Full Gauge® CONTROLS

PRODUCTS
CATALOG

Sitrad® PRO

REMOTE MANAGEMENT OF FACILITIES

Is maintaining the right temperature vital for your business? Then you need to use Sitrad Pro.

Sitrad Pro is the software for remote management of refrigeration, solar heating and air conditioning facilities by computer, tablet or mobile phone. It means that all you need is a device connected to the Internet, a converter interface and Full Gauge Controls controllers to access your installation data – and change operation parameters if necessary.

The simple download, installation and intuitive use makes Sitrad PRO easy to operate by users with any computer skills.

Alarms sent by e-mail, SMS, or push notifications are important functions of the software, as they allow for people in charge to act preventively, as they will respond in real time to any signaled changes, avoiding wastes and ensuring total quality of the final product stored.

The collected data is monitored by means of custom graphic or text reports, which are stored on the computer, avoiding unnecessary paper printouts.

The system was first released in 1997 and since then has its own development team for its updates. It continuously stores temperature, humidity, time, pressure, and voltage data, allowing you to safely and accurately modify parameters from anywhere in the world.

All of these features democratize automation and make remote monitoring more connected and efficient in any industry and for businesses of any size.

Download it now for free - no usage charge or monthly fees!

Do you need to monitor and change parameters of facilities such as restaurants, bakeries, markets, hotels, clubs, hospitals, laboratories, butcher shops, data centers and storage centers? It doesn't matter how large your company is. Sitrad Pro will always be the solution.
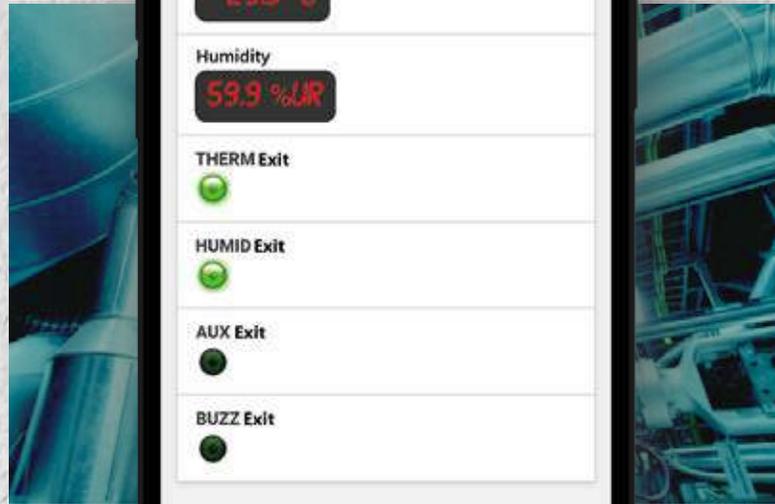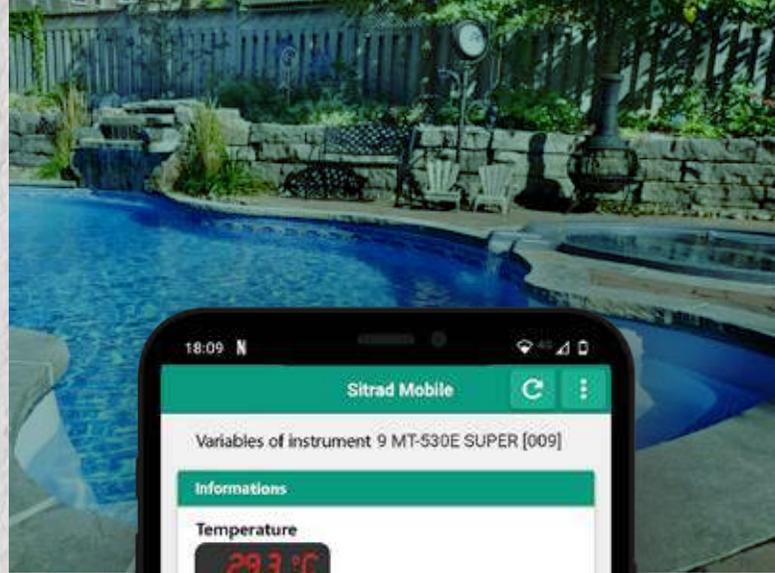
ADVANTAGES OF USING SITRAD PRO:

At the installation site, you can use **a computer or a TCP-485** connected to a 3G modem router, or rely on all **Sitrad InBox** technology.

Remote monitoring **saves costs** of unnecessary service calls.

Fully compliant with the most stringent requirements of global health regulatory agencies such as ANVISA (Brazil) and the Food and Drug Administration (FDA). This means that Sitrad PRO is also perfect for the pharmaceutical and hospital industry guidelines.

Up to 20% electricity savings without major investments.

Quick and easy **graphics and text reports.**

Each installation of Sitrad PRO has its own unique ID, facilitating remote access to the installation and eliminating the need for a fixed IP. **Sitrad PRO evolves to make your life easier.**
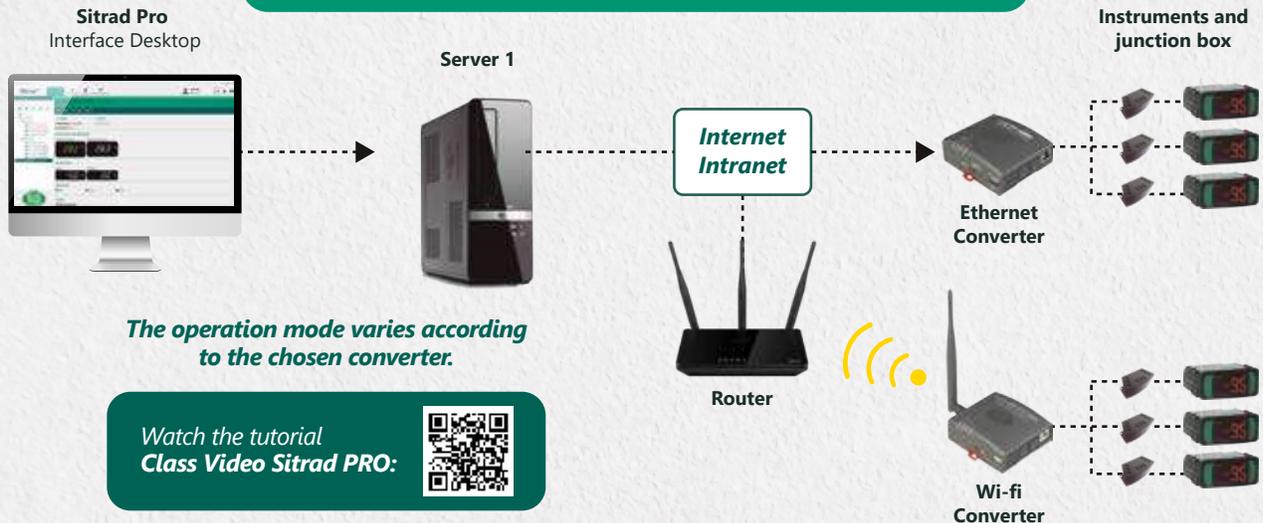
2

WHO USES, APPROVES.

Download now!
(Scan the QR code)

Customers worldwide use and approve Sitrad PRO. Check out real success stories on our website at **fullgauge.com.br/news**

Windows 10 Compatible

Sitrad PRO has gone through **Microsoft's Windows 10 compatibility validation.**

HOW SITRAD PRO WORKS?

Sitrad Pro
Interface Desktop

Server 1

Internet Intranet

Router

Instruments and junction box

Ethernet Converter

Wi-fi Converter

The operation mode varies according to the chosen converter.

Watch the tutorial
Class Video Sitrad PRO:

Do you want to learn more? *Contact our team at* **sitrad@fullgauge.com**

Sitrad® INBOX

All in one

COMPACT CASE,
TOTAL MANAGEMENT.

Access the **complete manual:**

Sitrad InBox is the complete solution for installations that require management in real time, *making it much easier to remotely access the instruments of Full Gauge Controls. Sitrad InBox already has the Sitrad Pro software installed,* **acting as the local server independently,** *accessible by a cell phone through Sitrad Mobile or a computer that also has Sitrad Pro installed. These devices (cell phone or computer) can connect to Sitrad InBox directly by its own Wi-Fi (hotspot) and also through Wi-Fi networks or Ethernet (wired RJ45).*

Its internal memory (datalogger) stores the information (event logs) of the installation and, when connected to the internet or other existing network, it can be accessed via mobile (Android or iOS) or Computer (Windows) **anywhere in the world.**

Sitrad InBox has also incorporated a converter interface that allows direct communication with 32 instruments. This number can be expanded by connecting more interfaces in its 4 USB ports (Conv32), in its ethernet communication port (TCP-485) or via wireless (TCP-485 Wi-Fi Log). It has an HDMI port for the installation of a monitor, and the USB ports can also be used for mouse and keyboard connection.

