DCF-77

General

The radio controlled clock allows you to control functions of the GLT system according to time. The radio controlled clock module receives the exact time, date and day of the week (summer/winter time and leap years are automatically taken into account) of the DCF-77 transmitter, pre-processes the data for the GLT system and transmits the processed data to the master via the subnet. As the functioning of the module depends on the radio reception of the DCF-77 transmitter, it is housed in IP65 casing and can therefore also be installed in industrial buildings with screened reinforced concrete walls wherever there is good DCF-77 reception (if necessary outside pointing towards Frankfurt/Main).

The module is fitted with a reception control function to determine the quality of the radio reception. This is activated when the module is operated without a BUS connection. Once the operating voltage has been applied, the radio controlled clock module will be initialised. This takes approx. 10 seconds. The internal clock will then synchronise itself with the radio signal. This process takes between three and ten minutes, depending on the reception check. If the BUS is not connected (disconnect BUS A + B), the reception check will activate after the 10-second module initialisation. The green LED will flash as follows according to the reception check:

Relationship light time: dark time	reception quality
1:1	very good
1:3	good
1:5	average
1:7	bad
LED remains OFF	no receipt

If the LED is still dark after 30 seconds of switching on, the time signal cannot be received in the module's current position. Move the module to another position (location). After the RS-485 BUS has been connected, the module will go into operating mode. The green LED will light up briefly several times while the master is communicating with the radio controlled clock. If the master has read in the current time of the radio controlled clock properly, the green LED will be permanently illuminated.

Function displays

- 1 red LED indicates the operation voltage
- 1 flashing yellow LED indicates the communication with the master via subnet
- 1 green LED signalise the radio receipt

Connections

- 1 connection for the subnet (BUS A and B, RS485)
- 1 connection for the operating voltage (Ub, 0V)

Design

- body casing light grey (IP-65)

Configuration

- Connect the module to the operating voltage and the subnet. It has a special address in the system and does not, therefore, require configuration.
- 1 DIP switch for setting 38400 or 9600 Baud

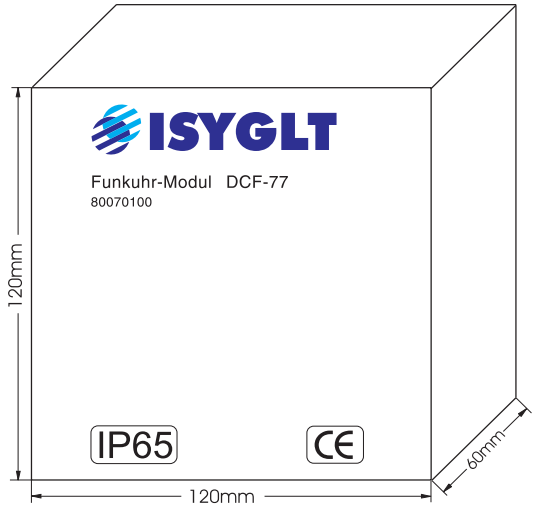
Technical data

Type	DCF-77 module
Art. Nr.	80070100
Operating voltage	16V to 35V DC or 16V to 27V AC
Current consumption	50mA
Subnet (RS-485)	max. 5,6V limited by Z-diodes
Dimensions	LxBxH 120x120x60mm
Weight	400g
Connection	Screw terminals 2,5 mm2
Operating temperature	-10...+50°C
Storage temperature	-25...+70°C
Humidity	0 ...85 % r.F. non condensing
Protection grade	IP 65
ESD immunity	Category 3 according to IEC-1000-4-2
EMV immunity	Use in typical industrial enviroment. Category 3 according to IEC-1000-4-4 (Test was carried out within a whole system)
CE sign	yes

Terminal assignment

Sh.	Free
≅ Ub	Operating voltage
0V	Operating voltage
A	Subnet (BUS A, RS-485)
B	Subnet (BUS B, RS-485)

View



Wiring diagram