**Access control
System components**
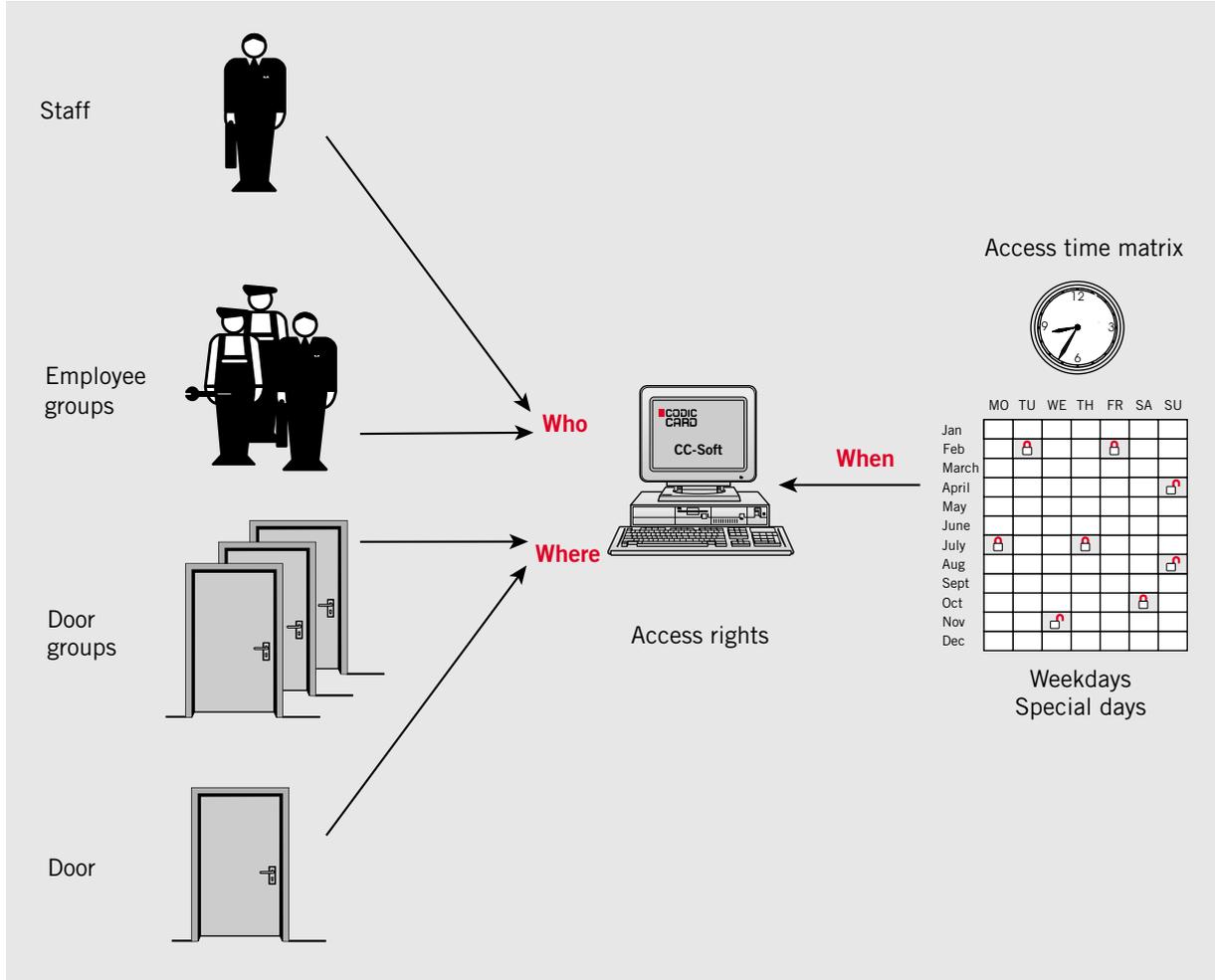
DORMA ▦ CODIC CARD

Systematic security

An access control system has to satisfy particularly high demands in the case of large building complexes managed on the basis of an integrated network. With the CODIC system from DORMA, up to 31 evaluation and control units can be inter-linked without problem. This means that up to 124 doors and readers can be integrated within a single system. Data management and coordina-tion can be efficiently per-formed with just one control centre computer even in a network comprising several kilometres of cabling. The CODIC CARD access control system also offers versatility in the selection of the

