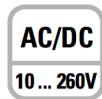


## LED Multifunction Counters – Codix 544

programmable as:

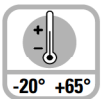
- Pulse counter
- Position display
- Frequency / speed display
- Timer/ short time meter



Power supply  
AC/DC



Front bezel  
dimensions



Wide temper-  
ature range



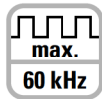
High IP  
protection  
rating



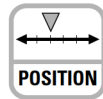
Plug-in screw  
terminal



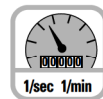
Menu-driven  
programming



Pulse counter/  
Totaliser



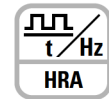
Position  
display



Frequency  
meter/  
Tachometer



Timer/  
Hour Meter



Frequency  
meter HRA

### Powerful

- **Fast count input and frequency input**  
Input frequency max. 60 kHz
- **Robust housing**  
IP 65 protection
- **LED display**  
Very bright, 14 mm high
- **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.
- **Fast start-up time**  
Detects incoming pulses just 16 ms after being switched on → so no pulses are lost with a simultaneous motor start-up



### User-friendly

- **Big keys**  
Can also be operated when using gloves
- **Easy to programme**  
Easy menu-driven programming and operation  
Possibility to enter the programming mode during operation, with authentication query

### Universal

- **Individually programmable scaling**  
Multiplication and division factor (0.0001 to 99.9999), to display corresponding engineering units, e.g. position in 1/10 mm and speed in RPM
- **4 different count input modes**  
2-channel input for detecting count direction, difference or adding mode, quadrature x1, x2 or x4
- **Frequency measurement**  
Display in 1/min or 1/sec
- **Time counting**  
Pulse width or time interval measurement in hours, minutes or seconds, as well as real-time display
- **AC or DC power supply**  
With sensor power supply
- **Inputs**  
As an alternative to the HTL inputs, devices with a 5 V DC input level are available, for use as parallel displays for PLCs.
- **Optional output**  
Zero signal for position and count, zero-speed monitoring, 1 Hz clock pulse for active time measurement

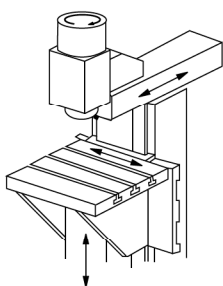
### Applications for Multi-function Display

- Counting tasks such as quantity and piece counting, measuring and recording of speed and of operating and processing times
- Piece counting or tool-life measurement on die cutters, presses, extruders, wood-working machines, drilling machines,

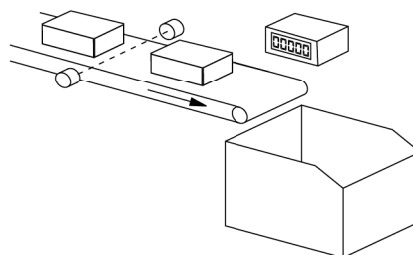
pick-and-place machines, guillotines, special-purpose vehicles etc.

- Positioning tasks on processing machines, such as sawing machines, milling machines, bending and folding machines, etc.

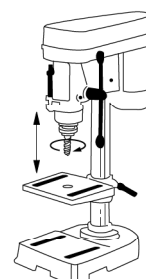
- Production data acquisition by means of piece counting (using difference or adding), or measurement of production times or production speeds.
- Totalizing flow, quantity and other scaleable media, or display of current flow rates.



Position or rotary speed on milling machine



Piece count on conveyor or production speed



Drilling machine head, speed or drilling depth

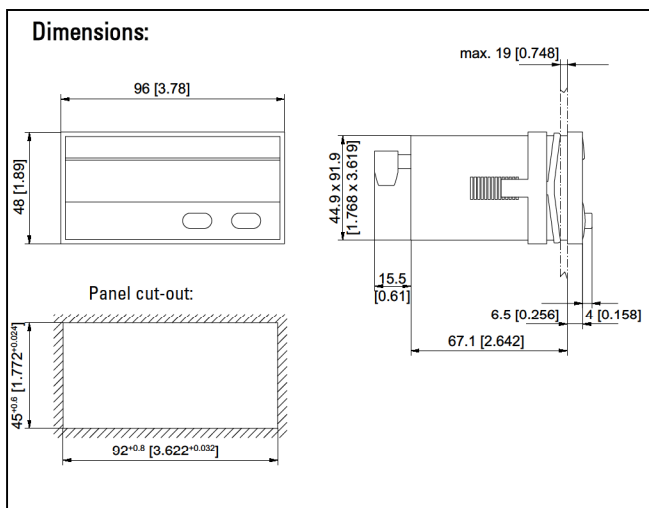
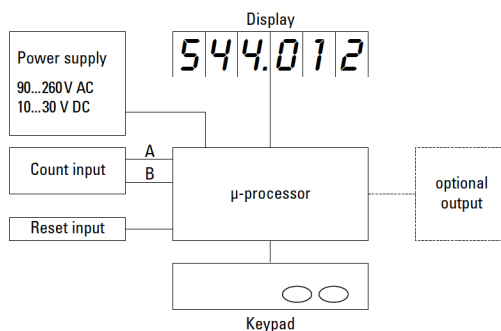
## LED Multifunction Counters – 544

