

AD2-28 INSTRUCTIONS FOR USE

Thank you for having chosen an LAE electronic product. Before installing the instrument, please read this instruction booklet carefully in order to ensure safe installation and optimum performance.

DESCRIPTION



Fig.1 - Front panel

- Info / Setpoint button.
- Manual defrost / Decrease button.

INDICATIONS

- Thermostat output
- Fan output
- Defrost output
- Activation of 2nd parameter set
- Alarm
- Manual activation / Increase button.
- Exit / Stand-by button.

INSTALLATION

- The AD2-28 controller, size 107x95x47 mm (WxHxD), is to be secured to a DIN rail in such a position as to ensure that no liquid infiltrates causing serious damage and compromising safety.
- Make sure that electrical connections comply with the paragraph "wiring diagrams". To reduce the effects of electromagnetic disturbance, keep the sensor and signal cables well separate from the power wires.
- Place the probe T1 inside the room in a point that truly represents the temperature of the stored product.
- Place the probe T2 on the evaporator where there is the maximum formation of frost.
- The function of probe T3 is determined by the parameter T3. With T3=DSP the probe measures the temperature to be displayed. With T3=CND the probe measures the condenser temperature, it must therefore be placed between the fins of the condensing unit. With T3=2EU the probe measures the temperature of the second evaporator and it must therefore be placed where there is the maximum formation of frost. With T3=NON, the third probe is disabled.

OPERATION

DISPLAY

During normal operation, the display shows either the temperature measured or one of the following indications:

dEF	Defrost in progress	hP	Condenser high pressure alarm
oFF	Controller in stand-by	h ₁	Room high temperature alarm
cL	Condenser clean warning	L ₀	Room low temperature alarm
d _o	Door open alarm	E 1	Probe T1 failure
hC	Condenser high temperature alarm	E 2	Probe T2 failure
		E 3	Probe T3 failure

INFO MENU

The information available in this menu is:

E 1	Instant probe 1 temperature	E h ₁	Maximum probe 1 temperature recorded
E 2	Instant probe 2 temperature	E L ₀	Minimum probe 1 temperature recorded
E 3	Instant probe 3 temperature	cnd**	Compressor working weeks
		L _{oc}	Keypad state lock

** : displayed only if enabled (see §Configuration Parameters) ** : displayed only if ACC > 0

Access to menu and information displayed.

- Press and immediately release button (I).
- With button (V) or (A) select the data to be displayed.
- Press button (I) to display value.
- To exit from the menu, press button (X) or wait for 10 seconds.

Reset of THI, TLO, CND recordings

- With button (V) or (A) select the data to be reset.
- Display the value with button (I).
- While keeping button (I) pressed, use button (X).

SETPOINT : display and modification

- Press button (I) for at least half second, to display the setpoint value.
- By keeping button (I) pressed, use button (V) or (A) to set the desired value (adjustment is within the minimum SPL and the maximum SPH limit).
- When button (I) is released, the new value is stored.

STAND-BY

Button (S), when pressed for 3 seconds, allows the controller to be put on a standby or output control to be resumed (with SB=YES only).

KEYPAD LOCK

The keypad lock avoids undesired, potentially dangerous operations, which might be attempted when the controller is operating in a public place. In the INFO menu, set parameter LOC=YES to inhibit all functions of the buttons. To resume normal operation of keypad, adjust setting so that LOC=NO.

SELECTION OF SECOND PARAMETER GROUP

It's possible to select control parameters between two different pre-programmed groups, in order for the fundamental control parameters to be adapted quickly to changing needs. Changeover from Group I to Group II (and vice versa) may take place MANUALLY by pressing button (M) for 2 seconds (with IISM=MAN), or AUTOMATICALLY when heavy duty conditions are detected (with IISM=HDD), or when IISM=DI2 and the AUXILIARY INPUT DI2 is activated (the activation of DI2 selects Group II). If IISM=NON, switchover to Group II is inhibited. The activation of Group II is signalled by the lighting up of the relevant LED on the controller display.

