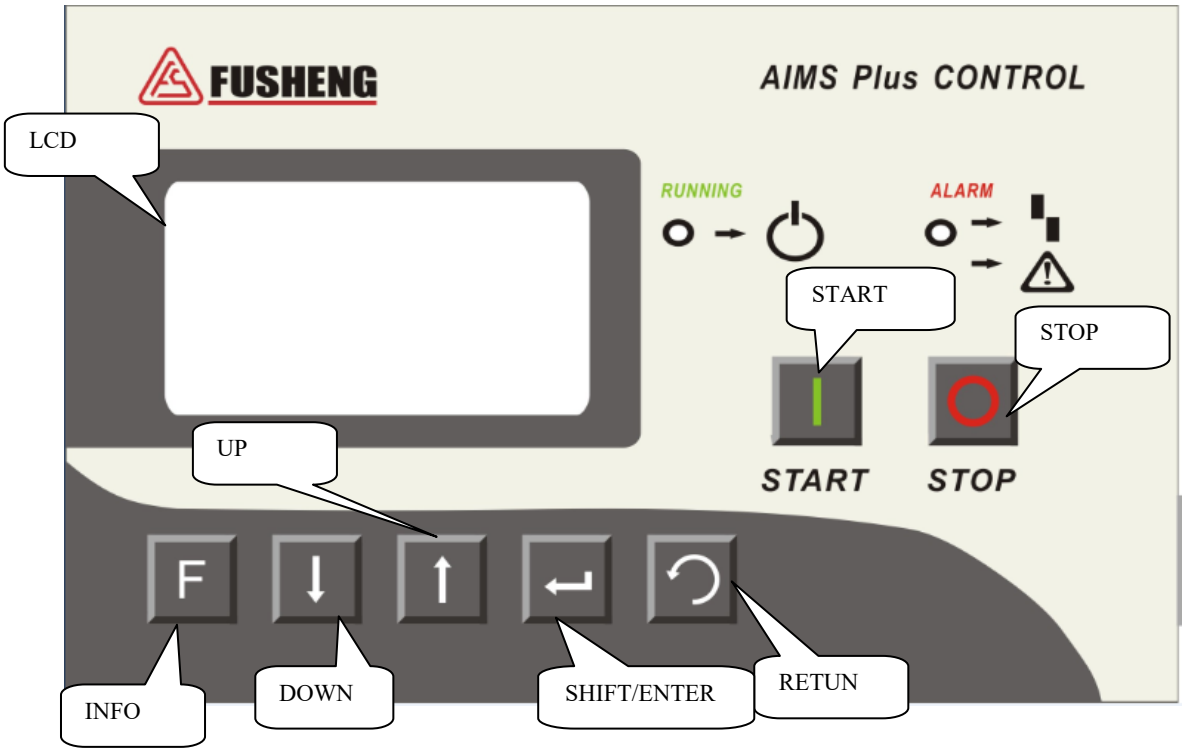
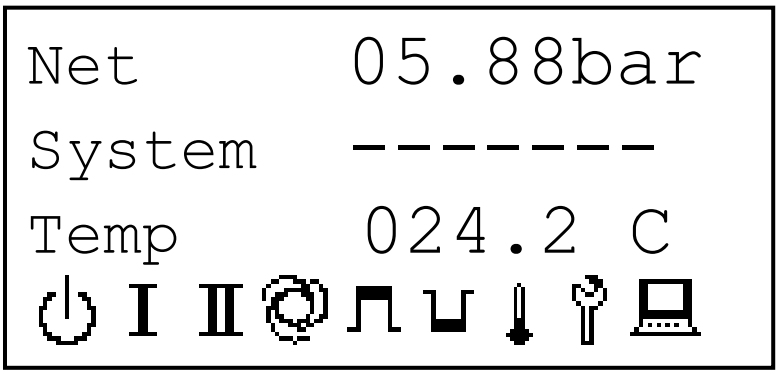
Contents

Operating Panel：

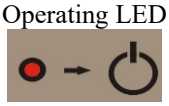
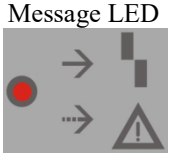