### Technical data:

|                           |  |
|---------------------------|--|
| Supply voltage:           | 10 ... 30 V DC, with reverse polarity protection                               |
| (galvanically isolated)   | 90 ... 260 V AC  |
| Current consumption:      | max. 50 mA, 6 VA   |
| Display:                  | 6-digit 7-segment red LED display;<br>14 mm high [0.551"]                      |
| Data backup:              | EEPROM   |
| Housing:                  | dimension 96 x 48 mm [3.78 x 1.89"]<br>according to DIN 43 700; RAL 7021, grey |
| Polarity of Inputs:       | programmable, npn or pnp for all inputs  |
| Input resistance:         | approx. 5 kΩ   |
| Counting frequency*:      | 60 kHz, can be damped to 30 Hz. For position display max. 25 kHz               |
| Minimum reset pulse time: | 5 ms   |
| Display range timer:      | 0.001 s ... 999999 h   |
| Weight:                   | approx. 150 g [5.291 oz]   |

\*for further specifications please refer to the manual

### Block diagram:



### Order code:

**6.544.01X.XX0**

Output  
1 = Optocoupler output  
2 = No output\*

Input switching level  
0 = Standard level\*  
A = 4 ... 30 V DC level

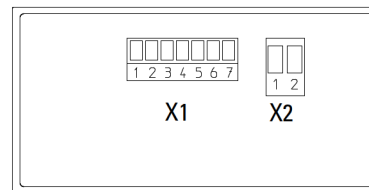
Voltage supply  
0 = 90 ... 260 V AC\*  
3 = 10 ... 30 V DC\*

Further stock model  
6.544.011.000

\* standard stock model

|  |  |
|--|--|
| Input switching level (standard version):    | DC-version<br>low: 0 ... 0.2 [0 ... 0.008"] x UB [V DC]<br>high: 0.6 x [0.024"] UB ... 30 V DC                       |
|  | AC-version<br>low: 0 ... 4 V DC<br>high: 12 ... 30 V DC  |
| Input switching level 4 ... 30 V DC version: | low: 0 ... 2 V DC<br>high: 4 ... 30 V DC   |
| Voltage supply for sensors:                  | 24 V DC ±15 %/100 mA at AC-versions  |
| Accuracy:                                    | tachometer: <0,1 %<br>timer: < 50 ppm  |
| Ambient temperature:                         | -20 ... +65 °C [-4 ... 149 °F] non condensing  |
| Storage temperature:                         | -25 ... +70 °C [-13 ... 158 °F]  |
| Altitude:                                    | up to 2000 m   |
| EMC:   | Emitted interference: EN55011 Class B<br>Immunity to interference: EN61000-6-2                                       |
| Device safety:                               | design to: EN61010 Part 1<br>protection Class: 2<br>application area: Soiling Level 2<br>protection: IP65 from front |

### Connections:



### Connection: X2:

| Pin | AC-version      | DC-version     |
|-----|-----------------|----------------|
| 1   | 90 ... 260 V AC | 0 V DC (GND)   |
| 2   | 90 ... 260 V AC | 10 ... 30 V DC |

### Connection X1:

| Pin | AC-version                   | DC-version |
|-----|------------------------------|------------|
| 1   | Optocoupler-output Emitter   |            |
| 2   | Optocoupler-output Collector |            |
| 3   | Set                          |            |
| 4   | INP B                        |            |
| 5   | INP A                        |            |
| 6   | GNDout                       | n.c.       |
| 7   | +24 Vout                     | n.c.       |

### Delivery specification:

Digital display  
Mounting clip  
Gasket

2 screw terminals  
Multilingual operating instructions

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Digital display  
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