DEFROST

- Automatic defrost.** Defrost starts automatically as soon as the time set with parameter DFT has elapsed.
- Timed defrost.** With DFM=TIM defrosts take place at regular intervals when the timer reaches the value of DFT. For example, with DFM=TIM and DFT=06, a defrost will take place every 6 hours.
- Optimized defrost.** With DFM=FRO the timer is only increased when the conditions occur for frost to form on the evaporator, until the time set with parameter DFT is matched. If the evaporator works at 0°C, defrost frequency depends on the thermal load and climatic conditions. With setpoints much lower than 0°C, defrost frequency mainly depends on the refrigerator operating time.
- Synchronised defrost.** With DI2=DSY and when more units (models AD2-28x3xxx only) are linked to each other as per Fig. 3, synchronised defrosts of all linked controllers will take place. The first controller which will start defrost, will also get all other controllers synchronised.
- Defrost time count backup.** At the power-up, if DFB=YES, the defrost timer resumes the time count from where it was left off before the power interruption. Vice versa, with DFB=NO, the time count re-starts from 0. In stand-by, the accumulated time count is frozen.
- Manual or remote defrost start.** It's possible to manually start a defrost, by pressing button (M) for 2 seconds, or defrost may be started remotely, if DI2=RDS, through the making of the auxiliary contact DI2.
- Defrost type.** Once defrost has started, Compressor and Defrost outputs are controlled according to parameter DTY. If FID=YES, the evaporator fans are active during defrost.
- Defrost termination.** The actual defrost duration is influenced by a series of parameters.
- Time termination:** T2=NO and T3 different from 2EU: the evaporator temperature is not monitored and defrost will last as long as time DTO.
- Temperature monitoring of one evaporator:** T2=YES and T3 different from 2EU. In this case, if the sensor T2 measures the temperature DLI before the time DTO elapses, defrost will be terminated in advance.
- Temperature monitoring of two evaporators:** T2=YES, T3=2EU, OAU=2EU. This function is for the control of two independent evaporators and it switches off the individual heating of the evaporator which gets to temperature DLI first, waiting for the second evaporator to get to that temperature before the time DTO elapses.

Resuming thermostatic cycle. When defrost is over, if DRN is greater than 0, all outputs will remain off for DRN minutes, in order for the ice to melt completely and the resulting water to drain. Moreover, if probe T2 is active (T2=YES), the fans will re-start when the evaporator gets to a temperature lower than FDD; Vice versa, if probe T2 is not active (T2=NO) or after defrost has come to an end, such condition does not occur by end of the time FTO, after FTO minutes have elapsed the fans will be switched on anyway.

Caution: if DFM=NON or C-H=HEA all defrost functions are inhibited; if DFT=0, automatic defrost functions are excluded. During a high pressure alarm, defrost is suspended. During defrost, high temperature alarm is bypassed.

CONFIGURATION PARAMETERS

- To get access to the parameter configuration menu, press button (M) + (I) for 5 seconds.
- With button (V) or (A) select the parameter to be modified.
- Press button (I) to display the value.
- By keeping button (I) pressed, use button (V) or (A) to set the desired value.
- When button (I) is released, the newly programmed value is stored and the following parameter is displayed.
- To exit from the setup, press button (X) or wait for 30 seconds.

