Diagnostic Telegram for PROFIBUS DP

Overview

A Diagnostic Telegram is sent by the LTMR controller when:
- There is a change of node address,
- A system fall down situation is detected,
- An error or a warning occurs.

The maximum length of a diagnostic telegram is equal to 36 bytes. This information is useful for PROFIBUS DP master configuration.

Byte 0-9

DP V0 Byte	DP V1 Byte	Byte Name	Description
0-5	0-5	PROFIBUS DP standard diagnostic data	
6	6	Header byte	Device-related diagnostic with length including header
7	-	PROFIBUS DP firmware	PROFIBUS DP firmware version, high byte
8	-	PROFIBUS DP firmware	PROFIBUS DP firmware version, low byte
9	-	PROFIBUS DP firmware	PROFIBUS DP firmware version, test version
-	7	-	DP V1: 0x81= Status, Type: Diagnostic Alarm
-	8	-	DP V1: slot number, e.g. 0x01
-	9	-	DP V1: 0x81= Status, Type: Diagnostic Alarm

Byte 10-13

DP V0 / DP V1 Byte	Byte Name	Description	
10	Manufacturer Specific ID	Module identifier:	
		31: LTMR controller only 32: LTMR controller with expansion module	
11	PROFIBUS DP device status	State of the PROFIBUS DP fieldbus handler	
		11.0	Local / remote 0 = PROFIBUS DP parameters have priority 1 = Locally set parameters have priority
		11.1-11.6	Reserved
		11.7 = 1	PROFIBUS DP application profile: 1 = motor management starter
12	PROFIBUS DP error byte		
13	PROFIBUS DP information and error byte	Report errors with internal communication	
		13.0	1 = an attempt to write setting registers from a PROFIBUS DP parameter frame was received when the motor was running
		13.1	1 = writing values from a PROFIBUS DP parameter frame failed even when the motor was not running
		13.2	1 = an internal error occurred during the generation of the PROFIBUS DP diagnostic frame
		13.3	1 = the internal cyclic data exchange (callback) failed
		13.4	1 = system fall down was detected
		13.5	1 = node address has changed

Byte 14-35

DP V0 / DP V1 Byte	Byte Name	Description
14	Register 455 (455.8-455.15)	Monitoring of status
15	Register 455 (455.0-455.7)	
16	Register 456 (456.8-456.15)	
17	Register 456 (456.0-456.7)	
18	Register 457 (457.8-457.15)	
19	Register 457 (457.0-457.7)	
20	Register 460 (460.8-460.15)	Monitoring of warnings
21	Register 460 (460.0-460.7)	
22	Register 461 (461.8-15)	
23	Register 461 (461.0-461.7)	
24	Register 462 (462.8-462.15)	
25	Register 462 (462.0-462.7)	
26	Reserved	
27		
28	Register 451 (451.8-451.15)	Monitoring of faults
29	Register 451 (451.0-451.7)	
30	Register 452 (452.8-452.15)	
31	Register 452 (452.0-452.7)	
32	Register 453 (453.8-453.15)	
33	Register 453 (453.0-453.7)	
34	Reserved	
35		

NOTE: For descriptions of registers, refer to the Communication Variables tables, introduced in Register Map (Organization of Communication Variables) *(see page 43)*.