

HE 5697 MFC

 **ENGINEERING**
made in Germany

Multifunction controller

Easily create, optimize and monitor sequence controls yourself



HESCH
AUTOMATION



The compact solution for independent process control

Multifunction controller HE 5697 MFC

In today's fast-moving operating environment, it is crucial to be able to react flexibly to requirements. That's why you need technology that is well thought-out, reliable and sophisticated and that you can operate and configure yourself – even without programming knowledge.

The multifunctional controller from HESCH makes this effortless, as it can be flexibly adapted to a wide range of requirements. The HE 5697 MFC is the ideal tool for both – new systems and the modernisation of existing systems.

With the multifunction controller HE 5697 MFC, you have a wide range of options for implementing automation and visualisation ideas quickly and easily.

The associated »**EasyTool MFC**« software offers a **comprehensive library** with **more than 100 tested functions** from various areas. The graphical wiring of existing function blocks creates a customised application in no time at all. Users can concentrate fully on realising their ideas without having to delve into time-consuming test phases for individual functions.



EasyTool MFC

With »EasyTool MFC«
process sequences can be
easily put together on the PC
using **drag & drop**.

✓ No programming knowledge necessary

Create, optimise and monitor complex sequence controls yourself

✓ Software »EasyTool MFC«

offers over 100 ready-made and tested function blocks

✓ Simply drag & drop

Map processes intuitively, quickly and without any programming knowledge

✓ Compact design

and versatile communication interfaces

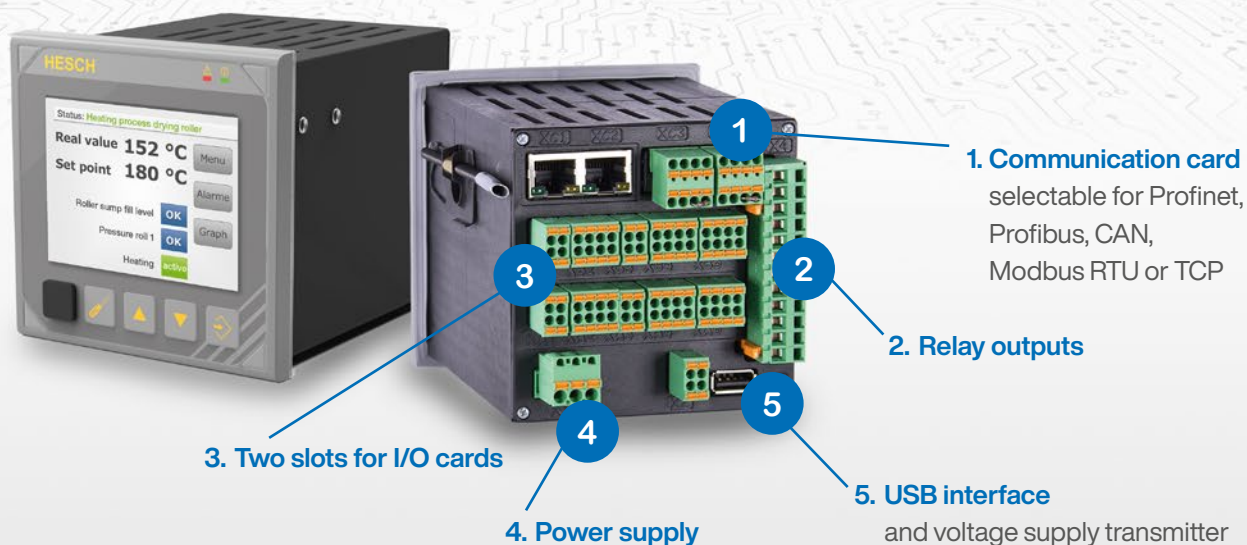
Maximum versatility

The basic device of the HE 5697 multifunction controller in a compact housing contains the supply voltage, four potential-free relay outputs, a slot for a communication card and two slots for input and output cards.

