

**WEIGL** 



**Weigl**  
**WEMC-KEY232**  
Version 1.05

**Instruction Manual**



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## 1 Important Information and Safety Tips

The Weigl WEMC-KEY232 is an electronic device that can fail, in part or in full despite careful testing. Therefore, it must not be used in applications where personal safety could be at risk due to the malfunction of the device.

Weigl equipment is generally not designed, intended, authorized or warranted to be suitable in life support applications, devices, systems, or other critical applications. Inclusion of Weigl equipment in such applications is understood to be the full risk of the customer.

Weigl assumes no liability for applications assistance, customer produced design, software performance or infringements of patents or copyrights.

Weigl does not warrant or represent that any license, either expressed or implied, is granted under any patent right, copyright, mask work right, or other intellectual property right of Weigl covering or relating to any combination, machine or process in which Weigl products or services might be or are used. The WEMC-KEY232 must not be directly connected to voltages greater than 24V.

It is important to read this manual and familiarize yourself with the function of the WEMC-KEY232 before working with the device. Failure to do so may cause damage to the WEMC-KEY232 or connected components.

Only experienced personnel should connect the WEMC-KEY232 to other systems that comply with required safety regulations.

External power sources connected to the WEMC-KEY232 must not exceed the maximum allowable voltage (24V) and must be protected accordingly. In addition, correct polarity must be utilized to avoid damage to the WEMC-KEY232. Failure to do so will void the warranty and Weigl Works, LLC or Weigl will not be liable for any resulting damages.

When connecting solenoids, a freewheeling diode for each solenoid is required. They should be mounted as close as possible to the solenoid. Please refer to the wiring diagram in the manual. If this is not observed, the output driver will be destroyed and will void the warranty.

The WEMC-KEY232 should not be exposed to extreme heat or humidity before, during or after installation. If the device is used for outdoor installations, it must be protected with proper weather proofing enclosures. Direct sunlight may also lead to overheating.

Damages caused by improper handling, improper wiring or improper use will void warranty and Weigl Works, LLC or Weigl-EM will not be held liable.

Weigl tried in all conscience to ensure, that the information in this manual is accurate. Please note that all information is subject to change.

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## 2 Warranty

The Weigl WEMC-KEY232 has a warranty period of 24 months from the original date of purchase. The warranty applies only to the original purchaser and is non-transferable.

The warranty covers parts that have been determined defective due to manufacturing or material defects and will be replaced or repaired. The replaced or repaired part(s) do not affect the warranty and the warranty will still expire 24 months from the original date of purchase. Damaged parts will not be returned. Any further legal claims, in particular those for compensation for direct or indirect damages are excluded from the warranty.

The customer will pay all shipping costs to and from Weigl Works, LLC or Weigl should parts be repaired or replaced in the WEMC-KEY232. The transport of the ProCommander is at the risk of the customer.

If a repair order was issued, but no fault could be detected, we reserve the right to charge service and diagnostic fees.

Excluded from the warranty are:

- ✓ Damage from natural causes such as fire, lightning, water damage, etc.
- ✓ Damage caused by errors in installation

## Warranty

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- ✓ Damage caused by tampering with the device by persons not expressly authorized by Weigl Works, LLC or Weigl to do so
- ✓ By not following the instructions (i.e. connection to the wrong voltage or incorrect input or output circuit)
- ✓ Damage caused by negligent handling, misuse, or improper use of WEMC-KEY232.



### 3 Introduction

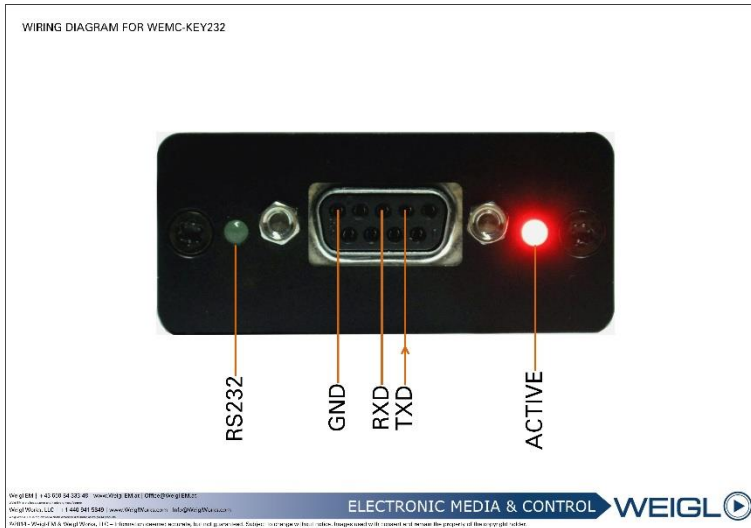
The WEMC-KEY232 is a freely programmable [RS232](#) interface. Up to sixteen matrixed connection or eight direct connections can be utilized. Using a terminal program for each key input can be any serial command to be programmed. Several commands, separated as required by wait commands can be assigned to a switch input. This allows, for example a button on a video projector to be turned on automatically and after a programmable delay the projector is turned off again.



