



BROCHURE

HMI07C

Operator panel with 7" capacitive display

English · Revision 0



1 OVERVIEW

HMI07C is a 7-inch graphic terminal with capacitive touch screen and I/O peripherals: in practice a complete PLC with a display. The 65,536-colour IPS display and the capacitive touch ensure a high aesthetic standard and easy interaction. It can be integrated into the customer's mechanics or into the black enclosure for panel mounting.



1.1 Key features

- **7" IPS display:** 800×480, 65,536 colours, capacitive touch.
- **On-board I/O:** 5 PNP digital inputs, 2 relay outputs 5 A 230 Vac.
- **Communication:** Ethernet, WiFi, BLE, 2 RS485 (Modbus master and slave), USB A, NFC.
- **Memory:** SD card up to 128 GB, 16 MB flash, 8 MB RAM.
- **Easy development:** C/C++ code on FreeRTOS, ready-made Modbus RTU/TCP, MQTT, graphics and FAT32 libraries.
- **Custom application:** Chronos can develop the application for you quickly.

1.2 Applications

- Operator panel for machines and plants
- Display of measurements from Chronos energy meters
- Small controllers with a graphical interface
- Local supervision of Modbus slaves

2 TECHNICAL SPECIFICATIONS

Hardware	
Microcontroller	ESP32-S3
Memory	Flash 16 MB · RAM 8 MB · SD card up to 128 GB
Display	TFT IPS 7" capacitive, 65,536 colours, 800×480
Power supply	9–36 Vdc from terminal · 5 Vdc from USB-C · consumption < 4 W
Digital I/O	5 PNP digital inputs, max 5 Hz, max 30 Vdc 2 relay outputs, max 5 A 230 Vac / 30 Vdc
Communication	Ethernet 10/100 Mb WiFi (Station and Access Point) · BLE 2 RS485 (typically 1 Modbus master and 1 Modbus slave) USB A (firmware update, debug, logging) · I2C
NFC	HF and LF reader at 13.56 MHz
On-board sensors	Temperature, humidity, buzzer

General specifications	
Operating temperature	0 ... +60 °C
Storage temperature	–30 ... +85 °C
Humidity	10 ... 90% non-condensing
Insulation	4 kVrms between the digital outputs
Connections	1 plug-in terminal, 3.5 mm pitch, 3 poles 1 plug-in terminal, 3.5 mm pitch, 4 poles 1 plug-in terminal, 3.5 mm pitch, 6 poles 2 plug-in terminals, 5 mm pitch, 2 poles
Dimensions	210 × 150 × 30 mm
Material	PBT, black
Protection rating	To be defined

IP protection rating to be defined (the previous brochure stated "IP65 ?").

3 ORDER CODES

Board, enclosure and expansion are ordered separately. For a complete panel-mount unit order HMI07C + HMI07C_27-52_BLK.

Order codes	
Code	Description
HMI07C	HMI board with 7" capacitive display (board only, without enclosure)
HMI07C_27-52_BLK	Black ABS enclosure for panel mounting
HMI0xC_EXP_IO	Expansion board: 4 thermocouple inputs J, K, N, R, S, T, E, B, 4 analogue inputs 0-10 V / NTC or 4-20 mA selectable by dip switch, 2 relay outputs 5 A 230 Vac

Other expansions (for example a 4G modem with GPS) can be agreed.

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