Input - extension

CamCon DC92/I

Digitronic Automationsanlagen GmbH

For your attention

This instruction manual relates to the CamCon DC92/I from 8/1997. The company Digitronic Automationsanlagen GmbH reserves the right to make changes which present an improvement of the quality or functionality of the device without prior notice. The instruction manual was created with great care, although it may not be error-proof. We would be grateful for any communication relating to any errors you may have found.

UP-date
You can also obtain this instruction manual on the Internet at **http://www.digitronic.com** in the latest version as PDF file.

Qualified personnel
This device may only be started and operated by qualified staff. By qualified we mean personnel who are entitled to handle, to earth and to lable devices, systems and power circuits in accordance with the technology safety standards.

Liability
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(2) The above mentioned limits to liability do not apply to insurance of named characteristics and damages which were caused deliberately or through negligence.

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Note:	We have examined the devices of the CamCon series for year 2000 compatibility and have not found any adverse effects on any functions.
Note:	CamCon is a registered trademark of the company Firma Digitronic Automationsanlagen GmbH.
Note:	The devices of the CamCon series comply with the standards for electromagnetic compatibility: EN 55011, EN 55022, EN 55024 Part 2, EN 50082 Part 2, ENV 50140, VDE 0843 Part 2, VDE 0843 Part 4, VDE 0871, VDE 0875 Part 3 ("N"), VDE 0875 Part 11, VDE 0877 Part 2, IEC 801 Part 3, IEC 801 Part 2, IEC 801 Part 4, IEC 801 Part 5.

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Content

1. Introduction

The CamCon DC92/I module is used as an input extension for the electronic cam-switch unit of the CamCon series. Each CamCon DC92 module has got 32 inputs, it can be connected by means of the external interface of the CamCon DC50, 90 and 115 -DICAM. By a series connection of several CamCon DC92 modules it is possible to increase the total number of inputs at one Camcon to at maximum 200 inputs. Thus, at a CamCon DC51 having 16 inputs another 5 CamCon DC92 modules could be connected. With 5 CamCon DC91/IO modules, for instance, you have got additionally 160 inputs at your disposal.

2. Assembling

The CamCon DC92 input extension module is locked on an EN carrier bar in the switch cabinet. The earthing clamps shall be connected to the central earth connection point of the mounting panel on the shortest possible way. All cable connections shall be established in a dead condition! Each CamCon DC9X module shall be connected with the supply voltage which amounts to 24VDC +/-20 %. The external interface of the CamCon DC50,90,115 and/or 1756-DIAM becomes connected via a cable of type: KK91/IO-XX with the 9pol. D Sub pin plug **"external inter. in"** at the CamCon DC92 module connected. Each further CamCon DC92 oder DC91 module is attached with a cable of the same type to the plug **"external inter out"**. The data line of the CamCon DC9X/IO modules are connected to each other via optical-couplers, thus being free of potentials.
For monitoring the data exchange you should program the safety output of the CamCon at the last CamCon DC91/IO module, because this will switch off in the case of an interruption of the cable connection.

3. Status LED

The CamCon DC91 module has got 2 additional status LED (see chapter 4. Dimensions).

LED 1   Indicates to supply voltage.
LED 2   indicates that for the moment no data exchange via CamCon and the DC92 is aktiv. The possible causes are: the cable length stopped at the CamCon exceeds the permissible border of 300 meters, the CamCon is switched off, and/or data exchange is interrupted (cable broken).

4. Dimensions

The following carrier rails may be used to adjust the case:

NS 35/7,5 (DIN 50022)
NS 35/15 (DIN 50022)
NS 32 (DIN 50035)
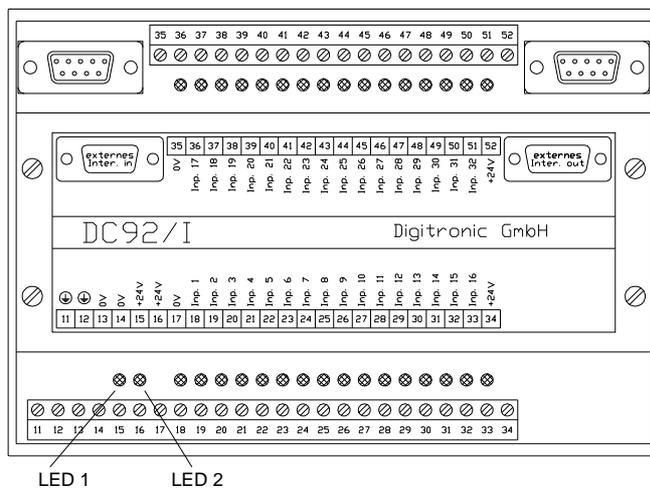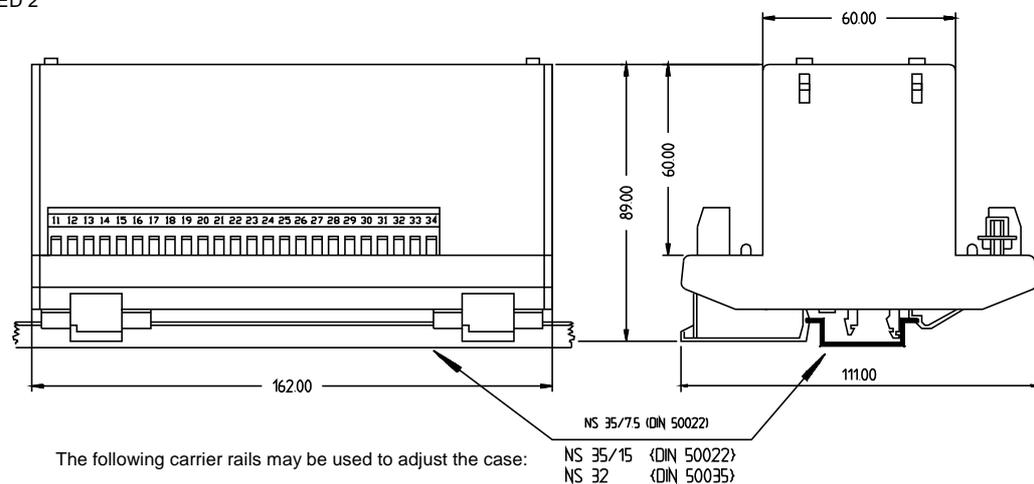
## 5. Electrical connections

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5.1. Clamp allocation
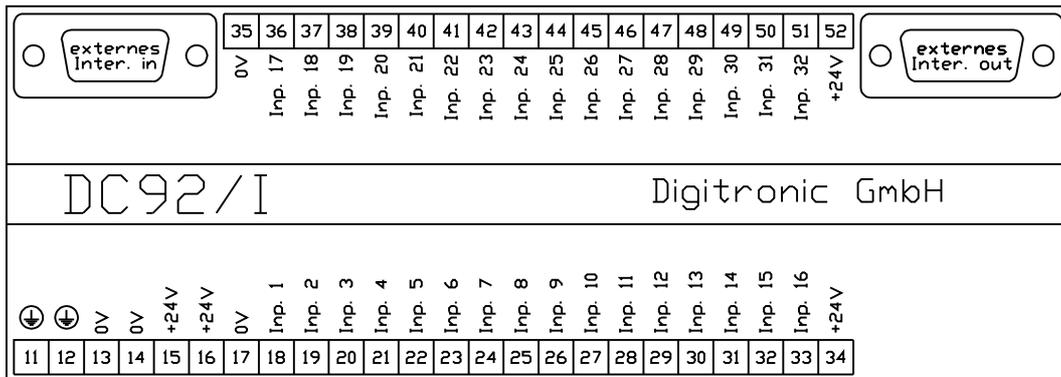
5.1.1. Clamp allocation of power supply

Clamp   11:   Earth connection/shielding
Clamp   12:   Earth connection/shielding
Clamp   13:   0V
Clamp   14:   0V
Clamp   15:   +24V DC Power supply
Clamp   16:   +24V DC Power supply

5.1.2. Clamp allocation of the inputs

Clamp   17 + 35:   0V of the input, connected to Clamp 13 and 14.

Clamp			Clamp		
Clamp	18:	Input 1	Clamp	36:	Input 17
Clamp	19:	Input 2	Clamp	37:	Input 18
Clamp	20:	Input 3	Clamp	38:	Input 19
Clamp	21:	Input 4	Clamp	39:	Input 20
Clamp	22:	Input 5	Clamp	40:	Input 21
Clamp	23:	Input 6	Clamp	41:	Input 22
Clamp	24:	Input 7	Clamp	42:	Input 23
Clamp	25:	Input 8	Clamp	43:	Input 24
Clamp	26:	Input 9	Clamp	44:	Input 25
Clamp	27:	Input 10	Clamp	45:	Input 26
Clamp	28:	Input 11	Clamp	46:	Input 27
Clamp	29:	Input 12	Clamp	47:	Input 28
Clamp	30:	Input 13	Clamp	48:	Input 29
Clamp	31:	Input 14	Clamp	49:	Input 30
Clamp	32:	Input 15	Clamp	50:	Input 31
Clamp	33:	Input 16	Clamp	51:	Input 32

Clamp   34 + 52:   +24V DC for power supply of external inputs connected to Clamp 15 and 16.

