

ABB i-bus® KNX

Weather Unit, 1-fold, MDRC

WZ/S 1.3.1.2, 2CDG110184R0011



Product description

The Weather Unit WZ/S 1.3.1.2 is used - primarily in residential applications - to record weather data. The Weather Sensor WES/A 3.1 is connected to the Weather Unit. The connection to the bus is established via the bus connection terminal on the front of the device.

The device is ready for operation after the connection of the mains voltage and the bus voltage. The assignment of the physical address and the parameterization are carried out using ETS and the current application.

ABB i-bus® KNX

Weather Unit, 1-fold, MDRC

WZ/S 1.3.1.2, 2CDG110184R0011

Technical data

Supply	Bus voltage	21...32 V DC
	Current consumption, bus	< 10 mA
	Mains voltage U_s	85...265 V AC, 110...240 V DC, 50/60 Hz
	Power consumption	Max. 11 W at 230 V AC
	Power consumption, mains	80/40 mA, at 115/230 V AC
	Power dissipation	Max. 3 W at 230 V AC
Auxiliary voltage supply to supply the sensor	Nominal voltage U_n	24 V DC \pm 2 V
	Rated current I_n	200 mA
	Power	0.38 W, when heating switched off (WES/A 3.1) 4.15 W, when heating switched on (WES/A 3.1)
Connections	KNX	Via bus connection terminal, screwless
	Mains voltage	Via screw terminals
	1 (0 V potential)	Electrical supply
	2 (24 V potential)	Electrical supply
	A (RS 485)	Serial data communication
	B (RS 485)	Serial data communication
PT1000	Temperature-dependent resistance	
Connection terminals	Screw terminals	0.2...2.5 mm ² fine stranded 0.2...4.0 mm ² single core
	Tightening torque	Max. 0.6 Nm
Cable length	Between the Weather Unit and Weather Sensor	Max. 100 m
Cable length / cable cross-section	P-YCYM or J-Y(ST)Y	2 x 2 x 0.8
Operating and display elements	Programming Button/LED 	For assignment of the physical address
Temperature range	Power	-5 °C...+45 °C
	Transport	-25 °C...+70 °C
	Storage	-25 °C...+55 °C

ABB i-bus® KNX

Weather Unit, 1-fold, MDRC

WZ/S 1.3.1.2, 2CDG110184R0011

Design	Modular installation device (MDRC)	Modular installation device, ProM
	Dimensions	90 x 72 x 64.5 mm (H x W x D)
	Mounting width in space units	4 x 18 mm modules
	Mounting depth	64.5 mm
Mounting	On 35 mm mounting rail	To DIN EN 60 715
Installation position	Any	
Weight	0.2 kg	
Housing/color	Plastic housing, gray	
Protection type	IP 20	To DIN EN 60 529
Protection class	II	To DIN EN 61 140
Approvals	KNX to EN 50 090-1, -2	Certification
CE mark	In accordance with the EMC guideline and low voltage guideline	

Device type	Application	Max. number of communication objects	Max. number of group addresses	Max. number of assignments
WZ/S 1.3.1.2	Weather information/1*	107	254	254

* ... = Current version number of the application. **Please refer to the software information on our website for this purpose.**

Note

For a detailed description of the application see "Weather Unit WZ/S 1.3.1.2, Weather Sensor WES/A 3.1" product manual. It is available free-of-charge at www.abb.com/knx.

ETS and the current version of the device application are required for programming.

The current version of the application is available on the Internet for download at www.abb.com/knx. After import into ETS, it appears in the *Catalogs* window under *Manufacturers/ABB/Input/Weather Unit*.

The device does not support the locking function of a KNX device in ETS. If you use a *BCU code* to inhibit access to all the project devices, it has no effect on this device. Data can still be read and programmed.

Note

Facade control is not possible with the Weather Unit WZ/S 1.3.1.2. Please use the Weather Station WS/S for this. The WES/A sensor combined with the Weather Unit is suitable for small to medium-sized buildings. The facade structure, wind conditions and local influences should also be considered with these buildings.

ABB i-bus® KNX

Weather Unit, 1-fold, MDRC

WZ/S 1.3.1.2, 2CDG110184R0011

Resolution and accuracy and tolerances

Please note that the tolerances of the sensors which are used will need to be added to the listed values.

With sensors based on resistance measurement, it is also necessary to consider the feeder cable errors.

