Controllers for refrigerated cabinets, counters and islands, with energy-saving strategies and compatible with the EVconnect APP and the EPoCA system



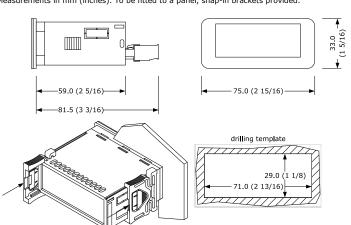




- Controllers for normal and low temperature units with automatic defrost mode accord ing to the setpoint value
- Power supply 115... 230 VAC or 230 VAC (according to the model)
- Cabinet probe (PTC/NTC)
- Evaporator/auxiliary probe (PTC/NTC)/multi-purpose input
- Compressor relay 16 A res. @ 250 VAC (30 A res. @ 250 VAC by request)
- sealed relays compliant with the standard EN 60079-15
- TTL MODBUS slave port for EVconnect app, EPoCA remote monitoring system or for
- Cooling or heating operation

MEASUREMENTS AND INSTALLATION

Measurements in mm (inches). To be fitted to a panel, snap-in brackets provided.



INSTALLATION PRECAUTIONS

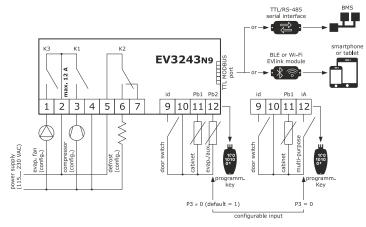
or shocks.

- The thickness of the panel must be between 0.8 and 2.0 mm (1/32 and 1/16 in) Ensure that the working conditions are within the limits stated in the TECHNICAL
- SPECIFICATIONS section. Do not install the device close to heat sources, equipment with a strong magnetic field, in places subject to direct sunlight, rain, damp, excessive dust, mechanical vibrations
- In compliance with safety regulations, the device must be installed properly to ensure adequate protection from contact with electrical parts. All protective parts must be fixed in such a way as to need the aid of a tool to remove them.

2 ELECTRICAL CONNECTION



Use cables of an adequate section for the current running through them. To reduce any electromagnetic interference connect the power cables as far away as possible from the signal cables.



PRECAUTIONS FOR ELECTRICAL CONNECTION

- If using an electrical or pneumatic screwdriver, adjust the tightening torque. If the device has been moved from a cold to a warm place, the humidity may have caused condensation to form inside. Wait about an hour before switching on the pow-
- Make sure that the supply voltage, electrical frequency and power are within the set limits. See the section TECHNICAL SPECIFICATIONS.
- Disconnect the power supply before doing any type of maintenance.
- Do not use the device as safety device.
- For repairs and for further information, contact the EVCO sales network.

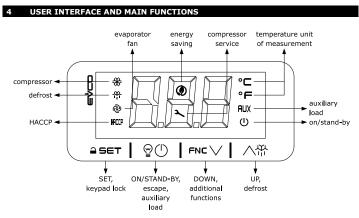
3 FIRST-TIME

- Install following the instructions given in the section MEASUREMENTS AND INSTALLA-
- Power up the device as shown in the section ELECTRICAL CONNECTION and an internal
- The test normally takes a few seconds, when it is finished the display will switch off. Configure the device as shown in the section $Setting\ configuration\ parameters.$

	Recommended configuration parameters for first-time use.		
PAR.	DEF.	PARAMETER	MIN MAX.
SP	0.0	setpoint	r1 r2
P0	1	probe type	0 = PTC 1 = NTC
P2	0	temperature unit of measurement	0 = °C 1 = °F
d00	0	enable parameters type b	0 = °C 1 = °F
d01	0	setpoint threshold to enable parame- r1 r2	
		ters type b	if SP > d01
d1	0	defrost type	0 = electric 1 = hot gas
			2 = compressor stopped
d1b	0	defrost type	0 = electric 1 = hot gas
			2 = compressor stopped

Then check that the remaining settings are appropriate: see the section CONFIGURA-TION PARAMETERS.

- Disconnect the device from the mains.
- Make the electrical connection as shown in the section ELECTRICAL CONNECTION without powering up the device.
- For the connection in an RS-485 network connect the interface EVIE22TSX or EVIF23TSX, to activate real time functions connect the module EVIF23TSX, to use the device with the APP EVconnect connect the interface EVIF25TBX. To use the device with the EPoCA remote monitoring system, connect the EVIF25TWX module; see the relevant instruction sheets. If EVIF22TSX or EVIF23TSX is used, set parameter bLE
- Power up the device.



Switching the device on/off

If POF = 1, touch the ON/STAND-BY key for 4 s.

If the device is switched on, the display will show the P5 value ("cabinet temperature" default);

if the dis	f the display shows an alarm code, see the section ALARMS.			
LED	ON	OFF	FLASHING	
**	compressor on	compressor off	- compressor protection active - setpoint setting active	
*	defrost or pre-dripping active	-	- defrost delay active - dripping active	
@	evaporator fan on	evaporator fan off	- evaporator fan stop active - low humidity operation active - static regulation active	
НАССР	saved HACCP alarm in EVlink	-	-	
Ø	energy saving active	-	-	
2	request for compressor service	-	- settings active - access to additional functions active - operation with EVconnect or EPoCA active	
°C/°F	view temperature	-	overcooling or overheating active	
AUX	auxiliary load on	auxiliary load off	- auxiliary load on by digital input - auxiliary load delay active - demisting on (slow flashing)	
(1)	device off	device on	device on/off active	

If Loc = 1 (default) and 30 s have elapsed without the keys being pressed, the display will show the "Loc" label and the keypad will lock automatically.

Unlock keypad

Touch a key for 1 s: the display will show the label "UnL".

Set the setpoint

Check that the keypad is not locked.

