

BALLUFF

Software- Description

BIS V-CLM

Sample Program S7-1200/1500



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1 BIS VU SAMPLE

The S7 project **BIS_V_CLM Sample** contains in FB10 an example call of BIS_V_CLM_COM for BIS V-6108-048-Cxxx, BIS M-40x, BIS M-40xx und BIS M-60xx. One S7-1500 CPU1513F is connected to the BIS V via Profinet. Configured I/O length: 64 bytes, peripheral start address: E/A256, hardware identifier: 271. The S7-1200 CPU1214C is connected to a compact processor unit BIS M-4xx via BNI PNT IO Link Master. Configured I/O length: 10 Byte, peripheral start address: E/A100, hardware identifier: 284. Another CPU1513F is connected to a BIS M-60x8 processor unit via Profinet. Configured I/O length 64 bytes, peripheral start address: I/O 256, hardware identifier: 265 and 266, used r/w head: Head 2. The parameters at BIS_V_CLM_COM[FB 33] are set according to the hardware configuration. The FB is initialized automatically by the PLC program. The data bit "Call BIS_V_CLM".Init is set to "1"; in OB 100 when the CPU is started. The variable table "WT_BIS_V_CLM_IBN"; is available to control the example.

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
- Read DSFID
- Write DSFID

ATTENTION

Please test carefully if the used commandos are supported by the BIS V processor and the read/write head! The maximum read/write length of the FB is 65,534 byte. When using VU read heads, a maximum of one data carrier may be located in the active range of the antenna.

1 BIS VU SAMPLE

1.2 General data

Program name:	BIS_V_CLM_Sample
Invoked blocks:	FB10, FB33
Reserved memory bits:	MB0 clock memory, MB1 system memory
Reserved Timers:	none
Reserved Counters:	none
Configured I/O Range	64 Byte, 10 Byte Bis M
Invoke:	absolute
Device compatibility:	Siemens Simatic® S7 1200/1500
Software version:	Siemens Simatic® S7-1200 CPU 1214C V4.1 or S7-1500 CPU 1513C V1.7 with TIA-Portal V13 SP1

1.3 Control and watch options with the variable table

Description of FB input parameters:

- "Call_BIS_V_CLM_DB".Init - function block initialization
- "Call_BIS_V_CLM_DB".Start - start commando.
- "Call_BIS_V_CLM_DB".ProcReset - reset processor and FB
- "Call_BIS_V_CLM_DB".HeadOff - head deactivation
- "Call_BIS_V_CLM_DB".Dynamic - dynamic mode
- "Call_BIS_V_CLM_DB".BIS_Default - set FB parameters to default values
- "Call_BIS_V_CLM_DB".Command - pretends the actual command
- "Call_BIS_V_CLM_DB".TAG_StartAddr - pretends start address
- "Call_BIS_V_CLM_DB".TAG_NumbOfByte - pretends number of bytes to read
- "Call_BIS_V_CLM_DB".CopTargetAddr - Copy target data carrier address
- "Call_BIS_V_CLM_DB".CopRW_HeadNo - Copy head number

Sample Program description for BIS V, BIS C, BIS M, BIS L

1 BIS VU SAMPLE

BIS_V_CLM_Sample ▶ PLC_3+BIS_M-6008 [CPU 1513F-1 PN] ▶ Watch and force tables ▶ WT_BIS						
	Name	Address	Display f...	Monitor value	Modify value	
1	// FB input parameter bit					
2	*Call_BIS_V_CLM_DB*.Init		Bool		FALSE	
3	*Call_BIS_V_CLM_DB*.Start		Bool		TRUE	
4	*Call_BIS_V_CLM_DB*.ProcReset		Bool		FALSE	
5	*Call_BIS_V_CLM_DB*.HeadOff		Bool		FALSE	
6	*Call_BIS_V_CLM_DB*.Dynamic		Bool		FALSE	
7	*Call_BIS_V_CLM_DB*.BIS_Default		Bool		FALSE	
8	// FB input parameter					
9	*Call_BIS_V_CLM_DB*.Command		Hex		16#0001	
10	*Call_BIS_V_CLM_DB*.Offset_DBSend		DEC+/-		0	
11	*Call_BIS_V_CLM_DB*.Offset_DBReceive		DEC+/-		0	
12	*Call_BIS_V_CLM_DB*.TAG_StartAddr		DEC+/-		6	
13	*Call_BIS_V_CLM_DB*.TAG_NumbOfByte		DEC+/-		100	
14	*Call_BIS_V_CLM_DB*.CopTargetAddr		DEC+/-		0	
15	*Call_BIS_V_CLM_DB*.CopRW_HeadNo		DEC+/-		2	
16	// FB output parameter bit					
17	*Call_BIS_V_CLM_DB*.Ready		Bool			
18	*Call_BIS_V_CLM_DB*.Error		Bool			
19	*Call_BIS_V_CLM_DB*.HeadOff		Bool			
20	*Call_BIS_V_CLM_DB*.DatCarrPresent		Bool			
21	// FB output parameter int					
22	*Call_BIS_V_CLM_DB*.ErrorCode		Hex			
23	// RFID write data					
24	*DB31Send*.SendData[0]	%DB31.DBB0	Hex		16#09	
25	*DB31Send*.SendData[1]	%DB31.DBB1	Hex			
26	*DB31Send*.SendData[2]	%DB31.DBB2	Hex			

Description of FB output parameters:

- "Call_BIS_V_CLM_DB".Ready - Job done
- "Call_BIS_V_CLM_DB".Error - Job done with errors
- "Call_BIS_V_CLM_DB".ErrorCode - Error number processor and FB
- "Call_BIS_V_CLM_DB".DatCarrPresent - Data carrier present

1 BIS VU SAMPLE

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!

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