

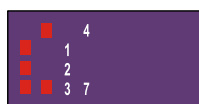
# buslink @C015



- LVDS @ctiveIO buslink with galvanic isolation
- @ctiveIO system bus extension up to 11.25m

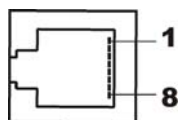
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## Pinout



LED	
1	SYNC (no valid buslink)
2	LINK Error
3	Parity Error forward (systembus)
4	LOCK (data transmission ok)
7	Parity Error backward (systembus)

\*) see notes



Pin	Signal
1	RxD +
2	RxD -
3	GND
4	GND
5	GND
6	GND
7	TxD +
8	TxD -

cable shieldin	Case
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Power	
1	24V DC
2	0V

## Attributes

### Applications:

Extension of systembus around 11.25 meter per LVDS buslink.  
You need @C015 and @C014 together for one buslink.

### Link Interface:

Highspeed LVDS bidirectional link with 1,25 GBaud

### Link Cable:

Specification: ..... CAT5e  
Shielding: ..... S/FTP  
Wire: ..... Cu 0.51 mm (AWG24)  
Type (LVDS): ..... crossover  
Length: ..... max. 11.25m  
Connectors: ..... RJ45 Hirose TM21P  
Recommended cable: ..... DRAKA UC 300 HS 24 4P

## Electrical Data

Power supply external ..... 24V DC ± 20%, see notes  
Operating Current ..... 50mA at 24V DC  
..... (only Controller, else depends from quantity of connected Modules)  
Input protection ..... 30V overvoltage, surge  
Link interface ..... LVDS bidirectional

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### System Information

System ID ..... 0x000F  
 System address space ..... 8 bit

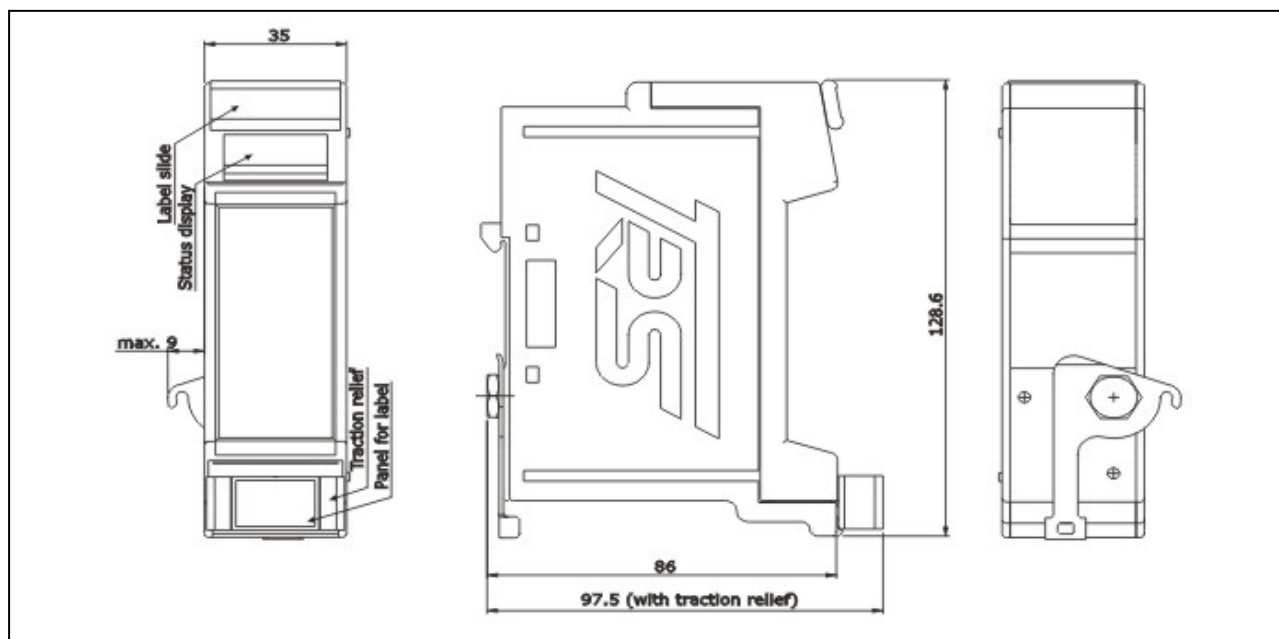
### Environmental Conditions

Electromagnetic compatibility (EMC) ..... EN 61000-4-2 (IEC-801-2) / EN 61000-4-4 (IEC-801-4)  
 Operating temperature [°C] ..... 0 .. +55  
 Storage temperature [°C] ..... -20 .. +70  
 Humidity (rel) ..... 98 % (non condensing)  
 Protection class\* ..... IP 20 (DIN 40 050)  
 \*The protection class is valid only with housing and connector installed

