

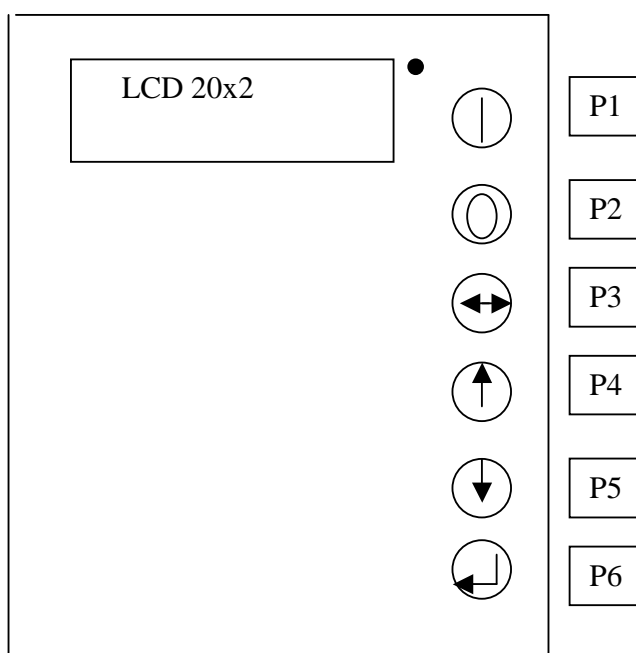
TECHNICAL SPECIFICATIONS

PRODUCT DESCRIPTION: Multi Tronic Control unit

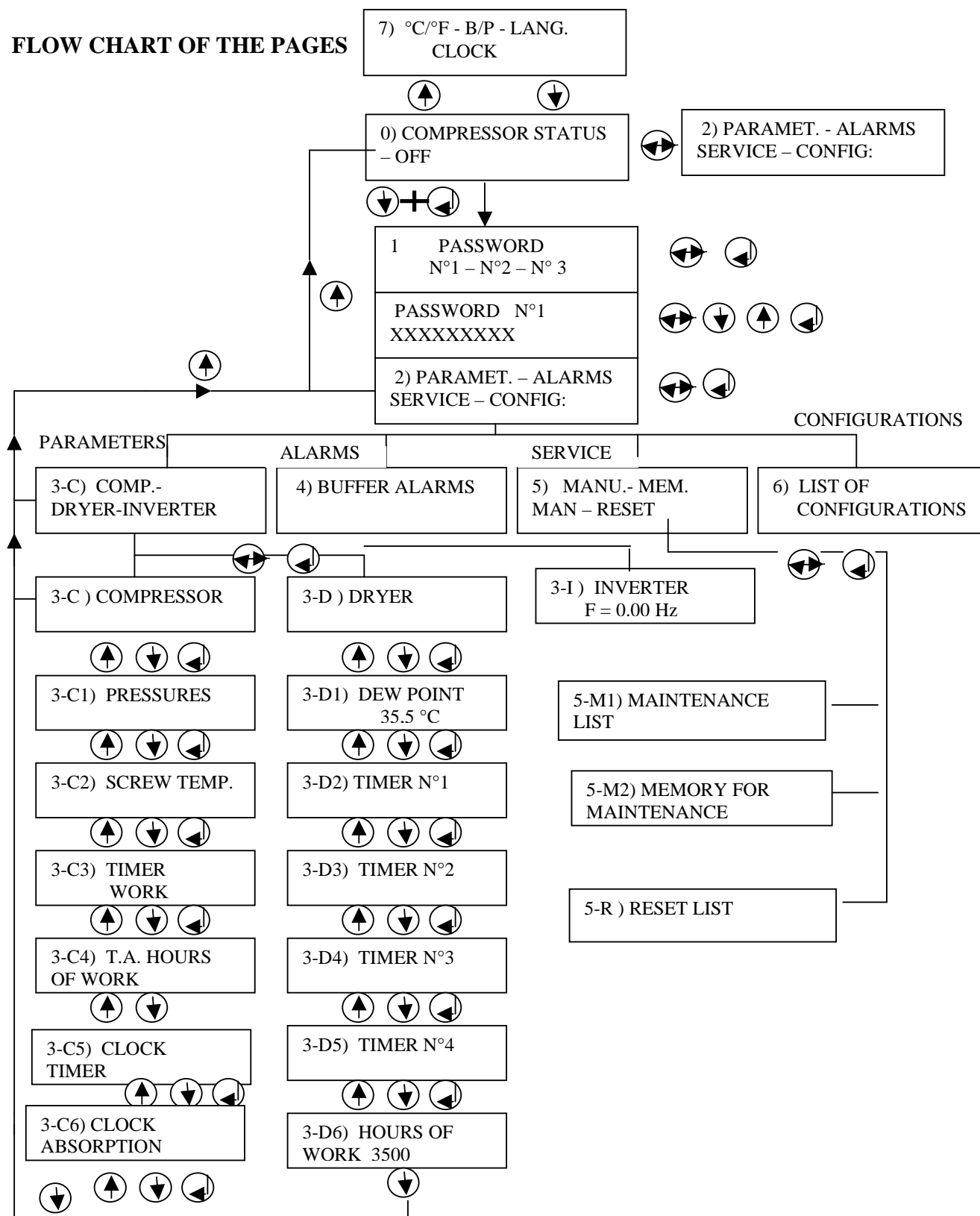
INTERNAL CODE: 0KFI5N2A

REV.1.12

Front view



FLOW CHART OF THE PAGES




DESCRIPTION OF THE MENUS

Main menu

When the compressor power is switched ON, the display shows the main page N°0 and the green DL1 lights up :

a) on the first line, the pressure, the temperature of the screw, the value detected by the T.A. (3 digits, if selected on the configuration page) and the message **"M"(master)** or **"S" (slave)** if selected on the respective configuration menu, the clock symbol if the optional card is installed and if the compressor has been configured with start and stop by clock.

b) on the second line, with compressor connected with Inverter
OFF = compressor ready to be switched on via the Start button 

OFF BY EXTERNAL STOP = external Start/Stop contact open

OFF BY TIMER – NEXT ON : XX:XX = compressor switched off by timer

WAIT = safety time intervention

XXX.XX (n° motor rpms) Hz XXX.XXkW (motor power) and the symbol >|< (with set point reached) or the symbol >| with compressor loaded

c) on the second line, with motor controlled in Star / Delta
the compressor states:

OFF = compressor ready to be switched on with the Start button 

IN SET = compressor stopped due to reaching the pressure set point

COMPRESSOR LOAD = compressor with full load operation



COMP. IDLING DUE TO SET = compressor idling due to set point reached

COMP. IDLING (flashing) = compressor in switch-off phase


OFF BY EXTERNAL STOP = external Start/Stop contact open


OFF BY TIMER – NEXT ON : XX:XX = compressor switched off by timer



WAIT FOR ON = safety time intervention

Note : With the compressor off by means of OFF BY TIMER, pressing the  button for approx. 3 sec. forces switch-on and when the  button is pressed, the compressor stops and returns to hourly programming.

From the main page N°0, pressing:

- the key  takes you to the display and setting of the language, °C/°F, bar / PSI and clock if the optional card is installed;


- the key  takes you to the display of user page N° 1





- the keys  +  takes you to the page for setting the password n° to access the next pages.

N.B.:

Parameter modification is enabled only with the compressor OFF, but the display is possible also with the compressor ON.

1) At any part of the flow related to the settings and/or display, pressing the key

 for more than 5 sec. takes you back to the main display.



2) After 120 sec. from the last pressing of the key  and/or  and/or  and/or , the display automatically shows the main page.


During the display and/or setting phase, the control is active and any alarms present are detected and displayed on the main menu.



3) When you exit from the settings under password, the password selected is lost after 120 sec. from the last key pressing.



