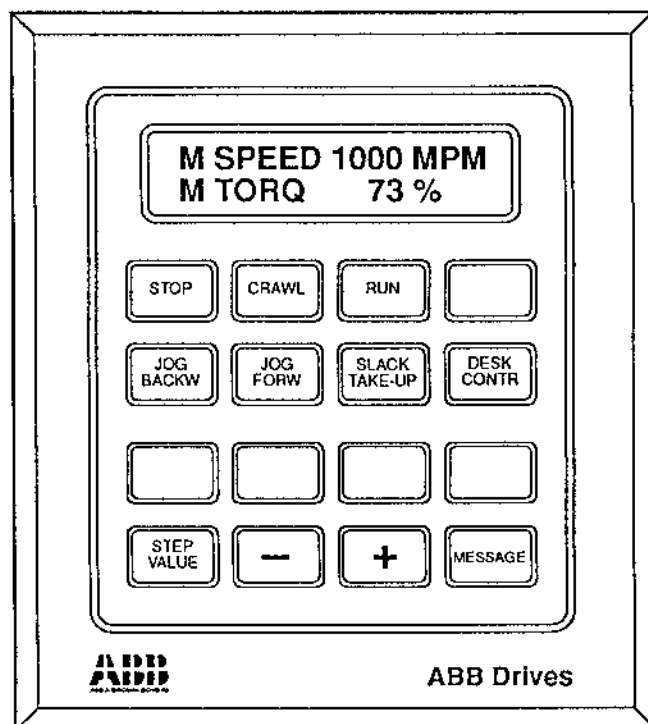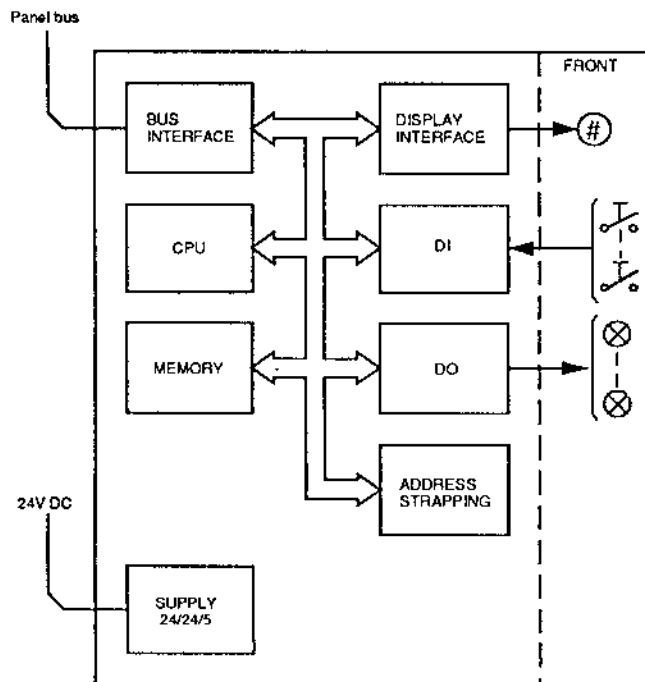# ABB Drives
93-12-27

Data sheet

Description

The DCU 40 is a microcomputer based drop in panel designed to be operator interface together with an APC unit. (Application controller used together with ACV inverters or DCV converters).

The panel unit is connected to the APC unit by the Panel bus. The Panel bus is a serial bus for multidrop, based on RS485 and designed for process communication.

The DCU 40 contains a 2 x 16 characters alphanumeric LCD-display and 16 push buttons with light indications. The display can be divided into six fields of optional size, each field can contain text or value. The presentation in the different fields of the display is controlled by logical signals from the control equipment. The DCU 40 may have up to 240 different text strings. The texts to be presented on the display are preloaded to the memory of the DCU 40 at delivery but it is possible to change and load any text string from the APC unit. The front panel is completely covered by a tightening membrane.

