

# INDICATOARE DE PROCES

## Indicator de frecventa / viteza de rotatie / viteza de deplasare liniara

CS1-F

### ■ DESCRIERE

CS1-F este o varianta economica de indicator pentru masurarea cu mare precizie a frecventei semnalelor de tensiune tip impuls sau sinusoida, prelucrarea si afisarea lor sub forma de frecventa, viteza de rotatie sau viteza de deplasare liniara.

Gama de masura de la 0,01 Hz la 100 KHz (optional 140 KHz) si rezolutia se selecteaza automat pentru afisarea cat mai precisa a frecventei de intrare.

Optional poate fi echipat cu 1 iesire:

- tip releu sau iesire analogica sau interfata RS 485 (Modbus RTU) cu functii de comanda, alarma, retransmisie sau comunicatie
- releul poate fi programat: Hi/ Lo/ Hi Hld/ Lo Hld / DO\* cu activare temporizata la pornire/ temporizare la activare si dezactivare/ histerezis; temporizare: de la 0:00.0 la 9 min.59.0 sec
- \*Hi/ Lo/ Hi Hld/ Lo Hld/ DO - superior/ inferior/ mentinut sup./ mentinut inf./ iesire digitala

### ■ APLICATII

- Panouri de automatizare, masura, alarma si comanda intrare/iesire de la distanta cu PC/PLC

### ■ CARACTERISTICI

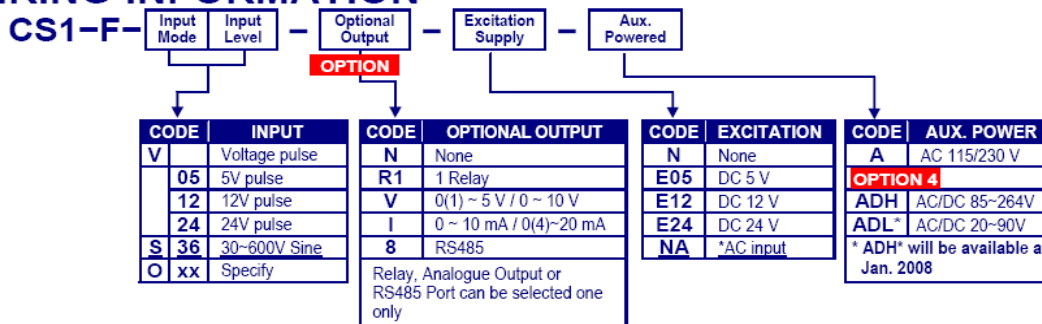
- Mod intrare: impuls de tensiune / tensiune sinusoidala
- Nivel intrare: impuls 5V / 12V / 24 V sinusoida 30...600 V
- Frecventa tensiune intrare: 0,01Hz la 100KHz (optional 140 KHz)
- Calibrare: nu este necesara
- Precizie masura:  $\leq \pm 0.005\%$  din FS  $\pm 1$  digit
- Afisaj: LED-uri rosii inalta luminozitate, 5 cifre, h=20mm
- Gama afisare: 0.0000...99999 cu deplasare automata a pct-ului zecimal
- Rezolutie PV: deplasare punct zecimal programabila in urmatoarele 3 moduri: automat / semiautomat / manual (fix)
- Tip afisare: viteza de rotatie/ viteza de deplasare liniara/ frecventa
- Unitati masura: RPM, RPS, m/min, cm/min, yd/min, ft/min, Hz, KHz
- Programare: ppr: 1...99999
- diametru roata de masura: 0.0001...9.999 m
- Functie 'pauza' a intrarii: la frecv. joasa, pe perioada pana la urmatorul impuls care face posibila identificarea acesteia, este afisat 0; 2 moduri programare pauza: automat /manual; manual de la 0.0sec la 999.9sec
- Factor de compensare a afisarii: 0.001...9.999
- Reglaj fin digital: fiecare capat de scala 0...+99999
- Indicare depasire gama: ovFL (intrare peste 120% din gama intrare sup.)
- Punct zecimal: programabil 0... 0.0000 (pt. rezolutie fixa, alti parametri)
- Functie de remote display: comandat prin RS 485
- LED-uri semnalizare:
  - 1 rosu - stare releu de iesire
  - 1 portocaliu - stare comunicatie RS485
  - 2 portocalii - stare min hold/max hold
  - 1 verde - functie tasta ▼