PAGE N°7 Setting and/or display of:



°C or °F, Bar or Psi , Language and Clock synchronisation if the optional card is present






From the main menu, pressing the key  displays page N°8 “°C - **Bar** – LANGUAGE – **CLOCK** , if the optional card is present”; press the key  to select the desired parameter between C – Bar – LANGUAGE – CLOCK .


When the parameter has been selected, press  to confirm:

- if °C is selected, °C flashes and °F is on steady; use  to select the parameter and  to confirm and return to the display of page N°7


- if Bar is selected, **Bar** flashes and **PSI** is on steady; use  to select the parameter and  to confirm and return to the display of page N°7

- if LANGUAGE is selected, the initials of the languages present appear with ITAL. flashing and the others steady; use  to select language and  to confirm and return to the display of page N°7








- if CLOCK is selected, the date – day of the week – hour – minutes and seconds are displayed, with the day of the month flashing; use  to select the parameter to be modified and  to confirm, and the parameter flashes; use the keys  and/or  to make the modification and confirm with  ; repeat the operations to synchronise the month, year, day of the week (1 = Monday - 7 = Sunday), hour, minutes, and seconds.

From page N°7, press  to return to the main page N°0.

Setting and display of parameters at user level

From the main page, press the key  to display page N°3.

PAGE N°1 Setting the PASSWORD

From the main page, pressing the keys  and  together displays the message “ **PASSWORD** N°1 - N°2 - N°3” with N°1 flashing; use the key  to select the password level and the key  to confirm the number, with the display of the message PASSWORD N°X (n° of password selected) on the first line of the LCD, and on the second line 4 underscore dashes with the first dash flashing; use the keys  and/or  to set the number or letter related to the first setting and the key  to confirm; after the confirmation of the last setting, page N°2 is displayed.



In case of an incorrect selection, press the key  to return to the previous number or character.

If the password code set is incorrect, the message “**INCORRECT PASSWORD**” appears for 2 sec. and then the main menu is shown.








Default codes:

N°1 = 2222

N°2 = 4444

N.B.: If the Password code is lost, you have to power the compressor using the buttons  and  pressed together for 5 seconds, after which the message “**PRESET**” flashes for 3 seconds, indicating that the default values of the 3 Password codes have been loaded.

Display and setting of the parameters related to the various pages

The keys  and/or  are used to select the parameter to be modified, confirming with  , the data of the parameter selected flashes. The keys  and/or  are used to vary the data, pressing the key  again confirms the variation and the data returns to steady state; with the display of the last parameter, pressing the key  takes you back to the display of the selected page.

PAGE N°3-I = INVERTER Variables read by the inverter “if available” Password N° 1-2-3-

F = xx.xx Hz (inverter operating frequency)

I = xxx A (current absorbed by the motor)

P = xx % (motor power)

P act = xxx.xx kW (active motor power)

V = xxx V. (voltage applied to the motor)

T.inv. = xx °C (inverter dissipator temperature)

State = inverter state or alarm (see inverter manual)

PAGE N°3-C1 = PRESSURES (page displayed if the control via transducer has been enabled by dipswitch n°1)

With control via contactors

	settable values	default	Password N°
P0 = max.transducer setting	15 – 16	16 bar	3
P1 = high pressure alarm	(P2+0.5) - (16-0.5)	10.5 bar	3
P2 = stop pressure set point	(P3+0.2) - (P1-0.2)	10.0 bar	0-1-2-3
P3 = start pressure set point	4 - (P2-0.2)	8.5 bar	0-1-2-3
P4 = start pressure set point Slave	3 - (P3-0.2)	8.3 bar	0-1-2-3
P5 = transducer offset	-2.0 - +2.0	0 bar	2-3

***N.B.:** The parameter P4 is only displayed if the machine has been configured for Master/Slave operation. See configuration page.

