

Description

CS3-RL indicator was designed with high accuracy measurement of pulse and frequency.
 The innovation feature is input from 0.01Hz~100KHz the display resolution will auto-range according input frequency to shift decimal point.
 A compact body design for small equipment, laboratory instrument, and others.
 Also are available option relay output, analog output, RS485 Modbus RTU communication for most popular applications.



CS3-RL

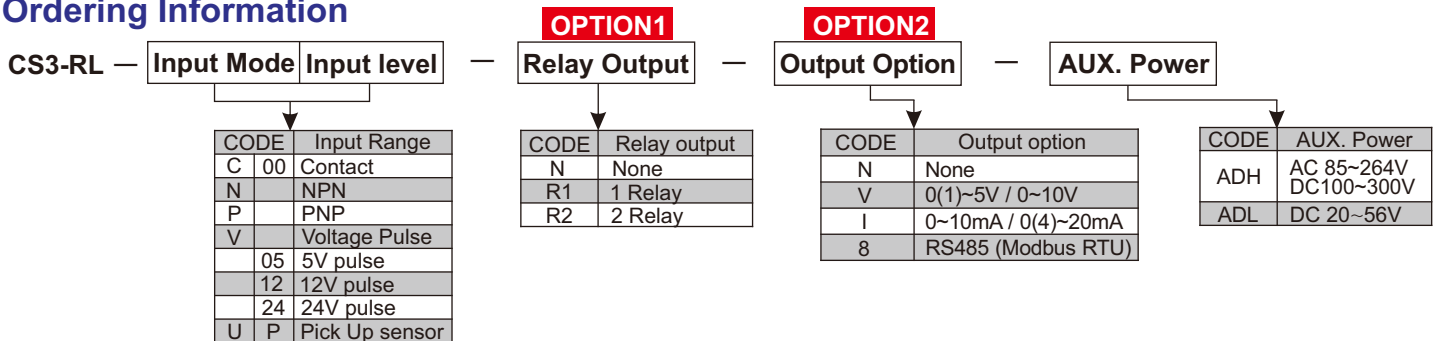
Features

1. Measuring frequency 0.01Hz~100KHz can be auto-range, decimal point auto shift
2. Multiple input type, Contact, NPN, PNP, Voltage pulse etc.
3. Relay output can be set to Hi / Lo / Hi Hold / Lo Hold / DO mode and can setting as Start delay band / Hysteresis band / Delay on & Delay off function
4. Analog output or RS485 communication are optional
5. External control input can be set to PV Hold / Max or Min value reset / Relay Reset function
6. CE and FCC approved

Application

With proximity and photoelectric switches both are supporting of speed, line-speed display, control, measurement and data collection via RS485.

Ordering Information



Technical Specification

Input Frequency	Input Mode	Input Level
0.01Hz~50Hz	Contact	
0.01Hz~50Hz 0.01Hz~100KHz	NPN	High Level: 8~12V ; Low level: 0.0~4.0V (Excitation supply: 12Vdc/ 30mA only)
	PNP	
	Voltage pulse	High Level: over 2/3 of input level Low Level: under 1/3 of input level
	Pick Up sensor	Specify specifications

Input Mode (NPN, PNP, Contact) & Level (5Vp, 12Vp, 24Vp) changeable by parameter setting

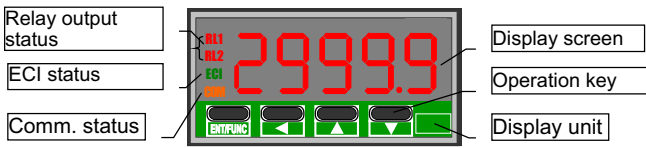
Input	
Input range	0.01Hz~100KHz
Accuracy	≤ ± 0.005% of FS ±1 count
Sampling rate	15 times / sec (≥15Hz)
Response time	≤100mS (AvG="1")
Time out function	Auto, Manual programmable, In manual mode, the period of time out can be set 0.0 sec~999.9 sec

Display & Functions	
Display	5 digits , 0.4" (10.0mm) red high - brightness LED
LED indicator	Relay output indicator : square red LED RS485 communication : square orange LED ECI indicator : square green LED
Display type	RPM / RPS/ Linear line speed / Frequency programmable
Display range	0.0000~99999 with auto shift of decimal point
Resolution of PV	AUTO / Semi-Auto / Fix
Compensation factor	Compensate error from 0.001~9.999
Over range indication	[O U F L] Over 110% input Hi limit value
Max /Min recording	Maximum and Minimum value storage during power on
Display functions	PV / Max(Min) value Hold / RS485 programmable
Front key functions	Down key can be set same as ECI function
Low cut	- 19999~19999 counts
Reading Stable Function	
Average	[A V G] : 1~99 times
Digital filter	[d.F. I L T] : 0~99 times

