MANUFACTURER DOCUMENT PACKAGE

Manufacturer's Manual

Reference package for procurement and maintenance review

SIEMENS

6RX1700-0AK00

CUD2 TERMINAL EXPANSION MODULE

Used with the applicable SIMOREG DC-MASTER 6RA70 configuration.

REFERENCE PACKAGE

OFFICIAL DOCUMENT

Selected official manufacturer pages follow this cover.

Source: Siemens SIMOREG DC-MASTER Control Module, 6RX1700-0BD76, ordering information and CUD2 terminal specifications.

SIEMENS

SIMOREG DC-MASTER Control Module

Operating Instructions

6RA70 Series

Control Module with microprocessor
for Variable-Speed DC Drives



Edition: 07

Order-No.: 6RX1700-0BD76

These Operating Instructions are available in the following languages:

Language	German	French	Spanish	Italian
Order No.	6RX1700-0BD00	6RX1700-0BD77	6RX1700-0BD78	6RX1700-0BD72

Control Module software version:

As these Operating Instructions went to print, SIMOREG DC-MASTER Control Modules were being delivered from the factory with software version **3.1** installed.

These Operating Instructions also apply to other software versions.

Earlier software versions: Some parameters described in this document might not be stored in the software (i.e. the corresponding functionality is not available on the converter) or some parameters will have a restricted setting range. If this is the case, however, appropriate reference to this status will be made in the Parameter List.

Later software versions: Additional parameters might be available on the SIMOREG DC-MASTER Control Module (i.e. extra functions might be available which are not described in these Operating Instructions) or some parameters might have an extended setting range. In this case, leave the relevant parameters at their factory setting, or do not set any parameter values which are not described in these Instructions !

The software version of the SIMOREG DC-MASTER Control Module can be read in parameters r060 and r065.

The latest software version is available at the following Internet site:

http://www4.ad.siemens.de/view/cs/en/8479576

CAUTION

Before updating your software, find out the product state of your SIMOREG device. You will find this on the rating plate (field on the bottom left-hand side "Prod. State").

Prod. State = A1,A2 (devices with the CUD1 electronics board, version C98043-A7001-L1-xx):
It is only permissible to load software versions 1.xx and 2.xx.

Prod. State = A3 (devices with the CUD1 electronics board, version C98043-A7001-L2-xx):
It is only permissible to load software versions 3.xx.

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We have checked that the contents of this publication agree with the hardware and software described herein. Nonetheless, differences might exist and therefore we cannot guarantee that they are completely identical. The information given in this publication is reviewed at regular intervals and any corrections that might be necessary are made in the subsequent printings. Suggestions for improvement are welcome at all times.

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2.4 Ordering information for options with order codes

6RA7000 - 0MV62 - 0 - Z

Order number of SIMOREG CM converter with order code Z

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Order codes (several added order codes) and/or

□

Plain text, where necessary

Options	Codes	Order No..
Technology software in the basic converter ("Free function blocks") (for orders at a later date, please quote factory serial number of converter)	S00	6RX1700-0AS00
Module terminal expansion (CUD2)	K00	6RX1700-0AK00
DriveMonitor PC - PMU (RS232) connecting cable, 3m		9AK1012-1AA00
User-friendly operator control panel (OP1S)		6SE7090-0XX84-2FK0
AOP1 adapter for mounting OP1A in cubicle door, including 5 m connecting cable		6SX7010-0AA00
PMU-OP1S connecting cable, 3m		6SX7010-0AB03
PMU-OP1S connecting cable, 5m		6SX7010-0AB05
Electronics power supply 24 V DC	L05	6RY1703-0CM24
LBA Local bus adapter for the electronics box LBA is always needed to install supplementary boards (see Section 5.3.2)	K11	6SE7090-0XX84-4HA0
ADB Adapter board ADB is always needed to install CBC, CBP, EB1, EB2, SBP and SLB boards	K01, K02 5)	6SE7090-0XX84-0KA0
SBP Pulse encoder evaluation board 1) 2) 3) (miniature-format board; ADB required)	C14, C15 C16, C17 5)	6SX7010-0FA00
EB1 Terminal expansion board 3) (miniature-format board; ADB required)	G64, G65 G66, G67 5)	6SE7090-0XX84-0KB0
EB2 Terminal expansion board 3) (miniature-format board; ADB required)	G74, G75 G76, G77 5)	6SE7090-0XX84-0KC0
SLB SIMOLINK board 1) 3) (miniature-format board; ADB required)	G44, G45 G46, G47 5)	6SX7010-0FJ00
CBP2 Communications board with interface for SINEC- L2-DP, (PROFIBUS) 1) 3) (miniature-format board; ADB required)	G94, G95 G96, G97 5)	6SX7010-0FF05
CBC Communications board with interface for CAN protocol 1) 3) (miniature-format board; ADB required)	G24, G25 G26, G27 5)	6SX7010-0FG00
CBD Communications board with interface for DeviceNet protocol 1) 3) (miniature-format board; ADB required)	G54, G55 G56, G57 5)	6SX7010-0FK00
SCB1 Serial Communication Board 1 (Master for SCI1 and SCI2 with FO link) 3) 4)		6SE7090-0XX84-0BC0
SCI1 Serial Communication Interface 1 (terminal expansion with FO link to SCB1) for attachment to DIN EN 50022 rail 4)		6SE7090-0XX84-3EA0