1.	≘ SET	Touch the SET key.
2.	√ FNE V	Touch the UP or DOWN key within 15 s to set the value within the limits r1 and r2 (default "-50 50")
3.	≙SET	Touch the SET key (or do not operate for 15 s).

4.4 Activate manual defrost

Check that the keypad is not locked and that overcooling is not active.

△₩ Touch the UP key for 2 s.

If P3 = 1 (default), defrost is activated provided that the evaporator temperature is lower than the d2 threshold.

Activate static/ventilated regulation (if r8 = 3)

Check that the keypad is not locked.

FNC 🗸 Touch the DOWN key.

During the static ventilation the evaporator fan is switched off

Cabinet light on/off (if uc1... uc3 = 3, default) 4.6

Touch the ON/STAND-BY key.

If uc1... uc3 = 5 and the keypad is not locked, the **button-operated load** switches on/off.

4.7 Switching the demisting on/off (if uc1... uc3 = 4)

Touch the UP key.

The demisting is switched on for the u6 duration. If u6 = 0 the demisting is switched on/off

4.8 Silence buzzer

Touch a key.

If uc1... uc3 = 6 and u4 = 1, the alarm output switches off.

ADDITIONAL FUNCTIONS

5.1 Activate/deactivate overcooling, overheating and manual energy saving Check that the keypad is not locked.

FNC 🗸 Touch the DOWN key.

FUNCTION	CONDITION	CONSEQUENCE
overcooling	r5 = 0, $r8 = 1$ and defrost	the setpoint becomes "setpoint -
	not active	r6", for the r7 duration
overheating	r5 and r8 = 1	the setpoint becomes "setpoint +
		r6", for the r7 duration
energy saving	r5 = 0 and r8 = 2	the setpoint becomes "setpoint +
		r4", at maximum for HE2 duration

5.2 Activating the high/low humidity operation (if F0 and F0b = 2)

Check that the keypad is not locked.

1.	FNC V		Touch the DOWN key for 4 s.
	LAB.	DESCRIPTION	ON
	rH_	low humidit	cy operation (evaporator fan according to F15 and F16 if compres-
		sor off, on i	f compressor on)
	rH ⁻	high humid	ity operation (evaporator fan on)
2.	aset		Touch the SET key.
3.			Touch the UP or DOWN key to set " 149 " (when label "rCH" is selected).
4.	≙SET		Touch the SET key.
5.	\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\		Touch the ON/STAND-BY key (or do not operate for 60 s) to exit

View/delete compressor functioning hours

Check that the keypad is not locked.

		Touch the DOWN key for 4 s.
2.	√ FNE V	Touch the UP or DOWN key within 15 s to select a label.

	LAB.	DESCRIPTION	ON
CH view compressor functioning h			essor functioning hours (hundreds)
	rCH	delete comp	pressor functioning hours
3.	3.		Touch the SET key.
4.	4. FIL		Touch the UP or DOWN key to set "149" (when label "rCH" is selected).
5.	==	eτ	Touch the SET key.
6.		(h)	Touch the ON/STAND-BY key (or do not operate for 60 s) to exit

View the temperature detected by the probes

Check that the keypad is not locked.

 $\wedge \oplus$

FNC 🗸

		, 1-10	- 🗸	-
LAB. DESCRIPTION				DN
cabinet temperature (if P3 ≠ 4)			perature (if P3 ≠ 4)	
		Pb1	inlet air tem	perature (if P3 = 4)
			evaporator	temperature (if P3 = 1 or 2)
,		Pb2	touch:	
		PD2	the UP key	to view the optimal evaporation temperature calculated
-			the DOWN I	key to view the minimum evaporator temperature detected
		Pb3	auxiliary ter	mperature (if P3 = 3, 4 or 5)
-		Pb4	calculated p	roduct temperature (CPT; if P3 = 4)
3. SET Touch the SET key.			Touch the SET key.	
4.		₩	(h)	Touch the ON/STAND-BY key (or do not operate for 60 s) to exit the procedure.

Touch the UP or DOWN key within 15 s to select a label.

Touch the DOWN key for 4 s.

	I = U	the procedure.
6 6.1	SETTINGS Setting configurat	ion parameters
	1	
1.	_ a set	Touch the SET key for 4 s: the display will show the label "PA".
2.	aset	Touch the SET key.
3.		Touch the UP or DOWN key within 15 s to set the PAS value (default "-19").
4.	aset	Touch the SET key (or do not operate for 15 s): the display will show the label "SP".
5.		Touch the UP or DOWN key to select a parameter.
6.	aset	Touch the SET key.
7.		Touch the UP or DOWN key within 15 s to set the value.
8.	aset	Touch the SET key (or do not operate for 15 s).
9.	aset	Touch the SET key for 4 s (or do not operate for 60 s) to exit the procedure.
	Cataba data tima	and down of the week (see the best EVIENCE V. EVIENCE V.

Set the date, time and day of the week (available if EVIF23TSX, EVIF25TWX or interface EVIF25TBX is connected)

N.B. Do not disconnect the device from the mains within two minutes since the setting

if the device communicates with the EVconnect app, the date, time and day of the week will be automatically set by the smartphone or tablet.

1. FNC \ Touch the DOWN key for 4 s.

Check that the keypad is not locked.

		· · · = V	
	2. FNC V		Touch the UP or DOWN key within 15 s to select the label "rtc".
	3.	LASET	Touch the SET key: the display will show the label "yy" follow
3.	= >=	by the last two figures of the year.	
	4.		Touch the UP or DOWN key within 15 s to set the year.