CE

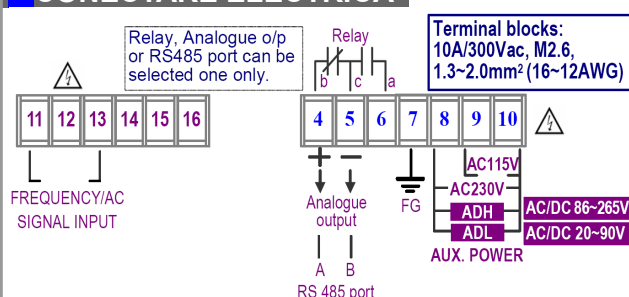


- Tastatura: 4 taste multifunctionale; tasta ▼ poate fi programata PV hold, PV relativ, RESET max. hold/min.hold sau RESET releu mentinut
- Memorare valori min/max masurate pe timpul alimentarii
- Alte functii: filtru digital, medie, medie mobila, taiere jos (low cut)
- Iesire tip releu: 1 prag programabil
  - 1 releu NI/ND, contacte 5A/230Vca, 10A/115Vca
  - mod activare releu: comparare cu nivel prag
  - programabil Hi/ Lo/ Hi Hld/ Lo Hld
  - prin RS 485 comandata de master-functie DO (iesire digitala)
  - functii activare: temporizare la pornire/ temporizare la activare si dezactivare/ histerezis/ activare mentinuta
  - gama temporizare: de la 0:00.0 la 9 min.59.0 sec
  - histerezis programabil: 0...5000 unitati
- Iesire analogica: tensiune: 0~5V, 1~5V, 0~10V (sarcina  $\geq 1000\Omega$ )  
curent: 0~10mA, 0~20mA, 4~20mA (sarcina  $\leq 600\Omega$ )  
precizie  $\leq \pm 0.1\%$  FS  
capete de gama setabile -19999...+29999  
reglaj fin digital capete de gama
- Iesire comunicatie: RS 485 protocol Modbus RTU; dist. 1,2 Km
- Rigiditate dielectrica: 2kVca pt.1' intre alim/intr/ies/carcasa
- Rezistenta izolatia  $\geq 100M\Omega$  la 500Vcc intre alim/intr/iesire
- Izolare intre alim./intr./ies. releu, analogica, RS 485
- Conditii de lucru: 0...60°C, 20...95%RH fara condens
- Carcasa: ABS rezistenta la foc
- Grad de protectie: panou frontal IP 54, carcasa IP 20
- Dim.: 96x48x72mm; montaj in panou, decupare 92x44 mm
- Alimentare: 230Vca, 85...264Vcc/ca, 20...90Vcc/ca, consum 5VA max.
- Alimentare senzor extern: max. 24 Vcc/ 30 mA
- Memorie EEPROM

### ■ ORDERING INFORMATION



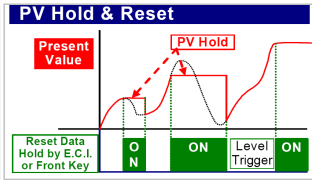
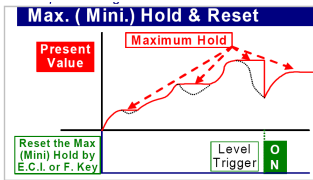
### ■ CONECTARE ELECTRICA



### Specificatii tehnice intrare

Frecventa de intrare	Mod de intrare	Nivel de intrare
0,01Hz...50 Hz	Impuls tensiune	Nivel sup.: peste 2/3 din nivel intrare
0,01Hz...100 KHz		
0,01Hz...140 KHz (optional)	Unda sinusoidala	Nivel inf.: sub 1/3 din nivel intrare

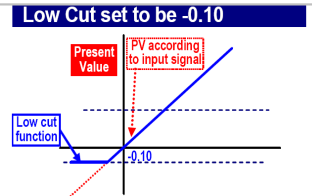
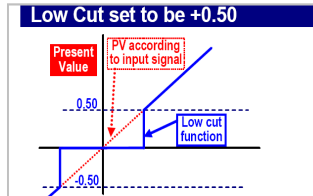
## ● FUNCTII AFISAJ



### Funcție taiere jos (low cut)

Limita de taiere > 0

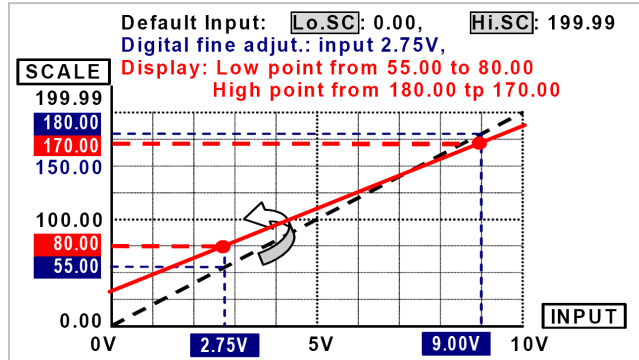
Limita de taiere < 0



Limita taiere jos setata la +0,50. In domeniul de variatie al PV de la -0,50 la +0,50 va fi afisat 0.

