Leuze electronic

Notes for Installation and Setting up

RFM 12/ RFM 32/ RFM 62 with Leuze multiNet at MA 21 100.2

Installation

For RS 485 networks it is important to avoid A-/B-wire interchanges. A separat network ground line is recommended, too. The shield should be connected only on one side. At the last slave in line, the network has to be terminated by a 220 Ω resistor. After mounting the RFM and MA, turn the address switch of each MA 21 100.2 to the dedicated address and set DIP-switch 1 to ON („Transparent-Mode"), for network operation set DIP-switch 3 („Service") to OFF. At the multiNet master (MA 31) the total number of slaves has to be set. Before switching on the power supply please check the wiring.

Setting Up

When the firmware is started, the MA 21 and the RFM give a ready sign on the network with „XXs" (XX is the slave address). The parameter setting can be done either with each device via Service interface or via multiNet master and the slave address in front of the command („01V"). If all slaves should be set to the same parameters, you can set a"00B" in front of the parameter string and send it to the master device. After the setting of the parameter, please make sure that all DIP switches are set to „HOST„ („operation").
For more details concerning the MA 21 please see the technical manual of the MA 21.

Troubleshooting

Error	Possible causes	Remedy
Master reports, connected slaves Don't	1- A/B-interchange or interruption / net resistors false installed 2- Number of slaves not set 3- DIP switch 3 / 4 set false	1- Check wiring and correct it, if necessary install 220 Ω resistors at end of line 2- Set Number with switch in master device (MA31) 3- Set DIP switch 3 to HOST/ OFF, DIP switch 4 to BCL/RFM / ON On Service interface MA 31 with terminal use command „00BV" to check Slaves
No message or error while Read /Write transponders	MA 21: DIP 1 or 4 setting is on OFF RFM: invalid commands	MA 21: Set DIP 1 and 4 to ON RFM: Restart with „00BH" command on service interface of master device

RFM 12/ RFM 32/ RFM 62 on PROFIBUS via MA 42 DP-k

After mounting of the RFM and the MA, turn the address switch of each MA 42 to the dedicated address. By the integration of the GSD-file into the PROFIBUS master, all configuration data of the MA 42 is usable for the PLC. The configuration of the RFM is done very easy via service interface of the MA42 and the RF-config tool. To do so please set all 3 DIP–switches to „Service"or "RS 232". When the configuration is finished set back the DIP-switches to„Betrieb" or „PROFIBUS"(operation).
The complete configuration telegram could be send directly from the PLC to the RFM (like a Command telegram). The structure and the description of the parameters are in the "telegram and command structure" file.
If communicating to the RFM device via PROFIBUS please note that each character is handled as ASCII-character and must be transfered into hexadecimal . With commands or telegrams longer than 6 Byte (including pre- and postfix), each part of the telegram has to be stored in the memory of the MA 42 (look for correct sequence). If the telegram/ command is complete in the memory of the MA 42, transfer the whole content with the bit „SFB" to the RFM. After the transfer, the memory of MA 42 has to be deleted.
For more details concerning the MA 42 please see the technical manual MA 40/ MA 41/MA 42 DP-k

RFM 12/ RFM 32/ RFM 62 on PROFIBUS via MA 204i

After mounting of the RFM and the MA, turn the address switch of each MA 204i to the dedicated address. By the integration of the GSD-file into the PROFIBUS master, all configuration data of the MA 204i is usable for the PLC. The configuration of the RFM is done very easy via service interface of the MA204i and the RF-config tool. To do so please set all DIP–switches to „„„Service"and"DEV ".When the configuration is finished set back the DIP-switches to„RUN"(operation).
The complete configuration telegram could be send directly from the PLC to the RFM (like a Command telegram). The structure and the description of the parameters are in the "telegram and command structure" file.
 If communicating to the RFM device via PROFIBUS please note that each character is handled as ASCII-character and must be transfered into hexadecimal . With very long commands or telegrams, each part of the telegram has to be stored in the memory of the MA 204i in the collecting mode (look for correct sequence). If the telegram/ command is complete in the memory of the MA 204i, transfer the whole content with the bit „SFB" to the RFM. For more details concerning the MA 204i please see the technical manual

RFM 12/ RFM 32/ RFM 62 on Ethernet via MA 208i

After mounting of the RFM and the MA, and setting the IP address(SW) at the SPS. The configuration of the RFM is done very easy via service interface of the MA208i and the RF-config tool. To do so please set all DIP–switches to „Service"and"DEV". When the configuration is finished set back the DIP-switches to„RUN".
The complete configuration telegram could be send directly from the PLC to the RFM (like a Command telegram). The structure and the description of the parameters are in the "telegram and command structure" file.
If communicating to the RFM device via Ethernet please note that each character is handled as ASCII-character and must be transfered into hexadecimal. With very long commands or telegrams, each part of the telegram has to be stored in the memory of the MA 208i in the collecting mode (look for correct sequence). If the telegram/ command is complete in the memory of the MA 208i, transfer the whole content with the bit „SFB" to the RFM.
For more details concerning the MA 208i please see the technical manual

RFM 12/ RFM 32/ RFM 62 on PROFINET via MA 248i

After mounting of the RFM and the MA, by the integration of the GSDML-file into the PROFINET master, all configuration data of the MA 248i is usable for the PLC. The configuration of the RFM is done very easy via service interface of the MA248i and the RF-config tool. To do so please set DIP–switches to „Service"and"DEV". When the configuration is finished set back the DIP-switches to„RUN" operation). If communicating to the RFM device via PROFINET please note that each character is handled as ASCII-character and must be transfered into hexadecimal .
The complete configuration telegram could be send directly from the PLC to the RFM (like a Command telegram). The structure and the description of the parameters are in the "telegram and command structure" file.
If communicating to the RFM device via ProfiNet please note that each character is handled as ASCII-character and must be transfered into hexadecimal. With very long commands or telegrams, each part of the telegram has to be stored in the memory of the MA 248i in the collecting mode (look for correct sequence). If the telegram/ command is complete in the memory of the MA 248i, transfer the whole content with the bit „SFB" to the RFM.
For more details concerning the MA 248i please see the technical manual