With control via inverter

P2 = set point	(4.0+P3) - (P1-P3-0.8)	9.0 bar	0-1-2-3
P3 = P delta	0.1 - 2.0	0.5 bar	0-1-2-3
P4 = start pressure set point Slave	3 - (P2-P3-0.2)	8.3 bar	0-1-2-3

PAGE N°3-C2 = SCREW TEMPERATURE

	settable values	default	Password N°
T1 = max. screw temp. range	(T2+2°) - 125	125 °C	3
T2 = set point screw high temp. alarm	(T3+2°) - (T1-2°C)	110 °C	3
T3 = set point screw high temp. pre-alarm	(T4+2°) - (T2-2°C)	105 °C	3
T4 = set of fan ON (RL5)	30 - (T3-2°)	70°C	2-3
T5 = T delta fan OFF	5 - 15°C	10°C	2-3
T6 = set point screw low temp. alarm	-10 - +15	0 °C	1-2-3
T7 = probe offset	-10 - +10 °C	0 °C	3

PAGE N°3-C3 = WORK TIMERS - Parameters related to the work timers.

With control via contactors

settable values	default	Password N°
t1 = star/delta comm. timer	2 - 20 sec.	5 sec. 3
t2 = star timer	10 - 50 ms	20 ms 3
t3 = launch timer	1 - 5 sec.	2 sec. 3
t4 = idling timer	1 - 10 min.	4 min. 2-3
t5 = safety timer	10 - 240 sec.	60 sec. 3

With control via inverter

t4 = idling timer	1 - 10 min.	4 min. 2-3
t5 = safety timer	10 - 240 sec.	60 sec. 3

N.B.: When the set point value is modified, the new value is acquired at the end of the count in progress.

PAGE N°3-C4 = OPERATING HOURS (Password N° 1-2-3)

TOTAL HOURS: 000.000.000 h.

LOAD HOURS: 000.000.000 h – displayed only with motor drive in star/delta

% OF WORK: xx.X%. – displayed only with motor drive in star/delta

STARTS/HOUR: N° x

RELEASE N°: xx.x (software release n°)

The total hours are the summation of the ON hours of the remote line switch (RL1).

The load hours are the summation of the ON hours of the load solenoid valve (RL4).

The % of work is obtained by dividing the ON hours of RL4 by the ON hours of RL1 in the last 100 working hours of RL1: the percentage is updated every 5 hours.


The starts/hour are related to the n° of starts in the span of the previous hour made by the motor.


The release n° refers to the software release of the programme resident in the microcontroller.

PAGE N°3-C5 = CLOCK TIMER (Password N° 1-2-3) – Programming switch-on and switch-off time of the compressor and dryer if card installed (RL7).




The second line of the display shows the message OFF – ON (with OFF flashing);

with the key  select:




OFF if you want the start and stop of the compressor using the Start/ Stop buttons; confirming the selection with the key  takes you back to the initial message “**CLOCK TIMER**”.

ON if you want the both start and stop of the compressor by clock; confirming with the key , the following message is displayed:


DAY No. 1 (1 corresponds to Monday and 7 corresponds to Sunday)



Use the keys  and/or  to select the day; press  to confirm the day selected, and the message below appears on the second line of the LCD:



1 ON 00:00 – OFF 00:00

with the first ON time (hours and minutes) flashing. Set the time using the key  and/or  and confirm with . The first OFF time begins to flash, automatically taking the data set on the first ON time. Continue in this way to the last setting of the OFF time (three ON/OFF selections are available for each day).

When you confirm the last OFF time of the day selected, the display shows the request for setting the next day; repeat the settings for all 7 days of the week.

- In case of an incorrect setting, press the key  to return to the previous number.

- If you want to copy the setting made the previous day, after having confirmed the day, press the  and  keys in sequence.

- If you want to cancel the setting made, after having confirmed the day, press the keys  and  in sequence.

After the confirmation of the last OFF time of the 7th day, the following message is displayed:

SUMMERTIME : NO - YES, default YES

YES = the change is made from solar time / summertime on the last Sunday of March and of October at 2 a.m. in the month of March and 3 a.m. in the month of October

NO = the solar time / summertime change is not made

- The setting range of each time is between 0:00 and 23:59.

