

# Technical Information



- MCI 60
  - MCI 84
  - MCI 96
  - MCI 128
- 

The **Preh MCI** series are space saving, high quality, keyboards providing 60, 84, 96 and 128 key positions, which can be configured and programmed to meet customized needs. The **MCI96** and **MCI128** are also available with a programmed alphanumeric layout.

The MTF technology protects this keyboard against dust and splash water. The universal, modular design of these compact keyboards permits easy adaptation to meet specific system requirements and

independent selection of optional modules. The magnetic card reader (MSR) and keylock are available for all MCI model keyboards. The smart card reader, micro joystick and touch pad are available only for the MCI96 and MCI128 models.

The data from the MSR and keylock is transmitted over the keyboard interface. The touch pad (only when keyboard has PS/2 interface) and smart card reader data is transmitted separately.

All configurable key positions can be populated with your

choice of single, double, and quadruple keys or with dead tiles, which disable a position.

Key values are assigned by programming the keyboard via the **Preh WinProgrammer** software, and can be rewritten or erased as often as desired.

The **MCI series** offer both PS/2 and USB interface and are compatible with all common operating systems, such as DOS, WINDOWS, UNIX, OS/2, LINUX, etc. No drivers are required.

MCI 128 with Keylock and MSR



## Optional Features

### Magnetic Stripe Reader (MSR)

The MSR works with all magnetic cards. The MSR data is transmitted over the keyboard interface. All information on the card is read.

- **Bi-directional MSR:** magnetic cards can be swiped in either direction.
- **MSR Tracks:** 3 tracks, including the ability to read drivers license format AAMVA and CADL.
- **Expected Magnetic-head life:** 500,000 passes.
- **Error rate:** less than 0.5%.
- **Power consumption:** less than 9mA.
- **Status LED:** provides confirmation of a correct read.
- **Headers and terminators:** are programmable.
- **Complaint with:** ISO 7810, ISO 7811, ISO 7812, and ISO 7813.

### Keylock

- **5 position**
- **Headers and terminators** are programmable

- **IP-54 rating** for dust and liquid protection.
- **Lifetime:** 20,000 maneuvers
- **Resistance of the stops** 10 kg/cm
- **Drive couple** <1.5 kg/cm

### Touch Pad

A touch pad could be installed in a 3x4 key position at any corner. Saves space and is rugged enough for POS use. Allows mouse movement simply by dragging a fingertip across the surface. Works as any standard mouse; no additional drivers are necessary.

- Fully compatible with standard Windows 95, 98, NT 4.0, 2000, XP and Linux drivers.
- Capable of meeting NEMA-4 requirements.
- EMI tolerant.
- Capacitive-sensing technology.
- Only available on **MCI 96** and **MCI 128**

### Smart Card Reader

- **Current consumption:** 60mA.
- **Interface:** USB or Serial.

- **Application Interface:** PC/SC, OCF and CT-API.
- ISO 7816 and EMV 2000 compatible.
- CAC compatible.

### Micro joystick

Operates as a cursor of a mouse (it can be manipulated 360 degrees). **Available only on special order basis**

- **Sense method:** Capacitance sense
- **Operation life:** Leaning action 500,000 cycles, push action 500,000 cycles

### Drivers and Tools:

- OPOS driver for MSR, keylock and Keyboard.
- JavaPOS driver (Windows and Linux) for MSR, keylock and Keyboard.
- Programming tools for Windows and DOS.

### Programming via the Preh WinProgrammer.

- User-friendly interface.
- Key assignments can be made available, edited and copied to a file.
- 128 programmable levels.



## Additional Modules

	MSR	Keylock	SmarCard Reader	Touch Pad	Micro joystick	Alphanumeric Layout	USB – PS/2 Interface
MCI128	✓	✓	✓	✓	✓	✓	✓
MCI96	✓	✓	✓	✓	✓	✓	✓
MCI84	✓	✓					✓
MCI60	✓	✓					✓

✓ Option available

## Technical Data

### Mechanics

#### Housing

- **Dimensions:**  
See page 6
- **Color:** gray-white (similar to RAL 9002) and black.

#### Keys

##### Key spacing:

19mm

##### Actuation travel:

3,5 mm

##### Actuation force:

0,6 N

##### Impact stability:

10 N, 1 min.

##### Lifetime:

3 million cycles per key

##### Bounce Time

5ms max.