Display：



Operating Elements：

Operating Element	Function	Description
Start Key 	Turn the compressor on	The function depends on the operating mode, system and net pressure.(Note: The compressor starts only if the system pressure is below a pre-set limit. See Pressure Menu,Parameter 9) There are two operating modes to be selectable. **Automatic-operation:** If the net pressure is higher than the cut-in pressure the compressor switches to stand-by mode. If the net pressure is lower than the cut-in pressure the compressor starts operating and switches to load operation. **Continuous-operation:** At this mode the compressor runs all the time, either at full load or at idling. The compressor starts operating continuously. If the net pressure is lower than the cut-in pressure the compressor switches to load operation.
Stop Key 	Turn the compressor off	The compressor switches to idle-operation and stop.
Return Key 	Return	Return to previous menu or cancel modification. Press Return key to change load/unload in operation.
Shift/Enter Key 	Enter into parameter selection	Shift cursor or enter into parameter selection.
Info Key 	Information display	By pressing the info key and the up key together the parameter menu will be invoked. By pressing the info key and the down key together the code menu can be invoked. After confirming parameter setting and fault or service information, press info key to save the setting. If the alarm message is confirmed by pressing info key, the compressor continues to operate. If the fault message is confirmed by pressing it, the compressor is forbidden to re-start immediately.
Up Key 	Parameter and information selection	The up-key scrolls to the next information display, switches to the next menu or increases a parameter value.

Down Key 	Parameter and information selection	The down-key scrolls to the previous information display, switches to the previous menu or decreases a parameter-value.
Operating LED 	Operating	The operating LED signalizes that the compressor is operating or in stand-by mode.
Message LED 	Fault or warning information	A blinking red LED indicates a warning signal. A continuously lit red LED indicates a fault signal and the compressor has/will shut down.

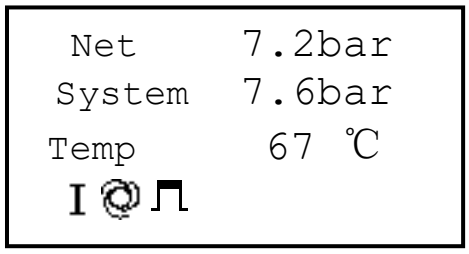
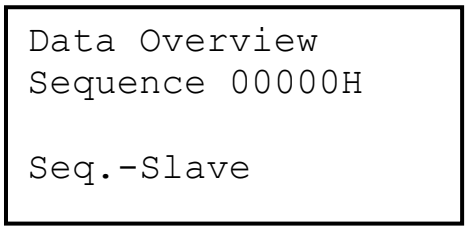
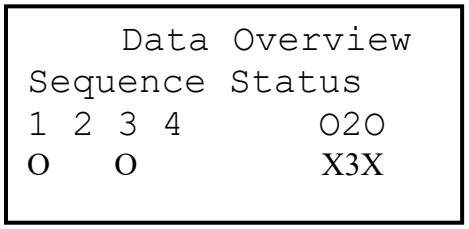
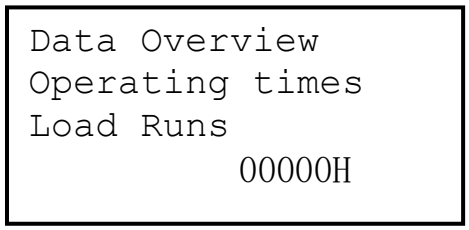
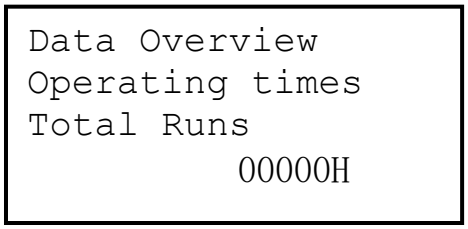
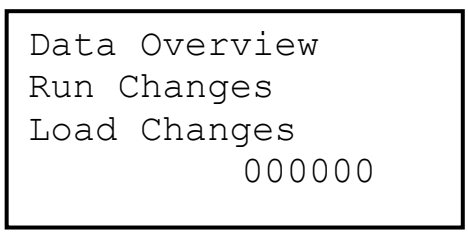
Display symbols:

Symbols	Signification	Function
	Stand-by	Compressor is in stand-by mode.
	1st pressure band	When this symbol appears the 1st pressure range is active.
	2nd pressure band	When this symbol appears the 2nd pressure range is active.
	External unload or load switch	When this symbol appears the External unload or load switch is active.
	Load operation	Compressor is in load operation.
	Idle operation	Compressor is in idle operation.
	Count down	The number between brackets shows a countdown timer. (E.g. the driver time between star and delta mode.)
	Air end	Air end relevant parameters. (A lighting symbol signalized continuous mode, a blinking symbol signalized intermission mode.)
	Service	Service parameter setup and indication of service intervals.
	Temperature	Temperature parameter setup and indication of frost-protection / start protection.
	Remote start	Compressor start via digital input.

