

LoRa Base Server

Technical Handbook

V 0.00

comtac AG

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1 History of this document

Date	Description
2017-04-11-Mc	First version, V0.00

Changes are added to this history when a new version has been issued.

2 Introduction

The LoRa base server a computer unit is on a Linux system is running. Depending on the application, different applications can be realized. The LoRa base has been developed to LoRa nodes on a cloud to connect server.

But also, local private installations can be realized. Any version can be realized through the internal modular construction of hardware. You can simply omit the Display board or the LoRa circuit part if not used.

The LoRa base server is available in different variants:



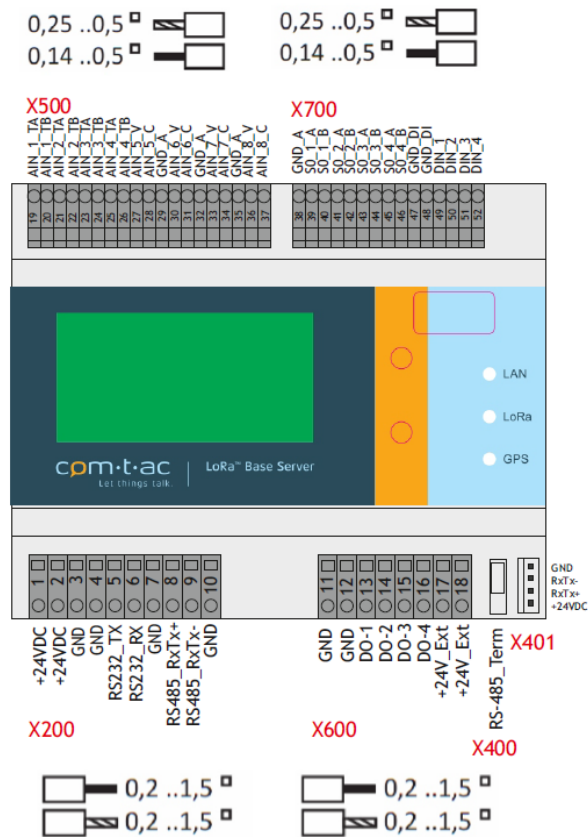
LoRa Base Server



Smart Base Server

3 LoRa Base Server

3.1 General Information's



3.2 Technical data

Parameter	Value	Note
Power supply	+24VDC	+/-10%
Power consumption	500mA	@ 24VDC max. 950mA
Operation temperature	-5°C to +45°C	
Storage temperature	-40°C to +85°C	
Operating time	Continuous	
Degree of protection	IP20	
Pollution degree	2	
Protection class	II	
Air humidity	Max. 95% r.F.	Non-condensing
Dimension	107mm x 91mm x 62mm	LxBxH
Weight	350g	
Standards	EN 60950-1 Low voltage directive 2014/35/EU RoHS II 2011/65/EU R&TTE 1999/5/EU EN 300 220-1 und -2 EN 300 440-1 EN 300 440-2 EN 50385	

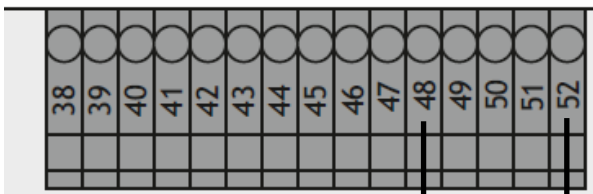
3.3 Digital Inputs X700

Parameter	Value	Note
Connection reference	X700	250-1415
Type of interface	Digital Inputs	
S_x_A/B	S0 Inputs	Output current max. 15mA
DIN_x	Digital Input	
Stripping length	8.5 mm / 9.5 mm	
Starr	min. / max.	
flexible with wire end ferrule <u>without</u> plastic sleeve	0.14mm ² / 0.5mm ²	
flexible with wire end ferrule <u>with</u> plastic sleeve	0.25mm ² / 1.0mm ²	