The modularity of the basic device allows it to be customised to the specific requirements of the application. A data logger is integrated into the basic device, which records relevant process data if required.

If the inputs and outputs in the basic device are not sufficient, additional I/O top-hat rail modules from the HIMOD family can be added almost at will via the communication card.

The multifunction controller is operated on site via the touch display and four freely programmable keys. The content and design of the display can be customised to the application in order to provide the operator with simple inputs and displays. The status display (e.g. alarm) two freely programmable LEDs.



There are 3 different types of I/O cards available:

Typ 1: 2 × universal inputs,
2 × standard signal inputs (mA, V),
2 × analogue outputs,
6 × digital inputs/outputs (function programmable) - of which 2 inputs can be used as counter input up to 10kHz

Typ 2: 2 × universal inputs,
2 × high-impedance mV inputs (-200 ...1800mV) for lambda sensors,
digital inputs/outputs like type 1

Typ 3: 18 digital inputs/outputs (function programmable)
- 3 of which can be used as counter inputs

Expansion with HIMOD®

The extensive selection of HIMOD® modules offers an ideal addition to the I/O level of the HE 5697 MFC, including a number of special modules for special sensors and functions. The I/O level can be expanded with HIMOD® both locally and decentrally. Thanks to its versatile functionalities, the I/O concept can be integrated into almost any process landscape.

Thanks to the »HotSwap« feature of HIMOD®, the system can be maintained and expanded at any time, even during operation.

The HIMOD® modules can also be integrated and parameterised using the »EasyTool MFC« software. One exception is the HIMOD® Ethernet coupler - this requires its own IP address, which can only be set using the „SmartControl“ software.



✓ RS-485 (MODBUS RTU)

- Connection with Modbus coupler HE 5813
- Can also be used outside the control cabinet
- Connection of several nodes possible

✓ ETHERNET (MODBUS TCP)

- Connection with Modbus coupler HE 5814
- Can also be used outside the control cabinet
- Connection of several nodes possible



HE 5697 MFC



MONITORING CENTRE

CANopen | Modbus TCP | Modbus RTU | PROFIBUS DP | ProfiNet | Ethernet



SENSORS

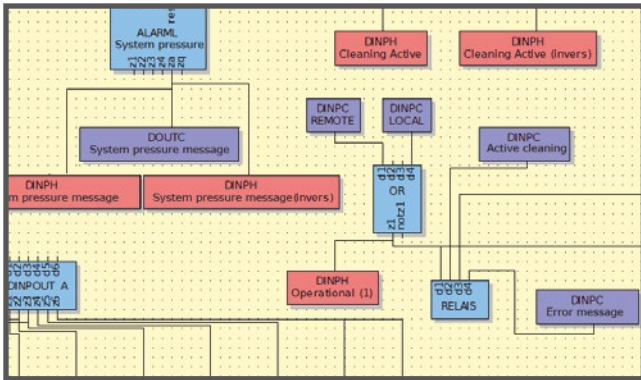


ACTUATORS

EasyTool MFC



With the special configuration software »**EasyTool MFC**«, you can customise the HE 5697 MFC precisely to the specific requirements of your company - without any programming knowledge. **Over 100 tested and prefabricated function blocks** allow you to put together your process sequences very easily simply by drag & drop on your PC.



Application example (detail)



EasyTool MFC

Functions::

- Creation of user-defined pages that can be used to customize design and operation of the HE 5697 MFC
- Creation of user-defined programmes / applications based on basic libraries and their wiring
- Test of the operating structure and the programme in the form of a device simulation
- Diagram-orientated online display of process values to support programme test and commissioning
- Debugging of the programme for testing the entire application

Free & unlimited

You can find the **freely available software** for testing on our website under **>>>Downloads**



One for everything!