##### Switching load

30V max/ 20mAh max.

### Contact Resistance

800 ohm max.

### Colors:

- Grey-white.
- Black.
- Additional colors on request.

### Environment protection

IP 54

### Electronics

#### Supply voltage

+ 5 V ± 5%

#### Current consumption

Max 50 mA

#### Interface

USB (PS/2 adaptor included).  
Hard-wired PS/2 interface available upon request.  
Minimum order quantities apply.

**Auto repeat** All keys, repeat frequency and delay time are programmable.

#### 4 Status LEDs

- Caps Lock
- Scroll Lock
- Num Lock
- MSR status

#### Buzzer

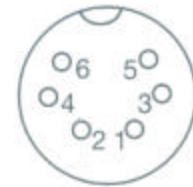
Generates acoustic signals (key click).

#### PS/2 socket

##### Assignment

(6 Pole Mini-Din connector)

- 1 Data
- 2 NC
- 3 GND
- 4 +5V
- 5 Clock
- 6 NC
- Shielding



## ESD/EMC/EMV

CE Approval

## Emissions

EN55022

FCC Subpart 15, Class A

## Interface Immunity

- Electrostatic discharge immunity according to EN 50082-1, resistance limit 8kv (air discharge).
- Radiated, radio-frequency electromagnetic field immunity, severity of test 3 V/m.