Limita taiere jos setata la -0,10. Pentru toate valorile PV ≤ -0,10 va fi afisat -0,10

### Reglaj fin digital



## ● FUNCTIE STABILITE CITIRE

### Medie

Average set to be 3

Sample 1 Sample 2 Sample 3 Sample 4 Sample 5 Sample 6 .....

Display Update Value = (Sample 1 + Sample 2 + Sample 3) / 3  
 Display Update Value = (Sample 4 + Sample 5 + Sample 6) / 3

Remark: The higher average setting will cause the response time of Relay and Analogue output slower.

### Medie mobila

Moving Average set to be 3

Sample 1 Sample 2 Sample 3 Sample 4 Sample 5 Sample 6 .....

In first 3 samples, Display Update Value = (Sample 1 + Sample 2 + Sample 3) / 3

Display Update Value = (Sample 2 + Sample 3 + Sample 4) / 3

Display Update Value = (Sample 3 + Sample 4 + Sample 5) / 3

Display Update Value = (Sample 4 + Sample 5 + Sample 6) / 3

Remark: The higher moving average setting wouldn't cause the response time of Relay and Analogue output slower after first 3 samples.

## SC SYSCOM 02 SRL

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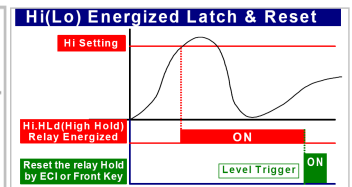
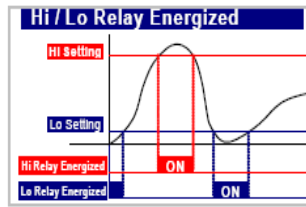
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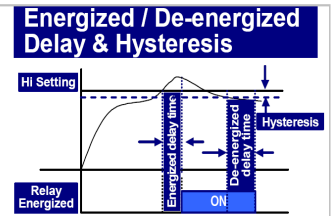
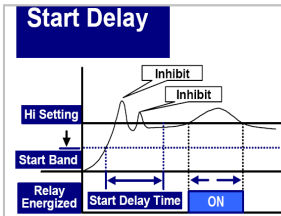
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## ● FUNCTII RELEE

### Mod activare

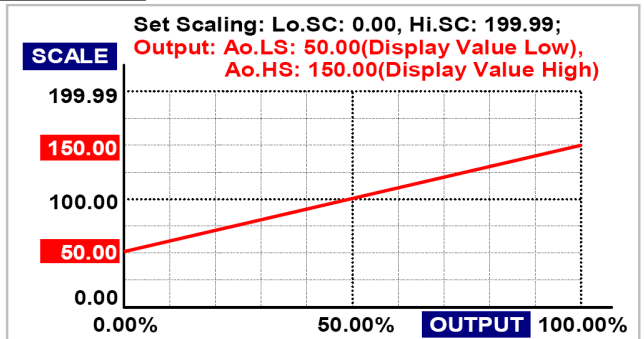


### Funcție temporizare



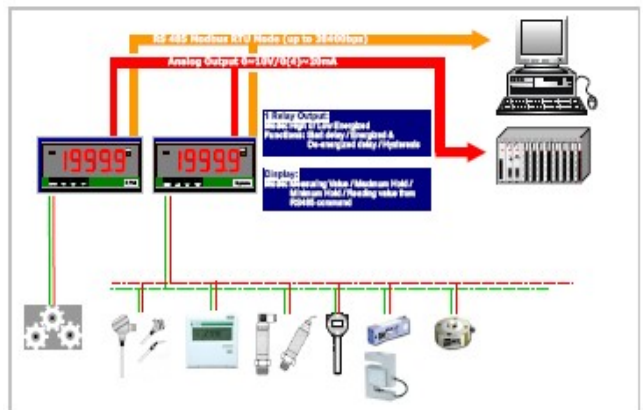
## ● IESIRE ANALOGICA

### Funcție scalare



Gama dintre AoHS si AoLS ar trebui sa fie mai mare de 20% din domeniul, altfel rezolutia iesirii analogice va fi micșorata

## ● INTERFATA RS 485



### CS1 APPLICATION FOR REMOTE DISPLAY FROM RS485 COMMAND

