

Intelligent Temperature Control: Isotherm Digital Display

PRODUCT INFORMATION

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- ✓ The Digital Display clearly and simply displays, controls and regulates the temperature within a refrigerated compartment from the outside.
 - ✓ Main operating parameters are handled by the micro processor in order to maximize performances.
 - ✓ Product integration is simple, since the device is fully compatible with control unit IWM P/N SEG00002DA (Secop version 101N0212, for BD35/50F), and IWM P/N SEG00030GA (Secop version 101N0510)

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- ✓ The system logic provides as standard smart features like:
 - Soft Start for effective, safe start-up of the compressor
 - Fast Cooling to lower the temperature as quickly as possible
 - Over Cooling to accumulate cold when there is a surplus of energy:
 1. When battery is in charging mode (battery charger, engine on, etc.)
 2. If provided with AC/DC kit when shore power is available

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- ✓ Turning the product on and off without opening the refrigerated compartment
 - ✓ Instant display of the actual temperature inside the refrigerated compartment
 - ✓ Display and/or change of the set temperature with a simple press of the up and down keys
 - ✓ Possibility of selecting temperature indication in Celsius or Fahrenheit


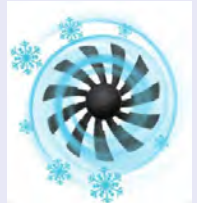
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- ✓ Instant display of main operating faults
 - ✓ Possibility of selecting three different battery protection levels
 - ✓ Three different temperature's offset levels available

- ✓ The product is equipped with a **Soft Start function**. The number of compressor revolutions is kept to the minimum allowed for approximately 30 sec. at every start of the compressor.
- ✓ It balances the internal pressures on the gas circuit, preventing possible compressor blocks.
- ✓ At the end of this process the compressor's operation returns to the standard settings.

- ✓ ECO function is normally de-activated and needs to be put on by the user in order to be started
- ✓ With ECO function active, the refrigerator will operate at minimum power, in energy-saving mode.
- ✓ Achievement of the set temperature cannot be guaranteed in this mode since priority is shifted to reduce power consumption and the capacity of the battery is preserved to the maximum achievable timing.
- ✓ When the ECO function is active, the Soft Start function is available and the compressor operates at the fixed RPM value of 2500.

- ✓ The ITC logic (intelligent temperature control) is the basic principle of the digital display solution combining high product performance with a significant energy saving.
- ✓ While the ITC is active, the following sub-functions are available:
 1. Soft start
 2. Fast Cooling
 3. Over Cooling (to be activated by the user)

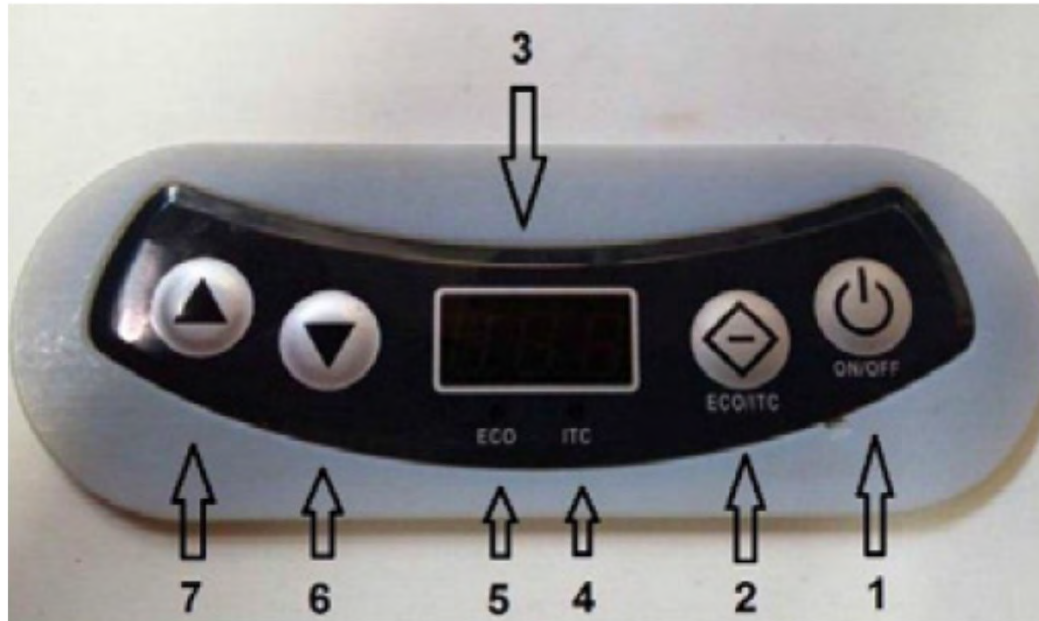
- ✓ With the over cooling function activated, the system accumulates energy in food and drinks, sub-cooling the cabinet with reference to the set temperature.
- ✓ The accurate cabinet's temperature reading allows the system to prevent freezing of food, stopping the sub-cooling under the reach of 1°C
- ✓ Over Cooling is allowed by the system when a surplus of energy is detected. This can be achieved via the battery being charged (engine on, battery charger on, etc.) or with shore power connected if provided with the AC/DC module control.