In the supplied state of the device, the stated accuracies will not be initially achieved. After initial commissioning, the device performs an autonomous calibration of the analog measurement circuit. This calibration takes about an hour and is performed in the background. It is undertaken regardless of whether or not the device is parameterized and is independent of the connected sensors. The normal function of the device is not affected. After calibration has been completed, the calibration values which have been determined will be stored in the non-volatile memory. Thereafter, the device will achieve this level of accuracy every time it is switched on. If the calibration is interrupted by programming or bus failure, it will recommence every time it is restarted. The ongoing calibration is displayed in the status byte by a 1 in bit 7.

PT1000

The PT1000 is precise and can be replaced and is only slightly influenced by feeder cable errors.

Tolerance classes:

Designation	Tolerance
DIN class A	$0.15 + (0.002 \times t)$
1/3 DIN class B	$0.10 + (0.005 \times t)$
1/2 DIN class B	$0.15 + (0.005 \times t)$
DIN class B	$0.30 + (0.005 \times t)$
2 DIN class B	$0.60 + (0.005 \times t)$
5 DIN class B	$1.50 + (0.005 \times t)$

t = Current temperature

Resistance signals

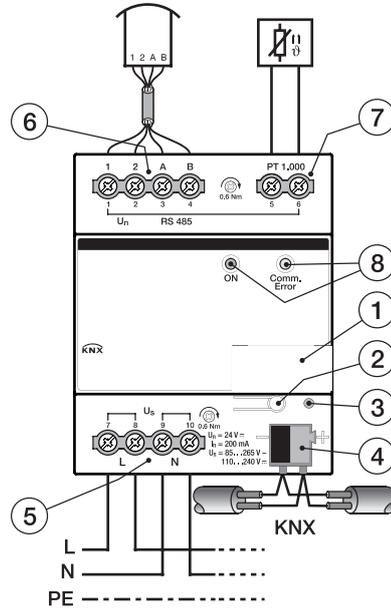
Sensor signal	Resolution	Accuracy at 25 °C T_u *1	Accuracy at -5...+45 °C T_u *1	Remark
PT1000 *2	0.1 Ohms	± 1.5 Ohms	± 2.0 Ohms	1 Ohm = 0.25 °C

*1 additional to current measured value at ambient temperature T_u

*2 plus feeder cable and sensor faults

ABB i-bus® KNX Weather Unit, 1-fold, MDRC WZ/S 1.3.1.2, 2CDG110184R0011

Connection diagram

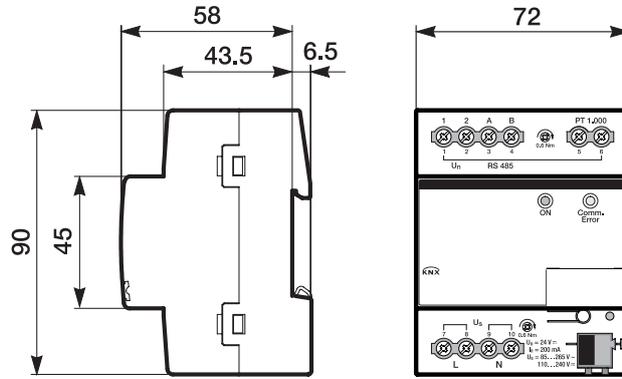


2CDC072032F0013

- 1 Label carrier
- 2 Programming button 
- 3 Programming LED 
- 4 Bus connection terminal
- 5 Power supply
- 6 Connection of Weather Sensor
- 7 Connection of PT1000 sensor
- 8 LED "On" and LED "Comm. Error"

ABB i-bus® KNX Weather Unit, 1-fold, MDRC WZ/S 1.3.1.2, 2CDG110184R0011

Dimension drawing



2CDC072033F0013

ABB i-bus® KNX
Weather Unit, 1-fold, MDRC
WZ/S 1.3.1.2, 2CDG110184R0011

Notes

Contact

ABB STOTZ-KONTAKT GmbH

Eppelheimer Straße 82

69123 Heidelberg, Germany

Telefon: +49 (0)6221 701 607

Telefax: +49 (0)6221 701 724

E-Mail: knx.marketing@de.abb.com

Further information and local contacts:

www.abb.com/knx

Note:

We reserve the right to make technical changes or modify the contents of this document without prior notice.

The agreed properties are definitive for any orders placed. ABB AG shall not be liable for any consequences arising from errors or incomplete information in this document.

We reserve all rights in this document and in the subject matter and illustrations contained therein. Reproduction, transfer to third parties or processing of the content – including sections thereof – is not permitted without prior expressed written permission from ABB AG.

Copyright© 2015 ABB

All rights reserved