



The Codix 52U is a voltage-powered dual function counter with 4 functions in one device:

Counter with 2 totalising ranges, totaliser and timer, totaliser and frequency meter, timer with 2 time ranges.

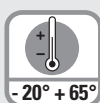
For fast and slow count pulses, with 6-digit LED display for NPN, PNP input signals.



Power supply



DIN front bezel



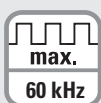
Temperature range



High protection level



Menu-driven programming



Pulse counter/Totaliser



Frequency meter/tachometer



Timer



Frequency meter HRA

Powerful

- Fast count and frequency input – input frequency max. 60 kHz
- Robust housing – IP65 protected
- Very bright LED display, 8 mm high, 6 digits
- Very accurate precise frequency measurement principle (HRA-High Rate Accuracy System)
Frequencies up to 38 Hz are calculated using time-interval (period duration) measurement. Frequencies > 38 Hz are calculated using a special time base (gate time) measurement. A very high accuracy of < 0.1% is achieved, even with very short gate times. The resulting measurement is available after a max. of 50 ms.
- Short start-up time – detects input pulses just 16 msec after being switched on => no pulses are lost with a simultaneous motor start-up

User-friendly and universal

- Large keys – can also be operated when wearing gloves
- Programming:
 - Simple uniform menu-driven programming and operation
 - Possible to enter the programming also during operation with a confirmation prompt
 - Pressing the right key switches between displays
- Individually programmable scaling: multiplication and division factor (0.0001...99.9999), to display corresponding engineering units, e.g. position in 1/10 mm and speed in RPM
- Separate factors for frequency- and pulse counting
- Inputs: as an alternative to the HTL inputs, devices are available with a 4 ... 30 V DC input level, for use as parallel displays to PLCs
- Timer specials: timer or hours-run meter with various Start/Stop measurements, time range settings in hours, minutes or seconds, with decimal point. Resolutions up to 1/1000 can be programmed.

Order code

6.52U . 01 2 . 3 X 0
a

- a** Input switching level
0 = Standard (HTL) ¹⁾
A = 4 ... 30 V DC

Delivery specification

- Digital counter
- Mounting clip
- Gasket
- Instruction manual, multilingual
- Front bezel for screw mounting (T008181)
56 x 40 mm, panel cut-out 50 x 25 mm
- Front bezel for clip mounting (T008180)
53 x 28 mm, panel cut-out 50 x 25 mm

Multifunction devices, electronic

LED dual function displays	Universal with dual functions, 4 combinations (DC)	Codix 52U
Accessories		Order-No.
Adapter front bezel, 72 x 36 mm	For cut-out 68 x 33 mm to cut-out 45 x 22.2 mm, for counters 48 x 24 mm, as set	black and silver anodised 162704 Set
Adapter front bezel, 48 x 48 mm	For cut-out 45 x 45 mm to cut-out 45 x 22.2 mm, with clip mounting for counters 48 x 24 mm	black T008883
Adapter front bezel, 60 x 50 mm	For cut-out 54 x 29 mm to cut-out 45 x 22.2 mm, with screw mounting and gasket for counters 48 x 24 mm	black N003001
Transparent cover, lockable, IP65	For cut-out 54 x 29 mm, for screw mounting to front bezel F1B or adapter front bezel N003001, for counters with cut-out 50 x 25 mm or 45 x 22.2 mm	N003002
Sealing cover type K1, IP65	Suitable for front bezel 60 x 50 mm with screw mounting of electromechanical counters and via adapter front bezel N003001, for counters 48 x 24 mm	G008301
Mounting frame with cut-out 50 x 25 mm via separate adapter also for 45 x 22.2 mm	For snap-on mounting on 35 mm top-hat DIN rail, for counters 53 x 28 mm and via separate adapter (T008180) for counters 48 x 24 mm	chromated G300004

Suitable gaskets as well as further accessories can be found in the accessories section or in the accessories area of our website at: www.kuebler.com/accessories.

General technical data	
Display	6 digits, red 7 segment LED display; 8 mm high
Data backup	EEPROM
Operating temperature	10 ... 26 V DC -20°C ... +65°C > 26 ... 30 V DC -20°C ... +55°C (non-condensing)
Storage temperature	-25°C ... +70°C

Electrical characteristics	
Power supply	10 ... 30 V DC, with reverse polarity protection
Current consumption	max. 40 mA
EMC	Emitted interference EN 55011 class B Immunity to interference EN 61000-6-2

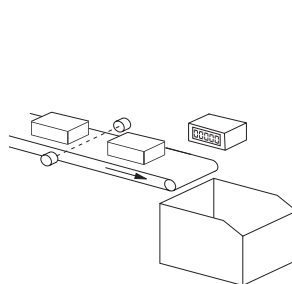
Mechanical characteristics	
Housing	front panel mount 48 x 24 mm acc. to DIN 43700; RAL 7021, dark grey
Protection	IP65 (from the front)
Weight	approx. 50 g

