SIEMENS

I IA CE

SIPLUS RIC IEC on S7

Interoperability list IEC 60870-5-103 Master V1.5

Contents

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IEC60870-5-103

This documentation is used to match the functionality required/demanded for communication with SIMATIC S7-300, SIMATIC S7-400 or SIMATIC ET200S devices based on telecommunication standard IEC 60870-5-103.

General information

Legend:

☐ Not implemented

☒ Implemented

1. Physical Layer

(network specific parameter; all implemented configurations are marked with ‚X')

☒ Electrical Interface RS-485

☐ Optical Interface*

*) The optical interface can be realized by external media converter.

Transmission speed
Same transmission speed for control direction and monitoring direction.

Asymmetrical interface
RS485/RS422

☒ 9600 bits/s

☒ 19200 bits/s

The available transmission rates depend on the used CP and interface module.

2. Application Layer

ASDUs in monitoring direction

Type-ID

- [X] <1> := Time tagged message
- [X] <2> := Time-tagged message with relative time
- [X] <3> := Measurands I
- [X] <4> := Time-tagged measurands with relative time
- [X] <5> := Identification message
- [X] <6> := Time synchronization
- [X] <8> := Termination of general interrogation
- [X] <9> := Measurands II
- [ ] <10> := Generic Data
- [ ] <11> := Generic identification
- [ ] <23> := List of recorded disturbances
- [ ] <26> := Ready for transmission of disturbance data
- [ ] <27> := Ready for transmission of a channel
- [ ] <28> := Ready for transmission of tags
- [ ] <29> := Transmission of tags
- [ ] <30> := Transmission of disturbance values
- [ ] <31> := End of Transmission

ASDUs in control direction

Type-ID

- [X] <6> := Time synchronization
- [X] <7> := Initiation of general interrogation
- [ ] <10> := Generic data
- [X] <20> := General Command
- [ ] <21> := Generic Command
- [ ] <24> := Order for disturbance data transmission
- [ ] <25> := Acknowledgement for disturbance data transmission

Basic application functions

- [ ] Test mode
- [ ] Blocking of monitoring direction
- [ ] Disturbance data
- [ ] Generic services
- [X] Private data (only Type-ID 140, Measurands SIMEAS T)

3. Protection devices

[X]	- Distance Protection	(function type 128)
[X]	- Over current protection	(function type 160)
[X]	- Transformer differential protection	(function type 176)
[X]	- Linie differential protection	(function type 192)

Private defined information with respect to chapter 2 can be supported.
Every information is parameterized individually.
A catalogue with pre defined information is not planned.