## Temperature Ratings

### Operational Temperature

0° C to 50° C

### Air Pressure

700 hPa to 1060 hPa

### Relative Humidity

5% to 93%

### Climatic Class

700 hPa to 1060 hPa

### Storage and Transportation

-40°C to 60°C

## Climatic class

DIN-IEC 68, part 1, appendix A

## Materials Surfaces

Housing: *ABS*

Guide Frame: *Polystyrol*

Switching Membrane: *Polyester*

*Polyester*

Base Plate: *Steel Zinc plated*

Spring Elements: *Elastomer*

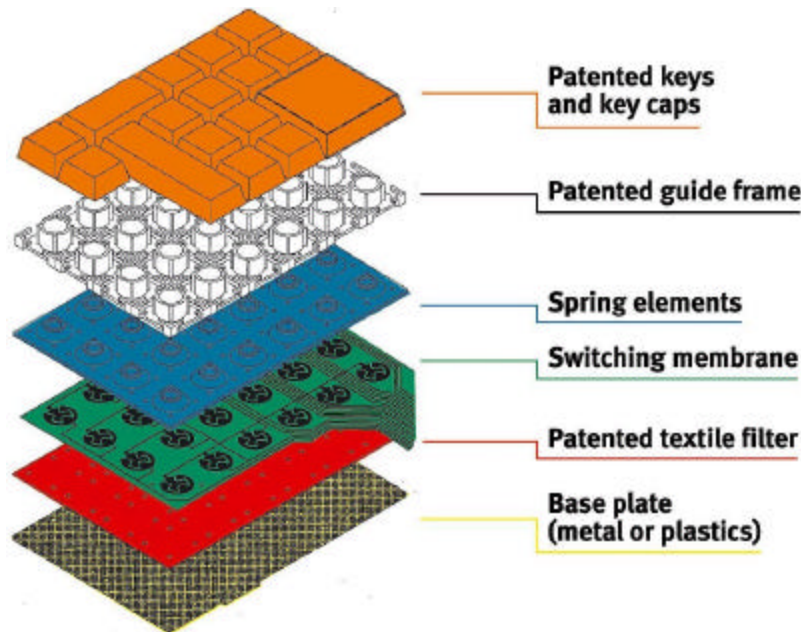
Textile filter: *Trevira*

Keys and Keycaps: *PBT/POM/PC*

*PBT/POM/PC*



## Patented long life Keypad Technology



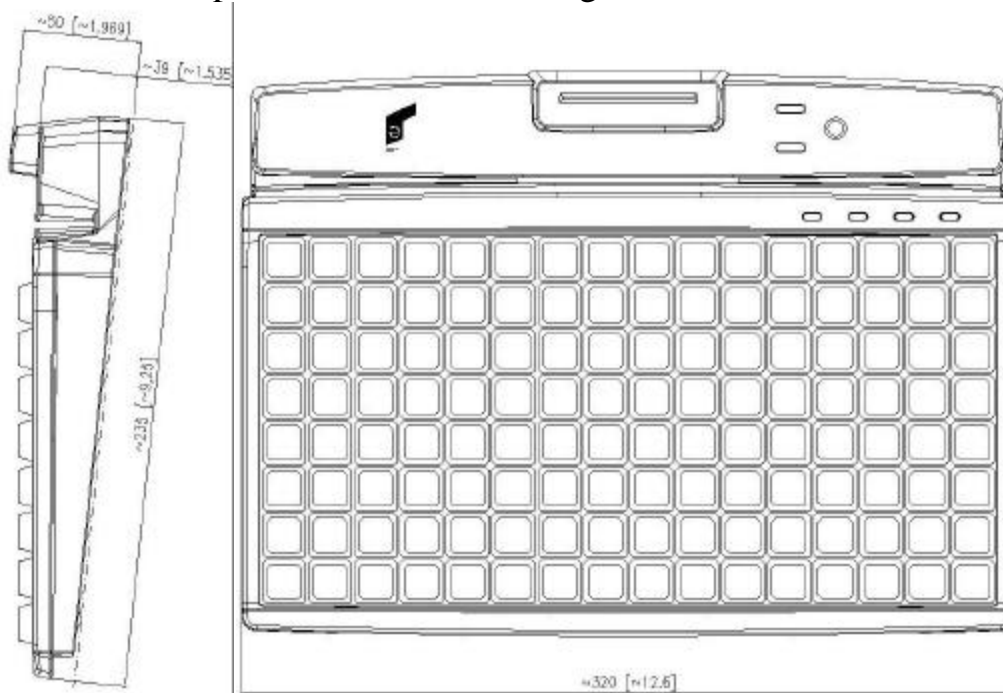
Preh Electronics Inc.  
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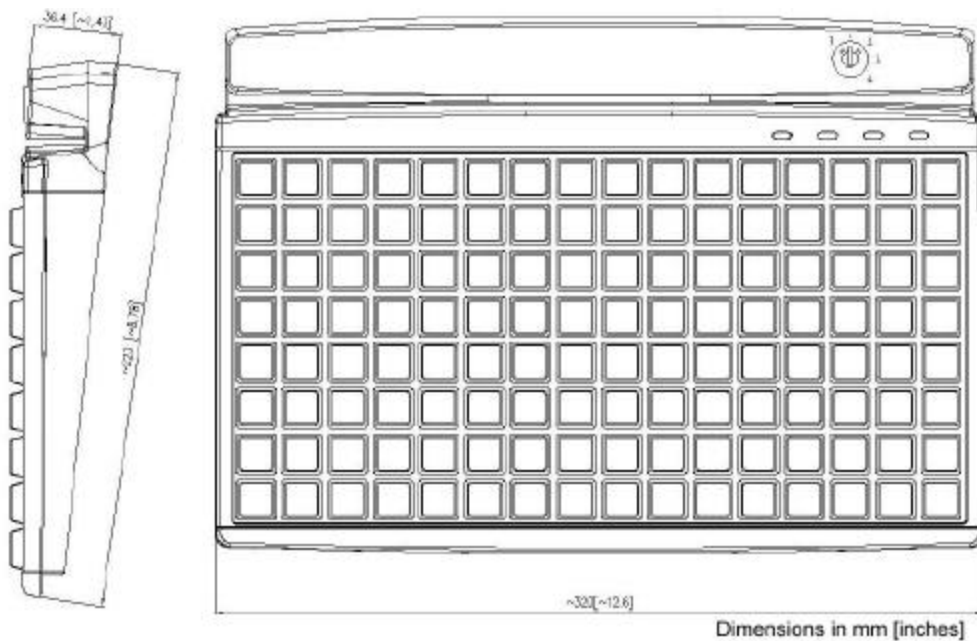
## Dimensional Drawings

Dimensions in mm (inches)