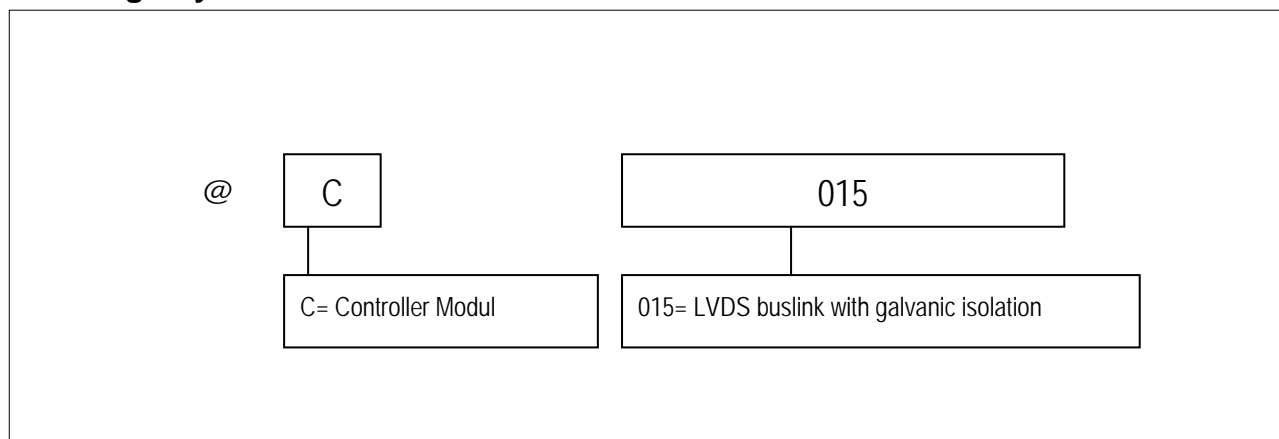
### Mechanical Data PCB

Weight ..... approx. 0.05 kg including connector  
 Dimension ..... 105mm x 80mm x 12mm

### Drawing (effective if mounted in @M housing)



### Ordering Key

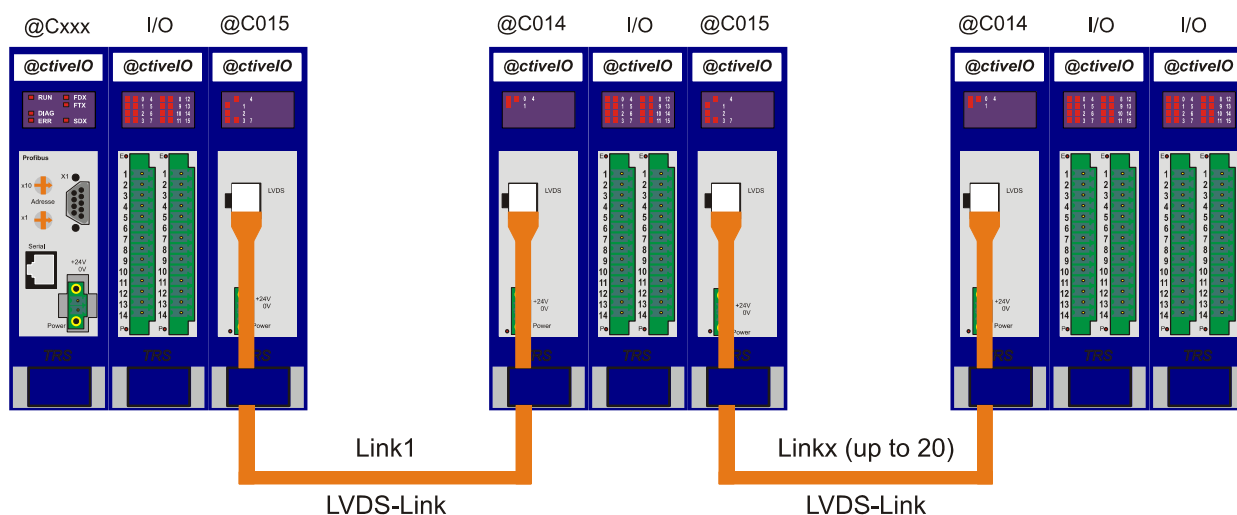


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### Example of Application

#### Connection and application of the sytembus extension



#### Installation notes for the connection cable

To ensure a failure-free functioning of the connection cable, note the following points:

- do not bend the cable (bending radius > 50mm) and do not put the cable under mechanical stress
- do not install the cable near strong electrical (230/400V power line) and magnetical fields
- all connection plugs must stuck firmly and be secured by a pull relief

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notes:

## Description of the LEDs

LED	Status	Description	
0	3,3V	ON	Power supply and +24V connection are O.K.
1	SYNC	ON	LVDS transmission chip start synchronisation, no valid data transmission possible
2	LINK Error	ON	Counter >0
3	Parity Error forward	ON	Parity error on systembus transfer in forward direction (reset with systembus reset)
4	LOCK	ON	LVDS link connection work properly
7	Parity Error backward	ON	Parity error on systembus transfer in backward direction (reset with systembus reset)

**Caution**

In SYNC state the @C015 module generates a TIMEOUT, the CPU check this state and creates a RESET-signal. So if lost LOCK, all outputs will be switched off.

**Parameter Bits of @C015**

Bit	Name	Description
0	Parameter enable	must be set high to change any function
1	not defined	
2	not defined	
3	not defined	a read access of parameter bit 3 to 0 deliver the firmware version
4	not defined	
5	close ring	after restart print before @C015 will be the last visible on systembus. Reset only by power off/on
6	not defined	
7	not defined	

**Data Bits of @C015**

Bit	Name	Description
0	error counter bit 0	each transmission error on the lvds-link increment this counter
1	error counter bit 1	
2	error counter bit 2	
3	error counter overflow	
4	parity error forward	systembus parity error occurred on the forward data line, reset with systembus reset
5	parity error backward	systembus parity error occurred on the backward data line, reset with systembus reset
6	not defined	
7	not defined	

**History**

Version	Description	Date (m/y)
01	Added: Installation notes for connection cable	12/06
02	Data Bit description and Pinout images changed	11/07