



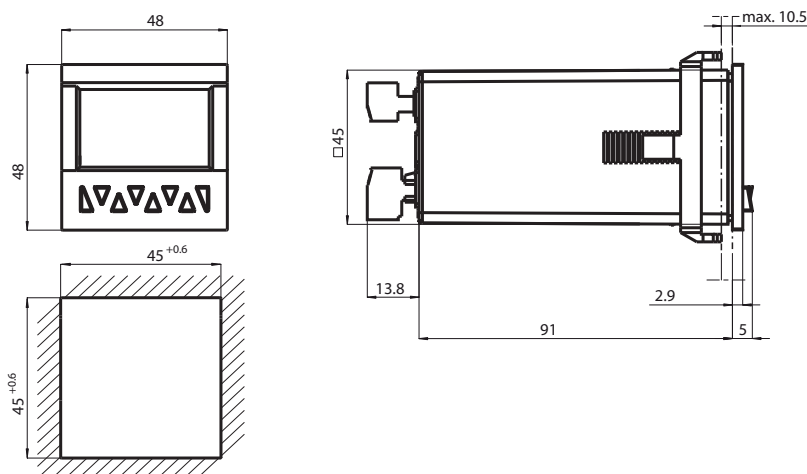
Timer, Counter, Tachometer KC-LCDL-48-2R-24VDC

- Counter/Timer/Tachometer
- Adding/subtracting via 2 separate inputs
- Batch controller with 2 pre-selections
- Easy-to-read backlit 2-line LCD display with icons for the displayed preselection and the status of both outputs
- 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 2 relay outputs and 24 VDC supply voltage



Dimensions



Technical Data

General specifications

Pre-selection	2-fold
Data storage	> 10 years, EEPROM
Programming	keypad-driven menu

Functional safety related parameters

MTTF _d	410 a
Mission Time (T _M)	10 a
Diagnostic Coverage (DC)	0 %

Indicators/operating means

Type	2-line, 2 x 6-digit LC display with leading sign backlighted
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

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Refer to "General Notes Relating to Pepperl+Fuchs Product Information".

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PEPPERL+FUCHS

Technical Data

Electrical specifications

Fusing		10 ... 30 V DC: T 0.2 A
Operating voltage	U_B	10 ... 30 V DC
Power consumption	P_0	max. 1.5 W

Input

Connection	Counter inputs: A and B Control/reset inputs: LOCK, RESET, GATE, MPI	
Signal voltage		
High		$0.6 \times U_B \dots 30 \text{ V DC}$
Low		$0 \dots 0.2 \times U_B$
Counting frequency		30 Hz / 55 kHz
Minimum pulse duration		Control/reset inputs: 10 ms / 1 ms
Impedance		5 kOhm
Count modes		
Pulse counter		Counting with counting direction (cnt.dir), difference counting (up.dn), up/down counting (quad), Cumulative counting (up.up), up/down counting x 2 (quad 2), up/down counting x 4 (quad 4), additional functions for counter input A and counter input B: A/B, (A-B)/A x 100%
Frequency counter		functions for input A and input B: A, A-B, A+B quad, A/B, (A-B)/A x 100 %
Timer		Time measurement via GATE input (FrErun), counter input A: Start, counter input B: Stop (InpA.InpB.), counter input B: Start/Stop (InpB.InpB.), time measuring via RESET input (auto)

Output

Relay	changeover contact , Make 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
Sensor supply		connected power supply is looped through, max. 80 mA
Output I		Relay with make contact, NC or NO progr.
Mechanical life		2×10^7 switching cycles
Electrical life		1×10^5 switching cycles at 3 A
Output II		Relay with changeover contact
Mechanical life		2×10^7 switching cycles
Electrical life		5×10^4 cycles at 3 A
Response time		Relay: approx. 7 ms Frequency counter: 100/600 ms

Compliance with standards and directives

Directive conformity		
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		-20 ... 65 °C (-4 ... 149 °F)
Storage temperature		-25 ... 75 °C (-13 ... 167 °F)
Relative humidity		≤ 93 % at 40 °C (noncondensing)
Altitude		0 ... 2000 m

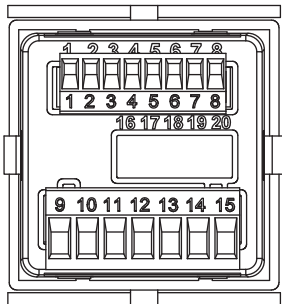
Mechanical specifications

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Technical Data

Degree of protection	IP65 (front)
Mass	approx. 138 g
Dimensions	48 mm x 48 mm x 109.8 mm

Connection



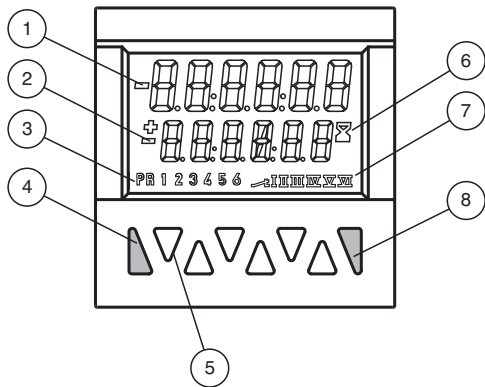
Signal and control inputs

- 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 GATE (Gate input)
- 8 MPI (User input)

Supply voltage and outputs

- 9 Relay contact C.
 - 10 Relay contact N.O.
 - 11 Relay contact C.
 - 12 Relay contact N.O.
 - 13 Relay contact N.C.
 - 14 10 ... 30 V DC
 - 15 GND (0V)
- Output 1 (9, 10)
Output 2 (11, 12)
Supply voltage (14, 15)

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