3.	I ager I		by the last two figures of the year.
4.	₹ FNL ♦		Touch the UP or DOWN key within 15 s to set the year.
5.	Repea	t actions 3. a	nd 4. to set the next labels.
	LAB.	DESCRIPTION	ON OF THE NUMBERS FOLLOWING THE LABEL
	n	month (01	. 12)
	d	day (01 3	1)
	h	time (00 2	23)
	n	minute (00.	59)
6.	==	6 ΕΤ	Touch the SET key: the display will show the label for the day of the week.
7.			Touch the UP or DOWN key within 15 s to set the day of the week.
	LAB.	DESCRIPTION	ON
	Mon	Monday	
	tuE	Tuesday	
	UEd	Wednesday	
	thu	Thursday	
	Fri	Friday	
	Sat	Saturday	
	Sun Sunday		
8.	==	6 ∈⊤	Touch the SET key: the device will exit the procedure.
9.	Touch the ON/ST		Touch the ON/STAND-BY key to exit the procedure beforehand.

7 CONFIGURATION PARAMETERS					
₽≣	N.	PAR.	DEF.	SETPOINT	MIN MAX.
® -	1	SP	0.0	setpoint	r1 r2
	N.	PAR.	DEF.	ANALOGUE INPUTS	MIN MAX.
	2	CA1	0.0	cabinet probe offset	-25 25 °C/°F
					if P3 = 4, air in probe offset
	3	CA2	0.0	evaporator/auxiliary probe offset	-25 25 °C/°F
	4	P0	1	probe type	0 = PTC 1 = NTC
	5	P1	1	enable °C decimal point	0 = no 1 = yes
	6	P2	0	temperature unit of measure- ment	0 = °C 1 = °F
O,	7	P3	1	configurable input function	0 = digital input 1 = defrost + fan 2 = fan 3 = condenser probe 4 = air out probe 5 = critical temperature probe if P3 = 4, regulation tempera- ture = product temperature (CPT)
	8	P5	0	value displayed	0 = regulation temperature 1 = setpoint 2 = evaporator/auxiliary temperature
	9	P7	5	air in weight for calculated prod- uct temperature (CPT)	0 10 % x 10 CPT = {[(P7 x (air in)] + [(100 - P7) x (air out)] : 100}
	10	P8	5	display refresh time	0 250 s : 10

	N. 11	PAR. r0	DEF. 2.0	REGULATION setpoint differential	MIN MAX. 1 15 °C/°F
	12	r1	-50	minimum setpoint	-99 °C/°F r2
	13 14	r2 r4	50.0 0.0	maximum setpoint setpoint offset in energy saving	r1 199 °C/°F 0 99 °C/°F
	15	r5	0.0	cooling or heating operation	0 = cooling
	16	r6	0.0	setpoint offset in overcool-	1 = heating 0 99 °C/°F
•	17	r7	30	ing/overheating overcooling/overheating duration	0 990 min
	18	r8	0	DOWN key additional function	0 = disabled
					1 = overcooling/overheating2 = energy saving
					3 = static/ventilated regula-
	19	r12	0	position of the r0 differential	tion 0 = asymmetric
	N.	DAD	DEE	COMPRECCOR	1 = symmetric
	N. 20	PAR. C0	DEF.	COMPRESSOR compressor on delay after pow-	MIN MAX. 0 240 min
	21	C2	3	er-on compressor off minimum time	0 240 min
	22	C3	0	compressor on minimum time	0 240 s
	23	C4	10	compressor off time during cabinet probe alarm	0 240 min
	24	C5	10	compressor on time during cabi-	0 240 min
	25	C6	80.0	net probe alarm threshold for high condensation	0 199 °C/°F
ļ	26	C7	90.0	warning threshold for high condensation	differential = 2 °C/4 °F 0 199 °C/°F
			30.0	alarm	0 133 C/ 1
	27 28	C8	0	high condensation alarm delay compressor hours for service	0 15 min 0 999 h x 100
					0 = disabled
	29	C11	0	second compressor switch-on de- lay	0 240 s
	30	C13	0	number of start-ups for compres-	0 10
_	N.	PAR.	DEF.	sor rotation DEFROST	0 = disabled MIN MAX.
	31 32	d00	0	enable parameters type b	$0 = no \qquad 1 = sì$