Operation:

AIMS Plus CONTROL V2.0	After powering up the unit, the welcome screen is shown.
Net 00.00bar System 0.0bar Temp 00 ℃	A short time after powering up the unit, the main screen is displayed. The net pressure(behind pressure maintaining valve), the system pressure and the air-end temperature will be displayed. If the compressor is in automatic operation mode ,the air-end symbol will be blinking. In continuous operation mode the symbol is on permanently. The I and II symbol indicate the actual pressure band.
Net 00.00bar System 0.0bar Temp 00 ℃	While the compressor is in automatic operation mode, if the net pressure(after the pressure valve)higher than idle pressure , the compressor will stay in stand-by-mode as long as the start button is pressed. Stand-by-mode is indicated by symbol . If "System pressure sensor" is activated, the symbol is blinking, which means the system pressure is still too high, the compressor can't start at once until the pressure is lower than "Sys.press cut-in" (Pressure menu - Parameter 9.)
Net 00.00bar System 0.0bar Temp 00 ℃	If the compressor is in idle-mode (after start-up, after overriding the cut-off pressure or during after-run time) the idle-mode symbol is displayed.
Net 00.00bar System 0.0bar Temp 00 ℃	If the net pressure is lower than the cut-in pressure the compressor switches to load operation mode, indicated by the load operation mode symbol .

Parameter Display:

 Main screen	When the main screen is shown on the display， by pressing the up-key ↑ the parameter display(Data overview)will show up. Following parameters are shown here: Operating hours, time and date, fault and service history log, service interval remaining times. Pressing the up ↑ and down ↓ keys will display the next or previous parameter screen.
  Sequence Signal Status	After pressing the down key ↓ for the first time, the first parameter screen is displayed where the interlock control is shown. When has not been moving into master control is displayed as the first state When the controller to master the control mode, display the second type of state : The number is in the third row with this controller connect the interlock control of the machine number, display behind O2O, is next to start the machine number for #2. Four row " O " corresponds to the status of the machine above, " O " indicates that are operation, no display indicates stopping, displayed behind X3X, is next to stop the machine number for #3
 Sequence Signal Status	Pressing the down-key ↓ again, will display the load operating time is shown.
 Total operating times	Pressing the down-key ↓ again will display the total operating time in which the compressor was operating(Load and idle hours). Stand-by times are not included.
 Number off–load change counter	Pressing the down-key ↓ again will display the number off load change counter. The counter indicates how many times the compressor has changed between idle and load operation.

Data Overview Run Changes Motor Starts 000000 Number of motor starts	Pressing the down-key again will display the number of motor starts.
Data Overview Internal Clock Data Time 04.06.201209.59.26 Date / Time	Pressing the down-key again will display the actual time and date.
Data Overview Error History	Pressing the down-key again will display the fault history log. The last 30 shut down/warning times are displayed. If no messages are logged ,the display is ignored. “Nr.:29” indicating the first log, “Nr.:28” second log…”Nr.:0 last log. Press Shift-key, indicate the analog parameter status at the fault moment.
Error History 00 Net Pressure High 12.09.2014 17.59.52	The first line display Error history number. The second line display error content. The third line display time and data of error occur. The fourth line display NET pressure and Temp. of error occur. Press shift-key may see more state of compressor.
Error History 00 Net Pressure High 000.0A 000.0A 09.84bar 222.7V	The first line display Error history number. The second line display error content. The third line display motor current of error occur. The fourth line display Sys. pressure and Bus Voltage of error occur. Press shift-key may see more state of compressor.
Error History 00 Net Pressure High 000.0A 000.0A 023.9V	The first line display Error history number. The second line display error content. The third line display time Fan current of error occur. The fourth line display controller voltage of error occur. Press shift-key may see more state of compressor.

Data Overview Service History	Pressing the down-key ↓ again will display the service history log. The last 30 service history times are displayed. If no messages are logged ,the display is ignored. “Nr.:29” indicating the first log, “Nr.:28” second log…”Nr.:0 last log.
Data Overview Remaining Time Motor Service 00000H Remaining time until motor service	Pressing the down-key ↓ again will display the remaining time until the next service. First the remaining time until the next motor service is displayed. (Parameter in hours) Note: If the parameter 1 is disabled **(=Off)** in the service menu this display is ignored.
Data Overview Remaining Time Compressor Service 00000H Remaining time until compressor service	Pressing the down-key ↓ again will display the remaining time until the next compressor service. (Parameter in hours) Note: If the parameter 2 is disabled **(=Off)** in the service menu this display is ignored.
Data Overview Remaining Time Oil-filter Service 00000H Remaining time until oil-filter service	Pressing the down-key ↓ again will display the remaining time until the next oil-filter service. (Parameter in hours) Note: If the parameter 3 is disabled **(=Off)** in the service menu this display is ignored.
Data Overview Remaining Time Oil Service 00000H Remaining time until oil service	Pressing the down-key ↓ again will display the remaining time until the next oil service. (Parameter in hours) Note: If the parameter 4 is disabled **(=Off)** in the service menu this display is ignored.
Data Overview Remaining Time Belt Service 00000H Remaining time until belt service	Pressing the down-key ↓ again will display the remaining time until the next belt service. (Parameter in hours) Note: If the parameter 5 is disabled **(=Off)** in the service menu this display is ignored.

