

HMI CONTROLS

THERMAL SYSTEM CONTROL SOLUTIONS



- HMI for vehicle-based climate systems
- Available with Graphical OLED/TFT displays
- 12/24VDC operation
- Precise control of temperature and airflow
- Custom function buttons & indicators
- Real-time display of temperature and status
- Automotive grade connectors and protection
- Diagnostic feedback
- Backlit buttons
- CAN Bus
- Custom software development available

Calatherm's HMI (Human Machine Interface) controllers are advanced operator interfaces designed to provide intuitive control and monitoring of thermal, HVAC, and climate systems in vehicles. These controllers combine user-friendly dashboards, customizable interaction logic, and robust automotive-grade construction to deliver precise management of temperature regulation, airflow, fan speed, heating, and other related functions.

HMIs typically interface directly with vehicle ECUs or control modules via CAN Bus communication, allowing real-time data exchange, status feedback, and system adjustments.

Available with graphical or button based interfaces, including OLED graphic displays, backlit keys, multi-coloured indicators, and menu based diagnostics, these controllers are engineered for heavy duty use.

Automotive connectors and configurable software enable OEM customisation, function expansion, and integration into complex climate and thermal systems, enhancing both operator usability and system reliability.

BENEFITS

- Real-time status and system data help operators make informed adjustments.
- Precise interface helps optimise HVAC and thermal control logic, reducing energy waste.
- Diagnostics via built-in menus and fault indicators simplify troubleshooting and reduce downtime.
- CAN Bus support enables coordinated control across subsystems.
- Interfaces and functions can be tailored to suit specific applications.
- Automotive ruggedness and protection ensure performance in harsh environments.
- Intuitive menus and feedback reduce operator learning curves.
- Software update pathways allow new features without hardware replacement.
- Configurable interfaces for diverse operator needs.

TECHNICAL SPECIFICATION

Model		ATC 1	ATC 2	ATC 3
Image				
Graphic Display		TFT	TFT	TFT
Backlit Buttons		Yes	Yes	Yes
Voltage	Range	10 to 30 VDC	10 to 30 VDC	10 to 30 VDC
	Nominal	12 / 24 VDC	12 / 24 VDC	12 / 24 VDC
	Maximum	32 VDC (5 minutes max)	32 VDC (5 minutes max)	32 VDC (5 minutes max)
Maximum Current		500 mA	500 mA	500 mA
Working Temperature		-40°C / +85°C	-40°C / +85°C	-40°C / +85°C
Protection	Reverse Polarity	Yes	Yes	Yes
	Output Short Circuit	Yes	Yes	Yes
Communication		CAN	CAN	CAN
Ingress Protection		IP 54	IP 54	IP 54
Mass		110 g	115 g	465 g
Dimensions	Length	135.3 mm	102 mm	188 mm
	Height	74.9 mm	64 mm	60 mm
	Depth	28.7 mm	28.7 mm	24.7 mm

Note: Other controls and designs are available, including analogue.

OUTLINE DIMENSIONS

Note that the image below is representative of the 'ATC 3' model.

