GSM Communication Module
CSI-F-10

Description:

The GSM communication module CSI-F-10 is an all-purpose electronic instrument for transferring data and digital signals via the GSM mobile communication network. As part of the HYDAC Condition Monitoring concept, amongst other functions, the CSI-F-10 links the sensor level with the interpretation level.

The device is designed for both stand-alone operation and for use as a GSM modem on a CMU 1000 (HYDAC Condition Monitoring Unit). Up to two HYDAC SMART sensors such as HYDACLab®, AS 1000 or CS 1000, can be connected to its input sockets. In addition, it is also possible to monitor various different system conditions via the four integrated digital inputs and to relay the data in binary form with the aid of the two integrated digital outputs. Via these digital outputs, the device can also directly access the machine/system being monitored.

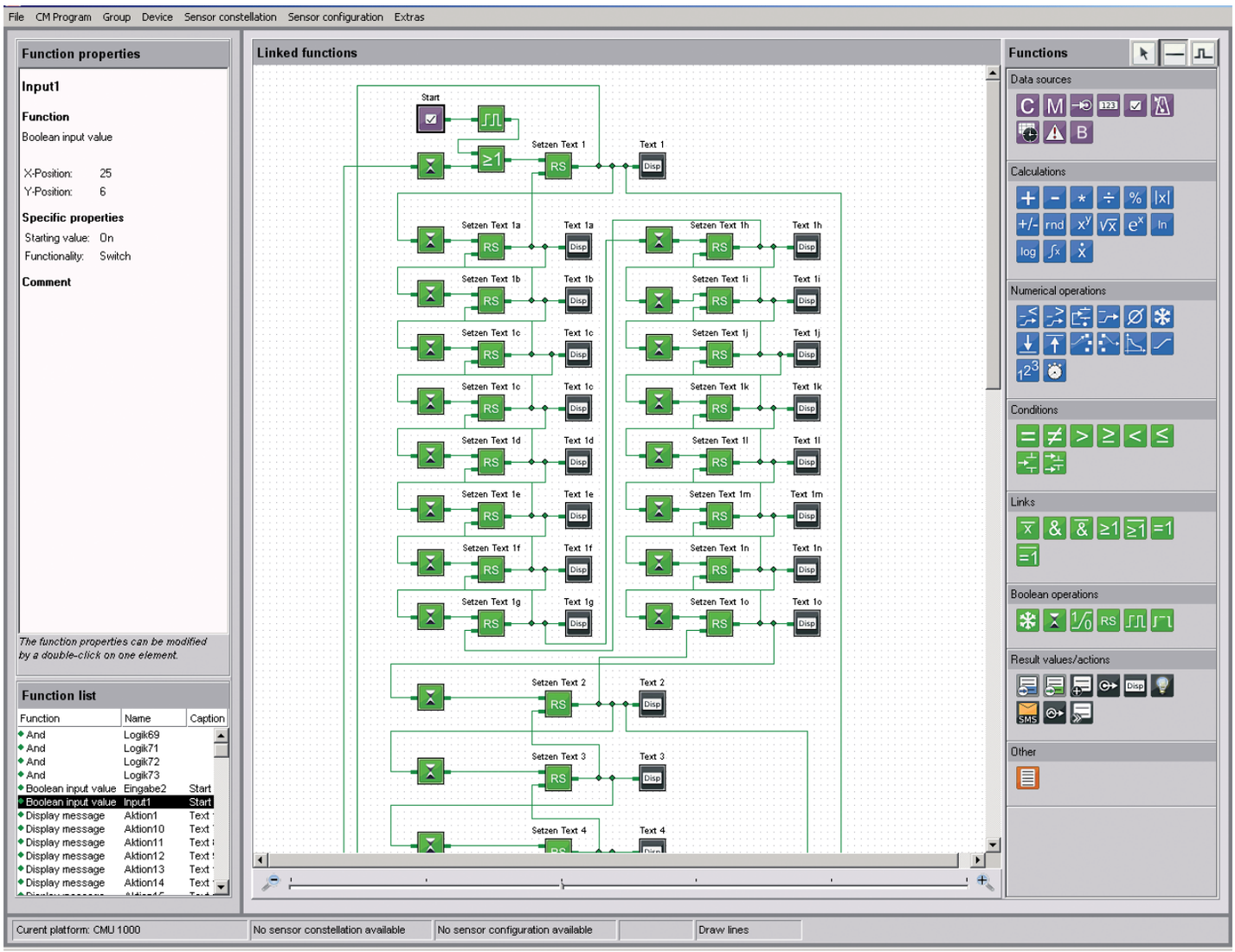
The CSI-F-10 processes and monitors the input signals using the application program stored in it. Which data is to be monitored, and how, and at what point a particular message is to be given, is defined in detail in this program. This application program can be created easily and conveniently (in accordance with IEC 61131) using the **CM Editor**, which forms part of the HYDAC PC software **CMWIN** Version V03 or higher.
Depending on the application, the user can choose independently between two operating modes of the CSI-F-10 and hence define the type and content of the communication.