Data Overview Remaining Time Separator Service 00000H Remaining time until separator service	Pressing the down-key ↓ again will display the remaining time until the next separator service. (Parameter in hours) Note: If the parameter 6 is disabled **(=Off)** in the service menu this display is ignored.
Data Overview Remaining Time Air-filter Service 00000H Remaining time until air-filter service	Pressing the down-key ↓ again will display the remaining time until the next air-filter service. (Parameter in hours) Note: If the parameter 7 is disabled **(=Off)** in the service menu this display is ignored.
Data Overview Remaining Number Load Changes 000000 Remaining No.-off for load change	Pressing the down-key ↓ again will display the remaining No.-off for load change. Note: If the parameter 8 is disabled **(=Off)** in the service menu this display is ignored. Press the down-key ↓ again, return to the first screen (sequence status).

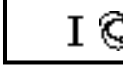
Query interface:

NET 00.00bar System 0.0bar Temp. 00 ℃ Main screen	Pressing the up-key ↑ can be shown as follows: 1. Voltage and current of motor. 2. Relevant status of the motor inverter. 3. Relevant status of the fan inverter. 4. Real time record of failure and maintenance. 5. Controller hardware version number and firmware version number.
CurrentA 000.0A CurrentB 000.0A Bus Vol 000.0V	Pressing the down-key ↓ for the first time will display the CurrentA 、 CurrentB and Bus Voltage.

Motor status	
Fan CurrentA 000.0A Fan CurrentB 000.0A Control Vol 024.0V Fan status	Pressing the down-key ↓ again will display Fan CurrentA、Fan CurrentB and Control Voltage.
Moto Fre. 0000.0Hz Moto Current 0000A Moto Voltage 0000V Moto Power 000.0KW Motor inverter status	Pressing the down-key ↓ again will display Motor Frequency，Motor Current，Motor Voltage and Motor Power.（Motor means the main motor） （Note：If the Motor Inverter Control is disabled in the Inverter Control menu，the number and the unit can't be shown here）
Moto Speed 00000 Moto Error 00000 Motor inverter status	Pressing the down-key ↓ again will display Motor speed and Motor Error.（Motor means the main motor） （Note：If the Motor Inverter Control is disabled in the Inverter Control menu, the number and the unit can't be shown here.）
Fan Fre. 0000.0Hz Fan Current 0000A Fan Voltage 0000V Fan Power 000.0KW Fan inverter status	Pressing the down-key ↓ again will display Fan Frequency，Fan Current，Fan Voltage and Fan Power. （Note：If the Fan Inverter Control is disabled in the Inverter Control menu，The number and the unit can't be shown here.）
Fan Speed 00000 Fan Error 00000	Pressing the down-key ↓ again will display Fan speed and Fan Error. （Note：If the Fan Inverter Control is disabled in the Inverter Control menu，The number and the unit can't be shown here.）

Fan inverter status	
《 Version 》 Hardware: V1.0C Firmware: V2.0 Hardware and firmware version	Pressing the down-key ↓ again will display Controller hardware version number and firmware version number. Press the down-key ↓ again, return to the first screen (Motor status).

Warning and fault messages :

Net 00.00bar System 0.0bar Temp. 00 C   red message LED	Blinking red LED indicates a warning signal. The main screen is still displayed and the compressor is still in operation. To see the warning message, press the up key and scroll to the error history.
//////////\\\\\\ << E-R-R-O-R >> Discharge temp.high  red message LED	Permanent red LED indicates a system fault and fault message is displayed on the screen. The compressor shuts down immediately. If multiple fault warnings occurred simultaneously, it is possible to switch between the messages with the up and down key. After acknowledging the fault message with the return-key the message disappears, but still can be shown in the info display by pressing the up key and scrolling to the fault history. If a warning and fault occurs at the same time the fault message is displayed.
Net 00.00bar System 0.0bar Temp. 00C 	The tool symbol in the main screen indicates a service message. The type of service message is shown in the information display and the compressor is still in operation.