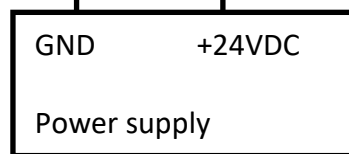
3.3.1 Connection Example DI

X700

GND_A
S0_1_A
S0_1_B
S0_2_A
S0_2_B
S0_3_A
S0_3_B
S0_4_A
S0_4_B
GND_DI
GND_DI
DIN_1
DIN_2
DIN_3
DIN_4



Switch or relay contact

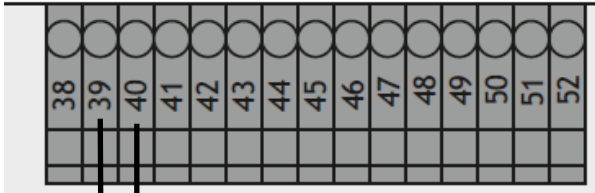


ATTENTION: GND_IO is galv. separated.
GND_IO must be with the GND + 24VDC
Power supply must be connected.

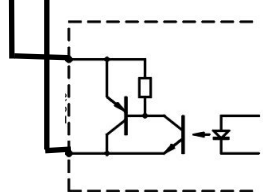
3.3.2 Connection example S0

X700

GND_A
S0_1_A
S0_1_B
S0_2_A
S0_2_B
S0_3_A
S0_3_B
S0_4_A
S0_4_B
GND_DI
GND_DI
DIN_1
DIN_2
DIN_3
DIN_4



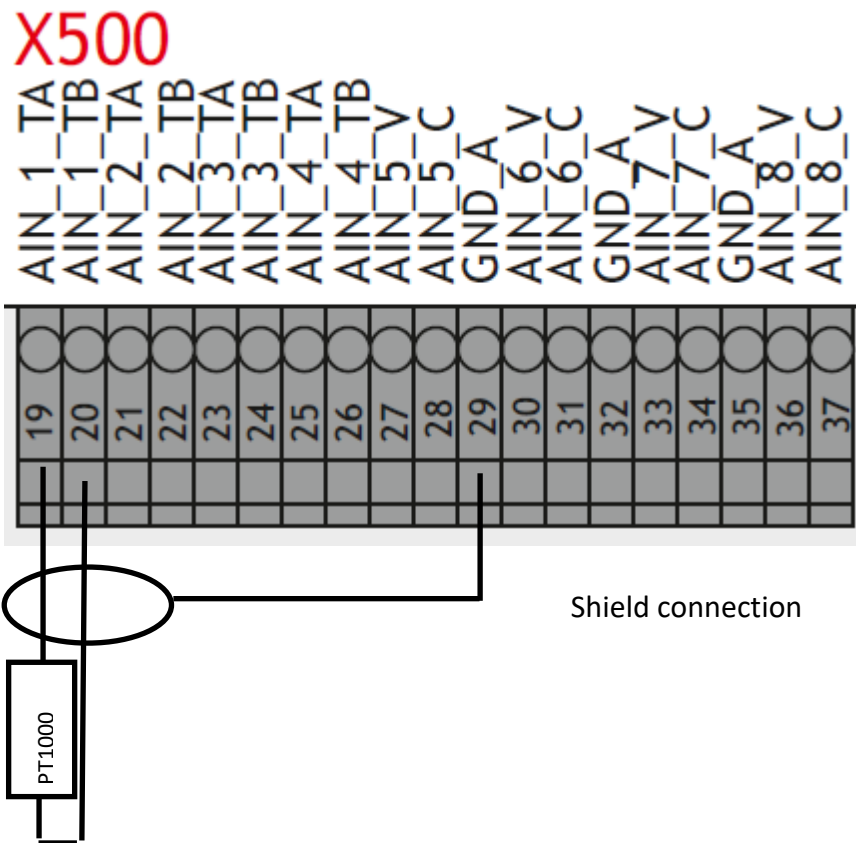
S0 Output for example of a power meter



3.4 Analog Inputs X500

Parameter	Value	Note
Connection reference	X500	250-1419
Type of interface	Analog Input	
AIN_x_V	0-10V voltage Input	
AIN_x_C	0-20mA current Input	
AIN_x_Tx	PT1000	
Stripping length	8.5 mm / 9.5 mm	
Conductor cross section	min. / max.	
starr	0.14mm ² / 0.5mm ²	
flexible with wire end ferrule <u>without</u> plastic sleeve	0.2mm ² / 0.5mm ²	
flexible with wire end ferrule <u>with</u> plastic sleeve	0.2mm ² / 0.5mm ²	