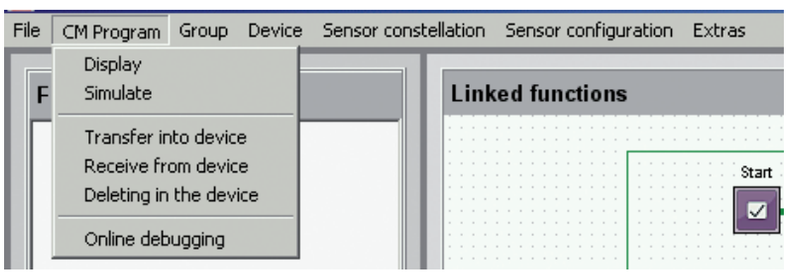
Special features:

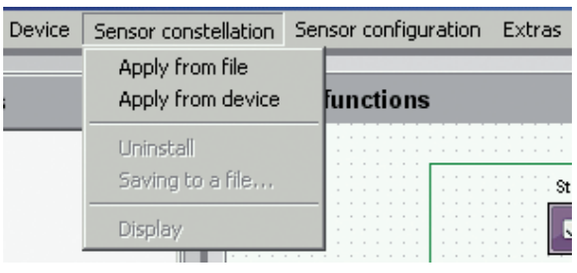
- 2 input channels for HYDAC SMART sensors
- 4 input channels for digital signals
- 2 output channels for digital signals
- Status indication for:
  - Network strength (4 LEDs)
  - Signals (2 LEDs, programmable)
  - Device status (1 LED)
  - GSM status (1 LED)
- Can be connected to CMU 1000
- Simplest form of programming using "Drag & Drop" on graphical user interface
- Up to 5 telephone numbers can be stored (for access via GSM)
- Parameters can be set online
- Sensors connected via M12x1 male connector
- Very compact design

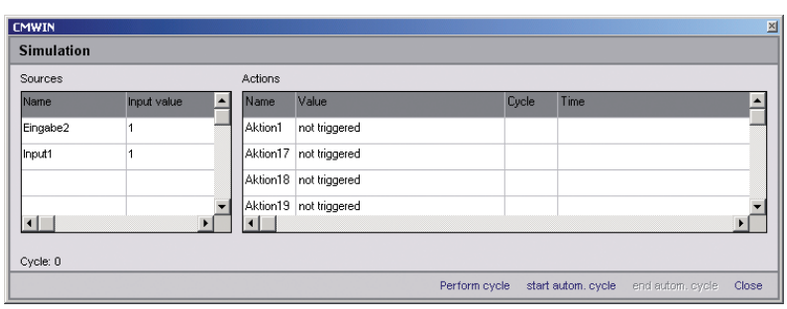
CM-Editor:

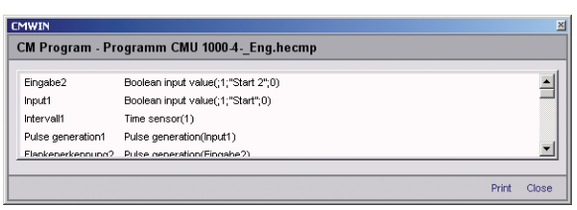
The CM Editor is part of the HYDAC PC software **CMWIN** Version 03 or higher and provides a wide variety of tools and functions for designing, integrating and testing the application program.
An application program consists of many individual functions which can be linked together. During subsequent operation, this user program is processed as for a PLC, cyclically.
The program is created according to the IEC 61131 (the standard for PLC programming).









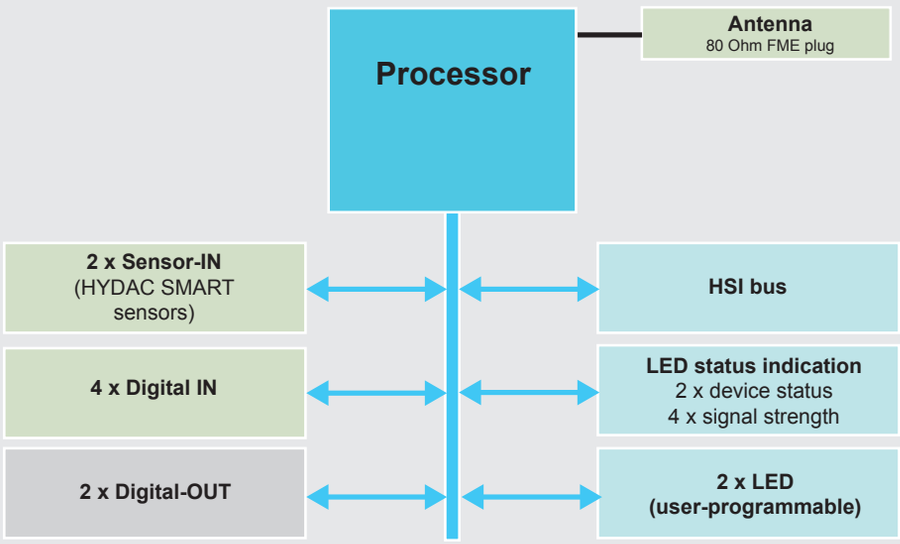


Technical specifications:

Supply	
Input voltage	10.5 .. 35.0 V DC
Residual ripple	≤ 5 %
Current consumption without sensors and outputs	Typically: ≤ 90 mA in stand-by ≤ 200 mA for wireless connection Pulsed: ≤ 2 A (recomm. power supply 3.5 A)
Reverse pol. protect.:	-35 V
Sensor Inputs	
Quantity	for 2 SMART sensors
Output voltage	$+U_B$ – 0.5 V
Current supply	500 mA max. at 50 °C
Logic Measurement Channels	
Quantity	32 A measurement channel can be a sub-channel of a SMART sensor* or a value derived (calculated) from sensor data.
Digital Inputs	
Quantity	4
Input voltage:	0 .. 35 V DC
Trigger threshold	Low: < 0.8 V; High: > 5.0 V
Current consumption	approx. 4 mA
Output voltage	$+U_B$ – 0.5 V
Current supply (incl. outputs)	500 mA max. at 50 °C
Digital Outputs	
Quantity	2
Switching capacity (per output)	$+U_{B\ Out}$ x 0.2 A
Interfaces	
HSI bus	
Mobile comm. network	GSM 850/950 (2 W EGSM) GSM 1800/1900 (1 W EGSM)
Antenna	50 Ω FME plug
SIM	3V SIM card
Environmental Conditions	
Operating temperature	-20 .. +55 °C (GSM 850/900) -10 .. +55 °C (GSM 1800/1900)
Storage temperature	-30 .. +65 °C
Relative humidity	0 .. 70 %, non-condensing
Dimensions and Weight	
Dimensions	approx. 140 x 95 x 55 without antenna
Weight	approx. 350 g
Technical Standards	
EMC	Conforms to R&TTE Directive 1999/5/EC
CE mark	EN 61000 - 6 - 1 / 2 / 3 / 4
Safety:	EN 60950 / EN 61010
Protection class	IP 65

Note:
* SMART sensors (Condition Monitoring Sensors) are a generation of sensors from HYDAC, which can provide a variety of different measured values.

Block circuit diagram:



Model code:

CSI – F – 10 – 000 – X

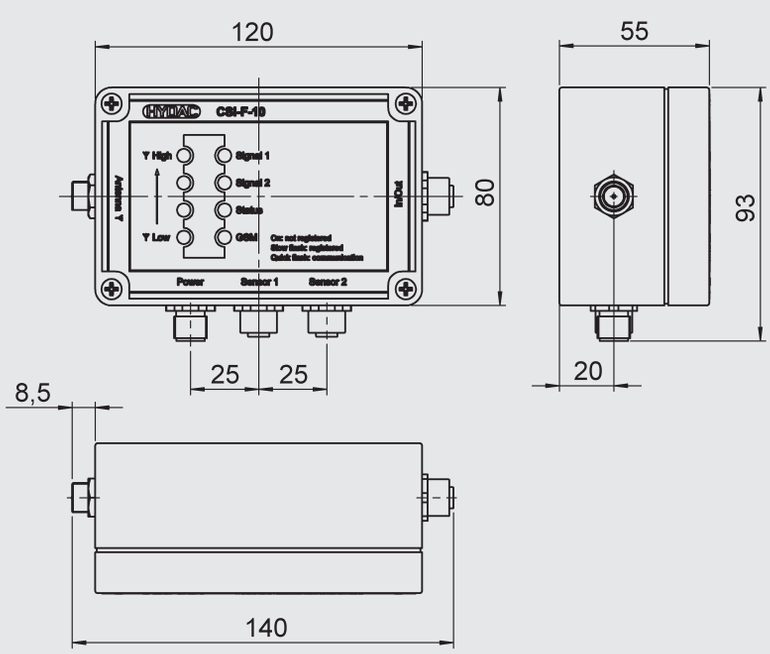
Modification number
000 = Standard

Operating manual and documentation
D = German
E = English
F = French

Note:
On instruments with a different modification number, please read the label or the technical amendment details supplied with the instrument.

Accessories:
Appropriate accessories, such as sensor lines for the electrical connection can be found in the Accessories section.

Dimensions:



Note:

The information in this brochure relates to the operating conditions and applications described.
For applications and operating conditions not described, please contact the relevant technical department.
Subject to technical modifications.

HYDAC ELECTRONIC GMBH
Hauptstraße 27, D-66128 Saarbrücken
Tel. +49 (0)6897 509-01
Fax +49 (0)6897 509-1726
E-Mail: electronic@hydac.com
Internet: www.hydac.com