PAR	RANGE	DESCRIPTION
SCL	1°C; 2°C; °F	Readout scale. 1°C (with INP=SN4 only): measuring range -50/-9.9 ... 19.9/80°C 2°C : measuring range -50 ... 120°C °F : measuring range -55 ... 240°F <i>Caution: upon changing the SCL value, it is then absolutely necessary to re-configure the parameters relevant to the absolute and relative temperatures (SPL, SPH, SP, ALA, AHA, etc.).</i>
SPL	-50...SPH	Minimum limit for SP setting.
SPH	SPL...120°	Maximum limit for SP setting.
SP	SPL... SPH	Setpoint (value to be maintained in the room).
C-H	REF; HEA	Refrigerating (REF) or Heating (HEA) control mode.
HYS	1...10°	OFF/ON thermostat differential.
CRT	0...30min	Compressor rest time. The output is switched on again after CRT minutes have elapsed since the previous switchover. We recommend to set CRT=03 with HYS<2.0°.
CT1	0...30min	Thermostat output run when probe T1 is faulty. With CT1=0 the output will always remain OFF.
CT2	0...30min	Thermostat output stop when probe T1 is faulty. With CT2=0 and CT1>0 the output will always be ON. <i>Example:</i> CT1=4, CT2= 6: In case of probe T1 failure, the compressor will cycle 4 minutes ON and 6 minutes OFF.
CSD	0...30min	Compressor stop delay after the door has been opened (active only if DS=YES).
DFM	NON; TIM; FRO	Defrost start mode NON : defrost function is disabled (the following parameter will be FID). TIM : regular time defrost. FRO : the defrost time count is only increased when the conditions occur for frost to form on the evaporator (optimised time increase).
DFT	0...99 hours	Time interval among defrosts. When this time has elapsed since the last defrost, a new defrost cycle is started.
DFB	NO/YES	Defrost timer backup. With DFB=YES, after a power interruption, the timer resumes the count from where it was left off with ±30 min. approximation. With DFB=NO, after a power interruption, the defrost timer will re-start to count from zero.
DLI	-50...120°	Defrost end temperature.
DTO	1...120min	Maximum defrost duration.
DTY	OFF; ELE; GAS	Defrost type OFF: off cycle defrost (Compressor and Heater OFF). ELE: electric defrost (Compressor OFF and Heater ON). GAS: hot gas defrost (Compressor and Heater ON).
DPD	0...240sec	Evaporator pump down. At the beginning of defrost, defrost outputs (determined by DTY) are OFF for DPD seconds.
DRN	0...30min	Pause after defrost (evaporator drain down time).
DDM	RT; LT; SP; DEF	Defrost display mode. During defrost the display will show: RT: the real temperature; LT: the last temperature before defrost; SP: the current setpoint value; DEF: "dEF".
DDY	0...60min	Display delay. The display shows the information selected with parameter DDM during defrost and for DDY minutes after defrost termination.
FID	NO/YES	Fans active during defrost.
FDD	-50...120°	Evaporator fan re-start temperature after defrost.
FTO	0...120min	Maximum evaporator fan stop after defrost.
FCM	NON; TMP; TIM	Fan mode during thermostatic control. NON : The fans remain ON all the time; TMP : Temperature-based control. The fans are ON when the compressor is ON. When the compressor is turned OFF, the fans remain ON as long as the temperature difference Te-Ta is greater than FDT. The fans are turned ON again with FDH differential. (Te = Evaporator temperature, Ta = Air temperature); TIM : Timed-based control. The fans are ON when the compressor is ON. When the compressor is OFF, the fans switch ON and OFF according to parameters FT1, FT2, FT3 (See Fig.2).
FDT	-120...0°	Evaporator-Air temperature difference for the fans to turn OFF after the compressor has stopped.
FDH	1...120°	Temperature differential for fan re-start. <i>Example:</i> FDT = -1, FDH=3. In this case, after the compressor has stopped, the fans are OFF when Te > Ta - 1 (FDT), whereas the fans are ON when Te < Ta - 4 (FDT-FDH).
FT1	0...180sec	Fan stop delay after compressor stop. See Fig. 2
FT2	0...30min	Timed fan stop. With FT2=0 the fans remain on all the time.
FT3	0...30min	Timed fan run. With FT3=0, and FT2 > 0, the fans remain off all the time.
ATM	NON; ABS; REL	Alarm threshold management. NON : all temperature alarms are inhibited (the following parameter will be ADO). ABS : the values programmed in ALA and AHA represent the real alarm thresholds. REL : the values programmed in ALR and AHR are alarm differentials referred to SP and SP+HYS.
ALA	-50... 120°	Low temperature alarm threshold.
AHA	-50... 120°	High temperature alarm threshold.
ALR	-12... 0°	Low temperature alarm differential. With ALR=0 the low temperature alarm is excluded.
AHR	0... 12°	High temperature alarm differential. With AHR=0 the high temperature alarm is excluded.
ATI	T1; T2; T3	Probe used for temperature alarm detection.
ATD	0... 120min	Delay before alarm temperature warning.
ADO	0... 30min	Delay before door open alarm warning.
AHM	NON; ALR; STP;	Operation in case of high condenser alarm NON : high condenser alarm inhibited. ALR : in case of alarm, "HC" flashes in the display and the buzzer is switched on. STP : in addition to the alarm symbols displayed, the compressor is stopped and defrosts are suspended.

