

Data sheet

ECL Comfort 200

230 V a.c. and 24 V a.c.

Application



The ECL Comfort 200 electronic controller is pre-programmed for a variety of different applications. Each application has its own card describing the settings in different languages.

The ECL Comfort 200 controller has triac outputs for motorized valve control and 2 relay outputs for pump/valve control.

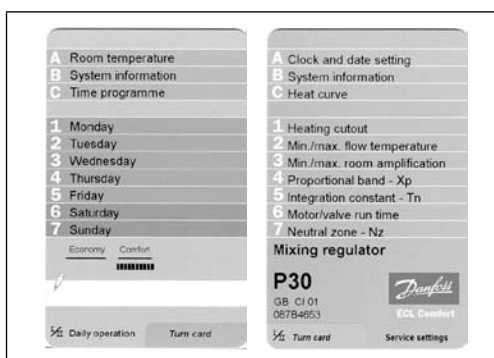
It is possible to connect up to 4 Pt 1000 temperature sensors and communication modules.

The enclosure is designed for wall and panel mounting as well as for mounting on a DIN rail.

ECL Comfort 200 communicates by means of the module ECA 71 via MODBUS to SCADA* systems.

* Supervisory Control And Data Acquisition

ECL Cards and applications



The ECL Comfort 200 controller is pre-programmed for different applications.

Each application has its own ECL Card with an overview of the end-user and installer settings.

Following applications can be realized together with ECL Comfort 200:

Card	Code no. (English version)	Application type description	Controller outputs (without accessories)
P16	087B4663	Constant temperature control of hot-water circuits with flow system or storage tank with built-in heating coil	1 x 3-point, 1 x 2-point
P17	087B4664	Constant temperature control of hot-water circuits with storage charging system	1 x 3-point, 2 x 2-point
P20	087B4660	Weather compensated flow temperature control of boiler systems	2 x 2-point
P30	087B4653	Weather compensated flow temperature control of heating systems with fixed return temperature limitation	1 x 3-point, 1 x 2-point

Each of the abovementioned code nos. comprises one ECL Card, one manual and one quick guide.

Ordering

Controller and enclosure:

Type	Designation	Code no.
ECL Comfort 200	Universal hardware - 230 V a.c.	087B1120
ECL Comfort 200	Universal hardware - 24 V a.c.	087B1124
ECL Comfort 200/300/301	Base part for wall mounting or DIN rail	087B1149
ECL Comfort	Connector set for panel mounting	087B1148
ECL Comfort	Mounting kit for DIN rail	087B1145

Pt 1000 temperature sensors:

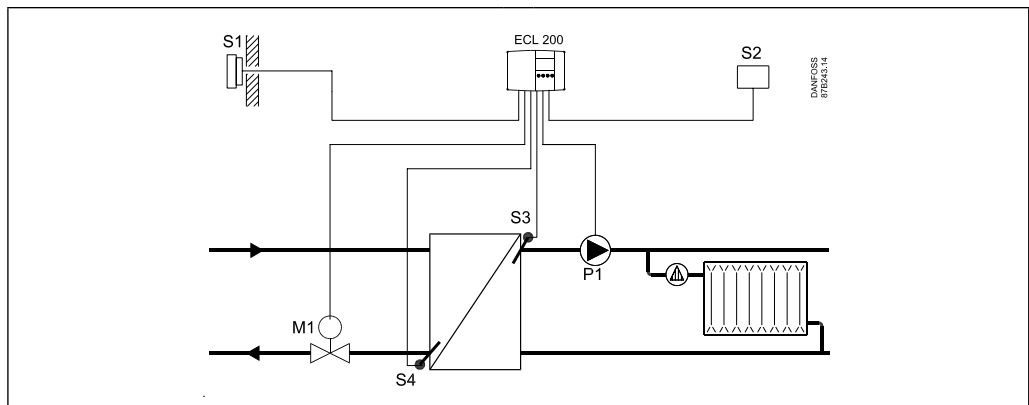
Type	Designation	Code No.
ESMT	Outdoor temperature sensor	084N1012
ESM-10	Room temperature sensor	087B1164
ESM-11	Surface sensor	087B1165
ESMB-12	Universal sensor	087B1184
ESMC	Surface sensor incl. 2 m cable	087N0011
ESMU-100	Immersion sensor, 100 mm, copper	087B1180
ESMU-250	Immersion sensor, 250 mm, copper	087B1181
ESMU-100	Immersion sensor, 100 mm, stainless steel	087B1182
ESMU-250	Immersion sensor, 250 mm, stainless steel	087B1183

