

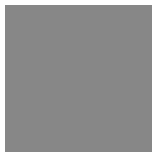
BALLUFF

Software- Description

Identification-System BIS

Sample Program S7-300/400 Profinet

with BIS M-4008



Sample Program description for BIS M-4008

1 BIS M SAMPLEPROGRAMM HIGH MEMORY

The S7 project „BIS_M4008_Sample_HM “ contains in FB10 an example call of FB32 for BIS M-4008. The FB 32 is optimized for reading high memory data carriers up to 128kByte. Configured is a S7 CPU 315-2PN/DP. I/O module length 64 Byte, Periphery HW start address: E/A 256. All FB 32 input parameters are set suitable to hardware configuration. The FB is initialized automatically by the program. The memory bit M100.0 „BIS M Init“ is set in the OB100 at PLC startup. For controlling the example, the variable table „VAT_BIS_M4008_IB“ is available.

1.1 Sample functions

The following commandos are supported in the demo program:

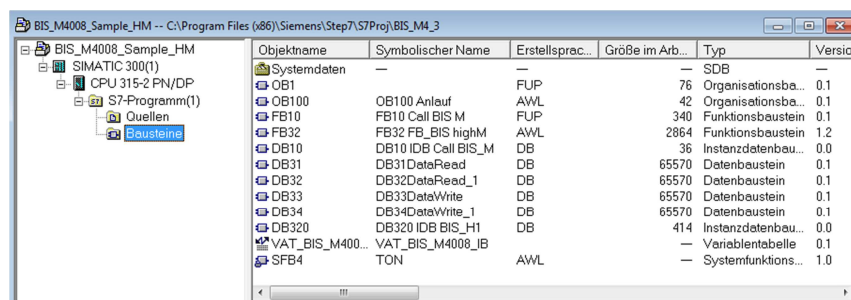
- Read data carrier (USER-data)
- Write data carrier (USER-data)
- Store Auto Read start address
- Type and serial number
- Copy data between data carrier
- Initialize CRC_16 data check
- Write constant value to data carrier

ATTENTION

Please test carefully if the used commandos are supported by the processor and the read/write head! With suitable data carriers e.g. BIS M-xxx-15/A the maximum of 131,068 bytes can be read or write.

1.2 General Data

Program name:	BIS_M4008_Sample_HM
Invoked blocks:	FB10, FB31, SFB4 TON
Reserved memory bits:	MW100-128
Reserved Timers:	none
Reserved Counters:	none
Configured I/O Range	64 Byte
Invoke:	absolute
Device compatibility:	Siemens Simatic® S7-300 CPU 315 2PN/DP with S7 V5.5



Objektname	Symbolischer Name	Erstellsprac...	Größe im Arb...	Typ	Versio
Systemdaten	—	—	—	SDB	—
OB1	—	FUP	76	Organisationsba...	0.1
OB100	OB100 Anlauf	AWL	42	Organisationsba...	0.1
FB10	FB10 Call BIS M	FUP	340	Funktionsbaustein	0.1
FB32	FB32 FB_BIS highM	AWL	2864	Funktionsbaustein	1.2
DB10	DB10 IDB Call BIS_M	DB	36	Instanzdatenbau...	0.0
DB31	DB31DataRead	DB	65570	Datenbaustein	0.1
DB32	DB32DataRead_1	DB	65570	Datenbaustein	0.1
DB33	DB33DataWrite	DB	65570	Datenbaustein	0.1
DB34	DB34DataWrite_1	DB	65570	Datenbaustein	0.1
DB320	DB320 IDB BIS_H1	DB	414	Instanzdatenbau...	0.0
VAT_BIS_M400...	VAT_BIS_M4008_IB	—	—	Variablentabelle	0.1
SFB4	TON	AWL	—	Systemfunktions...	1.0

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1 BIS M SAMPLEPROGRAMM HIGH MEMORY

1.3 Control and watch options with the variable table

Description of FB input parameters:

- „M100.1 BIS M Start“ starts commando
- „M100.2 BIS M ProcReset“ resets processor and FB
- „M100.3 BIS M HeadOff“ disables the R/W head
- „M100.4 Default BIS M“ sets FB parameters to default values
- „MW104 CommandNo“ pretends the actual command
- „MD106 BIS M Offset Send“ offset in send data block
- „MD110 BIS M Offset Rece“ offset in receive data block
- „MD114 TAG_StartAddr“ pretends start address
- „MD118 TAG_NumbOfByte“ pretends number of bytes to read/write
- „MD122 TAG_CopTargetAddr“ target address for copy commando
- „MW126 BIS M CopyRWHead“ number of R/W head for copy commando

	Operand	Symbol	Anzeigeformat	Statuswert	Steuerwert
1	// FB Input Parameter Bit				
2	M 100.1	"M100.1 BIS M Start"	BIN		
3	M 100.2	"M100.2 BIS M ProcReset"	BIN		
4	M 100.3	"M100.3 BIS M HeadOff"	BIN		
5	M 100.4	"M100.4 Default BIS M"	BOOL		
6	// FB Input Parameter Words				
7	// CommandNo: 0x81 Read, 0x82 Write, 0x87 Save Autostart Adr , 0x9 Typ and Serial No,				
8	// 0x92 CRC_Init 0xB2 Write constant value				
9	MW 104	"MW104 CommandNo"	HEX		W#16#0081
10	MD 106	"MD106 BIS M Offset Send"	DEZ		L#0
11	MD 110	"MD110 BIS M Offset Rece"	DEZ		L#0
12	MD 114	"MD114 TAG_StartAddr"	DEZ		L#0
13	// ! DB length == max. numb of byte == 131068 byte!				
14	MD 118	"MD118 TAG_NumbOfByte"	DEZ		L#80000
15					
16	// FB Output Parameter Bit				
17	M 101.0	"M101.0 BIS M Ready"	BOOL		
18	M 101.1	"M101.1 BIS M Error"	BOOL		
19	M 101.2	"M101.2 BIS M MultipleTag"	BOOL		
20	M 101.3	"M101.3 BIS M DatCarrPres"	BOOL		
21	// FB Output Parameter Words				
22	MW 128	"MW128 BIS M ErrorCode"	HEX		

Description of FB output parameters:

- „M101.0 BIS M Ready“ job or reset done
- „M101.1 BIS M Error“ job done with errors
- „M101.3 BIS M DataCarrPres“ data carrier present
- „MW128 BIS M ErrorCode“ error number processor and FB



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1.4 Disclaimer of Liability sample program:

This demo program is free of charge and is a universal application example. This demo program shall help program and configure PLC applications and shall provide possible solutions.

The user is not entitled to claim for warranty, error correction and updates. In particular there is excluded any claims against Balluff GmbH for damages that might result from the use of this demo program. Excluded from this limitation of liability shall be (a) those damages that are based on injury to life, limb or health, (b) a liability according to the Produkthaftungsgesetz (German Product Liability Law) and (c) cases of willful intent.

Please check if the demo program is intended for your application before adapting it in plants and machineries.

By using the S7 sample, made available free of charge you accept the limitation of warranty and liability!

Balluff GmbH
Schurwaldstraße 9
73765 Neuhausen a.d.F.
Deutschland
Tel. +49 7158 173-0
Fax +49 7158 5010
balluff@balluff.de
www.balluff.com

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