	ITC	ECO
	SOFT START	SOFT START OPERATES FIXED RPM 2500
	FAST COOLING	
overcooling	OVER COOLING (TO BE ACTIVATED BY THE USER)	

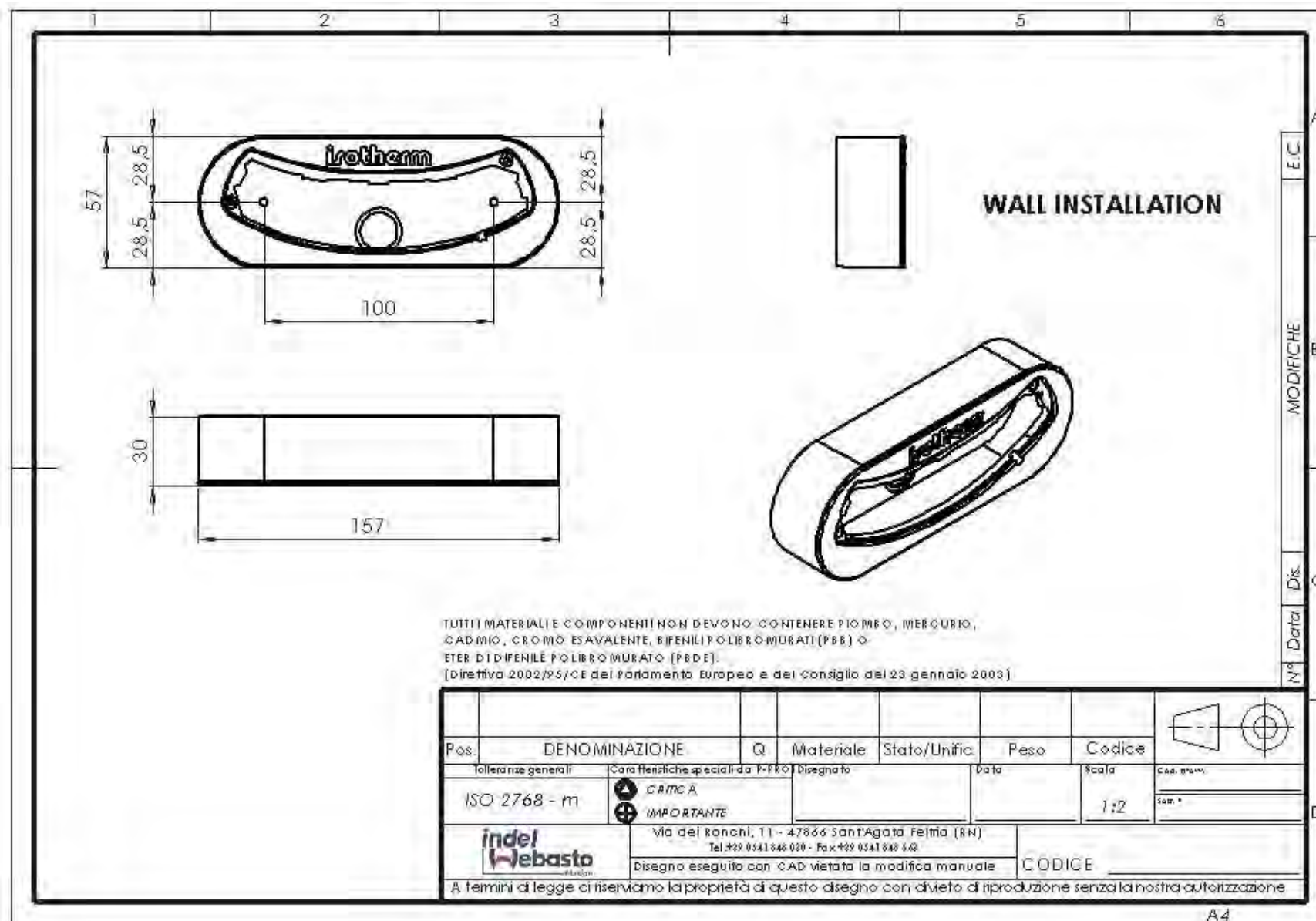
- ✓ The device is compatible only with control units IWM P/N SEG00002DA Secop version 101N0212 and IWM P/N SEG00030GA Secop version 101N0510.
- ✓ Make sure that your device is equipped with one of the a.m. control units before installation.
- ✓ Components making up the kit:
 - Instructions manual
 - Digital display
 - Digital display support frame
 - Container for wall installation
 - Container for flush mounting installation
 - Temperature sensor with cable
 - Grille and temperature sensor support
 - Display connection cable
 - Filter and prolonging cable for AC/DC
 - 2 M2.5 screws
 - 2 self-tapping screws
 - Rubber cable grommet