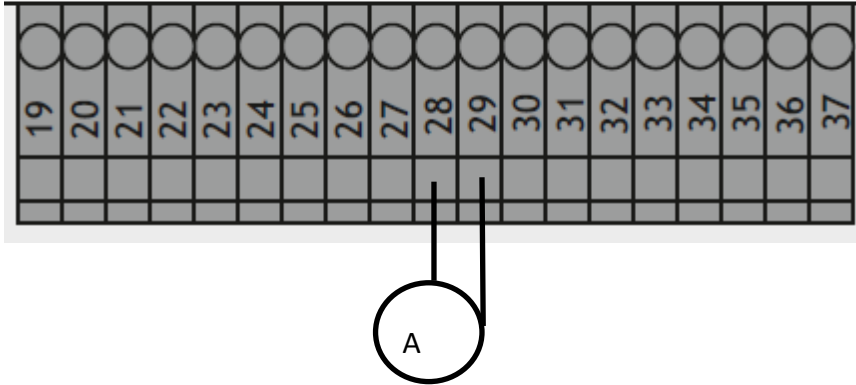
3.4.1 Connection example PT1000



3.4.2 Connection example 0-20mA

X500

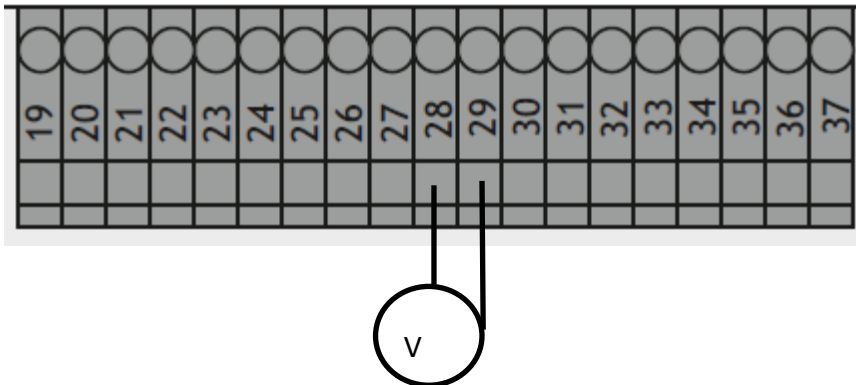
TA TB TA TB TA TB TA TB
 AIN_1_ AIN_1_ AIN_2_ AIN_2_ AIN_3_ AIN_3_ AIN_4_ AIN_4_ AIN_5_V AIN_5_C
 GND_A AIN_6_V AIN_6_C GND_A AIN_7_V AIN_7_C GND_A AIN_8_V AIN_8_C



3.4.3 Connection example 0-10VDC

X500

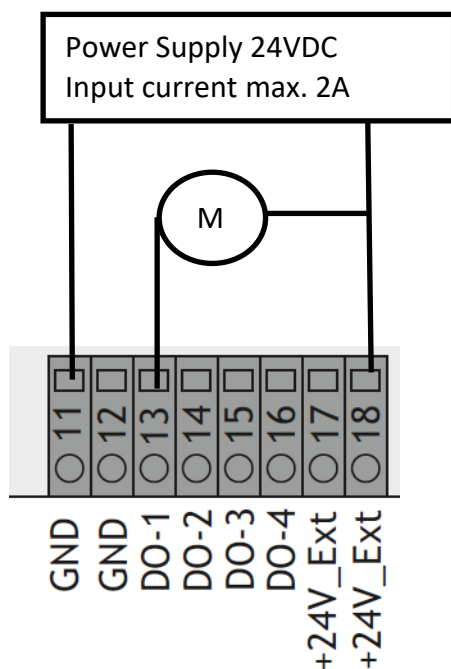
TA TB TA TB TA TB TA TB
 AIN_1_ AIN_1_ AIN_2_ AIN_2_ AIN_3_ AIN_3_ AIN_4_ AIN_4_ AIN_5_V AIN_5_C
 GND_A AIN_6_V AIN_6_C GND_A AIN_7_V AIN_7_C GND_A AIN_8_V AIN_8_C