CONVERTERS

CONV32
91 x 91,1 x 37,1mm
3,58 x 3,58 x 1,46 in

Device used to connect up to 32 instruments with serial connection to Sitrad PRO. It performs the communication between the controllers and the computer, by means of converting RS–485 signals from the controllers to computer. The CONV32 is connected to the computer or Sitrad InBox by USB cable.

Access the **complete manuals:**

CONV-32   TCP-485   TCP-485 Wifi Log

TCP-485
91 x 91,1 x 37,1mm
3,58 x 3,58 x 1,46 in

Serial device server transforms the RS-485 standard to Ethernet signal (internet or intranet) thus allowing the controllers to communicate with Sitrad software through wiring connection (RJ-45). It also allows connecting instruments remotely. Through the IP address of the TCP-485 Ethernet module, it is possible to access it wherever it is inside the company's network or on the internet.

TCP-485 WIFI Log
91 x 91,1 x 37,1mm
3,58 x 3,58 x 1,46 in

This converter enables communication between Full Gauge Controls controllers and Sitrad through a WiFi data network using the standard TCP/IP communication. Features datalogger (internal memory) for data storage.

TCP-485 WiFi Log does not require Ethernet cabling to manage the installation.

valex Line

Because of the current precision and technology in all Valex line products, the user saves approximately 20% in the purchase of equipment to complement the installation, since they can be more compact and have less capacity. The user will also have similar immediate savings on the electricity bill, among other advantages such as durability and reduced maintenance.

The Valex line is for everyone to benefit from the use of electronic expansion valves.

VX-1025E *plus* and VX-1050E *plus*

Compact and integrated instruments that offer a complete and totally configurable solution for the control of several models of electronic expansion valves, while also controlling superheating, room temperature, defrost, pressure, ventilation, lighting and alarms. In other words, they replace the thermostat of the equipment, since they control the refrigeration processes, and also the liquid's flow.

VX-1025E plus and VX-1050E plus have: new quick-plug and push-in connection systems; smooth defrost function for smoother and more economic defrosting; configurable economic setpoint functions and fast-freezing; internal clock in real time that allows defrost and economic setpoint events. And much more!

The Valex line brings the inovative Smooth Defrost mode that maintains lower evaporator temperature during defrost, saving energy and providing faster temperature pull-down after defrost is finished. As well, the intelligent defrost algorithm, which optimizes defrost cycles, delivering improved energy savings and system performance.

VX-1025E plus has an internal device (IEB – Internal Energy Backup) that dismisses the use of solenoids in cases of electric power cut. VX-1050E plus performs the control of several bipolar electronic expansion valves modules.

The two models are configurable to act in "driver" mode, being exclusively responsible for the control of the electronic expansion valve and the superheating of the refrigeration system. Thus, they may be used as a part of a control system and interlinked with other controllers.

Access the **complete manuals:**

VX-1025E *plus*   VX-1050E *plus*

### COMPARE OUR MODELS AND FIND YOUR **IDEAL VALVE ON VEE SELECTOR:**

|	MODEL	ORIFICE	INLET	OUTLET	LEAK	STEPS
VX-1025E plus	SB-88	1,0mm	5/16"	5/16"	350cm³/min	480
	SB-89	1,4mm	5/16"	5/16"	350cm³/min	480
	SB-90	1,8mm	1/4"	1/4"	500cm³/min	480
	SB-91	2,5mm	5/16"	5/16"	700cm³/min	480
	SB-92	3,0mm	5/16"	5/16"	500cm³/min	480
	SB-93	3,2mm	5/16"	5/16"	500cm³/min	480
	SB-94	4,0mm	5/16"	5/16"	700cm³/min	480
	SB-108	0,8mm	3/8"	1/2"	<1cm³/min	500
	SB-110	1,0mm	3/8"	1/2"	<1cm³/min	500
	SB-114	1,4mm	3/8"	1/2"	<1cm³/min	500
	SB-118	1,8mm	3/8"	1/2"	<1cm³/min	500
	SB-124	2,4mm	3/8"	1/2"	<1cm³/min	500
	SB-130	3,0mm	5/16"	5/16"	<500cm³/min	500
	SB-132	3,2mm	5/16"	5/16"	<500cm³/min	500
VX-1050E plus	SB-2012	7,5mm	5/8"	5/8"	-	2600
	SB-2025	7,5mm	5/8"	5/8"	-	2600
	SB-2050	11,4mm	7/8"	7/8"	-	2600

WHY USE **ELECTRONIC EXPANSION VALVES?**

The existing features in the **VX-1025E plus** and **VX-1050E plus** controllers allow a dynamic adjustment of the useful superheating degree, even in conditions of disturbances or power variations. A PID control network in real time corrects variations in superheating and the electronic valves maintain their performance even with pressure variations.
See in the picture below a VX-1025E Plus controlling superheating (orange) in the adjusted value at 5ºC (41°F).
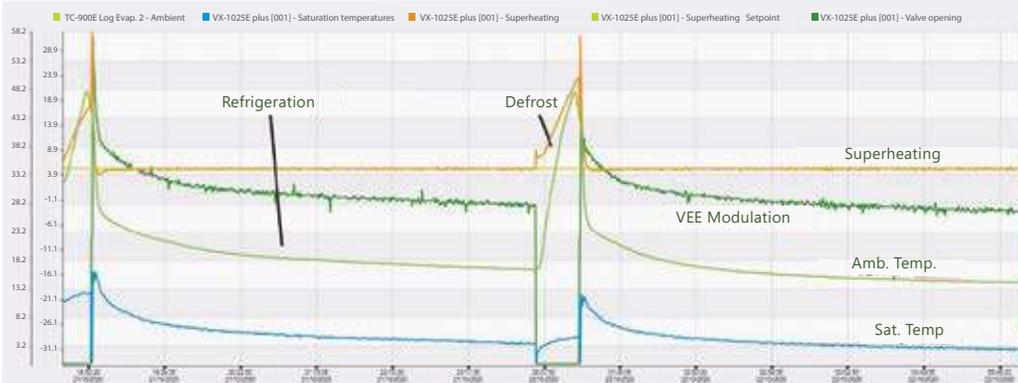
The **VX-1025E plus** and **VX-1050E plus** controllers have protection features such as low superheating, LOP (lowest operation pressure) and MOP (maximum operation pressure), which guarantee that the compressor works within its safety operation limits. This allows a lower number of stops in the compressor, safety for the products stored and a longer shelf life of the refrigeration system.The figure below illustrates the MOP protection action.
See that the valve will be modulated in accordance with the safety limit. After the correction of the event, the control of superheating will carry on.
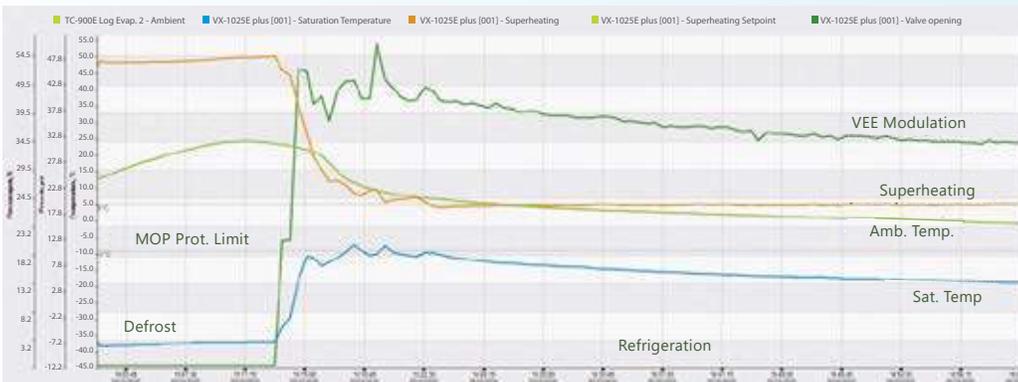
The figure below illustrates the execution of the low superheating protection (LoSH). See that when the superheating reduces and reaches 4ºC (39,2°F), the valve is closed with a greater intensity, reducing the quantity of fluid, and raising the superheating to its adjusted value, in this case 8ºC (46,4°F).
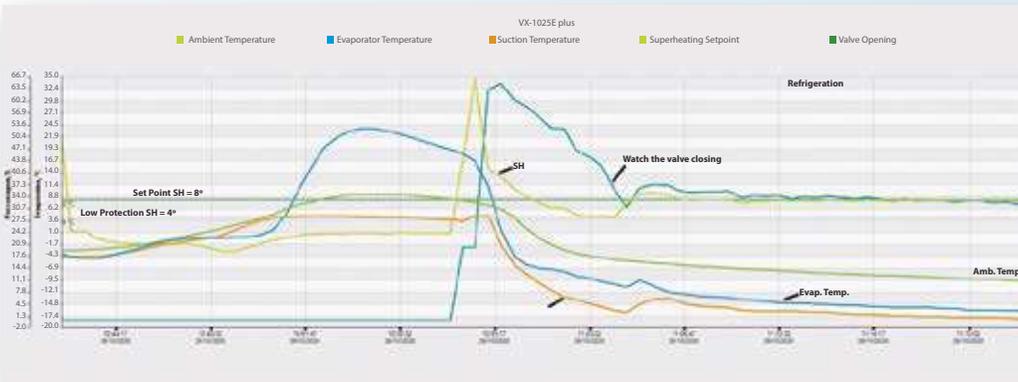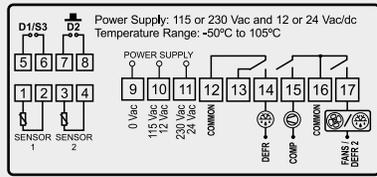

Illustrative graphic based on laboratory studies

VEE Selector
Download the **FG Toolbox app** and use **VEE Selector** to check the most adequate valve for your facility.