- If the third OFF time goes beyond 23:59, you go to 0:00 of the next day; this is shown by the message

of the upper line, which changes from "DAY 1" to "DAY 1-2".

- If the setting of the OFF time is equal to the previous ON time, this setting is not taken into consideration.

- Examples:

- a) setting the time band on three levels
1 ON 07:30 - OFF 12:30 - 2 ON 13:30 - OFF 17:30 - 3 ON 18:30 - OFF 23:30
- b) setting the time band on two levels
1 ON 07:30 - OFF 12:30 - 2 ON 13:30 - OFF 17:30 - 3 ON 17:30 - OFF 17:30
- c) setting the time band on one level
1 ON 07:30 - OFF 17:30 - 2 ON 17:30 - OFF 17:30 - 3 ON 17:30 - OFF 17:30
- d) compressors OFF all day
1 ON 00:00 - OFF 00:00 - 2 ON 00:00 - OFF 00:00 - 3 ON 00:00 - OFF 00:00

PAGE N°3-C6 = Amperometric transformer (Password N° 1-2-3)

	settable values	default	Password
TA1 = set point absorption alarm	$(TA2 + 2.5\% FS_{TA}^I) - FS_{TA}$	80% FS_{TA}	1-2-3
TA2 = set point absorption pre-alarm	$0 - (TA1 - 2.5\% FS_{TA})$	75% FS_{TA}	1-2-3

PAGE N°3-D3 = Filter 1 TIMER - RL9 (Password N° 1-2-3)

	settable values	default
t1 = ON timer	0 - 5 sec.	2 sec.
t2 = OFF timer	0 - 15 min.	10 min.

N.B.: When the set point value is modified, the new value is acquired at the end of the count in progress.

PAGE N°3-D4 = Filter 2 TIMER - RL10 (Password N° 1-2-3)

	settable values	default
t1 = ON timer	0 - 5 sec.	2 sec.
t2 = OFF timer	0 - 15 min.	10 min.

N.B.: When the set point value is modified, the new value is acquired at the end of the count in progress.

PAGE N°3-D5 = Filter 3 TIMER - RL11 (Password N° 1-2-3)

	settable values	default
t1 = ON timer	0 - 5 sec.	2 sec.
t2 = OFF timer	0 - 60 min.	45 min.

N.B.: When the set point value is modified, the new value is acquired at the end of the count in progress.

PAGE N°3-D6 = WORK HOURS (Password N° 0-1-2-3)

TOTAL HOURS: 000.000.000 h

The total hours are the summation of the ON hours of the dryer remote control switch (RL7).

^I FS_{TA} indicates the maximum setting of the amperometric transducer configurable from the **CONFIGURATION** menu.

PAGE N°4 = ALARMS

Memory of the alarms, with display of the progressive n° of the alarm, the date and time of intervention (if the optional card is present) and the cause of the alarm.



The memory is composed of 20 items and the last cancels the first; if there are no data in memory, the message “**MEMORY EMPTY**” is displayed.

PAGE N°5-M1 = MAINTENANCE

	Settable values	default	Password N°
CAF = air filter	0 - 3000 h.	1500 h	2-3
COF = oil filter	0 - 10,000 h.	3000 h	2-3
CSF = sep.filter	0 - 10,000 h.	3000 h	2-3
C-- = oil	0 - 10,000 h.	3000 h	2-3
C—h = comp.control	0 - 10,000 h.	500 h	2-3


When the set point value of a maintenance counter is set to 0, the count is disenabled.

The count is related to the ON time of the line contactor (RL1) and is made backwards; when the count reaches 0 the related alarm is generated and it continues in the negative.

Use the keys  and/or  to select the parameter, e.g. :

5-M1) CAF 1450 h (value of the count)






CHANGE AIR FILTER



If you want to make a modification to the set point or to reset the value counted, press the  and the message below is displayed:

5-M1) CAF LOAD : 2000

COUNTER: 1450h|RESET


Where: Load corresponds to the set point value set and Counter corresponds to the count value.