devices actuated. It can be configured, for example, for direct operation of electric strikes, high-security PROSIS jamb-concealed locks, DORMA SVP emergency escape locks with automatic locking action and even the entire DORMA emergency exit control system. Both authorised personnel and also the doors assigned to them can be divided into groups. This simplifies handling in cases where the identity cards merely need to allow equal-authority access to the same localities. The CC-Soft software used in the system also ensures easy and efficient adminis-tration of the access rights.
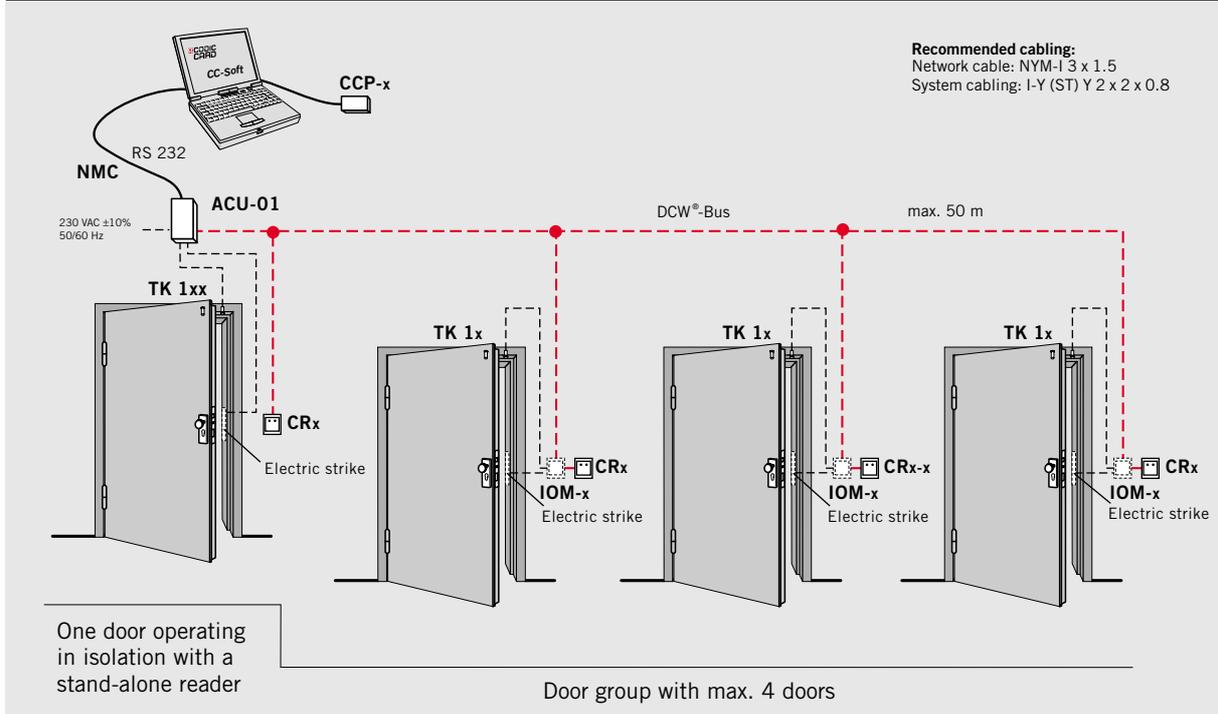
Benefits