Accessories:

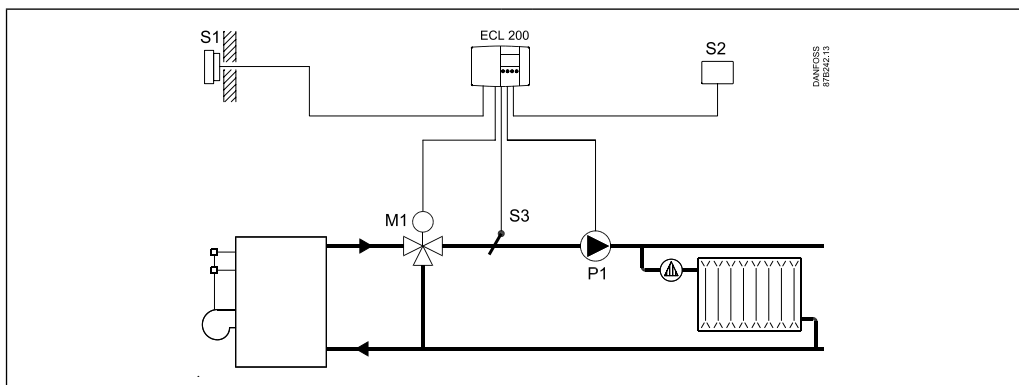
Type	Designation	Code no.
ECA 60	Room panel with sensor	087B1140
ECA 61	Remote control with 1 zone clock and sensor	087B1141
ECA 71	MODBUS communication module	087B1126
ECA 87	RS 232 remote control and data log Modem cable (1.5 m) for ECA 87 PC cable (1.5 m) for ECA 87	087B1160 087B1171 087B1172
ECA 99	24 V transformer, Lübke (35 VA)	087B1156
ECA 9010	Override module (for controller time programs)	087B3081

Application examples

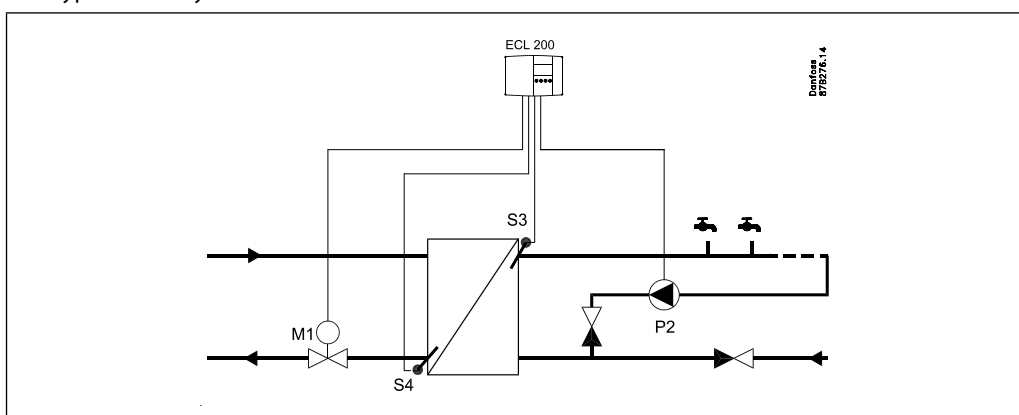
P30: Typical heating system (district heating)



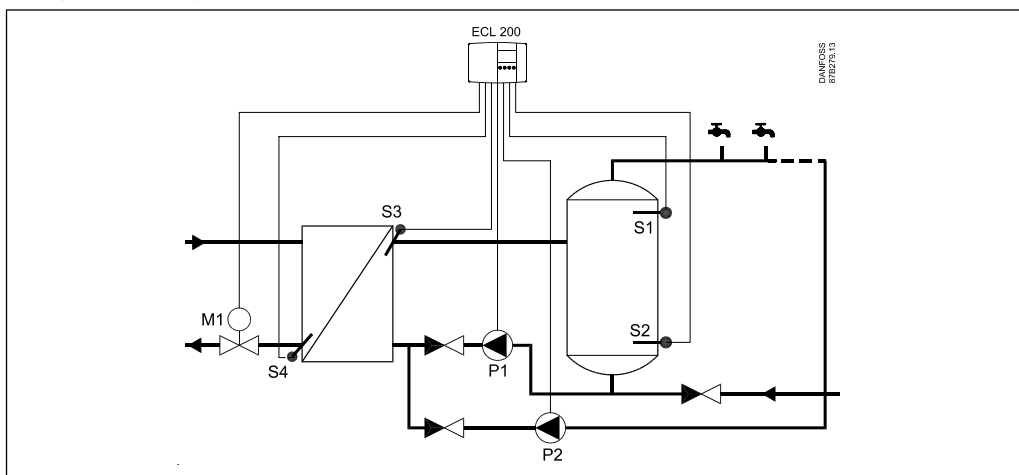
P30: Typical heating system (central heating)