Examples from the field



Efficient sludge dewatering

ANKO Innovation + Beratung GmbH has developed an innovative process for the precise dosing of flocculants in sewage sludge dewatering. Using the HE 5697 MFC, the PolyLyzer® analyzer* enables the exact determination of the polymer concentration in the sludge water, resulting in dosing in line with requirements. This offers a cost-effective and environmentally friendly approach for the disposal of sewage sludge in wastewater treatment plants.

*Registered trademark of the Anko GmbH



Perfectly matched mixture

The decorative plaster producer Stucco Pompeii not only uses the HE 5697 MFC to control the mixing time, but also measures the component quantities. After weighing, the controller automatically initiates the filling process and regulates the discharge of the screw conveyor. The company is very satisfied with the service provided by HESCH, which not only supplied the scale components, but also a customized control cabinet.



Control casein drying plant

A manufacturer of food additives requires a user-friendly control system for the automation of its casein drying plant. The controller must be able to control sophisticated processes and communicate with a PLC at the same time. After a thorough examination of all the requirements, the multifunction controller HE 5697 was purchased as it met all the criteria in full.



Optimize cooling systems

The HE 5697 MFC is successfully used in industrial refrigeration systems. Heck Kältetechnik GmbH from Steinhagen produces various refrigeration systems, from chillers to direct evaporation refrigeration and dehumidification systems. The use of the multifunction controller has significantly increased the attractiveness of their systems. The touch display provides operators with more detailed individual and operating messages than before, resulting in significantly improved functionality.

FAQs

Answers to frequently asked questions about configuration and customization options for the HE 5697 MFC can be found on our website:

<https://www.hesch-automation.com/en/support/faq/>

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Technische Daten

Supply voltage	24 V DC / 100...240 V AC
Transducer supply	18 V DC / 45 mA
Power consumption	max. 350 mA (24 V DC)
Display	resistive touch screen; 3,5", Resolution 320 × 240 Pixel QVGA;
LEDs	2 programmable LEDs for status displays
Keys	4 freely assignable keys
USB interfaces	Backside: 1 × USB 2.0 Host (Typ A) Frontside: 1 × Mini-USB 2.0 Device (Typ B), galvanically isolated
Slots	1 × for communication card 2 × for I/O card
Relays	4 potential-free relay outputs with changeover contacts (230 V AC / 5A; 24 V DC / 5A)
CPU	Cortex A8, 600 MHz
Boot time	approx. 17 s
Real-time clock	power failure buffered
Memory	Internal mass memory 2 GByte eMMC memory DDR2 64 MByte Flash 256 MByte MRAM 128 kByte yes, power failure buffered
Housing	Panel mounting housing
Housing dimensions (W × H × D)	98 × 98 × 115 mm without connector 98 × 98 × 130 mm with connector
Protection class	IP65 front side, IP20 remaining housing
Storage and transport temperature	-20 ... +70 °C
Ambient temperature operating	0 ... +55 °C
Certification	CE

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Fields of application:

- System control
- Pump control
- Dosing control
- Boiler control
- Roller drying
- Foundries
- Freezers
- Pulse burner
- Melting control
- Hardening shops
- Continuous furnaces
- Tube furnaces
- Rotary drum furnaces
- Chamber furnaces
- Pass-through furnaces
- chest furnaces
- Roller kilns
- Shaft furnaces ...



Heiko Wilkens, Dipl.-Ing. (FH)

+49 (0) 162 1338 107

h.wilkens@hesch.de



Rolf Bürssner, Dipl.-Ing. (FH)

+49 (0) 173 2439 388

r.buerssner@hesch.de



Thomas Jäger

+49 (0) 173 2989 932

t.jaeger@hesch.de

HESCH
AUTOMATION

AXXERON HESCH electronics GmbH

Headquarter

Boschstraße 8 | 31535 Neustadt

vertrieb@hesch.de

T +49 (0) 5032 9535-0

Branch North

Stöckenhoop 6 | 21465 Wentorf

T +49 (0) 40 727 57-08

info.hh@hesch.de

www.hesch-automation.com



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www.hesch-automation.com



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