- Modular components and software tools.
- Savings in time and cost with installation using modern bus technology.
- Choice between stand-alone operation and net-worked system.
- Suitable for integration with emergency exit control systems.
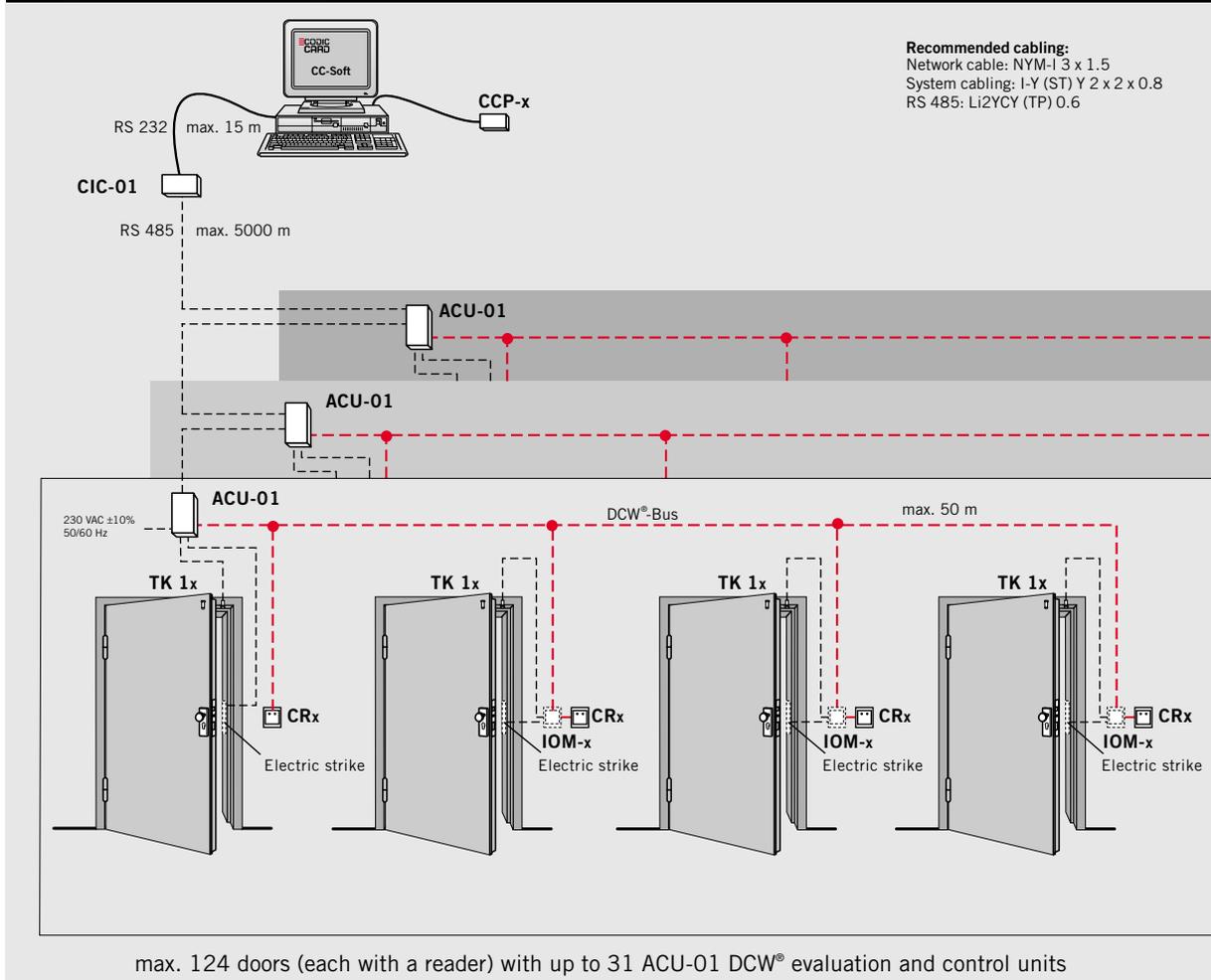- User-friendly software for convenient administration of access rights.

Access rights

Staff

Employee groups

Who

CC-Soft

When

Door groups

Where

Access rights

Door

Access time matrix

Weekdays
Special days

Configuration and data exchange via laptop (offline)

Recommended cabling:
Network cable: NYM-I 3 x 1.5
System cabling: I-Y (ST) Y 2 x 2 x 0.8

CC-Soft

CCP-x

RS 232

NMC

ACU-01

230 VAC ±10%
50/60 Hz

DCW®-Bus   max. 50 m

TK 1xx

TK 1x   **TK 1x**   **TK 1x**

CRx

Electric strike

CRx
IOM-x
Electric strike

CRx-x
IOM-x
Electric strike

CRx
IOM-x
Electric strike

One door operating
in isolation with a
stand-alone reader

Door group with max. 4 doors

Configuration and data exchange via PC (online)

Recommended cabling:
Network cable: NYM-I 3 x 1.5
System cabling: I-Y (ST) Y 2 x 2 x 0.8
RS 485: Li2YCY (TP) 0.6

CC-Soft

CCP-x

RS 232   max. 15 m

CIC-01

RS 485   max. 5000 m

ACU-01

ACU-01

ACU-01

230 VAC ±10%
50/60 Hz

DCW®-Bus   max. 50 m

TK 1x   **TK 1x**   **TK 1x**   **TK 1x**

CRx

Electric strike

CRx
IOM-x
Electric strike

CRx
IOM-x
Electric strike

CRx
IOM-x
Electric strike

max. 124 doors (each with a reader) with up to 31 ACU-01 DCW® evaluation and control units

