

# PRESET UP/DOWN COUNTER

### **General Specifications:**

- 2x6 Digit display, double PRESET, double OUT, up/down counter
- Counts switch, proximity switch & incremental encoder input
- Password protection
- Selectable input frequency
- Calibration constant; 0.00001.....9.99999
- Selectable decimal point; 1. ..... 3. Digit
- 7 input / 10 output function options
- Adss "OFFSET" to Count Value
- PRESET1; Absolute / Relative option
- OUT; latch or 0.1.....999.9 seconds pulse
- Loads count value & OUT satus at the lastest power failure after the first power on
- RESET via front panel
- Displays Preset ½ values
- EEPROM memory to store settings

### **Technical Specifications:**

• Panel Hole Sizes : 67x67mm

Display
2x6 Digit 7 Segment display
Count Input
2 x (Max: 7500 Hz, 5-30V)

• NPN Selection : Connect "npn select" to "+12V" to select NPN sensor for Cp1 and Cp2.

Reset input is always PNP. For totem pole or PNP type sensor

"npn select" left unconnected.

• Sensor Types : PNP/NPN proximity switch - NPN/PNP/Totem-pole output encoder

• Input Frequency : 20, 50, 2500, 7500 Hz selectable.

• Reset Input : 10ms (min), Positive input (PNP only) (5.....30V)

• Output : Out1, Out2; 2x Relay (O-NO-NC), 250VAC, 2A, Rezistif Yük

2x Open Collector (NPN), 30V, 100mA max.

• Sensor Supply : 12VDC, 50mA(max.) unregulated

• Supply Voltage : 100...240VAC, 50-60Hz

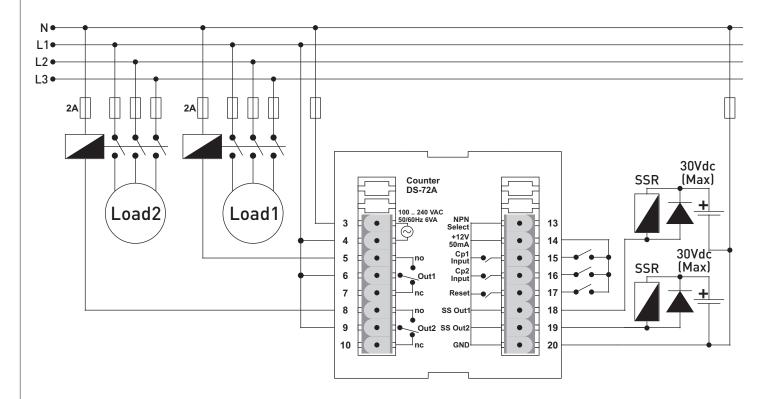
Power Consump. : < 8VA</li>

Operating Temp. : -20 °C....55 °C
Operating Altitude : < 2000m</li>

### / Warning:

- Use shielded and twisted signal cables and connect shield to ground. Keep all signal cables away from circuit breakers, inductive loads, device/cables emitting electrical noise and power cables.
- Take precautions agains environmental conditions like humidity, vibration, pollution and high/low temperature during installation.
- Use fuse (F250mA 250VAC) on mains/supply input of the device. Use appropriate cables for supply connections. Apply safety regulations during installation.
- Prefer to use (Input = Phase1) option for encoders, select (In.Freq = 20) to count mechanical switch ON-OFF pulses, select the minimum input frequency option that suits your application.
- For Input = 1up2up, 1up2dn, Phase2; input signal frequency shall be at most ½ of the selected input frequency option if both inputs are used. And for Input = Phase4; input signal frequency shall be at most 1/4 of the selected input frequency option if both inputs are used.