Avaliable for Android e iOS

TC-900E power

Power Supply: 115 or 230 Vac and 12 or 24 Vac/dc
Temperature Range: -50ºC to 105ºC

D1/S3 D2
POWER SUPPLY
5 6 7 8
1 2 3 4   9 10 11 12 13 14 15 16 17
SENSOR 1 SENSOR 2
0 Vac | 115 Vac 12 Vac | 230 Vac 24 Vac | COMMON | DEFR | COMP | COMMON | FANS / DEFR 2

TC-900E Log

Power Supply: 115 or 230 Vac and 12 or 24 Vac/dc
Temperature Range: -50ºC to 105ºC

SITRAD
A B   D2
POWER SUPPLY
5 6 7 8
1 2 3 4   9 10 11 12 13 14 15 16 17
S1 S2 D1/S3
0 Vac | 115 Vac 12 Vac | 230 Vac 24 Vac | COMMON | DEFR | COMP | COMMON | FANS / DEFR 2

For frozen goods, it automates the defrosting process according to the needs of the facility (intelligent defrosting), providing energy savings. It operates with two sensors, one for room temperature and the other, fastened to the evaporator, that controls defrosting completion and fan restarting. The room temperature control has a normal setpoint and an economic setpoint, in addition to the fast freezing functionality and alarm functions indicating that the door is open. It features up to two digital inputs. One of these inputs may be configured as sensor 3* to monitor the condenser temperature and disconnect the control outputs in case of an alarm or control defrost termination in a second evaporator. It also features a digital filter, which is intended to simulate an increase of the mass of the room temperature sensor (S1), thus increasing its response time (thermal inertia), and avoiding unnecessary compressor activations. Its 16-Amp relay output can control compressors of up to 1 hp and the defrost output has a current capacity of 10 A.
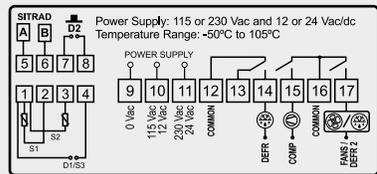
TC-900E Log is also able to communicate with Sitrad Pro software, it has an hourmeter to count the operating hours of the compressor, and an internal real time clock that enables the creation of a defrost schedule for each day of the week. Besides, with the help of an internal auxiliary power supply, the clock keeps working even in case of a power fault for at least 72 hours. It also has an internal memory for storing data (datalogger) and a sensor to activate the economy setpoint according to the intensity of the room light.
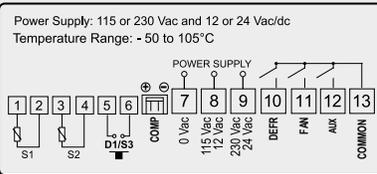
*Sold separately

Aplication Examples: Low temp refrigeration equipment such as reach-in, upright.

Sitrad PRO
TC-900E Log

IP65 FRONT

Access the **complete manuals:**

TC-900E power   TC-900E Log

TC-970E+Eco

Power Supply: 115 or 230 Vac and 12 or 24 Vac/dc
Temperature Range: - 50 to 105°C

POWER SUPPLY
1 2 3 4 5 6   COMP   7 8 9 10 11 12 13
S1 S2 D1/S3
0 Vac | 115 Vac 12 Vac | 230 Vac 24 Vac | DEFR | FAN | AUX | COMMON

Access the **complete manual:**

IP65 FRONT

Designed to maximize the energy efficiency in commercial refrigeration equipment using variable capacity compressors (VCC) from the main brands in the market. This controller features the new quick connections systems, increasing productivity in the manufacturing lines and temperature control with PID logic that promotes better system performance.

It has 4 programmable recipe options, each with its desired control temperature (SetPoint), Economic SetPoint and Fast Freezing, as well as specific hotkeys to enable/disable economy mode and switch the lamp on/off. It also has a Smooth Defrost function for smoother and more economic defrosts, a digital filter, which is intended to simulate an increase of the mass on the room temperature sensor (S1), thus increasing its response time (thermal inertia), and avoiding unnecessary compressor activations. It also includes an intelligent function lock system and a mode to switch off the control functions.

The defrost cycle includes two options: the Smooth Defrost mode that maintains lower evaporator temperature during defrost, saving energy and providing faster temperature pull-down after defrost is finished. As well, the intelligent defrost algorithm, which optimizes defrost cycles, delivering improved energy savings and system performance .

The digital input allows monitoring the opening of the door, activating the Economic SetPoint, controlling the temperature of the door or condenser, defrost or Fast Freezing.

Designed to maximize energy efficiency in commercial refrigeration equipment, this controller features new FastOn and Push-In coupling systems, increasing productivity in manufacturing lines. See which model best fits your need **(Faston or Easycon).**

Application Examples: beverage displays and frozen food counters.

CHILLED GOODS
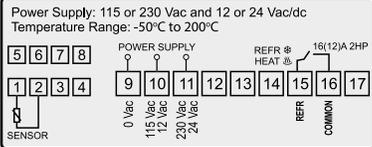## CONTROLLERS

MT-512E 2HP

Power Supply: 115 or 230 Vac and 12 or 24 Vac/dc
Temperature Range: -50°C to 200°C

POWER SUPPLY — REFR ❄ HEAT ♨ — 16(12)A 2HP
5 6 7 8 | 1 2 3 4 | 9 10 11 12 13 14 15 16 17
SENSOR | 0 Vac | 115 Vac 12 Vac | 230 Vac 24 Vac | REFR | COMMON

MT-512E Log

SITRAD — A B D1
Power Supply: 115 or 230 Vac and 12 or 24 Vac/dc
Temperature Range: -50°C to 200°C

POWER SUPPLY — REFR ❄ HEAT ♨
5 6 7 8 | 1 2 3 4 | 9 10 11 12 13 14 15 16 17
SENSOR | 0 Vac | 115 Vac 12 Vac | 230 Vac 24 Vac | NC | REFR | COMMUM

MT-512E Faston

Power Supply: 115 or 230 Vac and 12 or 24 Vac/dc
Temperature Range: -50°C to 200°C

POWER SUPPLY — REFR ❄ HEAT ♨ — 16(12)A 2HP
1 2 3 4 5 6 | 7 8 9 10 11 12 13 14
SENSOR | 0 Vac | 115 Vac 12 Vac | 230 Vac 24 Vac | REFR | COMMON

It features a single relay output, for cooling or heating purposes, combined to a cyclical timer for natural defrost. The natural defrost can be forced or performed through an off refrigeration cycle. It also features a configurable digital filter, which has the aim of simulating an increase of mass in the environment sensor, thus decreasing its response time, that is, the sensor response becomes slower. In addition to those features, has tamper-proof function that blocks the keypad preventing unauthorized users changing its settings, and a control function shutdown that deactivates the controlling outputs turning the instrument into a digital temperature indicator.
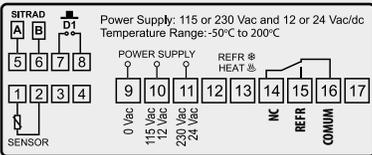
MT-512E Log is also able to communicate with Sitrad PRO software, it has open door indication and internal data storage memory (datalogger), which allows recording the measured temperature and the control output state at specified user-configurable intervals.