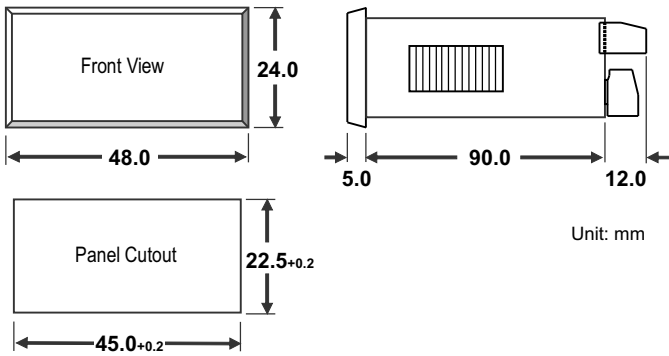
Relay Output (Option)	
Set point	-19999~99999
Relay contact form	2 sets SPDT (1c), 2A/250Vac
Relay action mode	Hi / Lo / Hi.HLd / Lo.HLd / DO
Relay action function	Each Relay can set Start delay / Delay off time / Hysteresis Start band setting: 0~9999 counts Start delay time setting: 0:00.0~9(Min): 59.9(Sec) Active delay time setting: 0:00.0~9(Min): 59.9(Sec) Delay off time setting: 0:00.0~9(Min): 59.9(Sec) Hysteresis setting: 0~5000 counts
External Control Input (ECI)	
Input mode	One Channel input , mechanical contact or open collect input are available
Input function	Tare / PV Hold / Max./Min. value reset / DI / Relay reset
Debouncing time	5~255 (x8mS) programable
Analog Output (Option)	
Accuracy	≤±0.1% of F.S. ; 16 bits DA converter
Ripple	≤±0.1% of F.S.
Response time	≤100 mS (10~90% of input)
Output range	Voltage output: 0~5V / 0~10V / 1~5V Current output: 0~10mA / 0~20mA / 4~20mA
Output capability	0~10V: ≥1000Ω 4(0)~20mA: ≤600Ω max
Scaling	[R _{o.H5}] Output High setting: -19999~99999 [R _{o.L5}] Output Low setting: -19999~99999 [R _{o.Lnt}] Output High Limit: 0.00~110.00%
Digital fine adjust	[R _{o.Pro}] adjust range: -19999~+32766 [R _{o.Sp}] adjust range: -19999~+32766
RS485 Communication (Option)	
Protocol	RS485 Modbus RTU mode
Baud rate	1200/2400/4800/9600/19200/38400 bps
Data bits	8 bits
Stop bits	1 or 2
Address	1~247
Distance	1200M max
Terminate resistor	120~300Ω/0.25W(typical: 150Ω)

Power Supply	
Range	ADH: AC 85~264V ; DC 100~300V ADL: AC/ DC 20~56V
Excitation Power	DC12V, 30mA
Power consumption	AC: ≤8VA @ 230V / DC:≤3W
Memory storage	EEPROM
Safety	
Isolation	AC 2KV, 50/60Hz, for 1 min, Between Power / Input / Output / Case
Insulation resistance	≥100MΩ @ 500Vdc Between Power / Input / Output / Case
EMC	En61326: 1:2013 / CISPR11 Class A EN61000-3-2: 2014 / EN61000-3-3: 2013 IEC61000-4-2: 2008 IEC61000-4-3: 2006+A1: 2007+A2: 2010 IEC61000-4-4: 2012/IEC 61000-4-5: 2005 IEC61000-4-6: 2013 / IEC61000-4-8: 2009 IEC61000-4-11: 2004
LVD	EN61010-1: 2010
FCC	FCC part 15 subpart B: Class A
Environmental Characteristics	
Operating Temp.	0~60°C
Humidity rating	20~95%RH, Non-condensing
Temp. coefficient	≤100 PPM/°C
Storage Temp.	-10~70°C
IP Enclosure	Front panel: IEC 529 (IP52) ; Housing: IP20
Mechanical Characteristics	
Dimensions	48mm(W)x24mm(H)x107mm(L)
Panel cutout	45mm(W)x22.5mm(H)
Case material	ABS (with fire-retardant)
Mounting	Panel mounting
Terminal block	PA 66 (UL 94V-0) AWG 28~14 / 0.5~1.5mm ² Screw Torque Value: M2.0 / 2.0kgf.cm (Max)
Weight	110g

Front Panel

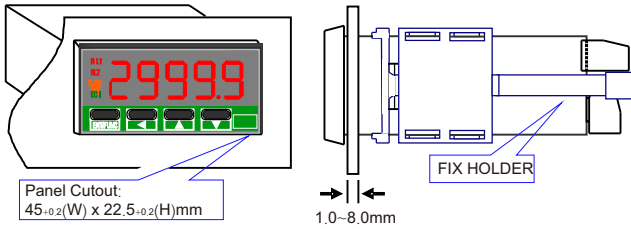


Dimension

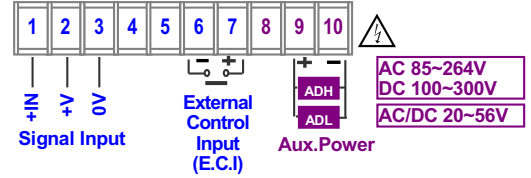
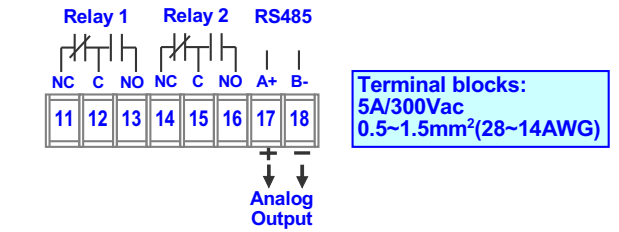


Installation

! The meter should be installed in a location that does not exceed the maximum operating temperature and provides good air circulation.

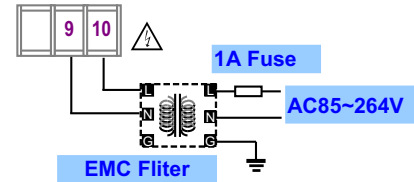


Connection Diagram

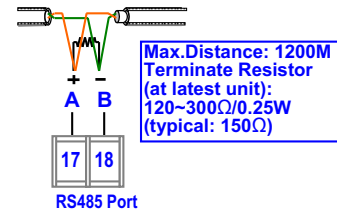


! Please check the voltage of power supplied first, and then connect to the specified terminals. It is recommended that power supplied to the meter be protected by a fuse or circuit breaker

Power Supply



RS485 Communication Port



Sensor input connection