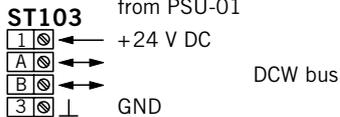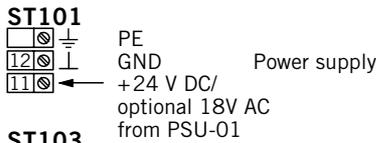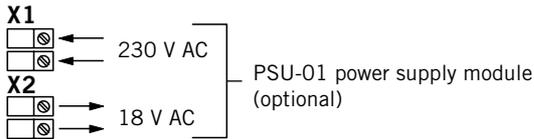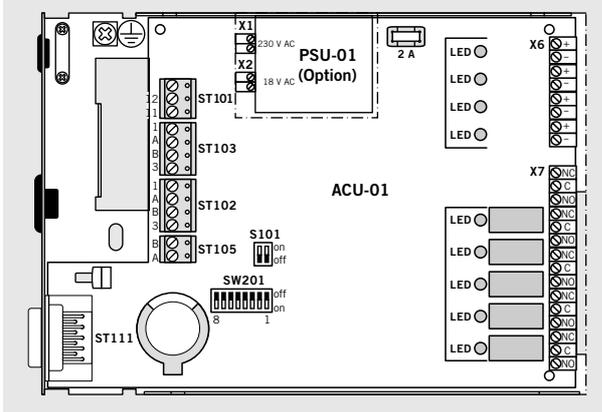The ACU-01 DCW® evaluation and control unit serves as the central processing device in the CODIC CARD access control system. It communicates via the DCW® bus with the ID readers and I/O modules of the system.

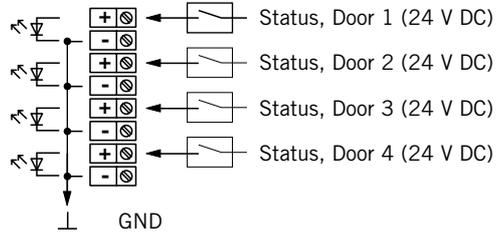It also administers the access authorisation data and enables data interchange with the PC.

Technical data

Power supply:	Via power supply module PSU-01; alternatives:
	16–36 V DC / 16–24 V AC
Current input:	max. 240 mA
Operating temperature:	– 20 °C to + 45 °C
Class of protection:	IP 20
Optocoupler inputs:	24 V DC, 20 mA
Relay outputs:	max. 60 VA
	max. 45 V DC / 35 V AC
	max. 2 A
Anti-tamper contact:	Fork-type photoelectric switch

ACU-01 DCW® evaluation and control unit: Terminal assignment and functions
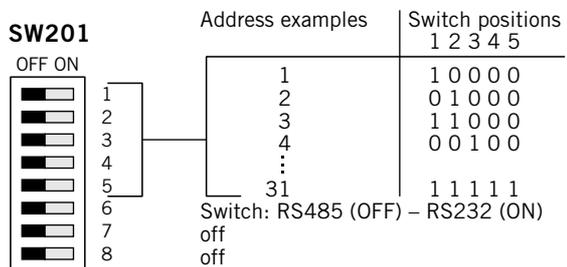

X6 Optocoupler inputs

- Status, Door 1 (24 V DC)
- Status, Door 2 (24 V DC)
- Status, Door 3 (24 V DC)
- Status, Door 4 (24 V DC)
- GND

X7 Relay outputs

- Activation, Door 1 — Floating change-over contact
- Activation, Door 2 — Floating change-over contact
- Activation, Door 3 — Floating change-over contact
- Activation, Door 4 — Floating change-over contact
- Anti-tamper contact — Floating change-over contact

X1
230 V AC

X2
18 V AC

PSU-01 power supply module (optional)

ST101
PE
GND
+24 V DC/ optional 18V AC from PSU-01

Power supply

ST103
+24 V DC
A
B
3 ⊥ GND

DCW bus

ST102
+24 V DC
A
B
3 ⊥ GND

DCW bus

ST105
B
A

RS 485

ST111

RS 232	Pin	Signal
	1	–
	2	RXD1#
	3	TXD1#
	4	–
	5	GND
	6	–
	7	–
	8	–
	9	–

S101
ON OFF

Switch-selectable bus terminating resistor

Both DIL switches must be set to ON for the first and last ACU in the chain

ACU addressing scheme

SW201
OFF ON

Address examples	Switch positions 1 2 3 4 5
1	1 0 0 0 0
2	0 1 0 0 0
3	1 1 0 0 0
4	0 0 1 0 0
⋮	
31	1 1 1 1 1

Switch: RS485 (OFF) – RS232 (ON)
off

Specification text	Order No. 🖳

CODIC CARD ACU-01 DCW® Evaluation and Control Unit

ACU-01 DCW® evaluation and control unit for connection of up to four CRx-xxx DCW® readers and up to three IOM-xxx DCW® I/O modules. Networked via the DORMA DCW® bus system. For storage and evaluation of up to 5,000 individual erasable access rights in 20 door-specific and/or personnel-specific time matrices. Logging of max. 5,000 authorised access events. Integrated lithium back-up battery ensures data security in the event of a power failure.