## 4 Pin Assignment

### 4.1 RS232 (9-pin D-SUB connector)

The pin assignments of the serial interface correspond to the assignment of the serial connector of a computer. To connect to a computer is therefore achieved through a null modem cable (2.3) to be used.



A regular blinking red **ACTIVE LED** indicates the proper functioning of the device. **RS232** The green **LED** lights up when a serial command is sent or received.

## 4.2 Keyboard (9-pin D-SUB connector or Phoenix Connector)

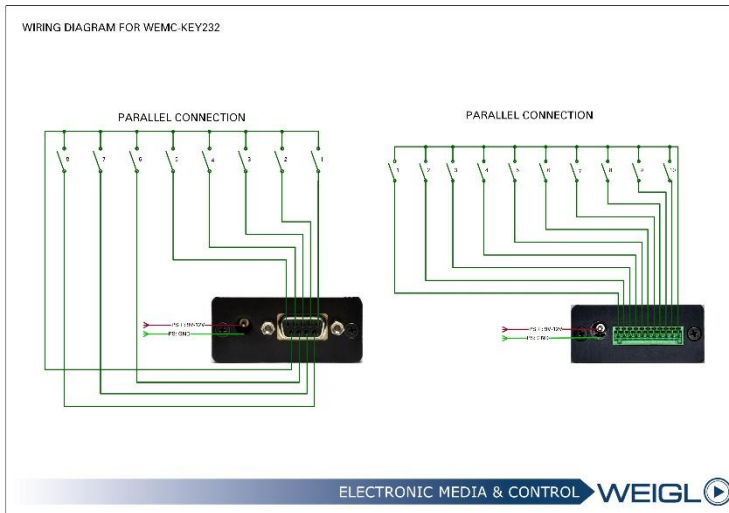
There are two possible options to connect button:

- ✓ Parallel Wiring
- ✓ Matrix Cabling

### 4.2.1 Parallel Wiring

The parallel wiring to the WEMC-KEY232 with a [D-SUB](#) connector to connect up to 8 buttons and WEMC-KEY232 with a Phoenix connector up to 10 buttons. The parallel wiring is used, if the opportunity should be given to press several buttons at once.

### Parallel wiring diagram for D-SUB and Phoenix



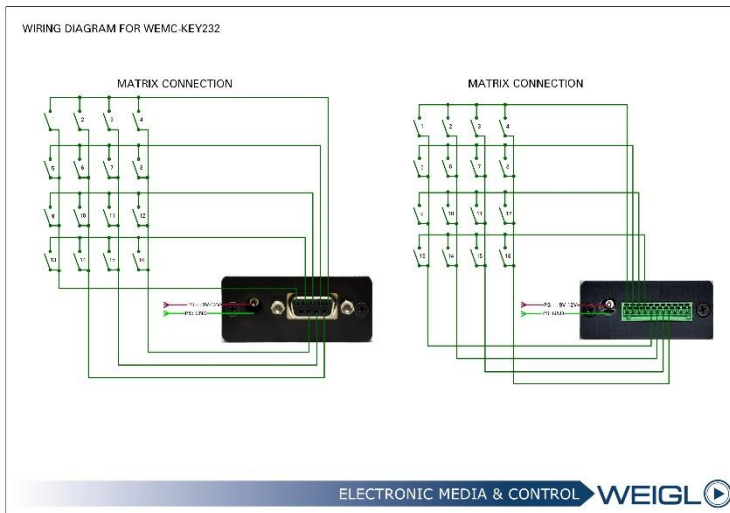
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87654321PS +: 9V-12VPS: GNDPS +: 9V-12VPS:  
GND34567891012

## 4.2.2 Matrix Cabling

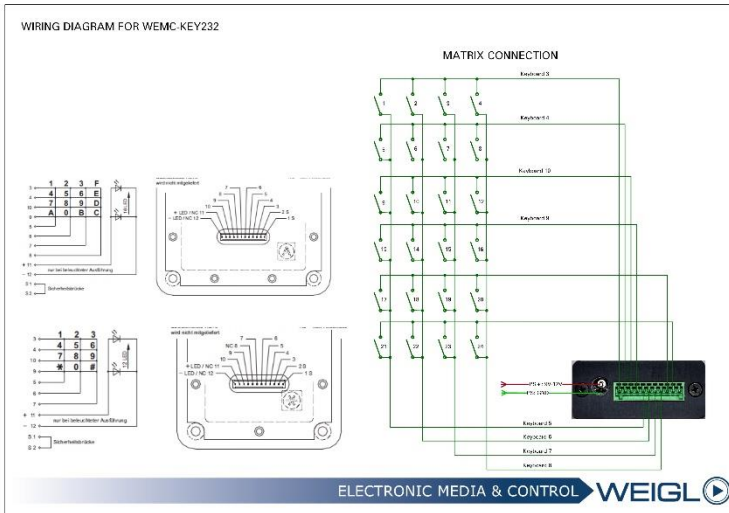
In the matrix wiring configuration the WEMC-KEY232 can utilize up to 16 inputs. In the matrix wiring multiple simultaneous actuated contacts cannot be clearly evaluated.