	32	d01	1.0	setpoint threshold to enable pa- rameters type b	r1 r2 se SP > d01
	33	d0	8	automatic defrost interval	0 99 h 0 = only manual
					if d8 = 3, maximum interval
	34	d0b	8	automatic defrost interval	0 99 h 0 = only manual
-		.14	_	dofront to a	if d8 = 3, maximum interval
	35	d1	0	defrost type	0 = electric 1 = hot gas
	26	d1b	0	defrost type	2 = compressor stopped
	36	nTD	0	defrost type	0 = electric 1 = hot gas
	37	d2	8.0	threshold for defrost end	2 = compressor stopped -99 99 °C/°F
	38	d2b	8.0	threshold for defrost end	-99 99 °C/°F
	39	d3	30	defrost duration	0 99 min se P3 = 1, maximum duration
	40	d3b	30	defrost duration	0 99 min
	41	d4	0	enable defrost at power-on	se P3 = 1, maximum duration $0 = no 1 = yes$
	42 43	d5	0	defrost dealy after power-on	0 99 min
)	45	d6		value displayed during defrost	0 = regulation temperature 1 = display locked
	44	d7	2	dripping time	2 = dEF label 0 15 min
	45	d7b	2	dripping time	0 15 min
	46	d8	0	defrost interval counting mode	0 = device on hours 1 = compressor on hours
					2 = hours evaporator tem-
					perature < d9 3 = reserved
	47	d9	0.0	evaporation threshold for auto-	4 = real time -99 99 °C/°F
				matic defrost interval counting	
	48	d11	0	enable defrost timeout alarm	0 = no $1 = yesif d1 = 0 or 1, enabled with$
	49	d15	0	compressor on consecutive time	SP < 0, if d1 = 2, disabled 0 99 min
				for hot gas defrost	
	50	d16	0	pre-dripping time for hot gas de- frost	0 99 min
	51	d20	180	compressor on consecutive time	0 999 min
	52	d21	200	for defrost compressor on consecutive time	0 = disabled 0 500 min
	-	-		for defrost after power-on and	if (regulation temperature -
_				overcooling	setpoint) > 10°C/20 °F 0 = disabled
	N. 55	PAR.	DEF.	ALARMS select value for high/low temper-	MIN MAX. 0 = regulation temperature
	در	AA		select value for high/low temper- ature alarms	1 = evaporator temperature
	56	A1	-10.0	threshold for low temperature	2 = auxiliary temperature -99 99 °C/°F
				alarm	,
	57	A2	2	low temperature alarm type	0 = disabled 1 = relative to setpoint
	Eo	Δ4	10.0	threshold for bigh to-	2 = absolute -99 99 °C/°F
	58	A4	10.0	threshold for high temperature alarm	75 55 ·C/*F
	59	A5	2	high temperature alarm type	0 = disabled 1 = relative to setpoint
					2 = absolute
3	60	A6	12	high temperature alarm delay after power-on	0 99 min x 10
	61	A7	15	high/low temperature alarms de-	0 240 min
	62	A8	15	lay high temperature alarm delay af-	0 240 min
				ter defrost	
	63	A9	15	high temperature alarm delay af- ter door closing	0 240 min
	64	A10	10	power failure duration for alarm recording	0 240 min always records in EVlink
	65	A11	2.0	high/low temperature alarms re-	1 15 °C/°F
	66	A12	2.0	set differential water reset warning delay	0 30 days
				- '	0 = disabled
	N. 67	PAR. F0	DEF.	FANS evaporator fan mode during	MIN MAX. 0 = off 1 = on
	"		-	normal operation	2 = according to F15 and
	. '				F16 if compressor off, or if compressor on
			I		3 = thermoregulated (with F1 and F1A)
					and LIMI
					4 = thermoregulated (with
•					•
•					4 = thermoregulated (with F1 and F1A) if compres