For increased productivity on manufacturing lines, we recommend *MT-512E Faston,* model, which features the new FastOn and Push-In quick coupling connector systems. We recommend *MT-512 G* for applications where a larger temperature display is required.
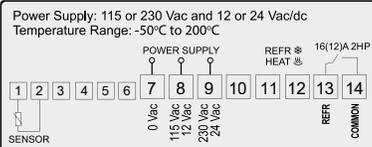
Application Examples: Medium or high temp refrigeration or heating equipment such as reach-in, upright, chest, walk-in and display coolers, heated cabinets, greenhouses and more.
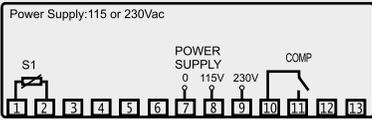
Sitrad PRO
MT-512E Log

NSF
MT-512E 2HP
MT-512E Log

MT-512G

Power Supply: 115 or 230Vac

POWER SUPPLY — 0 115V 230V — COMP
S1
1 2 3 4 5 6 7 8 9 10 11 12 13

Access the **videos and complete manuals:**

MT-512E 2HP | MT-512E Log | MT-512E Faston | MT-512G

MT-514E

Power Supply: 115 or 230 Vac and 12 or 24 Vac/dc
Temperature Range: -50°C to 200°C / -58°F to 329°F

POWER SUPPLY — NC INO — REFR ❄ HEAT ♨
5 6 7 8 | 1 2 3 4 | 9 10 11 12 13 14 15 16 17
SENSOR | D1 | 0 Vac | 115 Vac 12 Vac | 230 Vac 24 Vac | COMMON | ALARM DEFR | REFR | COMMON

MT-514E Faston

Power Supply: 115 or 230 Vac and 12 or 24 Vac/dc
Temperature Range: -50°C to 200°C

POWER SUPPLY — NC INO — REFR ❄ HEAT ♨
1 2 3 4 5 6 | 7 8 9 10 11 12 13 14
SENSOR | D1 | 0 Vac | 115 Vac 12 Vac | 230 Vac 24 Vac | ALARM DEFR | REFR | COMMON

CONTROLLERS FOR **FROZEN** AND **CHILLED** GOODS

Temperature controller for refrigeration (frozen and chilled goods) or heating applications. It has an internal audible alarm (buzzer) and a configurable digital input to detect an open door and/or external alarm/power fault. It performs a natural defrost by stopping the compressor if configured for chilled goods. Output 2 offers the option of functioning as a NC contact of output 1, as a temperature alarm, or to activate a forced defrost (when used for frozen goods).
For increased productivity on manufacturing lines, we recommend *MT-514E Faston* model, which features the new FastOn and Push-In quick coupling connector systems.

Application Examples: vaccine preservation, displays for chilled/frozen goods, and hot counters.
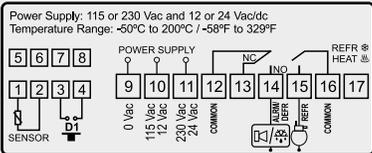
MT-514E

Access the **complete manuals:**

MT-514E | MT-514E Faston

d CORE

d CORE +ECO

t CORE

t CORE +ECO

Refrigeration controllers that combine high-end, high-tech components – precise touchpad, high intensity bright display – and bold design, allowing manufacturers to request color customization of the frame and display at the time of ordering.

Using an innovative logic and proprietary alghoritms, they perform the automatic programming of the control for different conditions of use, reducing power consumption and improving refrigeration and defrosting efficiency. They also feature power-saving mode and fast-freezing functions. Their four touchpad keys allow easy access to commands and four distinct, editable presets for each type of refrigerator or packaged product. They have up to three analog inputs for temperature sensors and up to two digital inputs, which can be configured for various functionalities – the number of inputs varies according to the model chosen. Four relay outputs directly drive compressor, lighting, defrost, and fan loads.

d-core is the economy, standard version for most applications and has two temperature sensor inputs and one digital input.
t-core has these same features, plus a True-RMS voltage monitor.

The **+ECO** versions are for use in equipment with variable capacity compressor (VCC).

Application Examples: Medium and low temp refrigeration equiment such as reach-in, upright, chest, walk-in, display and bottle coolers and freezers.

Dimensions:
Display: 100 x 54 x 22mm | 3,93 x 2,12 x 0,86 in
Power module: 95 x 88 x 26,5mm | 3,74 x 3,46x 1,04 in
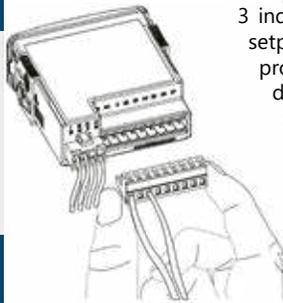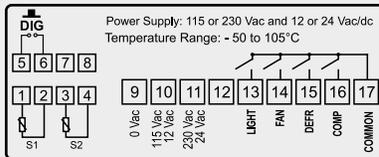
Access the
complete manuals:

dCORE

tCORE

MT-444E Fit

DIG

Power Supply: 115 or 230 Vac and 12 or 24 Vac/dc
Temperature Range: - 50 to 105°C

5	6	7	8
1	2	3	4

S1 S2

9	10	11	12	13	14	15	16	17

0 Vac / 115 Vac 12 Vac / 230 Vac 24 Vac / LIGHT / FAN / DEFR / COMP / COMMON

MT-444E Faston

Power Supply: 115 or 230 Vac and 12 or 24 Vac/dc
Temperature Range: - 50 to 105°C

POWER SUPPLY

1	2	3	4	5	6	7	8	9	10	11	12	13	14

S1 S2 D1/S3 0 Vac / 115 Vac 12 Vac / 230 Vac 24 Vac / LIGHT / FAN / DEFR / COMP / COMMON

It is equipped with 4 output relays (compressor, fan, defrost and light), 2 temperature sensors and one digital input. It can be configured with 3 independent sets of parameters for quick change of (setpoint, eco-setpoint, differential and defrost) settings to accommodate change of product in the room. Digital input can be programmed to activate/deactivate economic set point, initiate defrost, door ajar alarms, door open counter or light control. Light and economic setpoint can also be controlled through quick access menu key, eliminating the need of external switches.
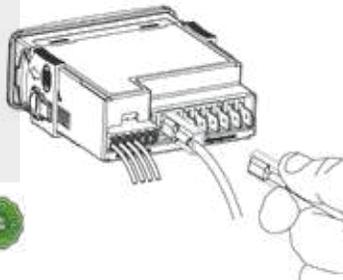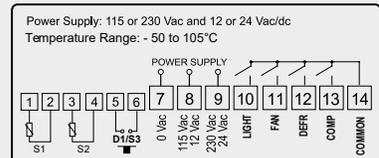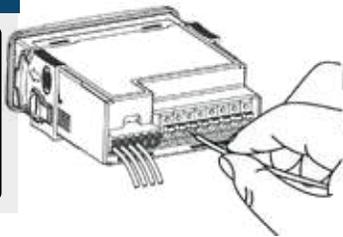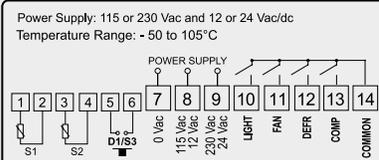
Designed to maximize energy efficiency in commercial refrigeration equipment, this controller features new FastOn and Push-In coupling systems, increasing productivity in manufacturing lines. See on the side which type best suits your needs.

Application Examples: beverage displays; reach-in coolers; refrigeration counters and up right freezers.

MT-444E EasyCon

Power Supply: 115 or 230 Vac and 12 or 24 Vac/dc
Temperature Range: - 50 to 105°C

POWER SUPPLY

1	2	3	4	5	6	7	8	9	10	11	12	13	14

S1 S2 D1/S3 0 Vac / 115 Vac 12 Vac / 230 Vac 24 Vac / LIGHT / FAN / DEFR / COMP / COMMON

Access the
complete manuals:

MT-444E Fit

MT-444E Faston

TEMPERATURE
CONTROLLERS

MT-543E *plus*

SITRAD
A B
Power Suply: 115 or 230 and 12 or 24 Vac/dc
Temperature Range: -200 to 300°C / -328 to 572°F

5 6 7 8 — POWER SUPPLY
1 2 3 4 — 9 10 11 12 13 14 15 16 17
NTC PT-100*
0 Vac | 115 Vac 12 Vac | 230 Vac 24 Vac | OUT 1 | OUT 2 | OUT 3 | COMMON 1 | COMMON 2 | OUT 4

MT-543E Log

Power Supply: 115 or 230V and 12 or 24Vac/dc
Temperature Range: NTC: -50 to 105°C / -58 to 221°F
PT100: -200 to 300°C / -328 to 572°F
PT1000: -200 to 300°C / -328 to 572°F

SITRAD
A B COMMON 3 OUT 5
5 6 7 8 — POWER SUPPLY
1 2 3 4 — 9 10 11 12 13 14 15 16 17
NTC PT100*/ PT1000* D1 90~264Vac
0 Vac | OUT 1 | OUT 2 | OUT 3 | COMMON 1 | COMMON 2 | OUT 4

They have four configurable outputs: cooling, heating, minimum ventilation, alarm and timer (cyclic timer).They accept three types of sensors: NTC thermistor (-50 to 105°C | *-58 to 221°F*)), PT100, and PT1000* (-99 to 300°C | *-146,2 to 572°F*). They also holds an internal audible alarm (buzzer) and a configurable digital filter that can be set to simulate a larger sensor inertia.