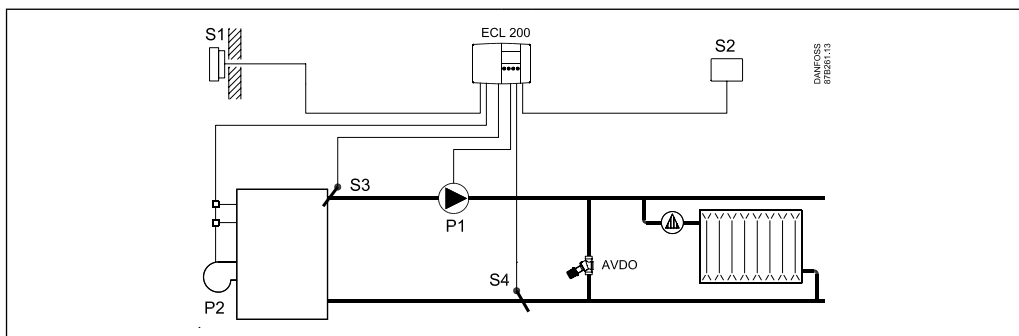
P16: Typical DHW system



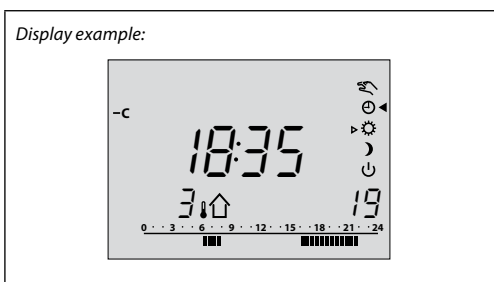
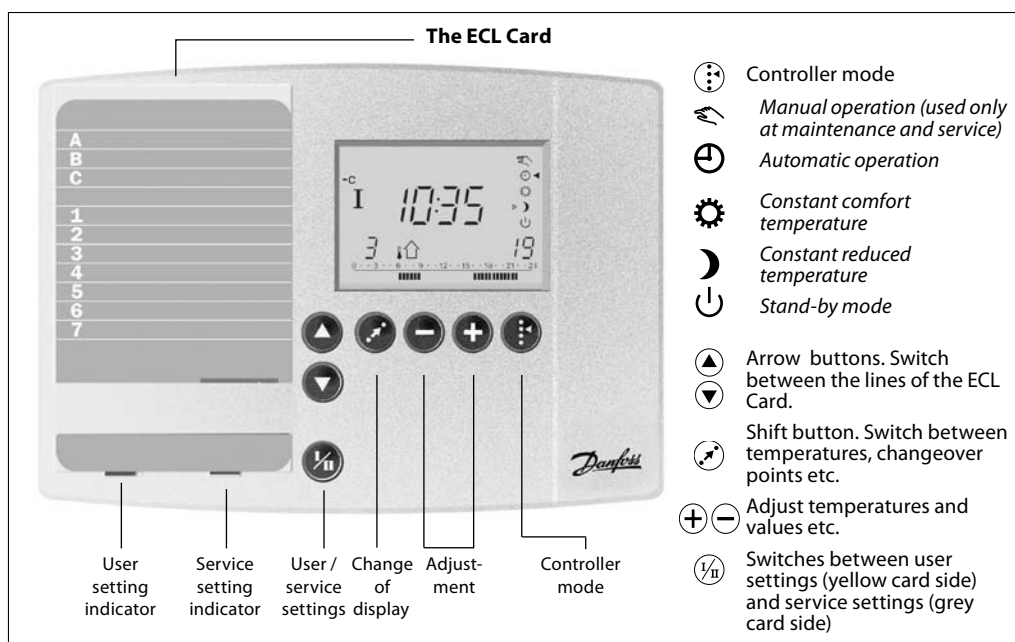
P17: Typical DHW system with storage tank



P20: Typical heating system with boiler (burner ON/OFF)



Operation



The display shows all status information about the heating system. The time and the heating program is shown in one of the displays which can be selected as a favourite display. The display is also used for the setting of control parameters.