AHT	-50...120°	Condensation temperature alarm (referred to T3 probe).
ACC	0...52 weeks	Condenser periodic cleaning. When the compressor operation time, expressed in weeks, matches the ACC value programmed, "CL" flashes in the display. With ACC=0 the condenser cleaning warning is disabled and CND disappears from Info Menu.
IISM	NON; MAN; HDD; DI2	Switchover mode to second parameter set NON : inhibition to use the second parameter group (the following parameter will be SB). MAN : button (M) switches the two parameter groups over. HDD : automatic switchover to the second parameter group, when heavy duty conditions are detected. DI2 : switchover to the second parameter group when the auxiliary DI2 input makes.
IISL	-50... IISH	Minimum limit for IISP setting.
IISH	IISL... 120°	Maximum limit for IISP setting.
IISP	IISL... IISH	Setpoint in mode 2.
IIHY	1... 10°	OFF/ON differential in mode 2.
IIFC	NON;TMP; TIM	Fan control in mode 2. See FCM.
HDS	1...5	Controller sensitivity for the automatic switchover from Group I to Group II (1=minimum, 5=maximum).
IIDF	0...99 hours	Time interval among defrosts in mode 2.
DS	NO/YES	Stand-by button (S) enabling.
SB	NO/YES	Door switch input enabling (closed when door is closed).
DI2	NON; HPS; IISM; RDS; DSY	DI2 digital input operation NON : digital input 2 not active. HPS : when contact opens a condensing unit high pressure alarm occurs. IISM : when contact makes the controller will use group 2 parameters. RDS : when contact makes a defrost is started (remote control). DSY : defrost synchronisation. The defrosts, linked as per Fig. 3, will all start and end defrost together. The first controller in defrost will get defrost of all the others started. The last controller ending defrost will get defrost of all the others stopped.
LSM	NON; MAN; DOR	Light control mode NON : light output not controlled. MAN : light output controlled through button (M) (if OAx=LGT). DOR : light output switched on when door is opened (if OAx=LGT).
OA1	NON; 0-1; LGT; 2CU; 2EU; AL0; AL1	AUX 1 output operation NON : output disabled (always off). 0-1 : the relay contacts follow the on/standby state of controller. LGT : output enabled for light control. 2CU : output programmed for the control of an auxiliary compressor. 2EU : output enabled for the control of the electrical defrost of a second evaporator. AL0 : contacts open when an alarm condition occurs. AL1 : contacts make when an alarm condition occurs.
OA2	See OA1	AUX2 output operation. See OA1.
2CD	0...120 sec	Auxiliary compressor start delay. If OAx=2CU the auxiliary output is switched on with a delay of 2CD seconds after the main compressor has cut-in. Both compressors are turned off at the same time.
INP	SN4; ST1	Temperature sensor selection. With INP=SN4, the probes must be the LAE models SN4.; with INP = ST1, the probes must be the LAE models ST1...
OS1	-12.5..12.5°C	Probe T1 offset.
T2	NO/YES	Probe T2 enabling (evaporator).
OS2	-12.5..12.5°C	Probe T2 offset.
T3	NON; DSP; CND; 2EU	Auxiliary probe T3 operation NON : probe T3 not fitted. DSP : temperature T3 to be displayed. CND : condenser temperature measurement. 2EU : second evaporator temperature measurement.
OS3	-12.5..12.5°C	Probe 3 offset.
TLD	1...30 min	Delay for minimum temperature (TLO) and maximum temperature (THI) logging.
SIM	0...100	Display slowdown.
ADR	1...255	AD2-28 address for PC communication.

