



Timer, Counter

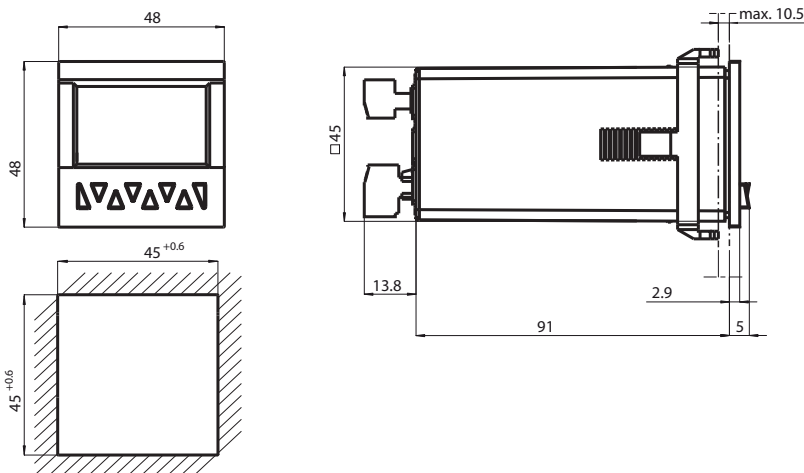
KC-LCD-48-1R-230VAC

- Counter/Timer
- Adding/subtracting via 2 separate inputs
- Batch controller with 1 pre-selection
- Easy-to-read, 2-line LCD display with symbols for indicated pre-selection and output status
- Display range and preselection range from -999999 up to 999999
Overflow will be evaluated correctly up to 1 decade
- PNP and NPN sensors can be connected
- Degree of protection IP65 (front only)

LCD batch controller with 1 relay output and 230 VAC supply voltage



Dimensions



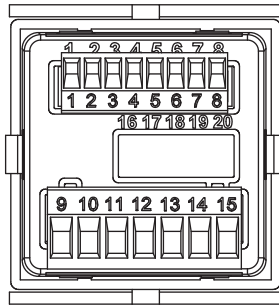
Technical Data

General specifications			
Pre-selection		single	
Data storage		> 10 years, EEPROM	
Programming		keypad-driven menu	
Indicators/operating means			
Type		2-line, 2 x 6-digit LC display with leading sign	
Display value		digit height 9 mm	
Pre-selection		digit height 7 mm	
Key interlock		via "high" potential at "LOCK" input	
Decimal point		0 to max 5 fractional digits	
Scale factor		0.0001 ... 99.9999	
Reset		manually or external	
Electrical specifications			
Fusing		T 0.1 A	
Operating voltage	U _B	230 V _{AC}	
Power consumption	P ₀	max. 6.5 VA	

Technical Data

Input		
Connection	Counter inputs: A and B Control/reset inputs: LOCK, RESET	
Signal voltage		
High		3.5 ... 30 V DC
Low		0 ... 2 V DC
Counting frequency		30 Hz / 5 kHz
Minimum pulse duration		Control/reset inputs: static / 1 ms
Impedance		10 kOhm
Count modes		
Pulse counter		Counting with counting direction (cnt.dir), difference counting (up.dn), up/down counting (quad),
Timer		Time measurement via GATE input (FrErun), counter input A: Start, counter input B: Stop (InpA.InpB.), counter input B: Start/Stop (InpB.InpB.),
Output		
Relay		changeover contact
Switching voltage		max. 250 V AC / 110 V DC
Switching current		max. 3 A AC/DC, min. 30 mA DC,
Switching power		max. 750 VA / 90 W
Mechanical life		2 x 10 ⁷ switching cycles
Electrical life		5 x 10 ⁴ cycles at 3 A
Response time		< 15 ms pulse counter < 10 ms time counter
Sensor supply		14.4 ... 27.6 V _{DC} max. 50 mA at 230 V _{AC}
Compliance with standards and directives		
Directive conformity		
Low Voltage Directive 2006/95/EC		EN 61010-1:2001; protection class: 2
EMC Directive 2004/108/EC		EN 61000-6-2:2005, EN 50295:1999
Standard conformity		
Emitted interference		DIN EN 55011:2009, Class B
Mech. capacity		EN 60068-2-6:2008 10 ... 55 Hz / 1 mm / XYZ 30 min in each direction
Shock and impact resistance		EN 60068-2-27:1995 100 G / 2 ms / XYZ 3 times in each direction
Ambient conditions		
Ambient temperature		-10 ... 50 °C (14 ... 122 °F)
Storage temperature		-25 ... 75 °C (-13 ... 167 °F)
Relative humidity		≤ 93 % at 40 °C (noncondensing)
Altitude		0 ... 2000 m
Pollution degree		2
Mechanical specifications		
Degree of protection		IP65 (front)
Mass		approx. 230 g
Dimensions		48 mm x 48 mm x 109.8 mm

Connection



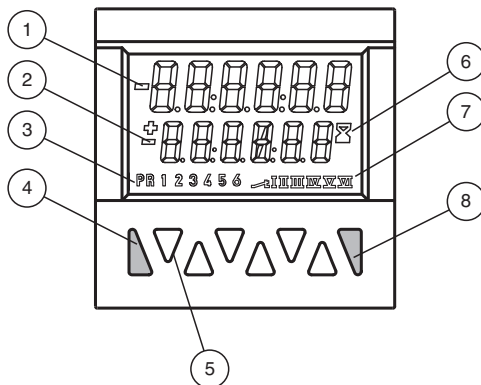
Signal and control inputs

- | | |
|---|--------------------------|
| 1 | Sensor supply voltage |
| 2 | GND (0V) |
| 3 | INP A (Signal input A) |
| 4 | INP B (Signal input B) |
| 5 | RESET (Reset input) |
| 6 | LOCK (Input Keypad lock) |
| 7 | not connected |
| 8 | not connected |

Supply voltage and outputs

- | | | |
|----|--------------------|----------------|
| 9 | not connected | |
| 10 | not connected | |
| 11 | Relay contact C. | Output |
| 12 | Relay contact N.O. | |
| 13 | Relay contact N.C. | |
| 14 | 230 V AC N~ | Supply voltage |
| 15 | 230 V AC L~ | |

Assembly



- | | |
|---|--|
| 1 | Current count value |
| 2 | Preset value |
| 3 | Indicator preset value (at 9) |
| 4 | Reset key |
| 5 | Decade keys 1 to 6 /
Keys for programming |
| 6 | Run display for timer |
| 7 | Shows the active output |
| 8 | Prog/Mode key |