



## RWD MODBUS Interface SEZ50MB

SEZ50MB is an adaptor for equipping all standalone RWD primary control products with communicative functions, it offers the following features:

- **Modbus Application Protocol Specification V1.1b**
- **AC 24 V SELV power supply input**
- **3-way terminal block for RS485 type Modbus connection (+, -, Ref)**
- **RTU mode only**
- **Dual communication baud rates (9600 kbps & 19200 kbps)**
- **DIP switch selection for basic communication setting**
- **DIP switch to assign logical device addresses and its range is from 1 to 247 (decimal numbers)**

### Use

---

The SEZ50MB unit is a RS485 type Modbus communication interface (RTU mode only). It connects with RWD controllers via the RS232 interface for remote monitoring functions. SEZ50MB Modbus communication can be developed by users according to Modbus Application Protocol Specification V1.1b ([www.Modbus.org](http://www.Modbus.org)), or Siemens Modbus SW tool can be used as the SEZ50MB Modbus interface.

## Communication Settings

The communication settings of SEZ50MB can be changed via a 4-way DIP switch:

DIP switch Position	Function Settings	ON (1) or OFF (0)		
1	Baud Rate Selection	ON	19200 bps (Default)	
		OFF	9600 bps	
2, 3	Parity & Stop Bits	OFF	OFF	ODD Parity, 1 Stop Bit
		ON	OFF	<b>Even Parity, 1 Stop Bit (Default)</b>
		OFF	ON	None Parity, 2 Stop Bits
		ON	ON	None Parity, 2 Stop Bits
4	Reserved	ON	No Function	
		OFF	<b>No Function (Default)</b>	

## Type summary

RWD Connection	Modbus Connection	Supply Voltage	Type
RS232 Type DB9 Male Socket	RS485 Type 3-way Terminal Block	AC 24 V (SELV)	SEZ50MB

## Ordering

When ordering, please indicate product ASN, SSN number and product name:

ASN	SSN	Product Name
SEZ50MB	S55370-C120	RWD Modbus Interface Unit

## Product family

Please refer to the following RWD product family and their variants for more details about their operation and applications:

Part Number	Type	Datasheet No.
RWD34	RWD Heat Pump Controller	N3346
RWD44	RWD Heat Pump Controller	N3346
RWD45	RWD Heat Pump Controller	N3347
RWD32	RWD Standard Controller	N3341
RWD62	RWD Standard Controller	N3342
RWD68	RWD Standard Controller	N3343
RWD82	RWD Standard Controller	N3341
RWD32S	RWD Solar Controller	N3344

## Mounting notes

The SEZ50MB can be mounted as follows:

- DIN rail mounting
- Wall mounting
- Mounted in an enclosure, e.g. ARG62.21

More information about installation of SEZ50MB, please refer to the document CB1M3099.



The sections marked with a warning symbol contain technical safety requirements and restrictions. Observe all of these warnings as they directly relate to the protection of personnel and equipment.



### Warning

- **G & G0 Terminals**

G is for AC 24 V live terminal while G0 is for AC 24 V reference terminal. Wrong wiring of these two terminals will cause damage to both SEZ50MB and RWD devices.

- **Device Isolation**

For each SEZ50MB device connected with RWDxx operated at AC 230 V, it gets its AC 24 V from AC 230 V by a SELV electrically isolated transformer (e.g. Siemens SEM62.1 or SEM62.2). To ensure best performance, this isolated transformer should not power other devices.

- **Network Termination**

For network connection with long cable length, it is recommended to use a termination resistor of 150  $\Omega$  at both ends of the cable for the best performance since Modbus is a 2-way communication.

## Disposal



---



The devices are considered electronics devices for disposal in term of European Directive 2012/19/EU and may not be disposed of as domestic waste.

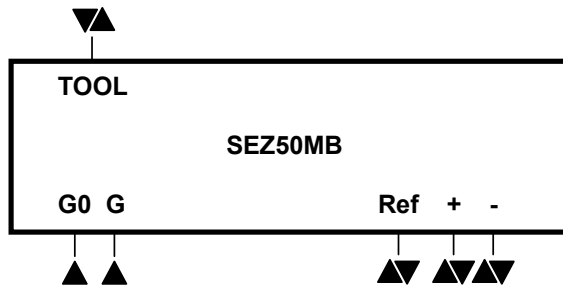
- Dispose of the device via the channels provided for this purpose.
- Comply with all local and currently applicable laws and regulations.

## Technical Data

Power Supply 	Operating voltage Safety extra low-voltage (SELV) / protective extra low-voltage (PELV) to Requirements for external safety isolating transformer (100% ED, maximum 320 VA) to	AC 24 V ±20% (SELV)  HD384  EN 61558-2-6
	Frequency	50 / 60 Hz
	Power Consumption	Max. 3 VA
	External fuse Internal fuse	Max. 10 A Thermal protection by internal self resettable fuse
	Electrical Connection	Terminal Connectors, wire 0.34...2.5 mm <sup>2</sup>
Connectors	RS232 RWD Connection	DB9 Male Socket
	RS485 Modbus Connection (+, -, Ref)	3-way Terminal Block (Twisted wires)
Environment	Operation Climatic Conditions Temperature Humidity	To IEC 60721-3-3 class 3 K5 0...50 °C (32...122 °F) <95% r.h. non-condensing
	Transport & Storage Climatic Conditions Temperature Humidity Mechanical Conditions	To IEC 60721-3-2 and IEC 60721-3-1 Class 2 K3 and class 1 K3 -25...70 °C (-13...158 °F) <95% r.h. non-condensing Class 2M2
Directives & Standards	EU Conformity (CE)	CE1T3099xx <sup>*)</sup>
	 C-Tick conformity (EMC)	AS/NZS 61000-6-3
	Class of protection to EN 60730-1	III (SELV)
Environmental compatibility	The product environmental declaration CE1E3099en contains data on environmentally compatible product design and assessments (RoHS compliance, materials composition, packaging, environmental benefit, disposal).	
Housing	Materials Top Housing Bottom Housing	PC plastic (UL94 class V-0) PC plastic (UL94 class V-0)
	Degree of protection to IEC 60529	IP 20
General	Dimensions	113.8 x 106.0 x 56.4 mm ( L x W x H)
	Weight	
	Unit Only 232 cable Overall Package	190 g 122 g 406 g

\*) The documents can be downloaded from <http://siemens.com/bt/download>.

## Connection Diagrams



<b>Legend</b>	G, G0	AC 24 V SELV Power Supply
	TOOL	RS232 DB9 Male Socket Connection to RWD Device
	Ref, +, -	RS485 Type 3-Wired Modbus Interface

## Dimensions (mm)