WIRING DIAGRAMS

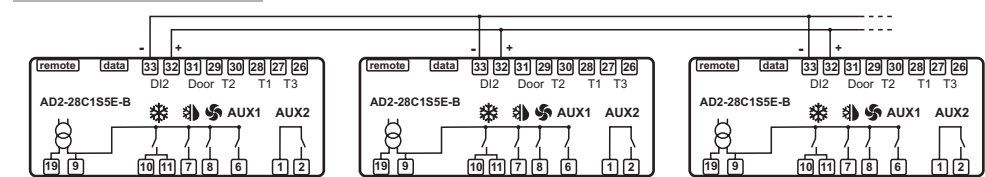
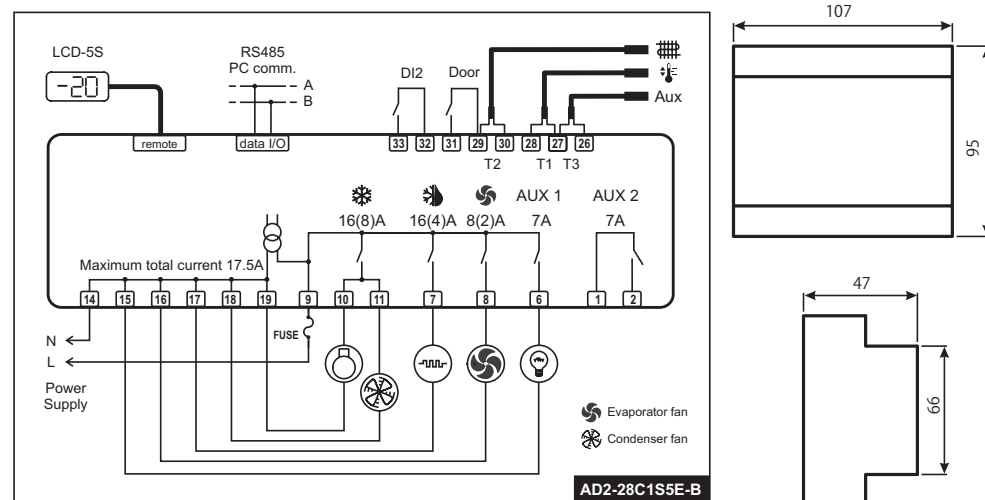


Fig.3 Connection for synchronising defrost start and termination



TECHNICAL DATA

Power supply

AD2-28...D	12Vac/dc ±10%, 3W
AD2-28...E	230Vac±10%, 50/60Hz, 3W
AD2-28...U	115Vac±10%, 50/60Hz, 3W

Relay output max loads (240Vac)

	AD2-28...S/T...-	AD2-28...Q/R...-
Compressor	16A resistive 8 FLA 48 RLA	12A resistive 8 FLA 48 RLA
Evap. Fan	8A resistive 2 FLA 12 RLA	8A resistive 2 FLA 12 RLA
Defrost	16A resistive	12A resistive
Auxiliary loads 1	7A resistive	7A resistive
Auxiliary loads 2	7A resistive	7A resistive

Input

NTC 10KΩ@25°C	LAE Part No. SN4...
PTC 1000Ω@25°C	LAE Part No. ST1...

Measurement Range

-50...120°C, -55...240°F
-50 / -9.9 ... 19.9 / 80°C (NTC10K only)

Measurement accuracy

<0.5°C within the measurement range

Operating conditions

-10 ... +50°C; 15%...80% r.H.