Use the key  to select the Load value or the Reset text and confirm with  if a) the Load value is selected, it flashes; use the keys  and/or  to modify, and confirm with  returning to the display of the count.

b) the Reset text is selected, use  to confirm the reset of the value counted, returning only to the display of the count; if you do not want to reset the value counted, press  to return to only the display of the count.

PAGE 5-M2 = MAINTENANCE HOURS MEMORY (Password N° 1-2-3)



Memory of the resets or set point change of the filters/oil hour timers, 20-item buffer.

Confirming the page with , the following message is displayed: (e.g.)

5-M00) 26-03-05 09:40

CAF RESET 2000 h

Where : the number following the letter M is the n° in sequence of the buffer of the memory; the memory is composed of 20 items and the last cancels the first. If there are no data in memory, the message “**MEMORY EMPTY**” is displayed. If the optional card is installed, the date and time in which the reset or set point change was made is displayed, and the second line shows the type of maintenance.

Use the key  and/or  to scroll the memory of data; after the last message, you return to the previous display.




PAGE N°5-R = RESET

WORK HOURS (Password N° 3)

ALARMS (Password N° 2- 3)

MAINTENANCE (Password N° 2-3)

GENERAL: (Password N° 3) – accepted only with compressor on “**OFF**”.

Use the key  and/or  to select the message and  to confirm the reset.

Example: If “**Work hours**” is selected and confirmed, the second line of the display shows the message

5-R) RESET

WORK HOURS

After the reset of the work hours (total, load, percentage of work), the message **Work hours** is displayed.

After the last message, you return to the message “**RESET**”.

PAGE N°6 = CONFIG. COMPRESS.

PHASE CONTROL: IN6 – IN7-8-9, default IN 7-8-9 (Password N° 1-2-3)

PHASE CONTROL: YES – NO, default YES (Password N° 1-2-3)

YES = phase control enabled

NO = phase control disenabled

T.A.: YES – NO, default NO (Password N° 1-2-3)

YES = T.A. reading enabled, pass to maximum setting

NO = T.A. reading disenabled, pass to IN 10

MAX. SETTING : 50-100-200-300-400-500-600 A

IN 5 (Door Micro) : YES – NO, default YES (Password N° 3)

YES = IN 5 enabled

NO = IN 5 disenabled

IN 10 (Water present) : YES – NO, default YES (Password N° 3)

YES = IN 10 enabled

NO = IN 10 disenabled

SAFETY: YES – NO, default NO (Password N° 3)

YES = when the CAF timer elapses, the alarm “**Safety Block**” is displayed; the alarm is cancelled only by entering this menu and selecting Safety = NO, the alarm code changes to “**Change Air Filter**”.

LOW VOLTAGE (Low voltage alarm) = YES –NO, default YES (Password N° 1-2-3)

YES = the alarm is enabled

NO = the alarm is disenabled

* **M/S OPERATION (MASTER / SLAVE)** = NO – YES, default NO (Password N° 2-3)

NO = the compressor works autonomously

YES = the compressor dialogues via the RS 232 serial connection with a second compressor in master/slave mode, see the respective work programme, and the following messages are displayed:



*- **“MASTER / SLAVE TIMER”** = 00 - 200 h. default 100 h.

Programming of the operating time to rotate the Master to Slave and vice versa; if the working time of one of the two machines is greater than the time set, it will not be configured as Master until the working hours are balanced.






*- **“SLAVE TIMER ”** = 1 - 99 min., default 5 min. (programming of the time after which, if the master at power ON has not reached the stop set point, the slave enters into operation).

- **“COMPRESSOR N°”** = 0 - 32 default 01 (programming of the n° of the compressor for the serial transmission (Password N° 2-3). **When the value 0 is set, the supervision via MODBUS is disenabled.**

N.B. : The parameters marked with an asterisk are displayed only if the compressor is controlled by the pressure transducer.

- **“SERIAL N°”**: 20 alphanumerical characters, serial number of the compressor (Password N° 3 for the setting and Password N° 0 - 3 for display); confirmation of the serial n° is made by pressing  for 3 sec or by pressing  on the 20th character.