Control system includes four optocoupler inputs for trans-mission of external signals and control commands (floating or non-floating) and five floating outputs for actuation of external components – such as DORMA SVP emergency escape locks with automatic locking action, PROSIS high-security jamb-concealed locks, electric strikes and motor locks, and/or for outputting signals. Anti-tamper contact for monitoring unauthorised attempts to open the housing. Parameterisation/programming performed using the CODIC CARD CC-SOFT software package running on a WINDOWS platform: Windows 98/NT4 Servicepack 6 or Windows 2000.

With max. 31 ACU-01 DCW® evaluation and control units, a network can be created containing up to 124 readers. For data communications with the evaluation units, the RS232 interface is provided for the stand-alone mode, and the RS485 interface is provided for network operations.

The maximum cable length in the network mode is 5,000 m.

Power supply by others:	24 VDC ± 10 %

Option: 230 V AC ± 10%, 50/60 Hz with PSU-01 power supply module.

Current input:	max. 240 mA
Optocoupler inputs:	24 V DC, 20 mA
Relay outputs:	max. 60 VA
	max. 45 V DC/35 V AC
	max. 2 A

Sheet steel housing (painted white, sim. to RAL 9010) for surface fixing

|	
Dimensions (W x H x D):	146 x 244 x 59 mm
Class of protection:	IP 20

19350001 🖳 ACU-01DCW®
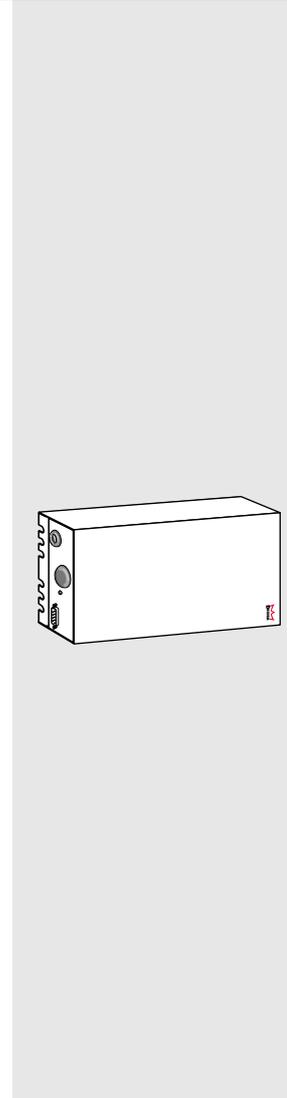
CODIC CARD PSU-01 Power Supply Module

Power supply pcb for supplying one ACU-01 DCW®, four CRH-xxx DCW® readers and three IOM-xxx DCW® I/O modules. Prepared for simple installation in the housing of the ACU-01 DCW® evaluation and control unit.
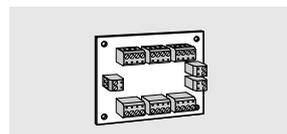
Power supply:	230 V AC ± 10 % 50/60 Hz
Power consumption:	24 VA
Dimensions (W x H x D):	90 x 60 x 35 mm

19350002 🖳 PSU-01
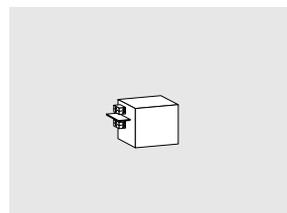
DORMA DCW® Bus Hub

DORMA DCW® bus hub with six ports as distribution board/branching module for DORMA DCW® bus devices; for installation in DCW® hub box or enclosure by others.
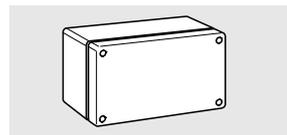
🖳 DCW®
56352100   bus hub

DORMA DCW® Hub Box

DORMA DCW® hub box for installation of up to four DCW® bus hubs; surface-fixed.