	68	F0b	1	evaporator fan mode during normal operation	0 = off $1 = on2 = according to F15$ and	(<u>L</u>)	N. 118	PAR. Hr0	DEF.	REAL TIN	1E CLOCK ock
					F16 if compressor off, on if compressor on		N. 119	PAR.	DEF.	1	GGING E\ rt configu
					3 = thermoregulated (with F1 and F1A)					nectivity	
					4 = thermoregulated (with F1 and F1A) if compres- sor on						
					5 = low humidity 6 = high humidity		120 121	rE0 rE1	15		ger sampli temperat
	69 70	F1 F1A	-4.0 -5.0	threshold for evaporator fan off threshold for evaporator fan on	-99 99 °C/°F						
	70	114	3.0	threshold for evaporator fair on	if F1A > F1, F1 differential = 2 °C/4 °F	-	N.	PAR.	DEF.	MODBUS	
	71	F2	0	evaporator fan mode during de- frost and dripping	0 = off 1 = on 2 = according to F0		122 123	LA Lb	247		address baud rate
	72	F2b	0	evaporator fan mode during de- frost and dripping	0 = off 1 = on 2 = according to F0	Id					
	73	F3	2	evaporator fan off maximum time	0 15 min		124	LP	2	parity	
	74	F3b	2	evaporator fan off maximum time	0 15 min						
	75	F4	0	evaporator fan off time during energy saving	0 240 s x 10	8	ALAF	RMS			
	76	F5	10	evaporator fan on time during energy saving	0 240 s x 10	COD.	cabi		be alarn		RESET
	77	F7	5.0	threshold for evaporator fan on after dripping (relative to set-	-99 99 °C/°F setpoint + F7	Pr2	alar	m	/auxiliar	y probe	automat
	78	F9	0	evaporator fan off delay after compressor off	0 240 s if F0 = 2	AL	low		ature al		manual automat
	79	F10	10.0	difference "cabinet temperature - evaporator temperature" for	0 99 °C/°F differential = 2 °C/4 °F	id	ope	n door			automat
	80	F11	15.0	evaporator fan on threshold for condenser fan on	0 99 °C/°F	PF	Ľ		re alarm		manual
	81	F12	30	condenser fan off delay after compressor off	0 240 s	CSd	1		nsation nsation		manual
	82 83	F13 F15	2.0	F11 differential evaporator fan off time with	1 15 °C/°F 0 240 s	iA Cth	_		ose inpu	t alarm al switch	automat automat
	84	F16	1	compressor off evaporator fan on time with	if F0 = 2 0 240 s	th	alar	m		ch alarm	manual
	N.	PAR.	DEF.	compressor off DIGITAL INPUTS	if F0 = 2 MIN MAX.	dFd			eout ala		manual
	85	i0	5	door switch input function	0 = disabled 1 = compressor + evapora-	H20			warnin		manual
					tor fan off 2 = evaporator fan off 3 = cabinet light op						
					3 = cabinet light on 4 = compressor + evapora- tor fan off, cabinet light	9				FICATIO	NS
					on 5 = evaporator fan off +	Constr	uctio		trol devi		
	86	i1	0	door switch input activation	cabinet light on 0 = with contact closed		ory of		nd fire r	esistance	
	87	i2	30	open door alarm delay	1 = with contact open -1 120 min		33.0	x 59.0		2 15/16 x	
	88	i3	15	regulation inhibition maximum	-1 = disabled -1 120 min					control de	
	89	i5	2	time with door open door switch/multi-purpose input	-1 = until the closing 0 = disabled					ided by th	
€*				function	1 = energy saving 2 = iA alarm 3 = button-operated load on	ing		method			
					4 = device on/off 5 = Cth alarm			to 2,5	inal blo mm²		ovable so
	90	i6	0	door switch/multi-purpose input	6 = th alarm 0 = with contact closed	2,5 mm²; by r Maximum permitted length for connection cab Power supply: 10 m (32.8 ft)					
	91	i7	0	activation multi-purpose input alarm delay	1 = with contact open -1 120 min	Digital	inpu	s: 10 r	n (32.8		
					-1 = disabled if i5 = 5 or 6, compressor on	Storag	je ten	nperatu	re		
	92	i10	0	door closed consecutive time for	delay after alarm reset 0 999 min			umidity		rol device	
				energy saving	after regulation temperature < SP 0 = disabled	Confo	mity	65/CE	the cont		E 2012/19
	93	i13	180	number of door openings for de- frost	0 240 0 = disabled	EMC 2					
	94	i14	32	door open consecutive time for defrost	0 240 min 0 = disabled	Power	supp	ly			
	N. 95	PAR. uc1	DEF.	relay K1 configuration	MIN MAX. 0 = compressor	=					
					1 = defrost 2 = evaporator fan	Rated	impu	lse-with	stand v	ontrol dev oltage	rice
					3 = cabinet light 4 = demisting 5 = button-operated load	Softwa	are cla		structu	re	
					6 = alarm 7 = door heaters	PTC pi		Se	nsor typ asureme		
					8 = heater for neutral zone 9 = condenser fan	NTC p	rohas	Re	solution nsor typ		
.3.4					10= on/stand-by 11= compressor 2	ср	3	Me	asureme solution		
X	96	uc2	1	relay K2 configuration	12= disabled like uc1	Digital Dry co		is		Cont	act type
	97 98	uc3 u2	0	relay K3 configuration enable cabinet light and button-	0 = no 1 = yes	,				Powe	er supply
	99	u4	0	enable alarm output off silencing the buzzer	manual 0 = no 1 = yes	Other	input	S		Input	t configur e)/digital i
	100	u5	-1.0	threshold for door heaters on	-99 99 °C/°F differential = 2 °C/4 °F	Digital Relay		uts			ctro-mech
	101	u6	5	demisting on duration	0 120 min 0 = solo manuale	Relay					
	102	u7	-5.0	neutral zone threshold for heat- ing (relative to setpoint)	-99 99 °C/°F setpoint + u7		l or T	ype 2 A			
	103 N.	u8 PAR.	2.0 DEF.	u7 differential ENERGY SAVING (if r5 = 0)	1 15 °C/°F MIN MAX.	tions		eatures	of Typ	e 1 or Ty	rpe 2 ac-
	104	HE2	0	energy saving maximum duration	0 999 min -1 = until the door opening	Displa Alarm	buzze		-1-		
<u> </u>	N.	PAR.	DEF.	REAL TIME ENERGY SAVING (if r5 = 0)	MIN MAX.	Comm	iunica	tion po	rts:		
*	105 106	H01 H02	0	Daily energy saving time Daily energy saving maximum	0 23 h 0 24 h						
	N.	PAR.	DEF.	duration REAL TIME DEFROST (if d8 = 4)	MIN MAX.	\	N.B.				
▲ @	107	Hd1 Hd2	h- h-	1st daily defrost time 2nd daily defrost time	h-= disabled h-= disabled	X	The	device		e disposed ectronic wa	of accord
	109 110	Hd3	h- h-	3rd daily defrost time 4th daily defrost time	h-= disabled h-= disabled	This do					ed therein
	111 112	Hd5 Hd6	h-	5th daily defrost time 6th daily defrost time	h-= disabled h-= disabled	tected b	y the	Italian	Intellectu	ial Property	Rights Co
	N.	PAR. Pbu	DEF. 2	SAFETIES selecting the event for buzzer activation	MIN MAX. 0 = disabled	vice. EV	CO ac	cepts n	o liability		user) assu
	113				1 = alarms	I any cha	naec				
— ⊘		POF	n		2 = keys and alarms	ment.	ngcs,	at ally	time with	out prejud	ice to the e
⊗	113 114 115 116	POF PAS PA1	0 -19 426	enable ON/STAND-BY key password level 1 password			IIgcs,	at ally	time with	EVCO	