CHANGE PASSWORD

Use the button  to confirm; the first line of the display shows the message **“PASSWORD N°X”** related to the level of access. When you confirm with , the lower line of the display shows 6 underscore dashes with the first dash flashing; with the key  and/or  set the number or letter related to the first setting and confirm with  ; after the confirmation of the last setting, the message “Change Password“ is displayed.

After the last message, you return to the message **“Config. Compress”**.

Alarm messages with instantaneous compressor block preceded by the words BLOCK DUE TO


Cod e	Name	Cause
1	EMERGENCY STOP	Emergency button open (IN 1)
2	MOTOR OVERLOAD	Motor circuit breaker open (IN 4)
3	NO PHASE	One or more phases lacking for more than 400 ms
4	PHASE INVERTED	Phase inverted by phase control or by IN 6
5	ELECT. BD. DOOR OPEN	Door microswitch open (IN 5)
6	WATER PRESENT	Water control probe closed (IN 10)
7	HIGH PRESSURE	Operating pressure above the set point P1
8	SCREW PROBE FAULT	Screw temperature probe faulty
9	SCREW TEMP.	Screw temperature greater than the set point T2
10	SCREW LOW TEMP.	Screw temperature less than the set point T6
11	NO LINE	In the event of power failure with compressor selected on manual restart
12	CONTROLLER FAULT	The controller detects anomalous operation

NOTE :

- The alarms Phase Inverted and Water Present are only detected at compressor switch-on.
- All the blocking alarms cause the block of the dryer (RL7) if the dryer card is installed.

Alarm messages with compressor block after a time of 30 sec. of idling are preceded by the words BLOCK DUE TO flashing.


Cod e	Name	Cause
20	COMP. OVERLOAD	Compressor circuit breaker open (IN 11)
21	PRESS. COMPRESSOR	Safety pressure gauge open (IN 12)
22	PRESS. TRANSD. FAULT	Operating pressure transducer fault
23	LOW VOLTAGE	With controller power supply less than 9.5Vac and Reset accepted only when the voltage rises to over 10.6Vac
24	SAFETY	CAF Timer elapsed, alarm detected only if the Safety parameter is set to YES
25	INVERTER FAULT	Inverter faulty
26	SCREW TEMP. PRE-ALARM	Screw temperature greater than the set point T3
27	HIGH ABSORPTION	Motor absorption greater than the set point TA1

N.B.: With a blocking alarm, RL6 + DL1red is energised and the alarm message is stored in the memory of alarms; after having eliminated the cause of the alarm, press  reset the alarm message and restart the compressor.

Alarm messages without compressor block

Code	Name	Cause
30	LOSS OF DATA	Acquisition of the default data

31	LOW VOLTAGE	Power supply voltage of the controller less than 11.6Vac with automatic reset when the voltage rises to 12Vac
32	HIGH VOLTAGE	Power supply voltage of the controller greater than 14.5Vac
33	CLOCK FAULT	The start and stop of the compressor must be done manually, the timers of Master/Slave operation are created by the microcontroller
34	DRYER PROBE FAULT	Temperature probe S6 faulty
35	RS 232 FAULT	The communication is interrupted, with Maser/Slave operation both compressors become Master
36	TIME CHANGED	Message indicating the change of time from summertime to solar time and vice versa
37	INVERTER ALARM	See inverter alarm code
38	DRYER HIGH TEMP.	Dryer temp. probe greater than the set point T1 with automatic reset when the temperature lowers to Set point – 5°C
39	MOTOR ABSORPTION	Motor absorption greater than the set point TA2, automatic reset when the current goes below $TA2-5\%FS_{TA}^2$

- N.B.:** 1) With alarm only displayed, RL6 + DL1 red is energised with intermittence.
 2) With message displayed (if it does not have automatic reset), pressing the key  resets the message, de-energises RL6 + DL1 red and storing the message in the memory of alarms.
 3) Alarm n°35 is automatically reset when the transmission is restored correctly.