Functions

ECL Comfort 200 has a custom-designed display with backlight for monitoring and setting.

The controller can be used as master or slave in systems with master/slave controllers.

A remote control or room panel can be connected to the system device bus.

Optional modules can be inserted into the controller to obtain communication via MODBUS or RS 232.

The Auto Tuning function for the automatic setting of control parameters for instantaneous domestic hot water production is available with the ECL Card P16.

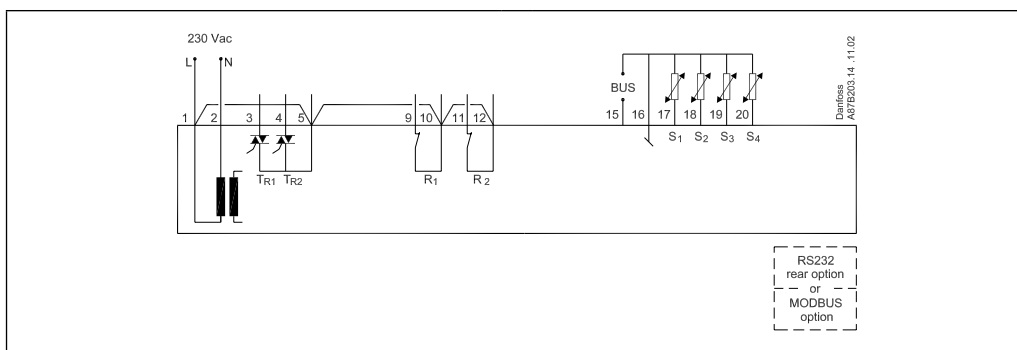
However, Auto Tuning is only applicable with valves that are approved for Auto Tuning, i.e. the Danfoss types VB 2 and VM 2 with split characteristic as well as logarithmic valves such as VF and VFS.

Motor protection, which ensures stable control and a long life of the motorized valve, is available with ECL Cards P16, P17 and P30.

General data

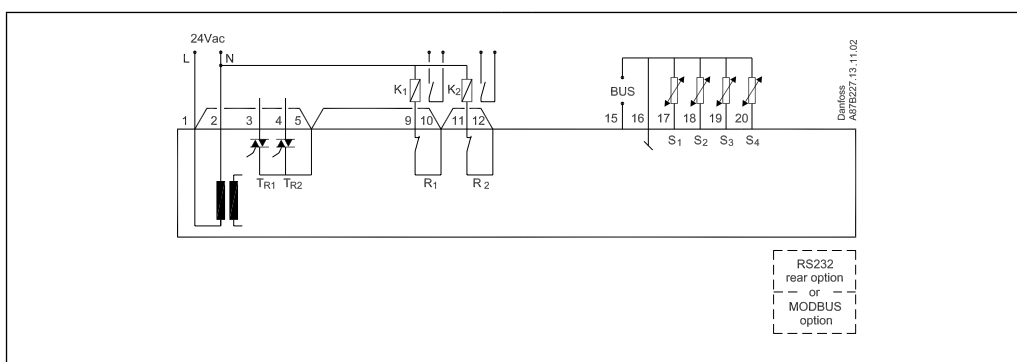
Ambient temperature	0 - 50 °C
Storage temperature	-40 - + 70 °C
Mounting	On wall, in panel or on DIN rail
Sensor type	Pt 1000 (1000 ohm at 0 °C)
Grade of enclosure	IP 41 - DIN 40050
- marking in accordance with the standards	EMC-Directive 89/336/EEC, 92/31/EEC, 93/68/EEC, EN61000-6-3 and EN61000-6-1, Low Voltage Directive 73/23/EEC and 93/68/EEC

Wiring - 230 V a.c.



Supply voltage	230 V a.c. - 50 Hz
Voltage range	207 to 244 V a.c. (IEC 60038)
Power consumption	5 VA
Load on relay outputs	4(2) A - 230 V a.c.
Load on triac outputs	0.2 A - 230 V a.c.