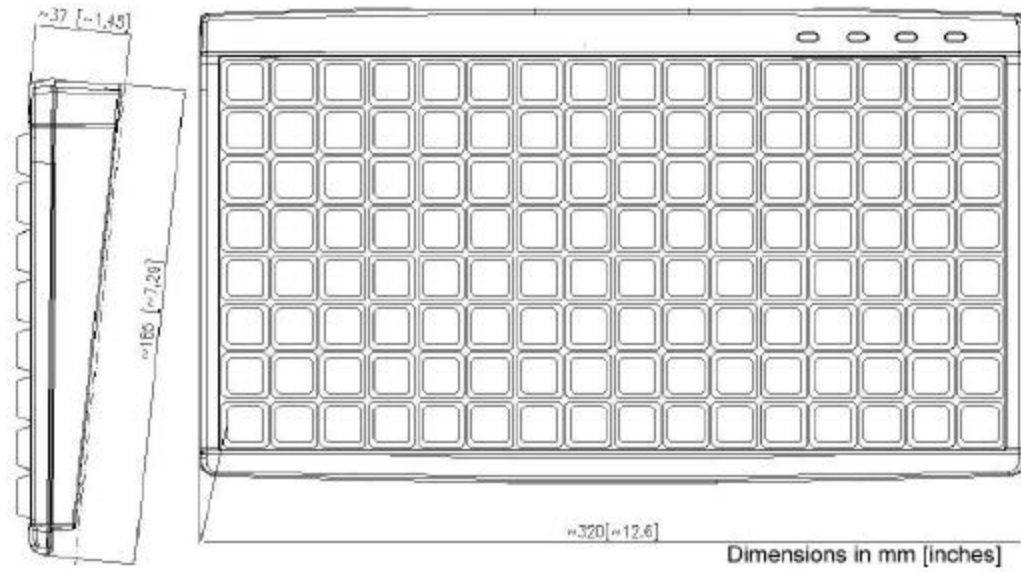
MCI 128 Full option model - E3 Housing



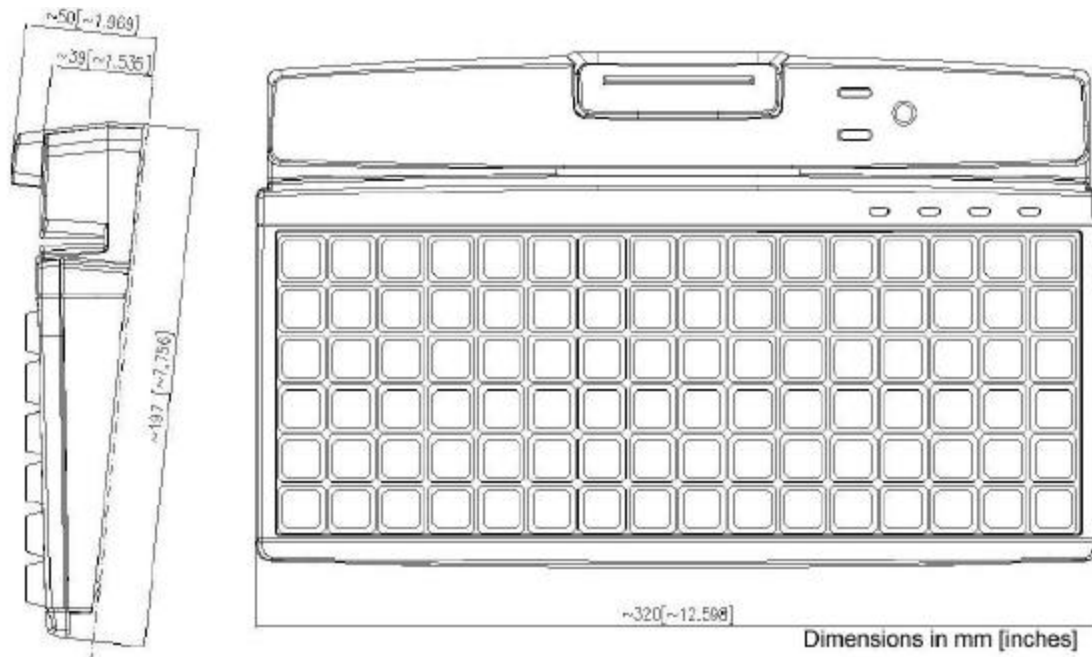
MCI 128 (MSR and keylock) – E2 Housing



### MCI 128 - E1 Housing



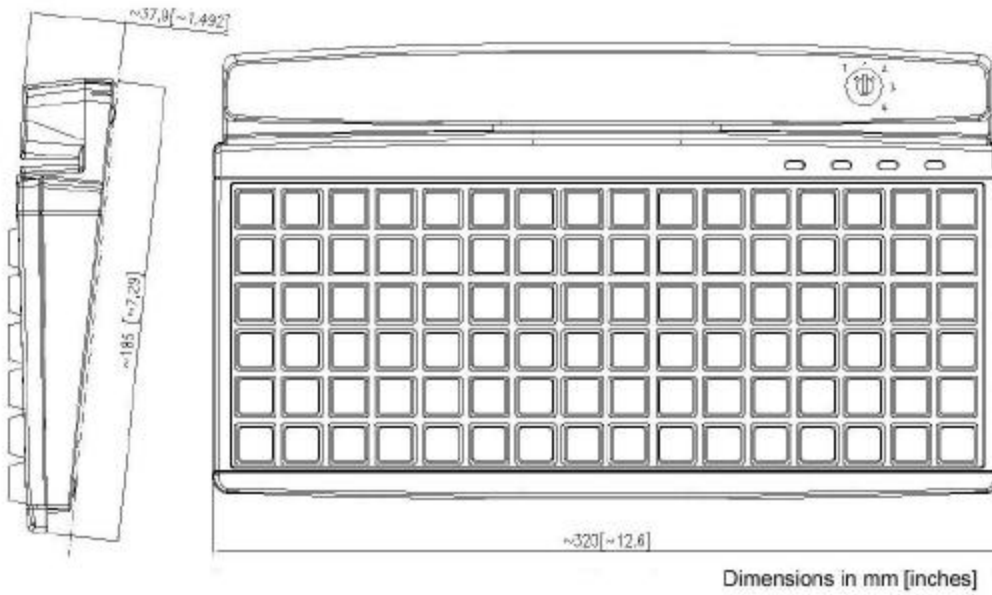
### MCI 96 Full option model - E3 Housing