Degree of protection:	IP 54
Dimensions (W x H x D):	200 x 120 x 75 mm

🖳 DCW®
56352000   hub box

| Specification text | Order No. 💻 |

CODIC CARD Software CC-SOFT
Access control software for running on a Windows platform
as a stand-alone version.
For configuration and administration of users, doors and
time zones of CODIC CARD readers. For managing
up to 5,000 access rights assigned to 124 readers via
31 evaluation and control units in 20 time zones. Indication
of data transfer requirement in relation to modified data
for the individual access controls. Integral wizard for user
prompting.
The audit trail (events history) data of the ID cards known
to the system can be read out as required. Access attempts
with non-system HITAG cards/transponders are likewise
logged.
Various rights can be managed on a password-secure basis.
Additional functions can be generated with the optional soft-
ware expansion modules:
– Layout plan upgrade: Integration of active links in user-
specific layout diagrams (up to 20 levels) enables direct
management of the door data.
– Report upgrade: This program module facilitates user
documentation of access rights, doors and specific
groupings. Also enables events history documentation
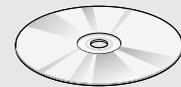provided that the audit trail upgrade has been implemented.
System requirements:
IBM-compatible PC (Pentium, 200 MHz or better);
operating system: Windows 98/NT4 Servicepack 6 or
Windows 2000; CD-ROM drive; 32 MB RAM;
60 MB free hard disk storage space plus capacity
for data logging.
Two free COM interfaces (V24 standard).

19650001 💻 CC-Soft

CODIC CARD Software Upgrade CLU-01, Layout
Software upgrade for expanding the CC-SOFT basic software
to enable the upload of up to 20 layouts of a building in BMP
or JPG format. In order to facilitate management, erasable
links to the door data can be incorporated directly into
the layout in order to enable the functions such as group
management, door-open alarm or set/modify energise time.

19650201 💻 CLU-01
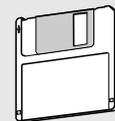
CODIC CARD Software Upgrade CRU-01, Report
Software upgrade for expanding the CC-SOFT basic software
to enable convenient documentation of the system-relevant
data pertaining to users, doors, their groups and time
matrices.
Also facilitates efficient documentation of usage/events
history in combination with the Audit Trail software upgrade.
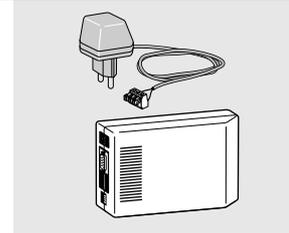
19650301 💻 CRU-01
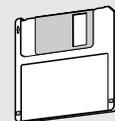
Specification text	**Order No.** 🖥

CODIC CARD Interface Controller CIC-01
Processor-controlled RS 485/RS 232 interface converter for networking the CODIC CARD ACU/01 DCW® evaluation and control units in the online mode via the serial interface (V24 standard) of the PC.
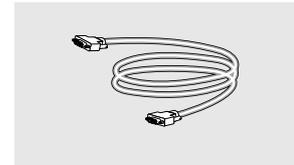
19493201 🖥 CIC-01

CODIC CARD Null Modem Cable NMC
For data interchange between the CODIC CARD ACU-01 DCW® evaluation and control unit or CODIC CARD CIC-01 interface controller with the serial interface (V24 standard) of the PC.

19491720 🖥 NMC

Abbreviations / Nomenclature	**Note:**

ACU-01 DCW®	**A**ccess **C**ontrol **U**nit
CCx-0x	**C**ODIC-**C**ARD
CCP-x01	**C**ODIC-**C**ARD **P**rogrammer
CC-SOFT	**C**ODIC-**C**ARD **S**OFTware
CHU-01	**C**ODIC **H**istory **U**pgrade
CIC-01	**C**ODIC **I**nterface **C**ontroller
CLU-01	**C**ODIC **L**ay-out **U**pgrade
CRx DCW®	**C**ard **R**eader
CRU-01	**C**ODIC **R**eport **U**pgrade
CTx-03	**C**ODIC Transponder **T**ag
DCW®	**D**ORMA **C**ONNECT AND **W**ORK
IOM-x DCW®	**I**nput/**O**utput **M**odule
NMC	**N**ull **M**odem **C**rosscable
PSU-01	**P**ower **S**upply **U**nit
RFSx	**R**eader **F**ittings **S**et
ROS-x	**R**eader **O**utdoor **S**et

x = Variants

For further information, consult the CODIC CARD Design Components brochure

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