

SMARTbox Mini

Smartbox Mini, based on the Telit Chipset HE910 is a ready to use solution for connecting Modbus devices to the Cumulocity. It provides a Master Slave Communication on RS485 for connecting up to 20 devices. Easy configure the configuration of building automation field devices like pumps, chillers, E-meters, Airhandling units in cloud – the Smartbox Mini will take care of it! by automatically picking up the coils and registers and sending alarms, measurements and status information.

SMARTBox Mini



EMeter



Cold Room Control



AirHandlingUnit



AirConditioning



Chiller/
Heatpumpsystem



Compressoracks
Showcases



Developed for Cloud Fieldbus

- Flexible Device database
- Alarming
- Events
- Measurements
- Value/ Operations
- SetUp Modbus MasterCommunication
- Remote restart

General Features

- Offline Buffer for Alarms and measurements up 24hours
- M2M Locate on cellular network
- Full Smartrest Support (low data traffic)
- Sending cycle defined by sms during runtime

Montage

Small Housing
70mm x 50mm
Mounting by
Switchboard clips

SMARTBox Modbus

OutOfBox Modbus Solution
Betriebsspannung 12-24V


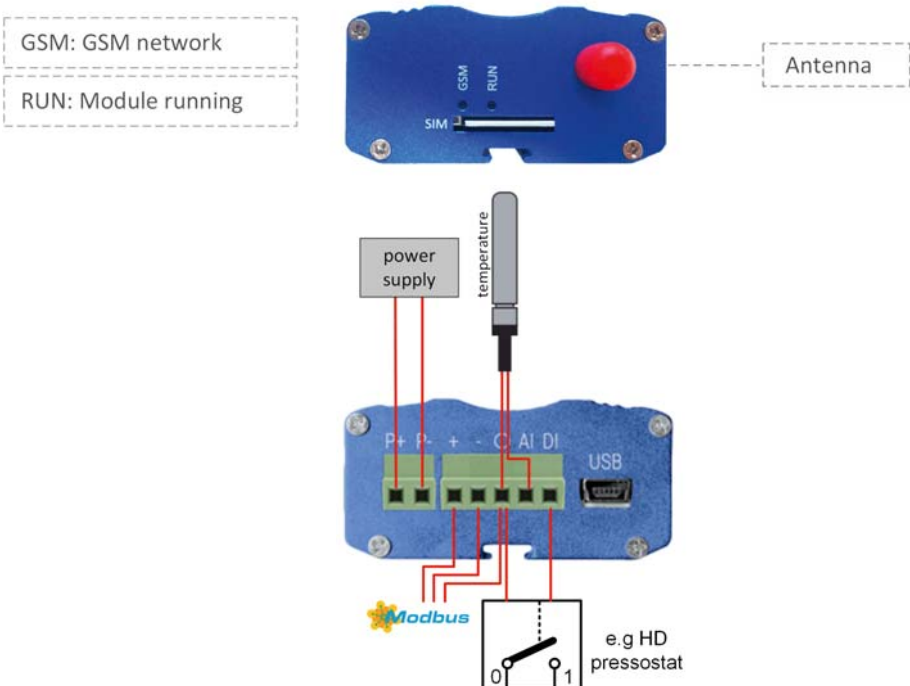


Modbus RTU RS485

- Modbus Master
- Frames: Parity/Even/ODD
- Stopbits: 1/2
- Baudrate: 4800, 9600, 19200, 38400
- FunctionCodes; F1/F2/F3/F4/F5/F6
- Up to 20 Devices on Modbus Line
- Sum: 1000 datapoints