Options:

Terminal expansion CUD2

Terminal type: Plug-in terminal (screw-type)
max. connection cross-section 1.5mm²

Motor interface (see also function diagrams, Section 8, sheets G185 and G186)

Module C98043-A7006 (CUD2)

Function	Terminal X164	Connection values/remarks
Motor temperature (temperature sensor input)	204 205	Sensor acc. to P490 index 2 The cable to the temperature sensor on the motor must be shielded and connected to ground at both ends.

Module C98043-A7006 (CUD2)

Function	Terminal X161	Connection values/remarks
Supply for digital inputs	210	24V DC, short circuit proof with respect to internal ground max. load 200mA (terminals 34, 44, and 210 combined), Overload response: Error signal F018 Warning signal A018
Binary input Binary input Binary input Binary input	211 212 213 214	H signal: +13V to +33V L signal: – 33V to +3V or terminal open Input resistance = 2.8 kΩ
Ground for binary inputs Ground for binary inputs M	215 216 217	can be isolated from internal ground (Open wire jumper between terminal 216 and 217)

Analog inputs (see also Section 8, sheet G114)

Module C98043-A7006 (CUD2)

Function	Terminal X164	Connection values/remarks
Select input analog 2 Ground analog	8 9	±10V, 52kΩ Resolution: ±10bit
Select input analog 3 Ground analog	10 11	Common mode suppression: ±15V

Analog outputs (see also Section 8, sheet G116)

Module C98043-A7006 (CUD2)

Function	Terminal X164	Connection values/remarks
Select output analog 3 Ground analog M	18 19	0. . . ±10V, max. 2mA Short-circuit-proof
Select output analog 4 Ground analog M	20 21	Resolution ±11bit

Digital inputs (see also Section 8, sheet G111)

Module C98043-A7006 (CUD2)

Function	Terminal X163	Connection values/remarks
Supply (output)	44	24V DC, short circuit proof max. load 200mA (terminals 34, 44, and 210 combined), internal supply with respect to internal ground Overload response: Fault signal F018 Warning signal A018
Ground digital M	45	
Select input binary 3	40	H signal: +13V to +33V L signal: – 33V to +3V or terminal open 8.5mA at 24V
Select input binary 4	41	
Select input binary 5	42	
Select input binary 6	43	

Digital outputs (see also Section 8, sheet G112)

Module C98043-A7006 (CUD2)

Function	Terminal X163	Connection values/remarks
Select output binary 3	50	H signal: +20 to +26V L signal: 0 to +2V short circuit proof 100mA Overload response: Fault signal F018 Warning signal A018 Internal suppressor circuit (freewheeling diode)
Ground M	51	
Select output binary 4	52	
Ground M	53	

Serial interface 3 RS485 (G-SST3)

Module C98043-A7006 (CUD2)

Function	Terminal X162	Connection values/remarks
TX+	61	RS485, 4-wire send cable, positive differential output
TX-	62	RS485, 4-wire send cable, negative differential output
RX+/TX+	63	RS485, 4-wire receive cable, positive differential input, 2-wire send/receive cable, positive differential input
RX-/TX-	64	RS485, 4-wire receive cable, negative differential input, 2-wire send/receive cable, negative differential input
M	65	Ground

Cable length: For transmission rate =187.5kBd ⇒ 600m
For transmission rate =93.75kBd ⇒ 1200m

The following must be observed: DIN 19245 Part 1
The potential difference between the data reference potentials M of all interfaces must not exceed -7V / +12V. If this cannot be guaranteed, then equipotential bonding must be provided.

Activate interface 3:

– Set the baud rate in parameter P803.
– Set the protocol in parameter P800.