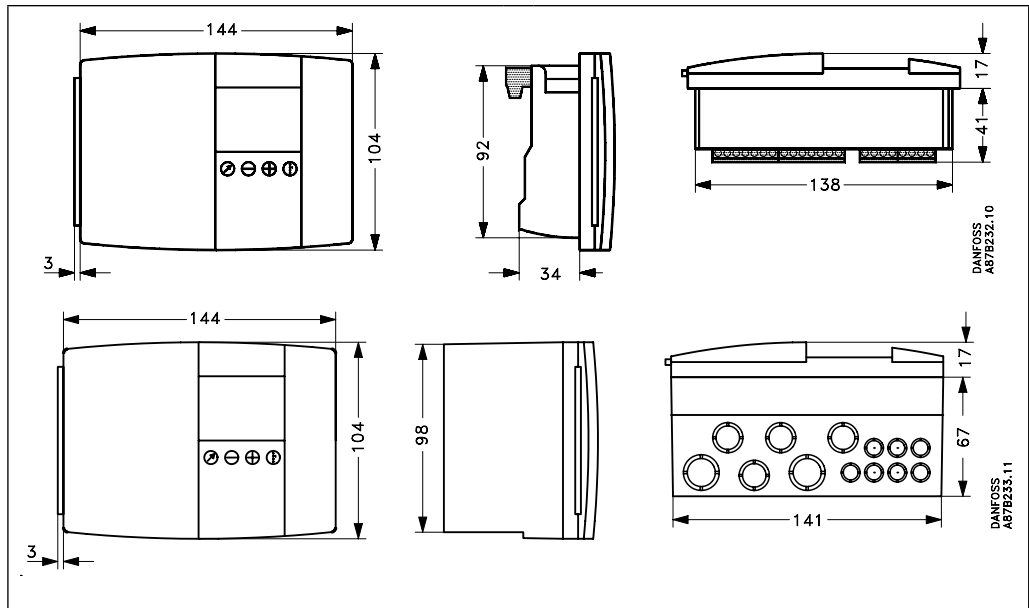
Wiring - 24 V a.c.



Auxiliary relays (K1 and K2) must be used in order to separate the 230 V a.c. supply from the 24 V a.c. supply of the controller.

Supply voltage	24 V a.c. - 50 Hz
Voltage range	21.6 to 26.4 V a.c. (IEC 60038)
Power consumption	5 VA
Load on relay outputs	4(2) A - 24 V a.c.
Load on triac outputs	1 A - 24 V a.c.

Dimensions



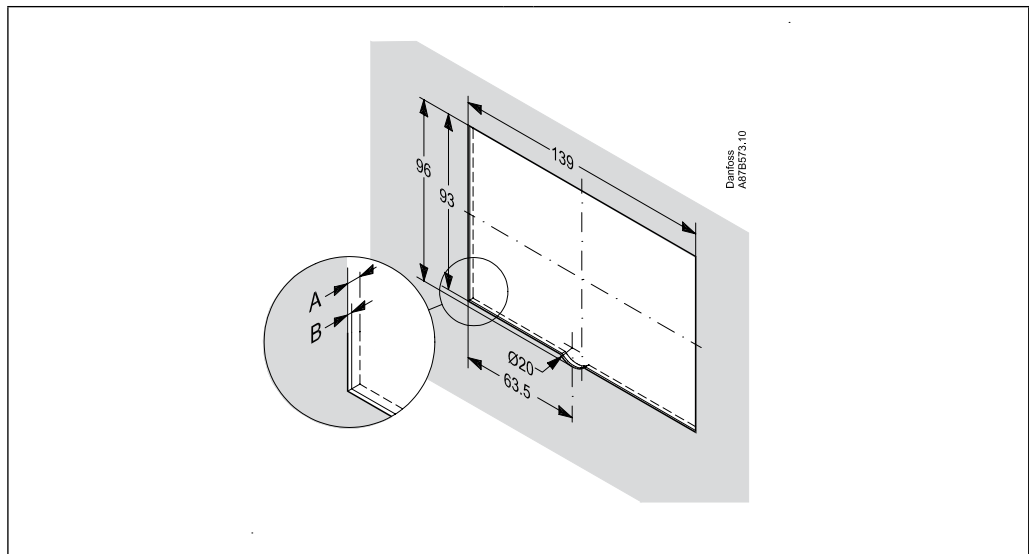
Cut-out for mounting

Mounting in a panel (connector set, code no. 087B1148):

The panel plate thickness A must not exceed 3 mm.

Mounting on a wall (socket code no. 087B1149):

The plate thickness B must not exceed 1 mm.



Additional documentation for ECL Comfort 200 is available on <http://heating.danfoss.com/>