CE - UL (Approvals and Reference norms)

EN60730-1; EN60730-2-9; EN55022 (Class B);
EN50082-1
SA32385, UL 60730-1A



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AD2-28 MODE D'EMPLOI

Nous vous remercions d'avoir choisi un produit LAE electronic. Pour que votre instrument soit le plus sûr et le plus performant possible, il est indispensable d'en lire attentivement le mode d'emploi.

DESCRIPTION



Fig.1 - Panneau avant

- Touche Info / Consigne.
Touche dégivrage manuel / diminution.

INSTALLATION

- Les dimensions du AD2-28 sont de 107x95x47 mm (LxHxP).
Effectuer les raccordements électriques en suivant les indications du paragraphe "schémas de raccordement".
Installer la sonde T1 en un point de la chambre qui corresponde bien à la température du produit à conserver.

FONCTIONNEMENT

AFFICHAGES

En fonctionnement normal, l'afficheur indique la température relevée ou une des informations suivantes:

Table mapping symbols to functions: dEF Dégivrage en cours, cFF Instrument en stand-by, cL Demande de nettoyage condensateur, dc Alarme porte ouverte, hc Alarme température élevée sur le condensateur, hp Alarme haute pression sur le condensateur, hi Alarme température élevée dans la chambre, lo Alarme basse température dans la chambre, E1 Panne de la sonde T1, E2 Panne de la sonde T2, E3 Panne de la sonde T3.

MENU INFO

Les informations disponibles dans le menu info sont:

Table mapping menu codes to info: l i Température instantanée sonde 1, l 2 * Température instantanée sonde 2, l 3 * Température instantanée sonde 3, lh Température maximum enregistrée sonde 1, llo Température minimum enregistrée sonde 1, cnd ** Semaines de fonctionnement du compresseur, loc Etat du clavier (blocage).

** visualisées seulement si validées (voir Paramètres et Configuration) ** visualisées seulement si ACC > 0

Accès au menu et affichage informations.

- Presser rapidement la touche I.
Avec les touches V ou A sélectionner les données à afficher.
Presser la touche I pour afficher la valeur.
Pour sortir du menu, presser la touche X ou attendre 10 sec.

Remise à zéro des mémorisations THI, TLO, CND

- Avec les touches V ou A sélectionner les données à remettre à zéro.
Afficher la valeur avec la touche I.
Presser la touche I tout en maintenant la touche X pressée.

STAND-BY

La touche O, pressée pendant 3 secondes, permet d'invertir l'état du régulateur entre opérativité des sorties et standby (seulement avec SB=YES).

BLOCAGE DU CLAVIER

Le blocage des touches permet d'empêcher que des opérations non désirées, potentiellement dangereuses, ne puissent être effectuées lorsque le régulateur fonctionne dans un lieu public. Programmer LOC=YES sur le menu INFO pour bloquer toutes les commandes du clavier; programmer de nouveau LOC=NO pour rétablir la fonction normale.

SELECTION DEUXIEME GROUPE DE PARAMETRES

Les paramètres principaux du régulateur peuvent être sélectionnés entre deux groupes préprogrammés de manière à les adapter, en quelques instants, aux exigences requises. Le passage du Groupe I au Groupe II peut être effectué MANUELLEMENT, en pressant pendant 2 secondes la touche M avec IISM=MAN, AUTOMATIQUEMENT lorsque des conditions d'utilisation particulièrement sévères sont détectées avec IISM=HDD, à la fermeture de l'ENTRÉE AUXILIAIRE DI2 avec IISM=DI2. Si IISM=NON le passage au Groupe II est impossible.

DEGIVRAGE

Dégivrage automatique. Le dégivrage commence automatiquement lorsque l'horloge interne atteint le temps programmé dans le paramètre DFT.