MT-543E plus features Soak mode operation which allows to configure up to five different setpoint and link time of operaiton in each setpoint. **MT-543E Log** also has a fifth relay that can be used as a power fault alarm and / or alert. In addition, it features a clock and internal memory (datalogger), which allows storage of the temperature value at specified periods of time, the variation of temperature and the status of the outputs.
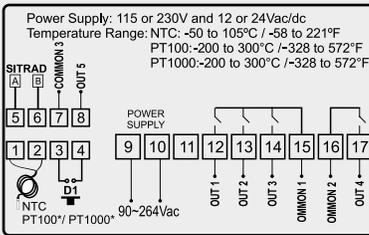
Even in power supply faults the **MT-543E Log** can keep recording data due its built-in rechargeable battery. This controller helps food industry management systems by allowing monitoring of the critical control points required by HACCP (Hazard Analysis and Critical Control Points).

*Only **MT-543E Log**

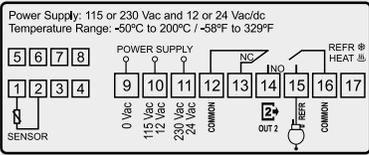**Application Examples: blood banks, data centers, wine cellars, air conditioning and ovens.**

IP65 FRONT   Sitrad PRO   c RU US
MT-543E Log

MT-516E

Power Supply: 115 or 230 Vac and 12 or 24 Vac/dc
Temperature Range: -50°C to 200°C / -58°F to 329°F

5 6 7 8 — POWER SUPPLY NC REFR / HEAT
1 2 3 4 — 9 10 11 12 13 14 15 16 17 INO
SENSOR
0 Vac | 115 Vac 12 Vac | 230 Vac 24 Vac | COMMON | OUT 2 | REFR | COMMON

It has an output for cyclic timer that can also be configured as an alarm output or a second refrigeration or heating stage. Another available resource is the disconnection of the control functions allowing for the MT-516E to act only as a temperature indicator. Additionally, through an intelligent function locking system, it prevents unauthorized people from changing the control functions.
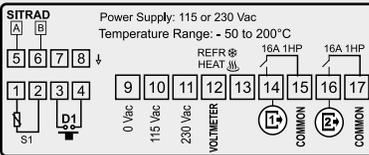
Application Examples: milk cooling tanks, refrigerated displays, incubators and heat pumps.

IP65 FRONT   c RU US

MT-516EVT *plus*

SITRAD
A B
Power Supply: 115 or 230 Vac
Temperature Range: - 50 to 200°C

5 6 7 8 — REFR / HEAT 16A 1HP 16A 1HP
1 2 3 4 — 9 10 11 12 13 14 15 16 17
S1 D1
0 Vac | 115 Vac | 230 Vac | VOLTMETER | COMMON | COMMON

Thermostat with two 16A outputs for cooling or heating applications. These products have cyclic timer and True RMS voltage monitor (from 90 to 300 Vac) with programmable settings of minimum and maximum working voltages, which could prevent damages on the refrigeration system due to voltage fluctuations.

Remote management is easy on the **MT-516EVT Plus** together with Sitrad PRO software.

Application Example: milk cooling tanks.

MT-516EVT

Power Supply: 115 or 230 Vac
Temperature Range: - 50 to 200°C

5 6 7 8 — REFR / HEAT 16A 1HP 16A 1HP
1 2 3 4 — 9 10 11 12 13 14 15 16 17
S1 D1
0 Vac | 115 Vac | 230 Vac | VOLTMETER | COMMON | COMMON

IP65 FRONT
MT-516EVT plus | MT-516EVT

Sitrad PRO
MT-516EVT plus

Access the **videos and complete manuals:**
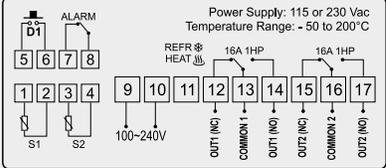
Access the **complete manuals:**

9

MT-519E

Temperature controller for cooling or heating applications with two independent thermostats, allowing operations in two different environments. In addition, the outputs of the thermostats can be configured as cyclic timers and the alarm output can be linked to any of the thermostats. Furthermore includes an audible alarm (buzzer), digital filter, and configurable digital input for door and pressure switch.
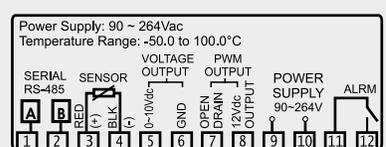
Application Examples: boilers, heaters, freezers, refrigerated counters, hot/cold counters.

Access the **complete manual:**

AutoPID plus

PID CONTROL

For cooling and heating processes, uses PID control (Proportional, Integral and Derivative),which allows controlling the temperature with high degree of stability. It has an analog output from 0 to 10 Vdc and PWM output.

Application Examples: green houses, stoves, laboratories and injection machines.
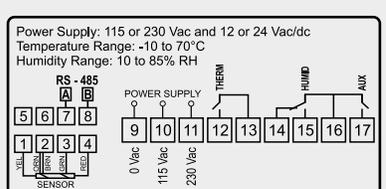
Access the **complete manual:**

HUMIDITY AND TEMPERATURE
INTEGRATED CONTROLERS

MT-530E *Super*

It has three outputs: one for temperature control, another for humidity control, and a third one for auxiliary purposes, which may operate as a second stage for temperature control, humidity control, alarm, or cyclic timer. It is intended for low and medium relative humidity applications (10% to 85% with no condensation) and features an internal audible alarm (buzzer). Its temperature and humidity sensors are combined in a single bulb, saving space and wiring.
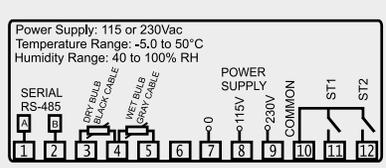
Application Examples: data centers, wine cellars, grain driers, green houses and general ambient air conditioning

Access the **video and complete manual:**

AHC-80 *plus*

It measures air moisture based on psychrometry (dry bulb and wet bulb). It features an integrated temperature controller, and allows configuring for dual stage of humidity. Used for high RH percentages and with water condensation. It operates in the range from 40 to 100% RH and from -5 to 50°C (*23 to 122°F*).

Application Examples: air conditioning and storage of fruits and flowers.
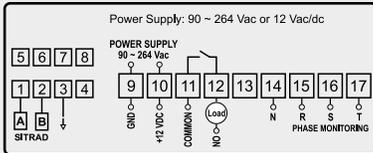
Access the **complete manual:**

ENERGY
CONTROLLERS

PhaseLog E plus

It's an instrument for monitoring and protection of electrical equipment for industrial, commercial and residential facilities. Using the true measurement method, it also monitors power quality and protects single / two / three phase loads against: under and over voltage, angular asymmetry, modular asymmetry, phase loss and phase sequence inversion. The internal datalogger stores the voltages of each phase of the electrical grid during periods of time determined by the user.
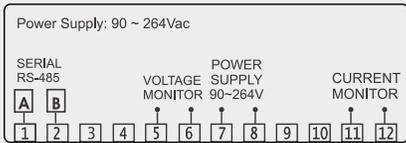Time and date of each sample is stored as well (internal realtime clock).

Application Examples: energy quality monitoring, motors protection, electrical panels protection and other multiphase equipments protection.

Sitrad PRO

Access the **complete manual:**

EnergyLog plus

Instrument for monitoring and displaying the electric energy quality and consumption which features a real time clock and internal memory to periodically store the electric data measured - the data acquisition period is defined by the user. It uses the True-RMS measurement method to determine the voltage and current and display the active, reactive and apparent power, power factor and power supply frequency. Current up to 5A can be measured directly through the controller. For currents larger than 5A up to 1000A a current transformer (CT) is required.
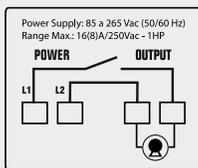
Application Examples: energy quality monitoring, motors protection, electrical panels protection and other multiphase equipments protection.

Sitrad PRO

Access the **video and complete manual:**

Monivolt II

This is a device for monitoring the voltage and for protecting electrical devices. It can be used either in industrial, commercial or residential applications. It uses the True-RMS measurement method to monitor the voltage and protect single-phase loads from under and overvoltage. It also includes an automatic 3-minute timer to avoid the output from turning ON again before this time elapses. It prevents the ON-OFF cycle during the instability of power source. This function ensures protection for equipment, such as compressors, that require a minimum stop time after turning OFF.

Dimensions: 77x39x97 mm *(3,03x1,53x3,82 in)*.

Application Examples: protection for single-phase electrical equipment.

