIFICATIONS

Type	MONITOR TYPE		UPPER/LOWER LIMIT PRESET TYPE	
Model	F90 - 101	F90 - 103	F90 - 201	F90 - 203
Output Option	————	Analog	————	Analog
Display	Red LED 14.22 X 7.8mm		Measuring Display: Red LED 10.0 X 5.5mm Preset Display: Green LED 8.0 X 4.0mm	
Number of Digits	6			
Display Range	0.0001 ~ 999999			
Decimal Point Position	4th decimal point position max.			
Scale Range	0.11Hz ~ 20KHz (1 pulse/ revolution : 6.6667rpm ~ 120000rpm)			
Preset Level	————		Upper / Lower Limit	
Measuring Method	1/TAU standard sampling : X'tal 2MHz ± 50ppm			
Measuring Accuracy	±0.008% reading ±1 digit (multiplier = 1.0000, divider = 1, -5 ~ 50°C)			
Sampling Time	0.5 ~ 10 seconds (sampling time is changed automatically by pulse interval)			
Up-date Time	Every sampling or 1 ~ 99seconds (maximum)			
Input Signal	Contact input: sink current 2mA Open collector input sink current 2mA L : 0~1.9V Voltage input input impedance 3KΩ L : 0~1.9V H : 3.5 ~ 30V (P-P3.5Vmin.) Magnetic sensor input input impedance 3KΩ L : -0.6 ~ -17V H : 0.6 ~ 17V			
Input Frequency	Contact input 0.11Hz ~ 25Hz minimum pulse width 20msec Open collector or Voltage input 0.11Hz ~ 20KHz minimum pulse width 25µsec Magnetic sensor input 0.11Hz ~ 20KHz minimum pulse width 25µsec (L : -0.6Vmax. / H : 0.6Vmin)			
Prescale	Multiplier : 0.0001 ~ 100 Divider : 1/1 ~ 1/9999 (can be used at the same time)			
Overflow	At every sampling, when the measured data is over 6 digits, "----------" is displayed			
Memory	Prescale value, upper/lower limit value and up date time are retained for 10 yrs. by EEPROM (rewrite 10000 times)			
Keylock	Prescale value, upper/lower limit value (exclude monitor type) and up date time are inhibited to be changed. Contact input • Open collector input (sink current 7mA L : 2Vmax)			
Output Inhibition	————		Upper / Lower Limit output inhibition Contact input • Open Collector input (sink current 7mA L : 2Vmax)	
Upper / Lower Output	————		Type 1C relay contact (AC250V/0.5A or DC30V/2A)	
Analog Output	Frequency voltage converter method Voltage Output : 0.1 ~ 10V (1KΩmin.) ±0.5%FS Current Output : 4.16 ~ 20mA (500Ωmax.) ±0.5%FS Output Ripple : 20mVp-p max. 3 Ranges: 20~200Hz, 20Hz~2KHz, 200Hz~20KHz selectable by dip-switches (Select voltage or current output).			
Sensor Supply Power Source	12VDC ±10% 100mA max. (Analog output is 50mA maximum)			
Power Supply	100 ~ 240VAC -15% +10% (85 ~ 264VAC) 50/60Hz			
Power Consumption	Approximately 6VA			
Operating Temperature	-5 ~ 50°C (Non freezing)			
Operating Humidity	45 ~ 85% RH (Non condensing)			
Front Panel	IP54 Standard			
Weight	Approximately 280g			

DIMENSIONS







Panel Cutout 45 $^{+0.6}_{0}$ x 92 $^{+0.8}_{0}$

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*Subject to change without prior notice.

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