Inputs	
Polarity of inputs	programmable, NPN or PNP
Input resistance	approx. 5 kΩ
Counting frequency¹⁾	max. 60 kHz, can be damped to 30 Hz
Display range	timer 0.001 s ... 999999 h frequency meter 1/min or 1/sec
Minimum pulse duration of the reset input	5 ms
Input switching level (HTL)	LOW 0 ... 0.2 x U _B [V DC] HIGH 0.6 x U _B ... 30 V DC
Input switching level at 4 ... 30 V DC	LOW 0 ... 2 V DC HIGH 4 ... 30 V DC
Accuracy	< 0.1 % frequency meter, tachometer

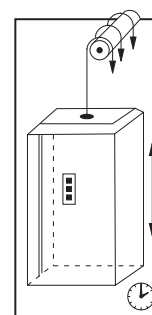
Multifunction devices

Applications for dual functions

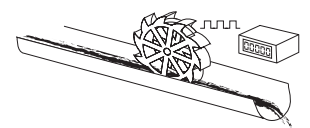
- Pulse and frequency (speed)
e.g. production data acquisition: total piece count and speed on OEM equipment, flow rate measuring systems – total flow and current flow
- 2 pulse counters
Measurement of batch and total piece count or of daily production count and total count values
- Pulse and time (maintenance counter)
Used in the lift industry as trip counters and hours-run meters and on production machines for piece and time counting, flow and time measurement, materials handling time and quantities
- 2 timers
Measurement of total time and orderspecific times, maintenance intervals and total time, time of day and total time



Piece count on conveyor and production speed

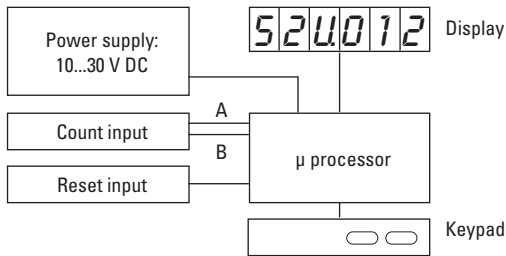


Trip counter and hours-run



Flow rate and total volume

1) Details see manual

Block diagram

Terminal assignment


PIN	DC version
1	10 ... 30 V DC
2	0 V GND
3	INP A
4	INP B
5	Reset

Function of the inputs INP A, INP B
Counter with 2 totalising ranges:

INP A: Dynamic count input counter 1 and counter 2

INP B: Inactive

Totaliser and timer:

INP A: Dynamic count input for totaliser

INP B: Start/Stop or gate input for timer, totaliser and frequency meter

Totaliser and frequency meter:

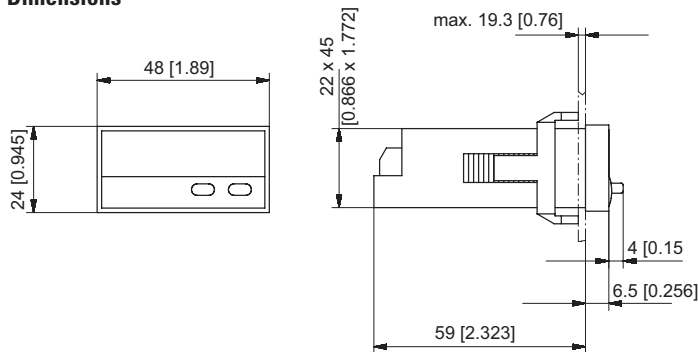
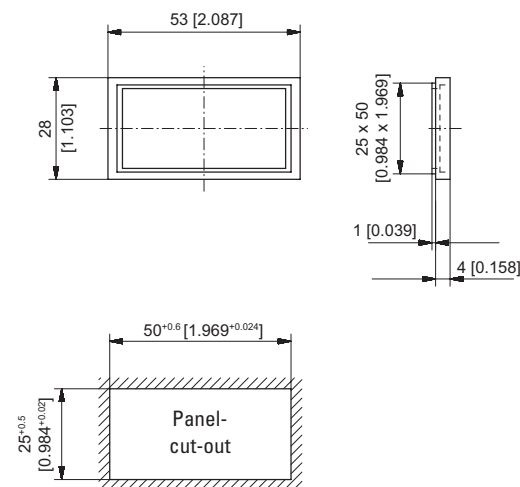
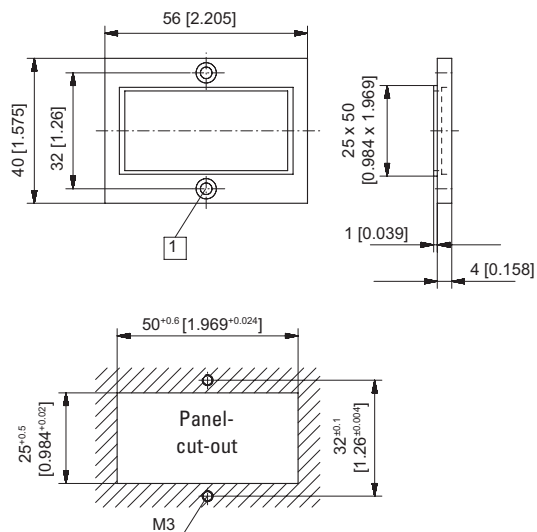
INP A: Dynamic count input/frequency input

INP B: Inactive

Timer with 2 time ranges:

INP A: Start input (depends on input type)

INP B: Start/Stop or gate input for timer (depends on input type)

Dimensions

Front bezel for clip mounting (included in delivery)

Front bezel for screw mounting (included in delivery)


1 Countersinking Af3, DIN 74