Maintenance Messages

Cod e	Name	Cause
45	CHANGE AIR FILTER	Count of the timer set on page n°5 parameter CAF elapsed
46	CHANGE OIL FILTER	Count of the timer set on page n°5 parameter COF elapsed
47	CHANGE SEP. FILTER	Count of the timer set on page n°5 parameter CSF elapsed
48	CHANGE OIL	Count of the timer set on page n°5 parameter C— Elapsed
49	COMPRESS. CONTROL	Count of the timer set on page n°5 parameter C-h elapsed

NOTES ON COMPRESSOR OPERATION

Meaning of the dipswitches

Dip n°1 ON = compressor control by means of pressure transducer (input S2), input IN2 (line pressure gauge) is not considered

Dip n°1 OFF = compressor control by means of line pressure gauge (IN 2), input S2 (pressure transducer) is not considered

Dip n°2 ON = manual restart, in the event of a power failure the control does not restart automatically and the message "NO LINE" is shown on the display.

²FS_{TA} indicates the maximum setting of the amperometric transducer configurable from the **CONFIGURATION** menu.

Dip n°2 OFF = automatic restart, in the event of a power failure the control restarts automatically with a delay equal to the time set on Wt5, during which the message “WAIT ” is displayed.

NOTES ON OPERATION WITH DRIVE BY MEANS OF CONTACTORS

Safety time t5

When the stop button **0** is pressed, the compressor stops with the following procedures:

- If the the compressor is in Load phase, it goes into Idling phase for the time set on timer t5; when timer t5 elapses the compressor switches off with the message “**OFF**”.
- If the the compressor is in Idling phase and the value of the timer t4 count is greater than t5, when the timer t4 elapses the compressor switches off with the message “**OFF**”; if the value of t4 is less than t5, the timer t5 continues with the count and when the count elapses, the compressor switches off with the message “**OFF**”.
- If the compressor is in “**IN SET**” status, it switches off with the message “**OFF**”.
- When the compressor switches off and the **OFF** message appears, the count of timer t5 starts. During this time, if the Start button is pressed the message “**WAIT**” appears and the compressor does not start; at the end of the count of timer t5 the compressor starts.

With the compressor off due to an alarm tripped, the count of timer t5 starts. During this time, if the alarm message is reset and the Start button is pressed, the message OFF flashes and the compressor does not start; at the end of the count of timer t5 the compressor starts.

Compressor stop by means of the external start/stop input – IN3

When input IN3 is opened, the compressor stops with the following procedures:

If the the compressor is in Load phase, it goes into Idling phase for the time set on t4, with the message “**OFF BY EXTERNAL STOP**” flashing; at the end of the timer, if IN3 is still open the compressor switches off with the message “**OFF BY EXTERNAL STOP**” steady. During the count of the timer t4, if input IN3 recloses the compressor returns under the logic of the pressure transducer or the pressure gauge.

- If the compressor is in Idling phase, at the end of t4 the compressor switches off with the message “**OFF BY EXTERNAL STOP**”.
- If the compressor is in “**IN SET**” status, the message “**OFF BY EXTERNAL STOP**” is displayed steady.

Operation of the load solenoid valve (RL4)

When the pressure reaches the stop set point or IN2 opens (line pressure gauge), the load solenoid valve (RL4) goes to OFF with the message on the display “**COMP. IDLING FOR SET**”. The time set on timer t4 starts; at the end of the timer if the pressure has not lowered to below the start set point or IN 2 is still open, the compressor stops. During the count of the timer, if the pressure goes below the start set point or IN 2 is closed, the load solenoid valve (RL4) goes to ON, with the message on the display “**COMPRESSOR AT LOAD**” and timer t4 is reset to zero.

Thermostatisation of the fan with RL5

With delta remote control switch active (RL2) :

- with screw temperature equal to or greater than the parameter T4 = RL5 ON;
- with screw temperature less than the parameter (T4 –T5) = RL5 OFF.