- Dégivrage temporisé. Avec DFM=TIM l'augmentation de la valeur de l'horloge est continue et les dégivrages se font automatiquement à intervalles réguliers.
Dégivrage optimisé. Avec DFM=FRO la valeur de la minuterie n'est augmentée que pour atteindre le paramètre DFT que lorsqu'il existe une possibilité de formation de givre sur l'évaporateur.
Dégivrage synchronisé. Avec DI2=DSY et lorsqu'il y a plusieurs régulateurs raccordés les uns aux autres suivant la Fig. 3 (modèles AD2-28x3xxx uniquement), les dégivrages de tous les régulateurs seront synchronisés.
Sauvetage compte. A l'allumage de l'instrument, si DFB=YES l'horloge de dégivrage reprend le compte du temps accumulé avant l'arrêt autrement, si DFB=NO, elle repart de 0.

Dégivrage manuel ou activation à distance. Si DFM=TIM, il est possible d'activer un dégivrage manuel en appuyant sur le bouton O pour quatre secondes. Le dégivrage peut être commandé à distance si DI2=RDS, avec la fermeture du contact auxiliaire DI2.

Type de dégivrage. Lorsqu'un dégivrage est commencé, les sorties Compresseur et Dégivrage sont commandées conformément au paramètre DTY. Si FID=YES les ventilateurs de l'évaporateur fonctionnent pendant le dégivrage.

Durée du dégivrage. La durée effective du dégivrage est influencée par une série de paramètres. Temps fixé: T2=NO et T3 différent de 2EU: la température de l'évaporateur n'est pas contrôlée et le temps de dégivrage sera toujours équivalent à DTO.

Contrôle de la température sur un évaporateur: T2=YES et T3 différent de 2EU: si la sonde T2 atteint la température DLI dans les limites du temps DTO, la fin du dégivrage sera anticipée.

Contrôle de la température sur deux évaporateurs: T2=YES, T3=2EU, OAU=2EU: ce mode permet de contrôler indépendamment deux évaporateurs et permet d'éteindre le chauffage de l'évaporateur qui atteint en premier la température DLI en attendant que, dans les limites du temps DTO, le deuxième atteigne également cette température (v. figure).

Rétablissement du cycle thermostatique. Une fois le dégivrage terminé, si DRN est supérieur à 0, toutes les sorties resteront éteintes pendant DRN minutes pour permettre une totale fonte de la glace et une parfaite évacuation de l'eau qui s'est formée. D'autre part, si la sonde T2 est mise en action (T2=YES), les ventilateurs repartiront lorsque l'évaporateur aura une température inférieure à FDD; si au contraire la sonde T2 n'est pas utilisée (T2=NO) ou si, après la fin du dégivrage, cette condition ne se vérifie pas dans le temps FTO établi, les ventilateurs se remettront de toute manière en marche après FTO minutes.

PARAMETRES DE CONFIGURATION

- Pour accéder au menu de configuration des paramètres, presser pendant 5 secondes les touches O + I.
Avec les touches V ou A sélectionner le paramètre à modifier.
Presser la touche I pour afficher la valeur.
Tout en maintenant la touche I pressée, agir sur les touches V ou A pour fixer la valeur désirée.
La nouvelle valeur est mémorisée et le paramètre suivant est affiché lorsque l'on cesse de presser la touche I.
Pour sortir du réglage, presser la touche X ou attendre 30 secondes

INDICATIONS

- Sortie thermostatation
Sortie ventilateurs
Sortie dégivrage
Activation 2ème série de paramètres
Alarme

- Touche augmentation / mode manuel.
Touche Sortie / Stand-by.

Main parameter table with columns: PAR, PLAGE, DESCRIPTION. Includes parameters like SCL, SPL, SPH, SP, C-H, HYS, CRT, CT1, CT2, CSD, DFM, DFT, DFB, DLI, DTO, DTY, DPD, DRN, DDM, DDY, FID, FDD, FTO, FCM, FDT, FDH, FT1, FT2, FT3, ATM, ALA, AHA, ALR, AHR, ATI, ATD, ADO, AHM.