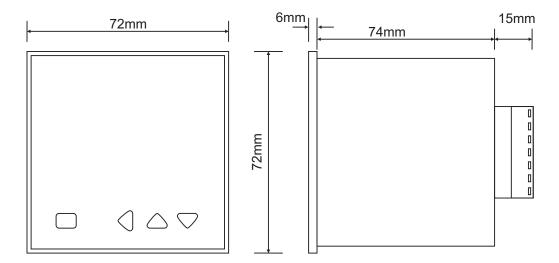
### Connection -



### Notes:

- Connect SS Out return pin directly to GND.
- Use free-wheeling diode to protect SS Out.
- To select PNP option; connect "npn select" to "+12V".

### Dimensions —



**Programming Steps** 

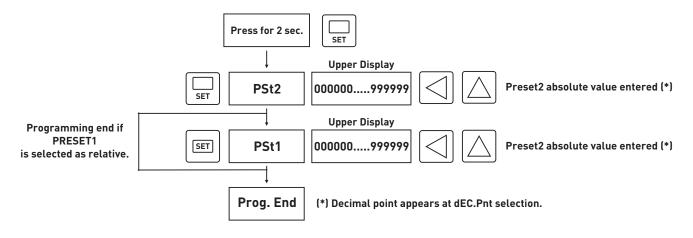
## Reading Preset1 / Preset2 value at lower display:

# Prst1/2 Pst1 Read Preset1 value at the lower display. Prst1/2 Pst2 Read Preset2 value at the lower display.

### Front Panel RESET:



# **Programming Preset1 and Preset2 Absolute Values:**



Input Types Cr.dr = drct Cr.dr = oppo CP1 CP1 Inp 1u CP2 CP2 2n Display Display CP1 CP1 Inp CP2-CP2 1u n+2 n n Display Display CP1 CP1 Inp CP2 CP2 1u 2G Display Display CP1 Inp CP2 CP2 1u Display Display CP1 CP1 Inp CP2-CP2 Phs4 Display Display CP1 CP1 Inp CP2 CP2 Phs1 Display • Display CP1 CP1 Inp CP2 CP2-Phs2 Display Display NPN OFF PNP / Totem Pole ON PNP / Totem Pole OFF NPN ON 4

### **Programming Parameters:** Parametre programlama sırasında "Back" tuşuna basılırsa başa dönülür. 🛚 Press for 2 sec **Upper Display** Enter fixed password; 162 CodE Enter 162 SET Preset1 relative value. If PRESET1 If Preset is relative; PrSET1 = PrSET2 - PrSET1. PrSEt1 000000.....999999 SET is absolute If result negative Pst1 = 000000. (\*) **Out1 ON duration** Out1 000.0....999.9 for latching enter, 0.000 SET Out2 ON duration Out2 000.0....999.9 for latcing enter, 0.000 SET **Calibration constant** CALib. 0.00000.....9.99999 1up.2dn, **Factory SET** 2up.2up, Values: 1up.2Gt, **InPut** 1up.2dr, Input options SET PSt2: 000100 Phase.4, Phase.1, PSt1: 000050 Phase.2 Out1: 001.0 sec. Out2: 001.0 sec. Operating modes SET ConFIG 0....9 options CALib: 1.00000 InPut: 1uP.2dn ConFIG: 0 0, 0.0, 0.00, 0.000, Select place of dEC.Pnt dEC.Pnt: 0 decimal point 0.0000, 0.00000 SFT Cnt.dir: direCt In.Freq: 20 Counting direction; Pon.rES: YES direCt, oPPos. direct / opposite or Cnt.dır SET up/down oFFSEt: 000000 PrSEt1: AbSolt 20, 500, Max. frequency for input signal. In.Freq Select 20Hz for mechanical switch. 2500, 7500 Hz Yes: Reset after power-on. Pon.rES YES, no No: Loads the count value & output status SET at the latest power failure after the first power-on. Offset Value; 1. If Cnt.dir=direCt; Counter is set to "oFFSET" with RESET ON or panel reset. oFFSEt 000000.....999999 2. If Cnt.dir=oPPos.; when Config=0.....6 and Input=1uP.2uP, 1up.2Gt, Phase.4, OUT2 is ON, as soon as counter reaches "oFFSET". (\*) Preset1; Absolute(AbSolt.), Relative (rELAtı.) If Absolute; OUT1 is ON when counter reaches PrSET1. If Relative; OUT1 is ON when counter reaches (PrSET2-PrSET1) AbSolt, rELAtı. PrSEt1 If (Pst2-Pst1) is negative, Out1 is ON when counter SET reaches 000000. (\*) Prog. End. (\*): Decimal appears at dEC.Pnt selection.