				REAL T	REAL TIME CLOCK		MIN MAX.				
<u> </u>	118	Hr0	0	enable				0 = no 1 = yes			
	N. 119	PAR. bLE	DEF.	DATA-LOGGING EVLINK serial port configuration for con-			for con-	MIN MAX. 0 = free			
	119	DLL	1	nectivi		uration	IOI COII-	1 = forced for EVconnect			
_								or EPoCA			
œ								2-99 = EPoCA local network address			
ш	120	rE0	15	data-lo	gger samp	lina inte	rval	0 240 min			
	121	rE1	1		ed tempera			0 = none 1 = cabinet			
								2 = evaporator/auxiliary			
								3 = all			
	N.	PAR.	DEF.	MODBI	JS			MIN MAX.			
	122	LA	247	MODBI	DBUS address			1 247			
	123	Lb	2	MODBI	MODBUS baud rate			0 = 2,400 baud			
ld								1 = 4,800 baud 2 = 9,600 baud			
IG								3 = 19,200 baud			
	124	LP	2	parity				0 = none, 2 stop bit			
								1 = odd 2 = even 3 = none, 1 stop bit			
	I 1		l	l				3 = Horie, 1 Stop bit			
8	ALAR	MS									
	l	on			Lacort		l				
COD.		CRIPTIO	be alarn	n	RESET	tic	REMED:				
Pr2			'auxiliar				1	k probe integrity			
	aları							- check electrical connection			
rtc					manual			te, time and day of the week			
AL AH	low temperature alarm high temperature alarm				automa automa			A, A1 and A2 A, A4 and A5			
id	open door alarm			iai III	automa		check i	•			
PF			e alarm	ı	manual		- touch				
					+			ck electrical connection			
CSd			nsation values			automatic check		C6 ch the device off and on			
Cou	Illigii	condei	isacion (alaitii	Indinadi			ck C7			
iA	mult	i-purpo	se input	t alarm	automa	tic	check is	ck i5 and i6			
Cth	ı		therm	al switc	h automa	tic	check is	5 and i6			
th	aları		nal swit	ch alarn	n manual		- cwitc	h the device off and on			
	giob	ai tileii	nai swic	cii didiii	Intanda			k i5 and i6			
dFd	defr	ost time	eout ala	rm	manual			ch a key			
								- check d2, d3 and d11 - touch a key			
H20	wate	er reset	warning	g delay			- touch	•			
Contai	ner		control			Built-i Black,		nic device nguishing			
Catego			nd fire re	esistanc	e	D					
			mm (2	15/16	x 1 5/16 x	75.0	x 33.0 x	81.5 mm (2 15/16 x 1 5/16 x			
2 5/16	in) w	ith fixe	d screw	termina	al blocks		•	ith removable screw terminal			
Mount	ina m	othods	for the (control	Hovico	blocks		a panel, snap-in brackets pro-			
Mount	iiig iii	etilous	ioi tile (CONTROL	Jevice	vided	nitted to	a paner, snap-in brackets pro-			
Degree	e of p	rotectio	on provi	ided by	the cover-	IP65 (front)				
ing											
		method , termi		cks Re	movable s	screw	terminal	Pico-Blade connector			
		to 2,5			cks for		up to	The Blace connector			
					mm²; by						
					nection cab		nue inc.	re: 10 m (22 9 ft)			
			n (32.8 i n (32.8 i			1		:s: 10 m (32.8 ft) : 10 m (32.8 ft)			
	Operating temperature						From 0 to 55 °C (from 32 to 131 °F)				
	Storage temperature						-25 to 70	From -25 to 70 °C (from -13 to 158 °F)			
Storag								Relative humidity without condensate from 10 to 90%			
Storag	ting h	umidity				Relati	ve humi	aity without condensate from			
Storag Operat		umidity		rol devi	ce_	Relati	ve humi	alty without condensate from			
Storag Operat	on sta	umidity				Relation 10 to 2	ve humi				
Storag Operat Pollutio	on sta	umidity			EEE 2012/1º	Relation 10 to 2	ve humi	REACH (EC) Regulation			
Operation Pollution Conformation RoHS	on sta mity 2011/	umidity itus of t				Relation 10 to 2	ve humi 90%	REACH (EC) Regulation 1907/2006			
Storag Operat Pollutio	on sta mity 2011/ 014/3	umidity itus of t 65/CE 60/UE				Relation 10 to 2 P/EU LVD 2	ve humi 90% 014/35/l	REACH (EC) Regulation 1907/2006			
Operation Pollution Conformation RoHS 2	on sta mity 2011/ 014/3	umidity itus of t 65/CE 60/UE				Relation 10 to 2 P/EU LVD 2 accord	ve humi 90% 014/35/U	REACH (EC) Regulation 1907/2006 JE			
Operation Pollution Conformation RoHS 2	on sta mity 2011/ 014/3	umidity itus of t 65/CE 60/UE				Relatir 10 to 2 P/EU LVD 2 accord (+10% VA in	014/35/Uding to 6 -15%)	REACH (EC) Regulation 1907/2006 JE the model, 115 230 VAC , 50/60 Hz (±3 Hz), max. 3.2 or 230 VAC (+10% -15%),			
Storag Operation Pollution Confor RoHS 2 EMC 2 Power	on sta mity 2011/ 014/3 suppl	umidity itus of t 65/CE 60/UE		WE	EEE 2012/1	Relatir 10 to 2 P/EU LVD 2 accord (+10% VA in	014/35/Uding to 6 -15%)	REACH (EC) Regulation 1907/2006 JE the model, 115 230 VAC , 50/60 Hz (±3 Hz), max. 3.2			
Storag Operat Pollutic Confor RoHS 2 EMC 2 Power	on starmity 2011/ 014/3 suppl	umidity stus of t 65/CE 80/UE ly	he cont	WE	EEE 2012/1	Relatir 10 to 2 9/EU LVD 2 accord (+109) VA in 50/60	014/35/Uding to 6-15%) isulated Hz (±3	REACH (EC) Regulation 1907/2006 JE the model, 115 230 VAC , 50/60 Hz (±3 Hz), max. 3.2 or 230 VAC (+10% -15%),			
