

SIMOREG DC-MASTER Control Module

Operating
Instructions

6RA70 Series

Control Module with microprocessor
for Variable-Speed DC Drives



CUD1	Electronics board C98043-A7001 of SIMOREG DC-MASTER (C ontrol U nit / D irect C urrent)
CUD2	Terminal expansion board C98043-A7006 for CUD1
DeviceNet	Field bus specification of ODVA (Open DeviceNet Vendor Association)
DP	D istributed P eripherals
EB1	Supplementary board with additional inputs/outputs (E xpansion B oard 1)
EB2	Supplementary board with additional inputs/outputs (E xpansion B oard 2)
GSD file	Device master data file defining the communication features of the PROFIBUS communication board
ID	I dentifier for CAN Bus communication
IND	Parameter I ndex
LBA	Connection module for mounting supplementary modules (L ocal B us A dapter)
LWL	Fiber-optic cable
MSAC_C1	Designation of a transmission channel for PROFIBUS (M aster S lave A cyctic / C lass 1)
MSCY_C1	Designation of a transmission channel for PROFIBUS (M aster S lave C yclic / C lass 1)
OP1S	Optional device operating panel with plaintext display and internal memory for parameter sets (O perator P anel 1 / S tore)
PKE	Parameter identifier
PKW	Reference to parameter (parameter identifier value)
PMU	Simple operator panel of SIMOREG DC-MASTER (P arameterization U nit)
PNU	P arameter n umber
PPO	Definition of number of parameter and process data words for PROFIBUS communication (P arameter P rocess D ata O bject)
PROFIBUS	Field bus specification of PROFIBUS user organization (P rocess F ield B us)
PWE	Parameter value
PZD	Process data
SBP	Supplementary board for linking tacho (S ensor B oard P ulse)
SCB1	Supplementary board for linking SCI1 or SCI2 via fiber optic cable (S erial C ommunication B oard 1)
SCI1	Supplementary board with additional inputs/outputs; I/O slave module on SCB1 (S erial C ommunication I nterface 1)
SCI2	Supplementary board with additional inputs/outputs; I/O slave module on SCB1 (S erial C ommunication I nterface 2)
SIMOLINK	Field bus specification for fiber optic ring bus (S iemens M otion L ink)
SLB	Supplementary board for SIMOLINK link (S IMOLINK B oard)
STW	Control word
T100	Supplementary board with technology functions (T echnology B oard 100)
T300	Supplementary board with technology functions (T echnology B oard 300)
T400	Supplementary board with technology functions (T echnology B oard 400)
TB	T echnology board T100, T300 or T400
USS	U niversal serial interface
ZSW	S tatus word

6.11.3 Fuses in the power interface

Board C98043-A7042:

Wickmann 198 1A / 250 V 5 x 20 mm slow

Wickmann 343 1A / 250 V 6.3 x 32 mm slow

Schurter FSD 1A / 250 V 5 x 20 mm slow, order code 0034.3987

Schurter FST 1A / 250 V 5 x 20 mm slow, order code 0034.3117

Board C98043-A7041:

F 6.3A / 250 V 5 x 20 mm (Fast-Acting Fuse)