Access the **complete manual:**

PhaseLog E plus

ELECTRIC EQUIPMENTS IN GOOD HANDS
THE NECESSARY PROTECTION IN EVERY SYSTEM

Sitrad PRO

Rackontrol Line
Intelligence for control of rack systems

RCK-862 *plus*

Expandable electronic controller of the Rackontrol line, designed for low and medium temperature rack systems in commercial and industrial refrigeration applications. It controls and monitors saturation pressure and temperature of refrigerant fluid (4-20 mA) or temperature (NTC) of a secondary fluid (Glycol, chilled water, ambient temperature) through up to six configurable sensors - allowing the use of backup sensors that come into operation automatically in case of need; and 8 digital inputs for monitoring external signals. It is a product dedicated to the control of condensing units and rack systems with up to 3 suction lines and 3 discharge lines, through its 8 outputs for compressors or fans, with two analog outputs for proportional control and 6 digital relay outputs, 3 of which are solid state that enable the control of variable capacity digital compressors (VCC).

RCK-862 plus is a control module that works alone or together with the RCK-461 expansion module to increase the number of inputs and outputs for large systems.

The controller features a new control logic intended to minimize the power consumption of the refrigeration system: the progressive algorithm seeks to match the refrigeration demand required by the plant with the power of the compressor set, reducing the number of equipment starts and stops. And through the floating condensation control function, the temperature of the outside environment is monitored to lower the condensation setpoint, thus reducing the system's compression ratio and power consumption. In addition, the proportional-integral control aims to minimize temperature/pressure variations in the suction and discharge lines. The defrost logics by time and schedule for suction lines and shutdown control with collection of refrigerant fluid (Pump Down) with synchronization with electronic expansion valve (VEE) via digital output providing an integrated and synchronized operation between the elements of the cooling system.

For use in cascade type racks, the RCK-862 plus has a synchronization option between the low, medium and high temperature lines to prioritize activations and alarms.

Simple to operate and configure, RCK-862 plus features an internal buzzer (audible warning), unique key and screens for alarm monitoring that simplify the process of monitoring and troubleshooting the refrigeration system. The real time clock (RTC) allows automating commands and recording the times of alarm occurrences. The USB connection allows downloading the configuration parameters and updating the firmware.

It has two independent RS-485 serial communication ports that can be used to connect to Sitrad PRO or other equipment via MODBUS protocol.

Dimensions: 70x136x62mm *(2,76x5,35x2,44 in)*.

Application Examples: compression centers in low and medium temperature commercial and industrial refrigeration systems (racks) and pump control for chilled water lines with interlocking with compressors (chillers).

SitradPRO

Access the **complete manual:**

RCK-461

It is an expansion module of the Rackcontrol line featuring easy configuration to increase the number of inputs and outputs of RCK-862 plus, which allows up to ten RCK-461 to connect, enabling the control of small, medium and large refrigeration systems. Furthermore, it is possible to add new controls, functionalities and features to an installation on demand.

RCK-461 has eight digital outputs, being five relay outputs and three solid-state outputs, and two 0-10V analog outputs to drive digital compressors. It also has six digital and eight configurable analog inputs for temperature (NTC) and pressure (4-20mA) sensors.

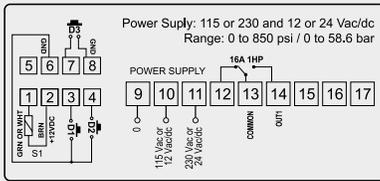Dimensions: 70x136x62mm *(2,76x5,35x2,44 in)*.

Application Example: expansion of the RCK-862 plus to control compressor racks.

Access the **complete manual:**

PCT-100E

Power Suply: 115 or 230 and 12 or 24 Vac/dc
Range: 0 to 850 psi / 0 to 58.6 bar

POWER SUPPLY
16A 1HP

Digital pressure switch easy-to-install and easy-to-apply for systems that require effective pressurization or depressurization control up to 850 psi. It is able to control loads up to 1 HP directly and has three digital inputs that allow using external devices to protect the controlled system. The hourmeter stores the number of hours the compressor operates and indicates when the compressor needs servicing.
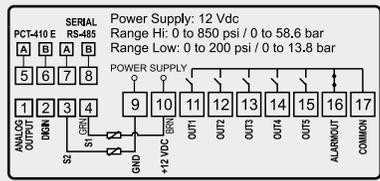
Application Examples: control of suction or discharge in refrigeration systems, control of air compressors and hydraulic pumps.

Sitrad PRO IP65 FRONT

Access the **complete manual:**

PCT-410E plus

PCT-410 E SERIAL RS-485
Power Supply: 12 Vdc
Range Hi: 0 to 850 psi / 0 to 58.6 bar
Range Low: 0 to 200 psi / 0 to 13.8 bar

POWER SUPPLY

Pressure based controller designed for refrigeration plants that require suction and discharge pressure control. Featuring 7 outputs of control, 6 digital and 1 analog for variable speed control, in addition 3 inputs, one for pressure transducer (4~20mA), one for temperature sensor and a digital input. When pressure and temperature sensors are used it can measures subcooling and superheating of the line. Working in pairs, allows to control up to 5 sets of fans and compressors simultaneously. Versatile, it offers 4 operating modes: linear, rotation, capacity or individual.

Application Examples: cooling racks and condensing units.

Sitrad PRO IP65 FRONT c UL us

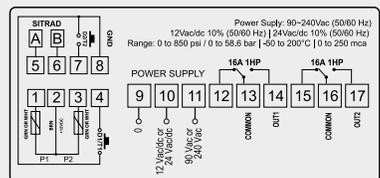Access the video and the **complete manual:**

PCT-120E plus
VERSATILITY IN A SINGLE PRODUCT!

The new Full Gauge Controls pressure gauge is complete versatility, being used for the control of water level in reservoirs and filters, and in refrigeration systems and air compressors. Know everything about it in our YouTube channel.

PCT-120E plus

SITRAD

Power Suply: 90~240Vac (50/60 Hz)
12Vac/dc 10% (50/60 Hz) | 24Vac/dc 10% (50/60 Hz)
Range: 0 to 850 psi / 0 to 58.6 bar | -50 to 200°C | 0 to 250 mca

POWER SUPPLY
16A 1HP   16A 1HP

Pressure switch and thermostat with two control outputs and two stages, operating in pressurization, depressurization, refrigeration, heating, or alarm modes. It can also be used for water level control. It is able to control two loads up to 1 HP directly and has two digital inputs that allow using external devices to protect the controlled system. The hourmeter stores the number of hours the compressor operates and indicates when the compressor needs servicing. By using temperature sensors together, it also monitors dynamic and adiabatic condensation, dynamic evaporation, superheating and subcooling, promoting greater energy efficiency in the system.

Application Examples: suction or discharge control in refrigeration systems, control of air compressors, semi-artesian wells, reservoirs, and water filters. Superheating and subcooling monitoring.

Sitrad PRO IP65 FRONT

Access the video and the **complete manual:**

SOLAR HEATING
CONTROLERS

MICROSOL ADVANCED
LINE

The *Microsol Advanced line* is characterized by its unique design for use in residential and commercial applications. It has 4 models:

MICROSOL SWP ADVANCED
Solar heating for swimming pools;

MICROSOL FLT ADVANCED
Controls the solar water pump and filtration system;

MICROSOL BMP ADVANCED
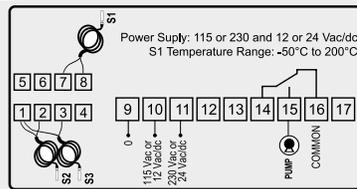Solar water heating controller featuring an output for backup system;

MICROSOL RST ADVANCED
Controls the backup system using "Real Time Clock" in thermosyphon systems.

MICROSOL E

Power Suply: 115 or 230 and 12 or 24 Vac/dc
S1 Temperature Range: -50°C to 200°C

Differential thermostat for solar heating with three sensors* that controls the water circulation pump based on the temperature differential between the solar panels and the thermal tank, or swimming pool. It has functions to ensure the efficiency of the heating system, prevent the freezing of the pipes during winter and control overheating.
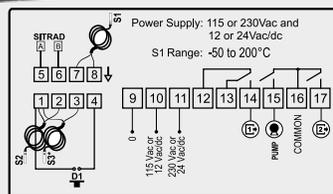*2 sensors included.

Application Examples: pumped solar heating systems.

IP65 FRONT

Access the video and the **complete manual:**

MICROSOL II E *plus*

Power Supply: 115 or 230Vac and 12 or 24Vac/dc
S1 Range: -50 to 200°C

Differential solar heating controller featuring three temperature sensors that activates the water pump. Its functions prevent the water from overheating and the freezing within the pipes. It has two backup outputs by electric resistance, gas or diesel-fired or even to command the swimming pool filtration. In addition to this, it features a real-time scheduler that allows to set weekly and daily events and permanent internal battery to ensure clock synchronism for many years, even in case of power shortage.
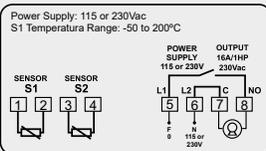*SB59 sensor (*up to 200°C | 392°F*) (sold separately).