### Matrix wiring diagram for D-SUB and Phoenix



# Pin assignment

## Wiring diagram for Matrix Cabeling for 24 keys



## 5 Programming

The programming of the WEMC-KEY232 is via a terminal program. The command sequences can be prepared using the terminal program directly to the WEMC-KEY232, or be transmitted in a text file.

### The following commands are available

Befehl	Name	Parameter	Beispiel	Info
!/?#	Info Abfrage		!/?#	Statusanzeige: Mit diesem Befehl kann die aktuelle Konfiguration abgefragt werden.
!scc..#	Set RS232 Configuration	RS232-ID: 1; Configuration: Baud: 1200, 2400, 4800, 9600, 19200, 38400, 57600, 115200; Daten-Bits : 5- 8; Parity: Even, Odd, No parity; Stopbits: 1-2.	!scc1 = 9600,8 N1#  !scc1 = 115200 ,7E2#  !scc1 = 57600, 8O1#	RS232: 9600Baud, 8 Datenbits, Kein Parity, 1 Stopbit. RS232: 115200Baud, 7 Datenbits, Gerade Parity, 2 Stopbits. RS232: 57600Baud, 8 Datenbits, Ungerade Parity, 1 Stopbit.
!ewt...#	Wait	Zeit in Sekunden; Bereich: 1 -- 65535 Sekunden	!ewt10#  !ewt65000#	Wartezeit: 10 Sekunden Wartezeit: 18 Stunden, 3 Minuten, 20 Sekunden.
!ekm..#	Key mask	Key Maske, linksbündige Auswertung	!ekm11111111 11111111#	Alle 16 Eingänge sind freigeschaltet.

## Programming

			!ekm1011#  !ekm00000000 00000000#	Eingang 1,3 und 4 ist freigeschaltet, 2 ist gesperrt. Die übrigen Eingänge werden nicht beeinflusst. Alle 16 Eingänge sind gesperrt.
!i1c!esd ....#	Input x close	x: Eingangs ID von 1 bis 16; gefolgt von weiteren Kommandos	!i1c!esd:"Hello World!" 0x0D !ewt:100!esd:"Hello World 2!" 0x0D#	Siehe Beschreibung auf den folgenden Seiten.
!i1o!esd ....#	Input x open	x: Eingangs ID von 1 bis 16; gefolgt von weiteren Kommandos	!i1o!esd:"Hello World!" 0x0D !ewt:100!esd:"Hello World 2!" 0x0D#	Siehe Beschreibung auf den folgenden Seiten.
!i1t!esd ....#	Input x toggle	x: Eingangs ID von 1 bis 16; gefolgt von weiteren Kommandos	!i1t!esd:"Hello World!" 0x0D !ewt:100!esd:"Hello World 2!" 0x0D#	Siehe Beschreibung auf den folgenden Seiten.
!fce#	Clear EEProm		!fce#	Löscht alle Informationen, die im EEPROM gespeichert sind.
!fkm..#	Set KeyMode	p: parallel  m: matrix	!fkm:p#  !fkm:m#	Setzt den Eingabemodus für eine parallele Verkabelung. Setzt den Eingabemodus für eine 4x4 Tastaturmatrix.



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**Example of a configuration file**

```
! fce #

! I1C! esd: 0xFF 0xAA 0xBB „1test1“ 0xCC
0xDD!ewt:10!esd:0x02 „Test2“ 0x0D 0x0A #

! i2c! esd: „Hello World_2“ #

! I3C! esd: „Test3“ #

! i4c! esd: „Hello World_4“ #

! i5c! esd: „Test5“ #

! i6c! esd: „Hello World_6“ #

! i7c! esd: „test7“ #

! i8c! esd: „Hello World_8“ #

! i9c! esd: „Test9“ #

! i10c! esd: „Hello World_10“ #

! i11c! esd: „test11“ #

! i12c! esd: „Hello World_12“ #

! i13c! esd: „test13“ #

! i14c! esd: „Hello World_14“ #
```

## Programming

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! i15c! esd: „Test15“ #

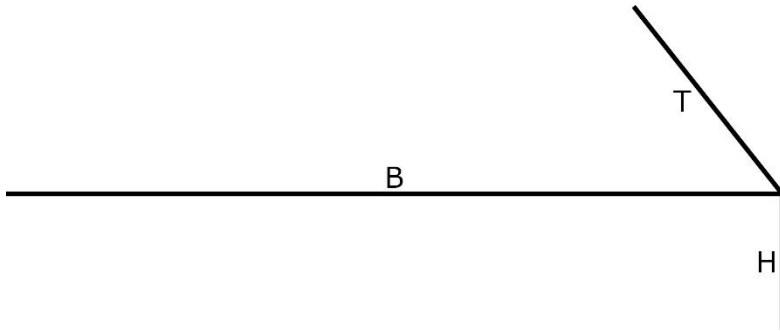
! i16c! esd: „Hello World\_16“ #

! fkm: m #

! SCC1 = 115,200.8 N1 #

## 6 Appendix

### 6.1 Measurements



H:	24 mm	0.94 in
B:	55 mm	2.17 in
T:	59 mm	2.32 in



0,06 kg

0.15 lb