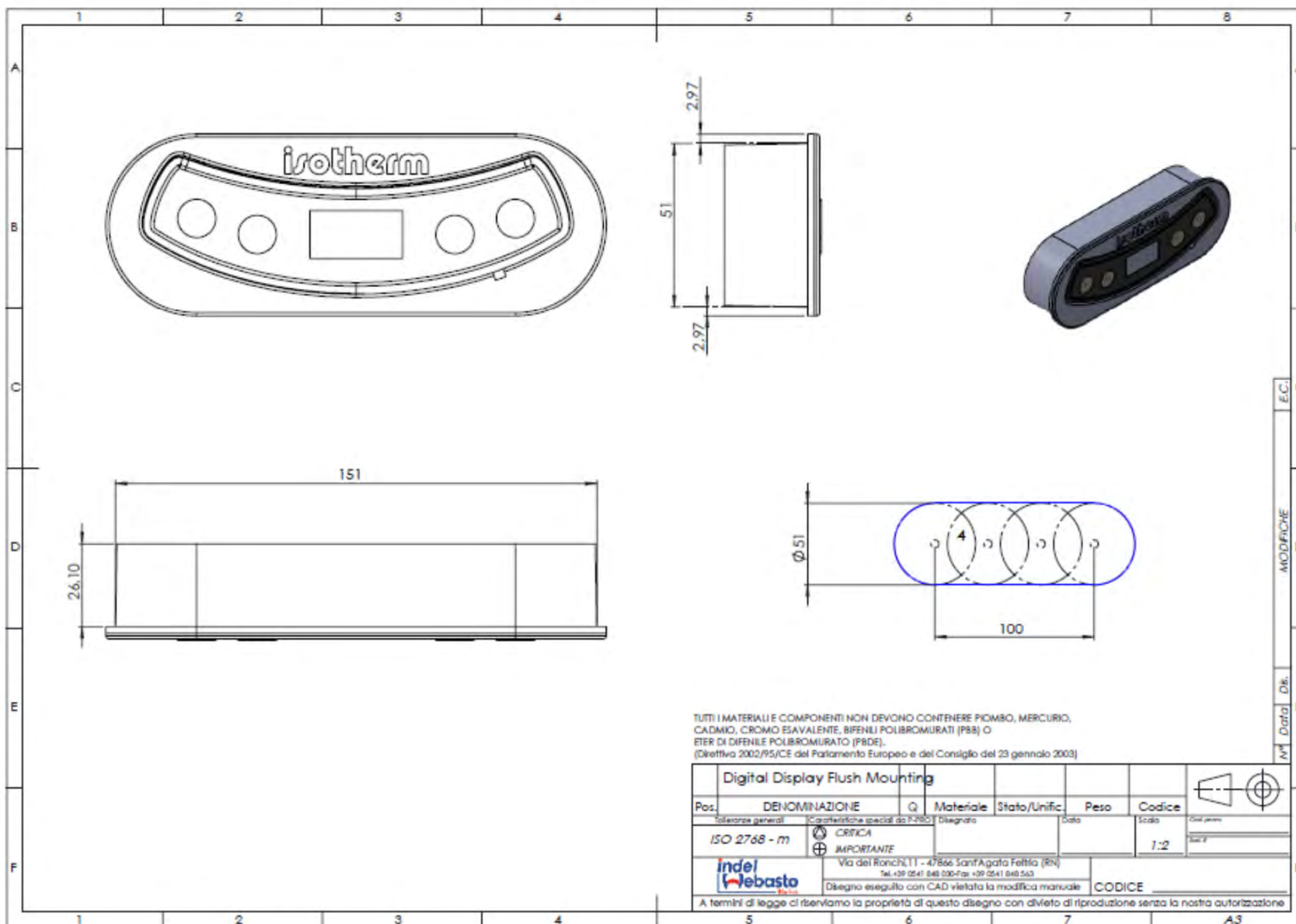




- 1 On button
- 2 ECO / ITC function change button
- 3 Display
- 4 ITC active function LED
- 5 ECO active function LED
- 6 Button for temperature value decrease or menu scrolling
- 7 Button for temperature value increase or menu scrolling







TUTTI I MATERIALI E COMPONENTI NON DEVONO CONTENERE PIOMBO, MERCURIO, CADMIO, CROMO ESAVALENTE, BIFENILI POLIBROMURATI (PB8) O ETER DI DIFENILE POLIBROMURATO (PBDE).
(Direttiva 2002/95/CE del Parlamento Europeo e del Consiglio del 23 gennaio 2003)

Digital Display Flush Mounting						
Pos.	DENOMINAZIONE	Q	Materiale	Stato/Unific.	Peso	Codice
	ISO 2768 - m		CRITICA	Disegnato	Data	Scala
			IMPORTANTE			1:2
			Via del Ronchi, 11 - 47866 Sant'Agata Feltria (RN)			
			Tel. +39 0541 848 000-Fax +39 0541 848 543			
			Disegno eseguito con CAD vietata la modifica manuale			CODICE
A termini di legge ci riserviamo la proprietà di questo disegno con divieto di riproduzione senza la nostra autorizzazione						

E.C. MODIFICHE Data Dis.



Scale: 1:2

Sheet 1

A3



Part Numbers, Description, Prices and Availability

Part Number	Description	Price
SED00036DA	ISOTHERM ITC DIGITAL DISPLAY KIT FOR ELECTRONIC BOARDS 101N0212 / 101N510	PLS Contact IWM



**DANFOSS/
SECOPI
ELECTRONIC
CONTROL
MODULE
101N0212**



**DANFOSS/
SECOPI
ELECTRONIC
CONTROL
MODULE
101N0510**

OVERVIEW OF ISOTHERM REFRIGERATION CONTROLS

	Interface	Energy Savings	Fast Cooling	Note
Thermostat	Mechanical	0	++	
ITC Digital Display	Digital	++	++	<ul style="list-style-type: none"> - Also for AC/DC applications - Dynamic control of battery charging status - ITC ready fridges
ITC+Plate*	Digital	+++	+	<ul style="list-style-type: none"> - Overcooling function on fixed ΔT - ECO mode to privilege battery savings - Also for AC/DC applications