Note: If no entry is done for 20 sec. during programming, current enteries are accepted and saved to EEPROM memory.

### Operating Modes Inpt = 1up2up, 1up2Gt, Phqse4 Comment Reset 999999 Preset Preset Offset Reset 999999 Preset2 Preset1 Offset Reset 999999 Preset2 Preset1 Offset Counting continues up/down until RESET ON after, Preset1 or Preset2 is reached. OUT1 pulse is independent of OUT2. Out1 Out1 Out1 Out2 Out2 Out2 Reset 999999 Preset2 Preset1 Offset Reset 999999 Reset 999999 Counting stops until RESET ON Preset2 Preset1 Offset Preset2 Preset1 Offset after Preset1 or Preset2 is reached. OUT1 pulse is independent of OUT2. Out1 Out1 Out1 Out2 Out2 Out2 Reset 999999 Preset2 Preset1 Offset Reset 999999 Preset2 Preset1 Offset Reset 999999 Preset2 Preset1 Offset Counting continues up/down until RESET ON after, Preset1 or Conf Preset2 is reached. OUT1 is OFF with OUT2 pulse OFF. OUT1 pulse Out1 Out1 Out1 is independent of OUT2. Out2 Out2 Out2 Reset 999999 Preset Preset Offset Reset 999999 Preset2 Preset1 Offset Reset 999999 Preset2 Preset1 Offset Counter is reset after Preset2 is reached. OUT1 is OFF with OUT2 pulse OFF, OUT1 pulse is independent of OUT2. Out1 Out1 Out1 Out2 Out2 Out2 Reset 999999 Preset Preset Offset Reset 999999 Preset Preset Offset Counting continues up/down after Preset2 is reached. Counter is reset and OUT1 is OFF with OUT2 pulse OFF, OUT1 pulse is Out1 Out1 Out1 independent of OUT2. Out2 Out2 Out2 Reset 999999 Preset2 Preset1 Offset Reset 999999 Preset2 Preset1 Offset Reset 999999 Preset2 Preset1 Offset Counting stops after Preset2 is reached. Counter is reset and OUT1 is OFF with OUT2 pulse OFF. OUT1 pulse is independent Out1 Out1 Out1 of OUT2. Out2 Out2 Out2 Reset 999999 Preset2 Preset1 Offset Reset 999999 Preset2 Preset1 Offset Counter is reset after Preset2 is 999999 Preset2 Preset1 Offset reached but display freezes until Conf the end of OUT2 pulse. OUT1 is OFF with OUT2 pulse OFF. OUT1 Out1 Out1 pulse is independent of OUT2. Out2 Out2 Out2 OUT1 is ON when counter is equal Reset 999999 Preset2 Preset1 Offset to Preset1 else OFF. OUT2 is ON when counter is equal to Preset2 else OFF. Use SS Outs if ON duration is too small for relay Out1 ON time. Out2 Reset 999999 Preset2 Preset1 Offset OUT1 is ON when counter is less then equal to Preset1 else OFF. OUT2 is ON when counter is greater or equal to Preset2 else Out1 OFF Out2 OUT1 is ON when counter is greater then equal to Preset1 else OFF. OUT2 is ON when counter is greater or equal to Preset2 Out1 else OFF. Out2 Pulse Latched Output