Telegram 750 for SIMIT

SIMIT SP V10.1

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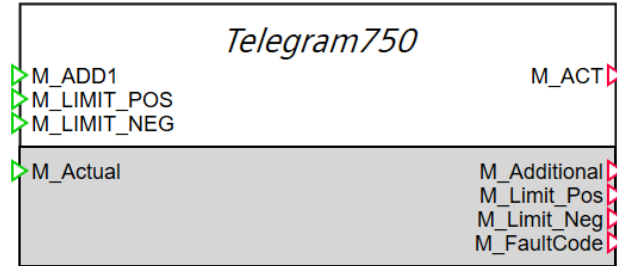
Table of contents

1 Description of the telegram

1.1 Symbol

Figure 1-1

1.2 Function

Telegram 750 is an Annex Telegram (supplementary telegram). The supplementary telegram is used to add a torque control to the existing main telegram. The telegram 750 is an alternative to a telegram extension by using a modular telegram configuration. This is a method for configuring a standard telegram as defined in the PROFIdrive standard.

See also e. g. manual / operating instructions
"SINAMICS/SIMOTICS, SINAMICS S210 servo drive system", especially chapter A.1.2 /4/

1.3 Telegram format

Figure 1-1

	PZD 1	PZD 2	PZD 3
TEL 750 Nominal	M_ADD1	M_LIMIT_POS	M_LIMIT_NEG
TEL 750 Actual	M_ACT		

1.4 Error codes

The following error codes are generated, output in "M_FaultCode" and the operating window:

Table 1-1

Error code	Description
0x0E1A (3610)	"M_ACT": Overflow of the calculated output value; an exceedance within the rounding range of "M_LIMIT_POS" doesn't result yet in an error.
0x0E1B (3611)	"M_ACT": Underflow of the calculated output value; an exceedance within the rounding range of "M_LIMIT_NEG" doesn't result yet in an error.
0x0E1C (3612)	"M_LIMIT_POS" < "M_LIMIT_NEG" and "M_LIMIT_POS" ≥ -"M_LIMIT_NEG" (parameter fault)
0x0E1D (3613)	"M_LIMIT_POS" < "M_LIMIT_NEG" and "M_LIMIT_POS" < -"M_LIMIT_NEG" (parameter fault)
0x0E1E (3614)	"torque100" ≤ 0.0 (parameter fault)

2 Connections

Table 2-1

Input	Description
M_ADD1	Additional torque 1
M_LIMIT_POS	Max. positive torque
M_LIMIT_NEG	Min. negative torque
M_Actual	Actual torque

Table 2-2

Output	Description
M_ACT	Standardized ("torque100" → 0x4000) actual torque
M_Additional	Additional torque from "M_ADD1", scaled to 0x4000 → "torque100".
M_Limit_Pos	Max. positive torque from "M_LIMIT_POS", scaled to 0x4000 → "torque100".
M_Limit_Neg	Min. negative torque from "M_LIMIT_NEG", scaled to 0x4000 → "torque100".
M_FaultCode	Fault / error code according to 1.4, else 0

3 Parameters

Table 3-1

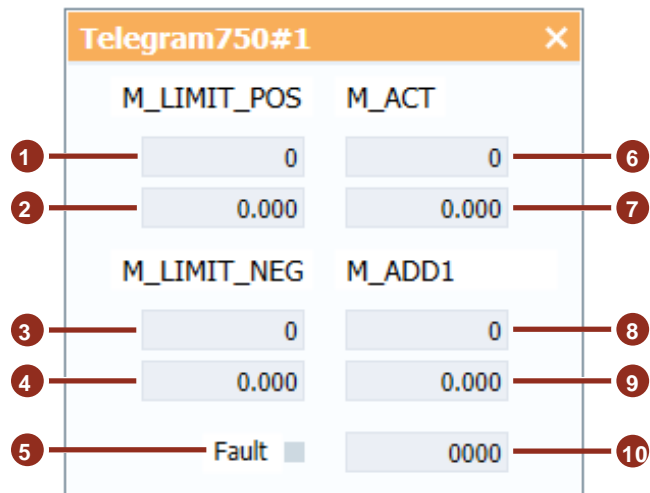| Parameter	Beschreibung
torque100	Torque value correlated with the value 0x4000 (100%) of "M_LIMIT_POS", "M_LIMIT_NEG", "M_ADD", "M_ACT"

4 Operating window

Figure 4-1

Table 4-1

Number	Description
1	The telegram value (Output-PZD 2) "M_LIMIT_POS" is displayed here in dec format.
2	The telegram value (Output-PZD 2) "M_LIMIT_POS" is displayed here in the standardized format.
3	The telegram value (Output-PZD 3) "M_LIMIT_NEG" is displayed here in dec format.
4	The telegram value (Output-PZD 3) "M_LIMIT_NEG" is displayed here in the standardized format.
5	The fault / error status of the component is displayed here.
6	The telegram value (Input-PZD 1) "M_ACT" is displayed here in dec format.
7	The telegram value (Input-PZD 1) "M_ACT" is displayed here in the standardized format.
8	The telegram value (Output-PZD 1) "M_ADD1" is displayed here in dec format.
9	The telegram value (Output-PZD 1) "M_ADD1" is displayed here in the standardized format.
10	The (now only) error code according to 1.4 is displayed here.

5 Appendix

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5.3 Links and literature

Table 5-1

No.	Topic
/1/	Siemens Industry Online Support https://support.industry.siemens.com
/2/	Link to this entry page of this application example https://support.industry.siemens.com/cs/ww/en/view/109761007
/3/	SIMATIC SIMIT Simulation Platform – Overview https://support.industry.siemens.com/cs/ww/en/view/109746429
/4/	"SINAMICS/SIMOTICS, SINAMICS S210 servo drive system" https://support.industry.siemens.com/cs/attachments/109753800/S210_1FK2_op_instr_011217_eng.pdf

5.4 Abbreviations

PZD Process Data

PLC Programmable Logic Controller

5.5 Change documentation

Table 5-2

Version	Date	Modifications
V1.0	10/2018	First version
V2.0	11/2021	Parameter new, only one error, only "neg. ≥ pos."