Section control

Data

POWER SUPPLY
18-35 V DC, typical 2,5 W, at start up 8 W Max fuse: 4 A

COMMUNICATION
Opto isolated RS-485, differential two wire, half duplex, multidrop
Baud rate: 19200, 9600, 4800, 2400 or 1200.
Bus terminator: Connect pin 2 and 3.
Max cable length: < 300 m
Cable type: FLEAK 3 x 2 x 0,34
Occupies one node address on the Panel bus

WEIGHT 1,8 kg

ENVIRONMENTAL DATA
Temperature
– Surrounding temperature range, operation +5 .. +40°C
– Surrounding temperature range, storage -40 .. +70°C

Electrical environment
– Interference resistance: PL3, SS 436 15 03
                            PL3, SS 436 15 22
Enclosure
– Front   IP65
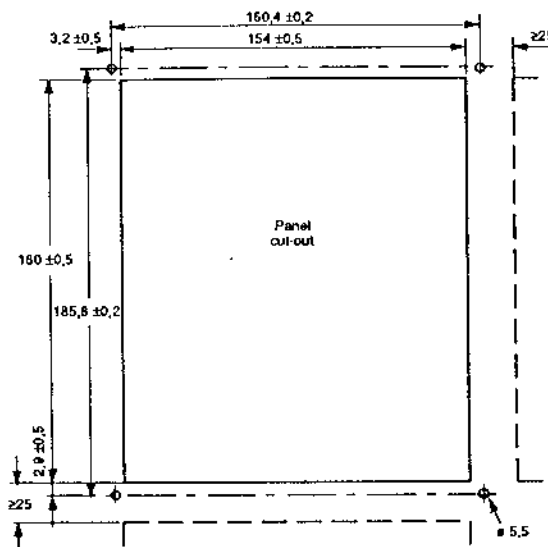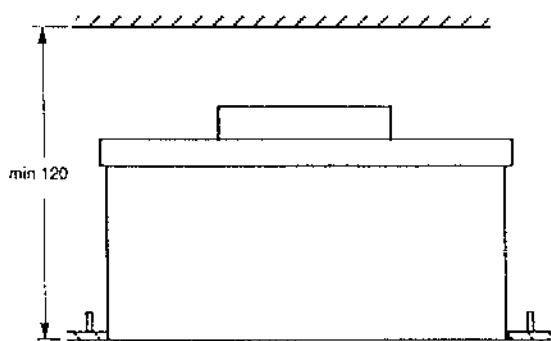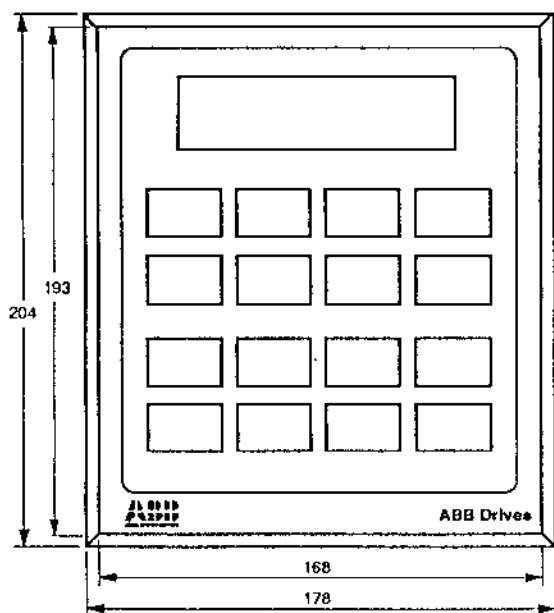– Back and side   IP00

Strappings

BUS ADDRESS

– The address of the DCU unit on the bus is made with dip switches at the connector board.

Bus address	Dip switches
0	Not allowed
1	1
2	2
3	1,2
4	3
5	1,3
6	2,3
7	1,2,3
8	4
9	1,4
10	2,4
11	1,2,4
12	3,4
13	1,3,4
14	2,3,4
15	1,2,3,4

TERMINATION

When the unit is connected as the last one on the bus, the bus must be terminated by a connection between pin 2 and 3 in any of the two connectors.

Dimensions (in mm)

Connections

X1
8 pins inline connector of Phoenix COMBICON type.

X2
8 pins inline connector of Phoenix COMBICON type.

Application

X1 and X2
pin
1   Earth
2   Signal A
3   Termination
4   Signal zero
5   Earth via capacitor and resistor
6   Signal B
7   + 24 V DC
8   0V

General

The identifications of push button functions are made by PVC strips, which are put into 4 pockets of the front membrane cover from the inside of the front plate.

Mounting instructions

To obtain the best immunity to electric noise the DCU 40 front panel must be electrically connected to the control desk panel through the fix screws in each corner. Use nuts that make scratches in the paint of the back side of the panel. All parts of the control desk must be electrically connected to each other.