Technical specifications table with columns: AHT, ACC, IISM, IISL, IISH, IISP, IIHY, IIFC, HDS, IIDF, SB, DS, DI2, LSM, OA1, 2CD, INP, OS1, T2, OS2, T3, OS3, TLD, SIM, ADR.

SCHEMAS DE RACCORDEMENT

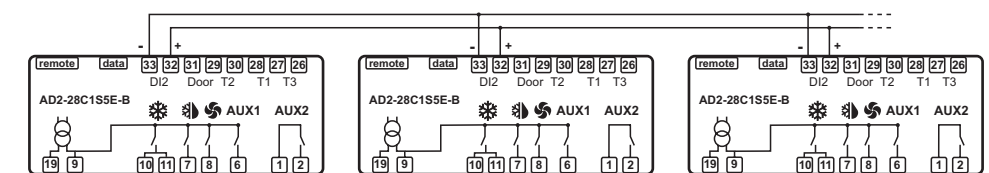
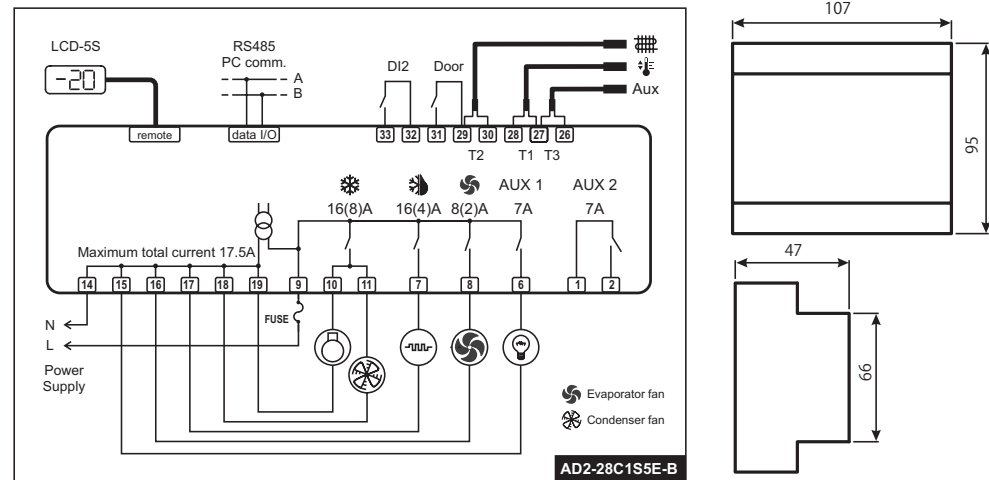


Fig.3 Raccordement pour la synchronisation de début et fin de dégivrage.



AD2-28



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DONNEES TECHNIQUES

Table with columns: Alimentation, AD2-28...D, AD2-28...E, AD2-28...U. Values include 12Vac/dc ±10%, 3W; 230Vac±10%, 50/60Hz, 3W; 115Vac±10%, 50/60Hz, 3W.

Charges max. sorties relais (240Vac)

Table with columns: Component, AD2-28...S/T...-, AD2-28...Q/R...-. Rows include Compresseur, Ventilateurs évap., Dégivrage, Charges aux 1, Charges Aux 2.

Entrées
NTC 10KΩ@25°C Code LAE SN4...
PTC 1000Ω@25°C Code LAE ST1...

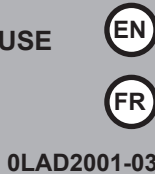
Plage de Mesure
-50... 120°C, -55... 240°F
-50 / -9.9 ... 19.9 / 80°C (seulement avec NTC10K)

Précision de mesure
<0.5°C dans l'étendue de mesure.

Conditions de fonctionnemen
-10 ... +50°C; 15%...80% H.R.

CE - UL (Normes de référence)
EN60730-1; EN60730-2-9; EN55022 (Class B);
EN50082-1
SA32385, UL 60730-1A

AD2-28 INSTRUCTIONS FOR USE MODE D'EMPLOI



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