Smart Energy Control	Mechanical	+++	+++	<ul style="list-style-type: none"> - Full modulation of compressor speed - Multiple customized settings for optimized savings/performance - SEC ready fridges - DC applications only

* Soon replaces ASU plate / cooling units with the following benefits:

Higher energy savings (+20%)

Digital interface: nicer and user friendly

It can handle freezers till -18°C (ASU -6°C)

Freeze protection setting for fridge cabinet

Various battery protections

Accurate display of temperature control via parameterizable offsets

ITC/ECO logic privileges battery savings/protection versus set temperature.
Basic overcooling function (2 speeds / fixed ΔT)

The Isotherm logo with the tagline "Intelligent Temperature Control" below it. The logo consists of the word "isotherm" in blue with a red dot above the 'i', underlined in blue, and the tagline in a smaller blue font.

SEC logic privileges temperature control performance modulating continuously compressor speed to save energy

The Isotherm logo with the tagline "Smart Energy Control" below it. The logo consists of the word "isotherm" in blue with a red dot above the 'i', underlined in blue, and the tagline in a smaller blue font.



Up to 25% energy savings due to a more efficient use of the compressor



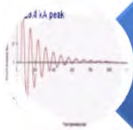
Up to 40% savings with combined effects of stored cooling energy in food and drinks



Available as retrofit kit or originally fitted on fridges in the factory



Quick cooling in boost mode



Soft start to avoid starting peaks



Easy to set battery protection directly from the display



Eco mode

Thank you for your attention