SMARTbox Mini Datasheet

Operate the device by SMS	Change APN	Send SMS with APN to the Terminal: GPRS=<APN>, <User>, <Pass> e.g. if no user and pass is needed you have to set GPRS=<APN>,,	
	Change Tenant	Send SMS with Tenant to the Terminal: DELETE and register new in Device Registration	
	RESTART	Send SMS with Tenant to the Terminal: RESET	
Realtime Clock	Updating Realtime clock during StartUp from timeserver by NIST Server		
Connectivity	2G/3G (4G optional)		
GPS	Optional available		
Interface	<div></div> <div>P+/P- 24VDC +/-/o Modbus RTU Master on RS485 AI Analogue Input (NTC, 4..20mA) DI Digital Input</div>		
Interface USB	MiniUSB to operate the device with AT commands		
Electrical cabling	<div><div>GSM: GSM network RUN: Module running</div></div>		
Fieldbus Communication Modbus	Type	Modbus RTU, ASCII (Master)	
	Baudrate	4800, 9600, 19200, 38400, 115200 (Change during Runtime possible)	
	Parity	Even, ODD, NONE (Change during Runtime possible)	
	Stopbits	2,1 (Change during Runtime possible)	
	Functioncodes	Funct. 1 (Read Single Coils) Funct.2 (Read Input Status) (set offset 10000 in Addr in CC) Funct.3 (Read Holding Registers) Funct.4 (Read Input Registers) (set offset 10000 in Addr in CC) Funct.5 (Write Coil) Funct.6 (Write Holding Register)	
	Datapoints	Max. 10 Slaves with each 100 datapoints	
	Polling Rate on Bus	300ms	
Sensors	NTC	max. 1	1
	PT1000		-
	4..20mA (supply by Smartbox)		1

	0..10V	-
	DIN (supply by Smartbox)	-
	Fast DIN	1
CoT Support	User	Cloud Fieldbus
	Security	TLS
	Operations	Reboot device Add childdevice and reload device database Change Transmit interval for measurements (Events, alarms, values are updated OnChange) Change Baudrate, Databits, Parity, Stopbits Change Modbus Register values Change Modbus Coil Values Operate the device with AT Commands in the Shell
	Communication	SmartRest protocol (all operations and requests) Self Registration SmartRest Templates
	Notifications	Realtime Notifications (+ pending every 12 minutes)
	Shell	Operate the device with AT Commands in the Shell
	Info	Sending operator, Cell ID, Lac, MNC, MCC, Signal strength
	Sending Values	On Change
	Sending Alarms	On Change
	Sending Events	On Change
	Sending Measurements	Settable 1s..6h in Modbus Configuration tab Default 900 seconds
	Sending Signal strength	sent every 10 Min as a measurement
	Sending Location	Identification by cellular network, sent at startUp
	Offline Buffering	Alarm, Events, Measurements, max. ≈ 24 hours
	Device database	Device database Support: Measurements, Event, Alarms, Values, Read, Read/Write, Signed/Unsigned, Decimal Places, Multiplier, Divisor, No of Bits, StartBit
	Update Database on Device	Load new Modbus Database automatically by Reboot or adding childdevices
	FOTA	Remoteupdate Software
Dimensions		75 x 53.5 x 26 mm (w/o connectors) 83 x 53.5 x 26 mm (w/connectors)
Weight		89g
GSM Antenna		SMA Connector
Power Supply		Nominal voltage range: 24VDC, 10% Maximum continuous (average) supply power: 2.5W Maximum continuous (average) supply current: 100mA at 24V
Operating temperature		-20..60°C
Storage temperature		-40..85°C
Operating humidity		Max. 85%
Storage humidity		Max. 85%
Mounting		Via DIN Rail Adapter or Adapter for Wall Mounting
IP Class		IP20/ IP54 (optional)
SIM Card Format		2FF
Certifications		
Conformity Declarations		Conformity Declarations EMC-Directive 2014/30/EU EN 55022:2010 EN 55024:2010 IEC 61000-6-1:2005 IEC 61000-6-3:2011 R&TTE-Directive 2014/53/EU EN 301 511 V9.0.2 EN 301 908-1 V6.2.1 EN 301 908-2 V6.2.1 RoHS-Directive 2011/65/EU EN 50581:2012