Pollution Confor RoHS EMC 2 Power Earthir Rated Over-w	on sta mity 2011/ 014/3 suppl	umidity tus of t 65/CE 60/UE by ethods f se-with e categ	or the costand voory	ontrol d	EEE 2012/1	Relatir 10 to 2 2 9/EU LVD 2 accord (+109 VA in 50/60 None 2,5 KV	014/35/Uding to 6-15%) isulated Hz (±3	REACH (EC) Regulation 1907/2006 JE the model, 115 230 VAC , 50/60 Hz (±3 Hz), max. 3.2 or 230 VAC (+10% -15%),			
Pollutic Confor RoHS 2 Power Earthir Rated Over-v Softwa	on starmity 2011/ 014/3 suppl	umidity atus of t 65/CE 60/UE by ethods f se-with e categ	or the costand visit	ontrol d	EEE 2012/1	Relatir 10 to 2 EVD 2 accord (+109 VA in 50/60 None 2,5 KV II A	014/35/Uding to % -15%) isulated Hz (±3)	REACH (EC) Regulation 1907/2006 JE the model, 115 230 VAC, 50/60 Hz (±3 Hz), max. 3.2 or 230 VAC (+10% -15%), Hz), max. 2 VA insulated			
Pollution Confor RoHS EMC 2 Power Earthir Rated Over-w	on starmity 2011/ 014/3 suppl	umidity 65/CE 60/UE by ethods f se-with e categ ass and puts	or the costand voory	ontrol d	EEE 2012/1	Pelatir 10 to 2 EVD 2 accord (+109 VA in 50/60 None 2,5 KV II A 1 for I	014/35/Uding to % -15%) issulated Hz (±3	REACH (EC) Regulation 1907/2006 JE the model, 115 230 VAC , 50/60 Hz (±3 Hz), max. 3.2 or 230 VAC (+10% -15%),			
Pollution Confor RoHS EMC 2 Power Earthir Rated Over-v Softwa Analog	on starmity 2011/ 014/3 suppl	umidity atus of t 65/CE 80/UE by ethods f se-with e categ ass and puts Ser	or the costand vioory	ontrol doltage	EEE 2012/1	Relatir 10 to 2 9/EU LVD 2 accord (+109 VA in 50/60 None 2,5 KV II A 1 for I KTY 8	014/35/Uding to % -15%) issulated Hz (±3 I	REACH (EC) Regulation 1907/2006 JE the model, 115 230 VAC, 50/60 Hz (±3 Hz), max. 3.2 or 230 VAC (+10% -15%), Hz), max. 2 VA insulated			
Storago Operat Pollutic Confor RoHS . EMC 2 Power Earthir Rated Over-v Softwa Analog PTC pr	on sta mity 2011/ 014/3 suppl ng me impul voltag yue in	ethods for se-with e categories and puts Ser Mee Res	or the continuous structures or type asuremes solution	ontrol d oltage re e ent field	EEE 2012/1	Relatir 10 to 2 P/EU LVD 2 accord (+109 VA in 50/60 None 2,5 KV III A 1 for I KTY 8 From 0.1 °C	014/35/U ing to % -15%) sulated Hz (±3) / PTC or N 1-121 (9 -50 to 15	REACH (EC) Regulation 1907/2006 JE the model, 115 230 VAC , 50/60 Hz (±3 Hz), max. 3.2 or 230 VAC (+10% -15%), Hz), max. 2 VA insulated TC probes (cabinet probe) 90 Ω @ 25 °C, 77 °F) 50 °C (from -58 to 302 °F)			
Pollution Confor RoHS EMC 2 Power Earthir Rated Over-v Softwa Analog	on sta mity 2011/ 014/3 suppl ng me impul voltag yue in	ethods f se-with e categ ass and puts Ser Res Ser	or the continuous structures assurements colution as or type assurements colution as or type as or	ontrol doltage	EEE 2012/1	Relatir 10 to 2 P/EU LVD 2 accord (+10° VA in 50/60 None 2,5 KV II A 1 for I KTY 8 From 0.1 °C 63435	014/35/0 014/35/0 014/35/0 016/0 018/0 018/0 0 014/35/0 0 014/35/0 0 0 014/35/0 0 0 014/35/0 0 0 014/35/0 0 0 014/35/0 0 0 014/35/0 0 0 014/35/0 0 0 014/35/0 0 0 014/35/0 0 0 014/35/0 0 0 014/35/0 0 0 014/35/0 0 0 014/35/0 0 0 014/35/0 0 0 014/35/0 0 0 014/35/0 0 0 014/35/0 0 0 014/35/0 0 0 014/35/0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	REACH (EC) Regulation 1907/2006 JE the model, 115 230 VAC, 50/60 Hz (±3 Hz), max. 3.2 or 230 VAC (+10% -15%), Hz), max. 2 VA insulated IC probes (cabinet probe) 90 Ω @ 25 °C, 77 °F) 50 °C (from -58 to 302 °F) 2 @ 25 °C, 77 °F)			
Storago Operat Pollutic Confor RoHS . EMC 2 Power Earthir Rated Over-v Softwa Analog PTC pr	on sta mity 2011/ 014/3 suppl ng me impul voltag yue in	umidity itus of t ide5/CE ide5/CE ide6/CE ide6	or the continuous structures or type asuremes solution	ontrol doltage	EEE 2012/1	Relatir 10 to 2 P/EU LVD 2 accorr (+10° VA in 50/60 None 2,5 KV II A 1 for I KTY 8 From 0.1 °C 63435 From	014/35/0 014/35/0 014/35/0 016/0 018/0 018/0 0 014/35/0 0 014/35/0 0 0 014/35/0 0 0 014/35/0 0 0 014/35/0 0 0 014/35/0 0 0 014/35/0 0 0 014/35/0 0 0 014/35/0 0 0 014/35/0 0 0 014/35/0 0 0 014/35/0 0 0 014/35/0 0 0 014/35/0 0 0 014/35/0 0 0 014/35/0 0 0 014/35/0 0 0 014/35/0 0 0 014/35/0 0 0 014/35/0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	REACH (EC) Regulation 1907/2006 JE the model, 115 230 VAC , 50/60 Hz (±3 Hz), max. 3.2 or 230 VAC (+10% -15%), Hz), max. 2 VA insulated TC probes (cabinet probe) 90 Ω @ 25 °C, 77 °F) 50 °C (from -58 to 302 °F)			