e.g., Wickmann 193,
Littlefuse 217P Series

6.12 Arrangement of printed circuit boards

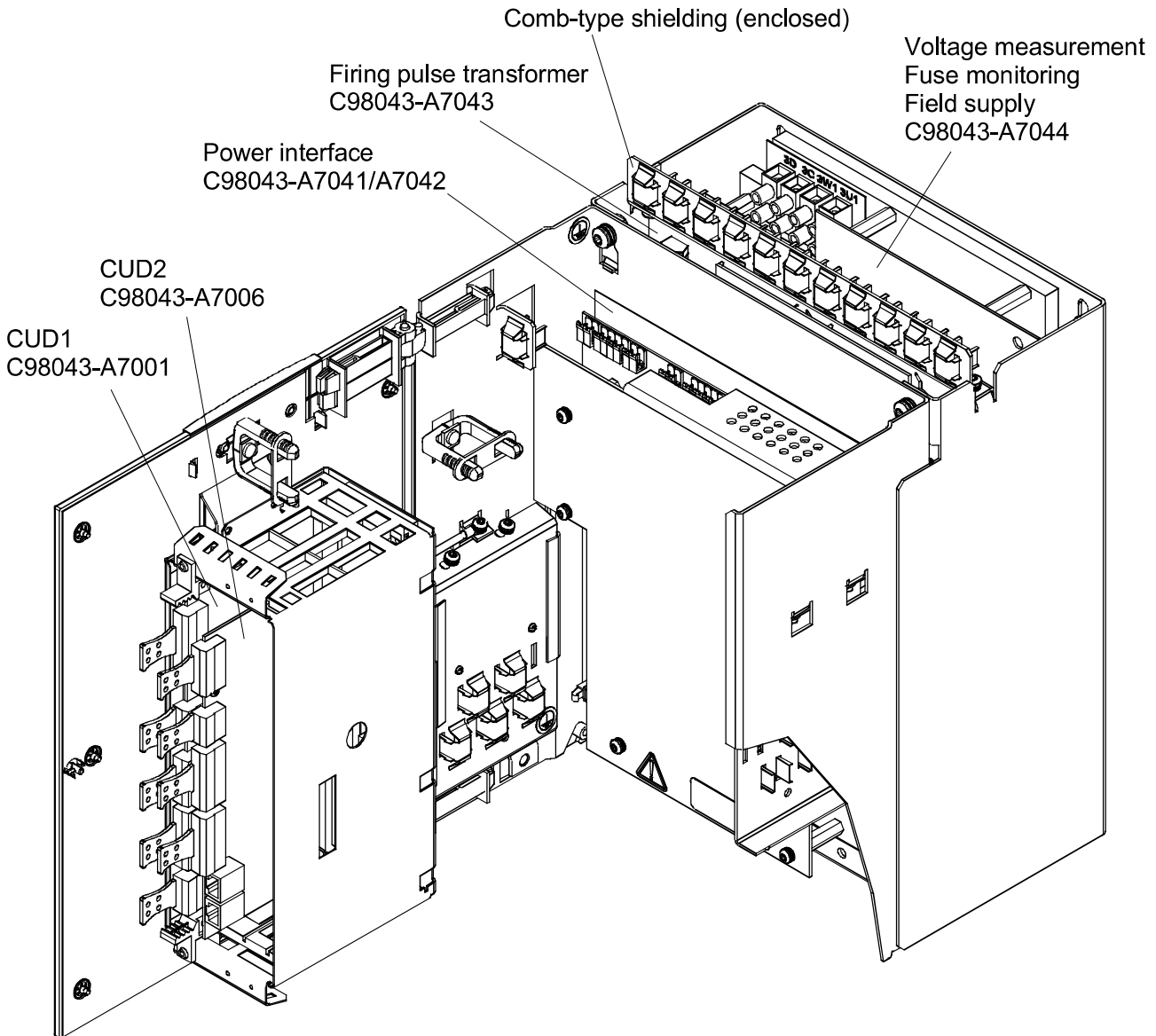


Fig. 6.12.1

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	211	} H signal: +13V to +33V } L signal: - 33V to +3V or terminal open } Input resistance = 2.8 k Ω
Binary input	212	
Binary input	213	
Binary input	214	
Ground for binary inputs	215	can be isolated from internal ground
Ground for binary inputs	216	(Open wire jumper between terminal 216 and 217)
M	217	

Analog inputs (see also Section 8, sheet G114)

Module C98043-A7006 (CUD2)

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

Analog outputs (see also Section 8, sheet G116)

Module C98043-A7006 (CUD2)

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

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
Ground digital M	45	Overload response: Fault signal F018 Warning signal A018
Select input binary 3	40	H signal: +13V to +33V
Select input binary 4	41	L signal: - 33V to +3V or terminal open
Select input binary 5	42	8.5mA at 24V
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
Ground M	51	L signal: 0 to +2V short circuit proof 100mA
Select output binary 4	52	Overload response: Fault signal F018 Warning signal A018
Ground M	53	Internal suppressor circuit (freewheeling diode)

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.