How to setup CANopen Time Synchronization in multiple Genset- and Breaker Application

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Follow instructions below...

CANopen Time Synchronizsation with easYgen-2000 /-3000 /-3000XT / LS-6XT / LS-5

1 Introduction

Time synchronization via CAN bus is a standardized process in the CANopen specifications which need a certain setup for the CAN bus parameters at the participating devices.

easYgen-2000 / - 3000 / -3000 XT, LS-6XT and LS-5 controls do support the CANopen time sync Message.

2 Set up CAN bus parameters

NOTICE **The table "Parameter numbers" below STEP 5 does show the appropriate parameter numbers of your actual device.**

STEP 1 Set up parameter "**Node-ID**" , e.g. set equal to the device number.
If above is not possible, ensure that at least each Node-ID is unique in the CAN network.
(If Node-ID and Device no. is aligned automatically, then set "**1702 Device no**." accordingly.)

STEP 2 In all connected devices select "Default Master" in drop-down menu for parameter "**CANopen Master**"

STEP 3 Set parameter "**COB-ID TIME Message**" to
- DEC format via Toolkit, or
- HEX format via HMI display (Normally this is already the default setting)

STEP 4 Set parameter "**Cycle of TIME sync. Message**".
Define here how often the time will be updated/synched (Default setting is 10 s).

STEP 5 Now set up the actual time/date in the device with **lowest Node-ID**.
That device will send the time message to all other controllers via CAN bus

Parameters easYgen-3100XT/-3200XT | easYgen-3100/-3200 | easYgen-2000

ID	Parameter CAN bus #1	easYgen-3100XT/ -3200XT	easYgen-3100 / -3200 / -2000
8950	Node-ID	1…32	1…32
8993	CANopen Master	Default Master	Default Master
9101	COB ID TIME Message	C0000100 hex -1073741568 dec	C0000100 hex 3221225728 dec
9102	Cycle of TIME sync. message	10	10

Parameters easYgen-3400XT/-3500XT | easYgen-3400/-3500

ID	Parameter CAN bus #3	easYgen-3400XT/ -3500XT	easYgen-3400 / -3500
8952	Node-ID	1…32	1…32
8995	CANopen Master	Default Master	Default Master
9104	COB ID TIME Message	C0000100 hex -1073741568 dec	C0000100 hex 3221225728 dec
9105	Cycle of TIME sync. message	10	10

Parameters LS-6XT | LS-5

ID	Parameter CAN bus #1	LS-6XT	LS-5
1702	Device # (=Node-ID)	33…64	33…64
8993	CANopen Master	Default Master	Default Master
9101	COB ID TIME Message	C0000100 hex -1073741568 dec	C0000100 hex 3221225728 dec
9102	Cycle of TIME sync. message	10	n.a. fixed to 10