Note: Clamp 15, 16, 34 and 52 are connected with each other.
Clamp 13, 14, 17 and 35 are connected with each other.
Clamp 11 and 12 are connected with each other.

5.1.3. Pin allocation of the external interface

The CamCon DC91 module has an external interface via which the data exchange with the camswitch is processed. Via the interfaceinput also the data exchange with the CamCon DC 50 i.e. DC 90 or DC115 is done. The interface output is used for the data exchange with another CamCon DC91 module. By this way of switching it is possible to switch up tio 7 CamCon DC91 module to a CamCon DC50 i.e. DC90 or DC115. A shielded 6 pole data cable with pairly wired cores is required for this purpose. the maximum wiring distance is 300 meters. As an option, distances up to 100 meters are possible. the data exchange is realised by optical couplers and therefore free of potentials. For the monitoring of the data exchange you should program the safety output of the CamCon DC50, DC90 or DC115 at the last CamCon DC91, for it will switch of if the wire is broken.

DSUB 9 male and female plug:

| Pin 1,4,7	GND							
Pin 2	TxD	+	Pin 8	CLK	+	Pin 5	RxD	+
Pin 6	TxD	-	Pin 3	CLK	-	Pin 9	RxD	-
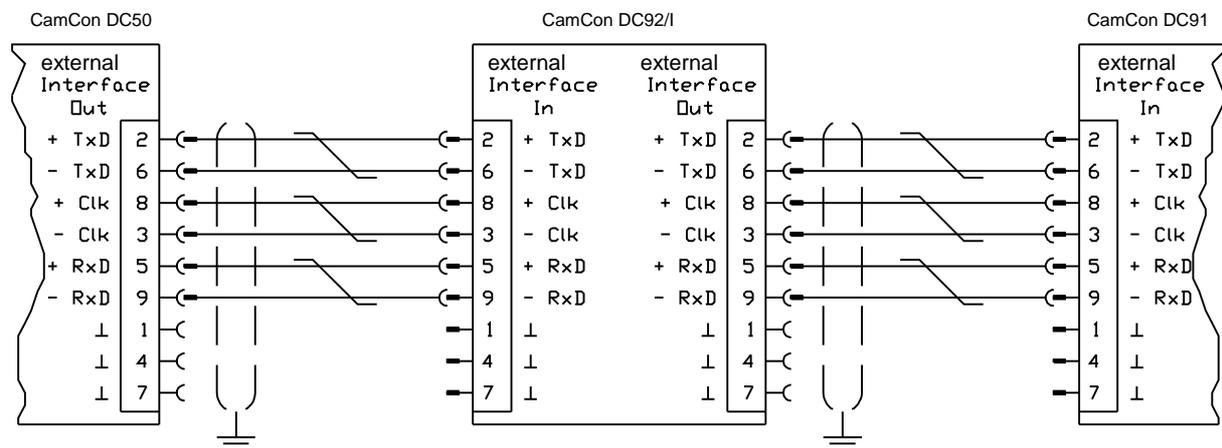
5.2. The Inputs

The CamCon DC92 Modul has got 32 inputs. These inputs function with highly active 24 V signals and are not free of potentials. For each input one Status LED shows the status.

The input resistance amounts to approx. 5.7 KOhm.

Input circuit:
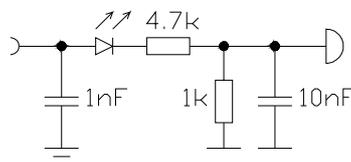
6. Technical data

Display .... 32 yellow LED for each input.
1 red LED for error messages.
1 yellow LED for power supply.

Number of inputs... 32

Length of the connecting cable
between CamCon and CamCon DC91/IO .... max. 300 m (optionally up to 1000 meters)

Supply voltage.. 24VDC ±20 %
Current consumption.. approx. 100mA.

Input resistance... ca. 5.7kOhm

Connections for:
Voltage supply.. via plug-in screw clamps IP20
Inputs .... via plug-in screw clamps IP20

Assembly.. convenient snap-on assembly; carrier bar according to EN 50 022, may be set in rows.
Dismantling .... by pulling back the snap lock.

Dimensions .... Please, refer to chapter 4. Dimensions at page 4.

International protection....................................... The housing fulfils IP20.

Operation temperature....................................... 0°C ... + 55° C

Weight.. approx. 500 g