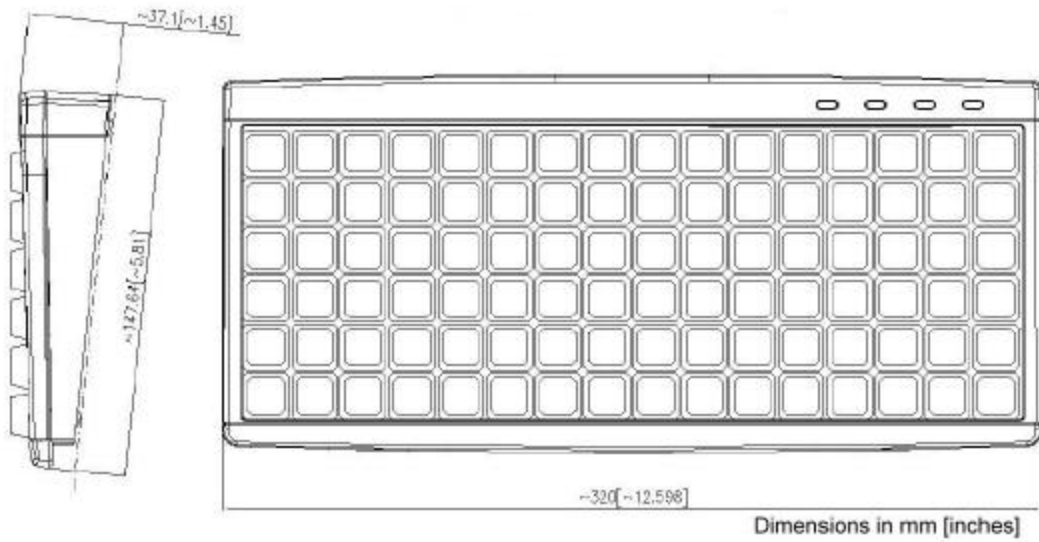
# MCI 96 (MSR and keylock) – E2 Housing



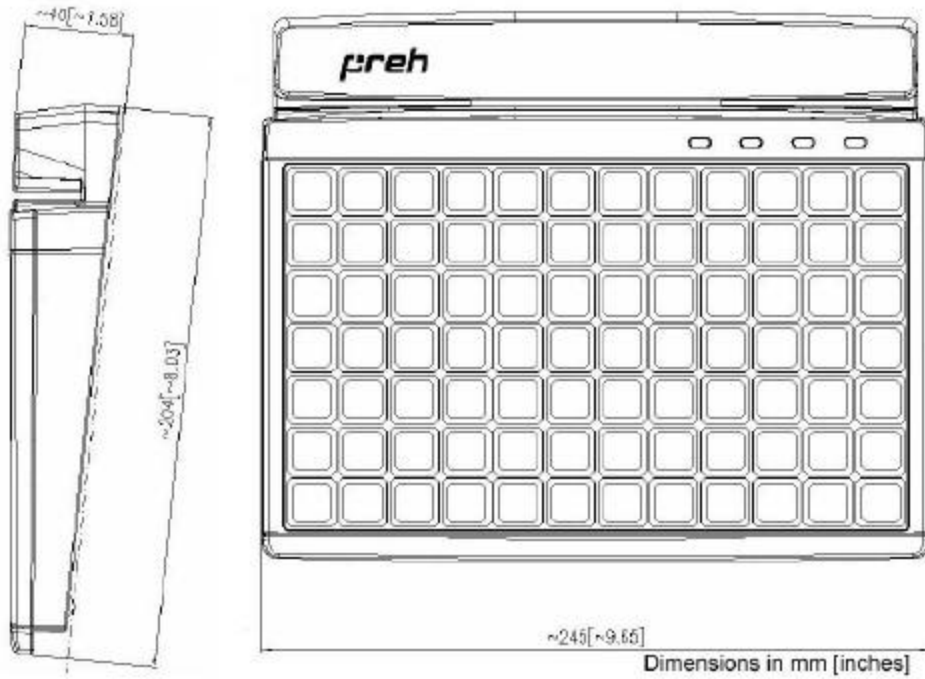
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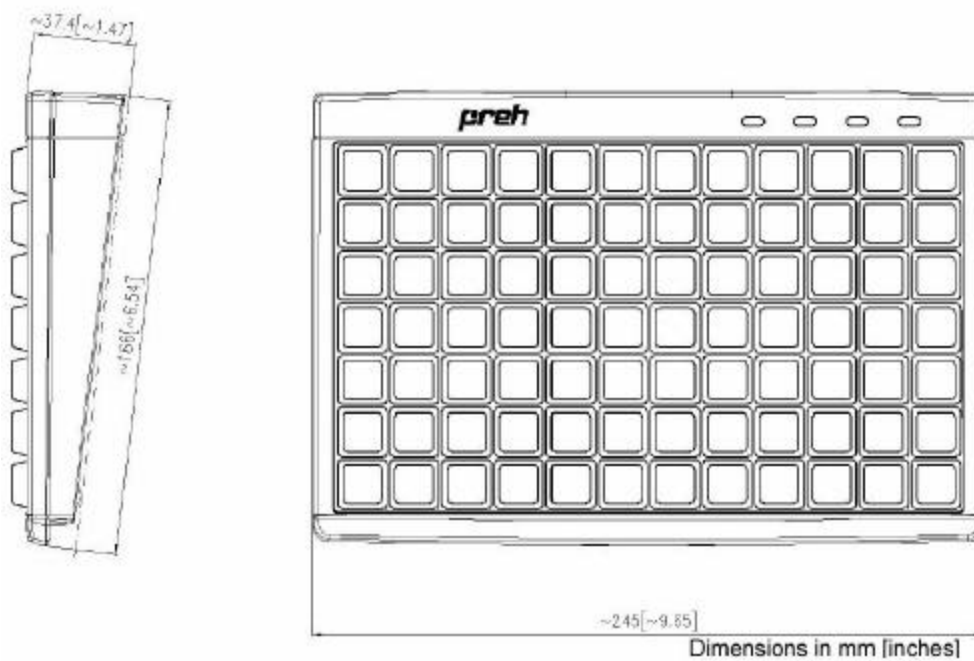
# MCI 96 - E1 Housing



MCI 84 (MSR and keylock) – E2 Housing



MCI 84 - E1 Housing





### MCI 60 (MSR and keylock) – E2 Housing