Application Examples: pumped solar heating systems.

Sitrad PRO
IP65 FRONT

Access the video and the **complete manual:**

ANASOL

Power Supply: 115 or 230Vac
S1 Temperatura Range: -50 to 200°C

POWER SUPPLY 115 or 230V   OUTPUT 16A/1HP 230Vac

SENSOR S1   SENSOR S2

The economic version of the differential thermostat for solar heating is here completely renovated. It has user-programmable functions that prevent: damage caused by thermal shock to the plates (vacuum tube); system freezing; and water superheating. It also features easy activation for filtering with an adjustable timer and 16-amp relay for direct control of circulation pumps with up to 1HP. Anasol can be configured as a thermostat for refrigeration or heating, as it has a new kick-start function.

Application Example: solar heating systems in swimming pools or thermal reservoirs, gas or electric-powered water heaters, air conditioners, and refrigerators.
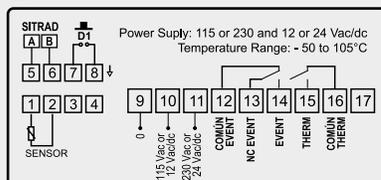
100x73,5x37 mm
3,93x2,89x1,46 in

Access the video and the **complete manual:**

RT-607E *plus*

SITRAD A B   D1
Power Suply: 115 or 230 and 12 or 24 Vac/dc
Temperature Range: - 50 to 105°C

SENSOR

Digital temperature controller for cooling or heating purposes combined with a time scheduler which allows the user to configure up to eight daily events, with programmable start and end time, which may be daily, weekly or split into business days and weekends. It has a permanent internal battery to ensure clock synchronization and schedule setup for many years, even in case of power shortage. It allows the user to activate the load manually even out of the events. In addition to that, it offers parameters for recirculation and protection of water heaters. With the sensor disabled it works as a time scheduler only.

Application Examples: water heaters, air-conditioning, counters with static coil and all processes that require time scheduling.

Sitrad PRO
IP65 FRONT

Access the video and the **complete manual:**

MT-622E

Power Suply: 115 or 230 and 12 or 24 Vac/dc
Temperature Range: 0 to 600°C

DIG3 DIG4
5 6 7 8
1 2 3 4
DIG1 DIG2

Type J (thermocouple)
RED(+)
BLUE(-)
0 Vac
115 Vac or 12 Vac/dc
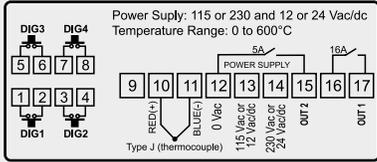230 Vac or 24 Vac/dc
OUT 2
OUT 1

5A 16A
POWER SUPPLY
9 10 11 12 13 14 15 16 17

Designed for heating (cooking equipment), it uses a type J thermocouple* as a sensor for the temperature range from -50° C to 600° C (*32° to 1112°F*). It features two control outputs for temperature and an internal audible alarm (buzzer). The first output could uses a preheating cyclic mode and the second output may be configured to work as an alarm, timer (cyclic timer) or indicator of process completion. It features a timer that operates in different modes, driven by digital inputs, which indicates the end of the time of one or two processes. It also features five configurable presets, allowing to quickly change the values of the setpoint (desired temperature) and hysteresis (control differential) of the first stage and the process time.
*Sold separately.

Application Examples: Fryers, ovens and sauna

IP65 FRONT
c UL us

Access the video and the **complete manual!**

Therm On Line

Complete solutions in control for bakeries, pizza places, delicatessen and many more!

TO-711F* e TO-711B
Gas, electric and wood industrial ovens

c UL us *

TO-712F* e TO-712B
Gas, electric and wood industrial ovens

c UL us *

TO-721B
Combined ovens, forced convection ovens and stoves

TO-741B
Electric deck and bread ovens

TO-751B
Proofers

TO-754B
Meat aging chambers

TO-761B
Rotating ovens

TO-771B
Pellet-type ovens

Access now and know more

TIMERS

TEMPUS E

Power Suply: 115 or 230 Vac ±10% (Acceptable variation in relation to the rated voltage.) (50/60 Hz)

POWER SUPPLY

5	6	7	8
1	2	3	4

Start/Pause Count in   Stop/Reset

| 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 |

0 Vac / 115 Vac / 230 Vac / OUT1 / COMMON 1 / NC 2 / OUT2 / COMMON 2
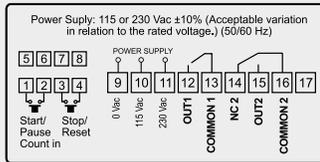
Multi-function device designed to operate as digital timer or counter. It includes three configurable and independent operating modes: event timer, cyclic timer or unit counter. The event timer mode offers three preset options and it is triggered through one of the controller's keys or an external switch connected to the digital input. The cyclic timer mode can operate with up to two outputs of control and include a delay option where both outputs will remain off. The counter mode include unit, batch and total counting options. Other salient feature include an internal audible alarm (buzzer) and an output that indicates the end of cycle/process and event totalizing, in addition to two digital inputs for external start/pause/count and stop/reset switches.
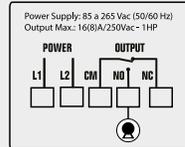
Application Examples: equipment that needs to control the timings of its processes or equipment that needs quantity counts.

IP65 FRONT

Access the **complete manual:**

ICEMATIC II

Power Supply: 85 a 265 Vac (50/60 Hz)
Output Max.: 16(8)A/250Vac - 1HP

POWER   OUTPUT

| L1 | L2 | CM | NO | NC |

Cyclic timer programmable by setting the output (ON) to 12 hours and an adjustment of up to 60 minutes to keep the control output off. Suitable for all types of cyclic events for its ease of programming. It also has a dedicated key to reverse the output state manually, always respecting the two-minute delay time before activating the control output (ON) as a protection of the installation.

Dimensions: 77x39x97 mm *(3,03x1,53x3,82 in).*

Access the **complete manual:**

THERMOMETERS

PENTA III

135 x 75 x 34 mm
5,31 x 2,95 x 1,34 in

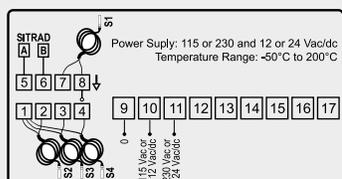Access the **complete manual:**

Portable thermometer that indicates the temperature at five different points. Due to its wide versatility, it is excellent for measuring temperature in central, automotive, and wall-mounted air conditioning equipment, freezers for frigorific balancing of evaporators, among others. It has unique features such as recording minimum and maximum temperatures, HOLD function (locking of instantaneous, minimum and maximum indications), display of average and differential temperatures, besides the configurable automatic power off.

Application Examples: Temperature measurements on central, automotive or window air conditioners; freezers and in the refrigerator balancing of evaporators.

TI-44E *plus*

SITRAD
A B   S1

Power Suply: 115 or 230 and 12 or 24 Vac/dc
Temperature Range: -50°C to 200°C

5	6	7	8
1	2	3	4

| 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 |

S2 S3 S4   0 / 115 Vac or 230 Vac/dc / 12 Vac/dc / 24 Vac/dc

Thermometer designed to monitor average, differential or individual temperatures of up-to four NTC sensors*. It can be connected to Sitrad realtime monitoring and management software or smartphone APP using RS-485 serial communication port.**
*One sensor included.
**Using a Full Gauge Converter.
Application Examples: cold storage equipment, machine tools, stoves, furnaces, motor vehicles, air conditioned rooms, food, chemical, and pharmaceutical industries.

Sitrad PRO

IP65 FRONT

Access the **complete manual:**

MODULES

MOD-64

This is a device developed to operate independently or together with other Full Gauge Controls instruments, used as a complement in remote management systems. It has six inputs, two digital, two analogical and two by voltage. These inputs can be connected to a variety of sensors (volume, mass, percentage, level, smoke, presence, pressure, temperature and humidity, for example). It also has four 16A relay outputs being two configurable as a cyclic timer and events agenda.
Furthermore, the **MOD64** allows to create operating rules for its applications through Sitrad PRO.

115 x 90 x 40mm
4,52 x 3,54 x 1,57 in

Access the **complete manual:**

MOD-I42

Expansion module designed to operate in stand-alone mode (after being configured) or combined with Sitrad PRO. It allows the expansion of the capacity of digital events (on/off), it keeps track of the temperature values and the measurament of a wide range different variables using any 4-20mA sensor on its analog input. The conversion resolution of the AIN analog inputs is 3000 points. It has 14 inputs and 2 outputs.