Storago Operat Pollutic Confor RoHS . EMC 2 Power Earthir Rated Over-v Softwa Analog PTC pr	on sta mity 2011/ 014/3 suppli ng me impul voltag are cla gue in obes	umidity of the total control o	or the continuous or the costand visor type assurements of type as	ontrol doltage	EEE 2012/1	Relatir 10 to 2 EVD 2 accord (+10° VA in 50/60 None 2,5 KV II A 1 for I KY 8 From 0.1 °C 63435 From 0.1 °C 0.1 °C 10 Relation 10 Relat	014/35/Uding to % -15%) isulated Hz (±3 V	REACH (EC) Regulation 1907/2006 JE the model, 115 230 VAC, 50/60 Hz (±3 Hz), max. 3.2 or 230 VAC (+10% -15%), Hz), max. 2 VA insulated TC probes (cabinet probe) 90 Ω @ 25 °C, 77 °F) 50 °C (from -58 to 302 °F) 2 @ 25 °C, 77 °F) 55 °C (from -40 to 221 °F) door switch)			
Storago Operat Pollutic Confor RoHS : EMC 2 Power Earthir Rated Over-v Softwa Analog PTC pr	on starmity 2011/ 014/3 supplied suppli	umidity itus of t 65/CE 65/CE 65/CE 90/UE y thinds f se-with e categ ess and puts Ser Me. Res Ser Me. Res	or the continuous or the costand visor type assurements of type as	ontrol doltage re eent field eent field	evice	Relatir 10 to 2 EVD 2 accord (+10° VA in 50/60 None 2,5 KV II A 1 for I KY 8 From 0.1 °C 63435 From 0.1 °C 0.1 °C 10 Relation 10 Relat	014/35/Uding to % -15%) isulated Hz (±3 V	REACH (EC) Regulation 1907/2006 JE the model, 115 230 VAC, 50/60 Hz (±3 Hz), max. 3.2 or 230 VAC (+10% -15%), Hz), max. 2 VA insulated TC probes (cabinet probe) 90 Ω @ 25 °C, 77 °F) 50 °C (from -58 to 302 °F) Δ @ 25 °C, 77 °F) 55 °C (from -40 to 221 °F) door switch) 5 VDC, 1.5 mA			
Storago Operat Operat Confor RoHS : EMC 2 Power Earthin Rated Over-v Softwa Analog PTC pr NTC pi	on starmity 2011/ 014/3 supplied suppli	umidity itus of t 65/CE 65/CE 65/CE 90/UE y thinds f se-with e categ ess and puts Ser Me. Res Ser Me. Res	or the continuous or the costand visor type assurements of type as	ontrol doltage re ent field ent field Co Por	evice ntact type wer supply	Relatir 10 to 2 EVD 2 accord (+10° VA in 50/60 None 2,5 KV II A 1 for I KY 8 From 0.1 °C 63435 From 0.1 °C 0.1 °C 10 Relation 10 Relat	014/35/Uding to % -15%) isulated Hz (±3 V	REACH (EC) Regulation 1907/2006 JE the model, 115 230 VAC, 50/60 Hz (±3 Hz), max. 3.2 or 230 VAC (+10% -15%), Hz), max. 2 VA insulated TC probes (cabinet probe) 90 Ω @ 25 °C, 77 °F) 50 °C (from -58 to 302 °F) Δ @ 25 °C, 77 °F) 55 °C (from -40 to 221 °F) door switch) 5 VDC, 1.5 mA None			
Storago Operat Operat Confor RoHS : EMC 2 Power Earthin Rated Over-v Softwa Analog PTC pr NTC pi	on starmity 2011/ 014/3 suppling me impul voltag jue in obes robes input input	umidity of the second of the s	or the continuous or the costand visor type assurements of type as	ontrol doltage re ent field ent field Co Por	evice ntact type wer supply stection	Relating 10 to 2 EVD 2 accord (+109 VA in 50/60 None 2,5 KV III A 1 for I KTY 8 From 0.1 °C 63435 From 0.1 °C 1 dry	014/35/Uding to % -15%) issulated Hz (±3) / -50 to 15 (10 Kis-40 to 10 (10 (10 F)) contact (REACH (EC) Regulation 1907/2006 JE the model, 115 230 VAC, 50/60 Hz (±3 Hz), max. 3.2 or 230 VAC (+10% -15%), Hz), max. 2 VA insulated TC probes (cabinet probe) 90 Ω @ 25 °C, 77 °F) 50 °C (from -58 to 302 °F) Δ @ 25 °C, 77 °F) 55 °C (from -40 to 221 °F) door switch) 5 VDC, 1.5 mA			
Storag Operat Op	on starmity 2011/ 014/3 supplied impul imp	umidity of the total control o	or the continuous or the costand visor type assurements of type as	ontrol doltage re eent field eent field Co Por Prc Inp	evice ntact type wer supply stection	Relatir 10 to 2 P/EU LVD 2 accord (+10° VA in 50/60 None 2,5 KV III A 1 for I KTY 8 From 0.1 °C B3435 From 0.1 °C 1 dry	014/35/Uding to 014/35/Uding to 06/6 -15%) usulated Hz (±3) V PTC or N 1-121 (9) -50 to 15 0 (10 K 0 -40 to 10 0 (10 F) contact (0 0 r analog nulti-pur	REACH (EC) Regulation 1907/2006 JE the model, 115 230 VAC, 50/60 Hz (±3 Hz), max. 3.2 or 230 VAC (+10% -15%), Hz), max. 2 VA insulated TC probes (cabinet probe) 90 Ω @ 25 °C, 77 °F) 50 °C (from -58 to 302 °F) Q @ 25 °C, 77 °F) 05 °C (from -40 to 221 °C (fro			



The device must be disposed of according to local regulations governing the collection

Type 1

Incorporated

SPST, 16 A res. @ 250 VAC

SPDT, 8 A res. @ 250 VAC

SPST, 5 A res. @ 250 VAC

SPST, 30 A res. @ 250 VAC (by request)

3 digits custom display, with function icons

1 TTL MODBUS slave port for EV connect app, EPoCA remote monitoring system or for BMS

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