3.5 Digital Outputs X600

Parameter	Value	Note
Connection reference	X600	250-208
Type of interface	Digital Output	
Output current	0.5 A	Per channel
Power supply	Separat Power Input	+24VDC +/- 10%
Stripping length	8.5 mm / 9.5 mm	
Conductor cross section	min. / max.	
starr	0.2mm ² / 1.5mm ²	
flexible with wire end ferrule <u>without</u> plastic sleeve	0.25mm ² / 1.0mm ²	
flexible with wire end ferrule <u>with</u> plastic sleeve	0.25mm ² / 1.0mm ²	

3.5.1 Connction Example



X600

3.6 USB

Parameter	Value	Note
Connection reference	Xxx	USB mini Typ B
Type of connection	USB	

3.7 Power Supply DC

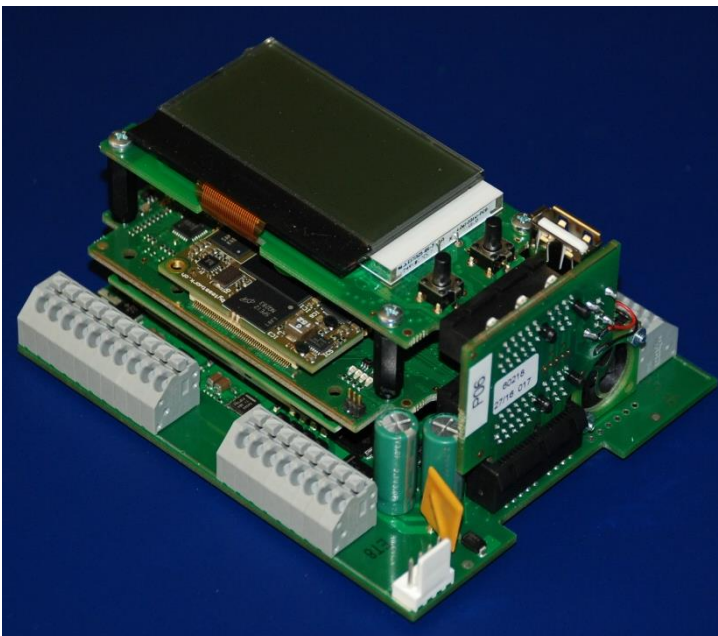
Parameter	Value	Note
Connection reference	X200	250-208
Type of interface	Power supply	24VDC +/-10%
Stripping length	8.5 mm / 9.5 mm	
Conductor cross section	min. / max.	
starr	0.2mm ² / 1.5mm ²	
flexible with wire end ferrule <u>without</u> plastic sleeve	0.25mm ² / 1.0mm ²	
flexible with wire end ferrule <u>with</u> plastic sleeve	0.25mm ² / 1.0mm ²	

3.8 Display

Element	Description	Note
LED LAN	Flash on activity	
LED LoRa	Flash on activity	If Option LoRa
LED GPS	Flash on activity	If Option GPS
Display	Status information	4 line display

3.9 Internal structur LoRa Base Server

The boards of the LoRa base server are modular built, it just individual boards can be omitted depending on the needs. Custom versions are very easy to be viable, because individual boards can be adapted easily customized project specific.



4 Installation specifications



Technical Handbook

The information, limits, introductions and instructions in this technical manual must be considered and observed accordingly.



Users

The installation and connection of the device, as well as the making of operations and settings, may only be carried out by trained specialists. The devices are delivered exclusively to system integrators for building automation and not directly to end users.

The valid electrical installation regulations for House installations.



General safety instructions

There are voltage-carrying elements in the device and in the connection terminals. Touching such elements can be dangerous if the system is not disconnected from the mains.

The device is only allowed to be opened by the manufacturer.



External voltage

Always disconnect all connections to the mains voltage when servicing the device or the connected peripherals.

The mains voltage must not be applied to the terminals as long as the earth connection point is not properly grounded.



Installation instructions

The device is designed for stationary operation and must be installed in such a way that it is not possible to touch the voltage-conducting elements in normal operation.

Description mounting / integration

ESD and safety regulations must always be observed during installation. The device may only be connected in the voltage-free state of the infeed.

The specified ambient conditions must be observed during installation and during operation.

Since the device, itself does not have any strain relief on the connection cables, this must be implemented accordingly during the installation.

5 Contact person

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