115 x 90 x 40mm
4,52 x 3,54 x 1,57 in

Access the **complete manual:**

ACESSORIES

EasyProg - PROGRAMMING KEY

The revolutionary Full Gauge EasyProg allows storage of nine individual programmings. It can copy the information from a standard controller and then download it to other controllers without the need for connecting it to a PC. It can also be connected to the PC through a USB port and change the parameters using Sitrad 's Preset Editor. The communication with the instruments has a RS-485 port and a Serial TTL port. Portable, works with no batteries.
See the controller's manual to check if it is compatible with **EasyProg** before connecting them.

Access the **video**

ENCLOSURE

For installation of instruments with measures 71x28x71mm (*2,79x1,10x2,79 in*) in situations such as wall mounting type (surface) and din rail or screw fixing. Connection types: X System; conduit. Includes two 16A switches that can be used to turn on light, air curtain, compressor or fans.
*Also available for sale without switches.
 ** For illustrative purposes only (instrument not included).

ECASE

Rear protective case for controllers, prevents against water and moisture in the controller's terminals.
*Image merely illustrative (product not included).

EXTENSION FRAME

For installation of instruments with measures 71x28x71mm (*2,79x1,10x2,79 in*) in varied situations, since it eliminates the need of precise cutouts to embed the instrument. With a modern look, its fixation is by screws* that are hidden, further enhancing its appearance. The Extension Frame of Full Gauge Controls also allows customization with the brand and contact of the installer or industry and accompany two 10A switches that can trigger internal light, air curtain, compressor or fan.
*Screws are included
**Accompanies two on / off switches
***Image merely illustrative (product not included).

• TIMERS. & THERMOMETERS
• MODULES
• ACESSORIES

SENSORS

SB70 Sensor

NTC sensor with thermoplastic polyester cable and individual isolation. Operates in temperatures from -50 to 105°C *(-58 to 221°F)* .

SB19 Sensor

NTC sensor with thermoplastic polyester cable and individual isolation. Operates in temperatures from -50 to 105°C *(-58 to 221°F)*.

SB41 Sensor

NTC sensor with thermoplastic polyester cable and individual isolation, covered with a stainless steel shell.
Operates in temperatures from -50 to 105°C *(-58 to 221°F)*.

SB59 Sensor

Temperature sensor whit silicone cable and covered with a stainless steel shell. It operates in temperatures from -50 to 200°C *(-58 to 392°F)*. **See which controllers are supported.**

Pressure Transducer SB69

Manufactured from stainless steel 316L, it has high stability and accuracy, being immune to interference and vibration. It operates from -40 to 100°C (*-40 to 212°F*) , for pressures ranging up to 850 psi. It has a male SAE ¼ fitting, featuring both voltage output signal from 0.5 to 4.5 Vdc or current output signal from 4 to 20 mA. It allows measuring pressure in the following fluids: compressed air, water, oil, and cooling gases (including ammonia).

SB68 Sensor

This pressure transducer is highly stable and accurate, being immune to interference and vibration. It features a female 1/4" flared fitting. It operates at temperatures between -30 and 80°C (*22 and 176°F*) and is available in the following versions: - SB68-232A e SB68-650A for pressure ranging from 0 to 232 psi and from 0 to 650 psi, respectively. Powered by a 10 to 30 Vdc supply, it provides a current output signal of 4 to 20 mA. SB68-290V e SB68-667V for pressure ranging from 0 to 290 psi and from 0 to 667 psi, respectively. Powered by a 5 Vdc supply, it provides a voltage output signal of 0,5 Vdc to 4,5 Vdc. SB-68 measures the pressure of common HCFC, HFC, HFO refrigerants, such as: R22, R134A, R404A, R407A, R407F, R407C, R410A, R448A, R449A, R450A, R452A, R513A, R507A.

SB12 Sensor Type J Thermocouple

Sensor formed by two metal alloys (iron and constantan) for measure temperatures between 0 and 300°C (*-32 and 572°F*). To use with **MT-622E** and with **ThermON line**.

SB56 Sensor

Combined temperature and relative humidity sensor for use in conjunction with **MT-530E Super.**

SB28 Sensor

Screw type sensor to be directly inserted in the solar heating piping, ensuring even more precision in the control of hot water temperature and facility in installation. Sealed with a special resin, it prevents interference caused by humidity when measuring the temperature.

Penetration Sensor

An accessory that can be used in Full Gauge Controls temperature instruments, allowing for the internal temperature of products to be checked. Available in two sizes: 150mm/*5,90 in* (**SB32**) and 75mm/*2,95 in* (**SB57**).
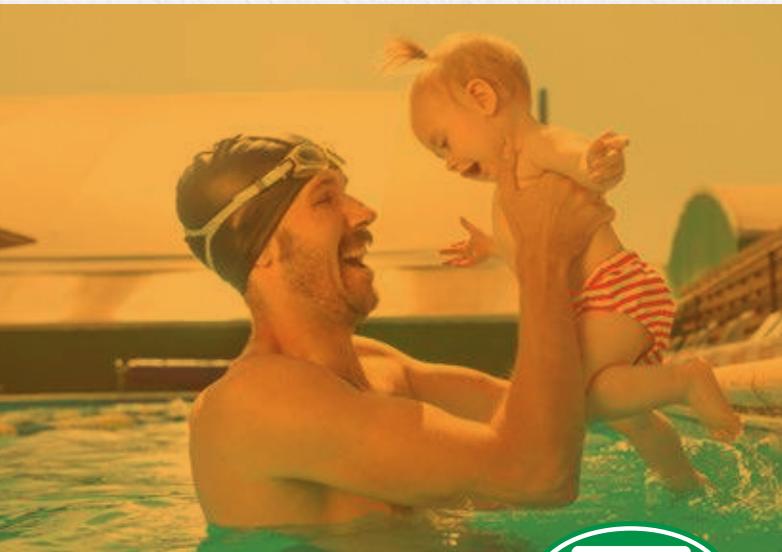
LIVES THAT **INSPIRE US**

We are part of the lives of millions of people around the world. Even without noticing, we are always there assuring the quality of products reaching the table of a major part of the population, whether during transportation of fresh meat for the Sunday barbecue, the oven baking of the bread we are used to eating for breakfast, or even the freezer where we keep our refreshing beverages.

We are also engaged in offering the ideal climate for hanging out at the mall or in exciting moments, such as Arrivals and Departures at the airport. We are there, guaranteeing the perfect temperature of the water for sharing pleasant moments at a swimming pool with friends, and for making that ice cream a delicious experience with the ideal consistency.

And, if for any reason, something gets out of hand, there is no reason to worry: Sitrad, a management software via Internet, will send an alarm to the cell phone of the responsible persons so everything can go back to normal in short time.

People's lives inspire us to continuously invest in new technologies, state-of-the-art machines and expansion of our physical space, training and professional development of the sector, in order to always do more and better.

WHO **WE ARE**

Since 1985, we produce a varied line of digital instruments for the refrigeration, air conditioning, heating, and solar heating industries.

We have offices in the United States, as well as an industrial compound installed in an area of 2 acres in the city of Canoas (Brazil), where our products are 100% developed and manufactured. Thus, we keep the Development Engineering and Production Engineering integrated in the same physical space, ensuring our commitment to meeting the delivery deadlines.

The innovative sector that includes Industrial Design and an Injection Factory guarantee agility and autonomy throughout the production process, the result of substantial investments in state-of-the-art machines, such as a modern large 3D printer and hiring of a specialized team.

We are present throughout the world by exporting half of our production, as exhibitors in more than 20 trade fairs across the globe per year, and through our employees who provide lectures and training. This way our image is consolidated in 62 countries, including: United States, Canada, China, United Arab Emirates, Portugal, Mexico, Colombia, Argentina, and South Africa.

We are more than 300 employees engaged with the company's Quality and Environmental Policy, focused and motivated to always deliver the best, disseminate technical knowledge in practice, contributing to empower the industry, satisfying and conquering our partner: you

QUALITY AND **CERTIFICATIONS**

We are committed to excellence in manufacturing our products, affirming respect for environmental preservation. Our products and processes comply with international guidelines, standards and certifications such as UL, CE, NSF, and ISO 9001 and 14001. Our production line also complies with the European directive RoHS, which eliminates the use of hazardous substances in electronic devices. Sitrad PRO software has been approved by Microsoft's rigorous validation process, ensuring its compatibility with Windows 10 and demonstrating all reliability and security in the facilities.

UNDERSTAND THE **ICONS**

Find out what the icons throughout this catalog means:

Refrigeration

Heating

Sitrad PRO

Key Flatec

Function Lock

Serial programming

Degree of protection IP65

Turn off control functions

Dimensions of rectangular instruments : 71x28x71mm (*2,79x1,10x2,79 in*).

Full Gauge® CONTROLS

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