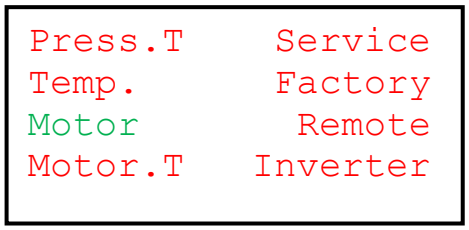
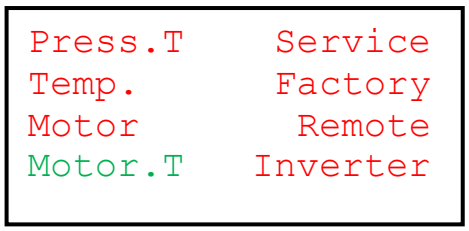
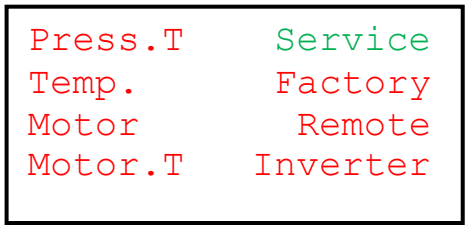
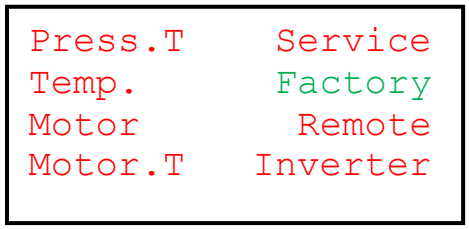
Controller user parameter query :

Pressure Menu Pressure Menu Time Menu Sequence Control Password Menu	Controller user parameters query interface can be invoked from the main info screen by pressing the info-key F followed by the info-key and the up-key pressed together. The Pressure menu option is in flashing after entering， At this time by pressing the shift key to enter the menu and check pressure parameters.
Time Menu Pressure Menu Time Menu Sequence Control Password Menu	Pressing the down-key will switch to the Time Menu option and it's also in flashing. At this time by pressing the shift key to enter the Time Menu and check time and date parameters.

Sequence Control Pressure Menu Time Menu Sequence Control Password Menu	Pressing the down-key ↓ will switch to the Sequence Control option and it's in flashing. At this time by pressing the shift key ↵ to enter the Sequence Control option and check related parameters.
Password Menu Pressure Menu Time Menu Sequence Control Password Menu	Pressing the down-key ↓ will switch to the Password menu option and it's in flashing. At this time by pressing the shift key ↵ to enter the Sequence Control option view user password. Press the down-key ↓ again, switch to the first option.(pressure menu)

Controller factory parameter query :

Press.T Press.T Service Temp. Factory Motor Remote Motor.T Inverter	Controller factory parameters query interface can be invoked from Controller user parameters query interface by pressing the info-key F The Press.T menu option is flashing after entering， At this time by pressing the shift key ↵ to enter the Press.T option to check related parameters.
Temp. Press.T Service Temp. Factory Motor Remote Motor.T Inverter	Pressing the down-key ↓ will switch to the Temp. option which is flashing. At this time by pressing the shift key ↵ to enter the temperature menu option to check temperature parameter.

Motor 	Pressing the down-key ↓ will switch to the Motor menu option which is flashing. At this time by pressing the shift key ↵ to enter the Motor option to check related parameters.
Motor.T 	Pressing the down-key ↓ will switch to the Motor.T menu option which is flashing. At this time by pressing the shift key ↵ to enter the Motor.T option to check related parameters.
Service 	Pressing the down-key ↓ will switch to the Service menu option which is flashing. At this time by pressing the shift key ↵ to enter the Service option to check related parameters.
Factory 	Pressing the down-key ↓ will switch to the Factory menu option which is flashing. At this time by pressing the shift key ↵ to enter the Factory option to check related parameters.

Remote Press.T Service Temp. Factory Motor Remote Motor.T Inverter	Pressing the down-key ↓ will switch to the Remote menu option which is flashing. At this time by pressing the shift key ↵ to enter the Remote option to s check related parameters.
Inverter Press.T Service Temp. Factory Motor Remote Motor.T Inverter	Pressing the down-key ↓ will switch to the Inverter menu option which is flashing. At this time by pressing the shift key ↵ to enter the Inverter option to check related parameters. Press the down-key ↓ again, switch to the first option.(Press.T menu)

Programming :

General information:

All the parameters of the controller can be viewed and changed via the parameter menu. To change parameters first you must insert a password. There are four different passwords (User/ Service/Factory/Voltage) of the different access authorization; the user password only can change parameters which are labeled as USER; With the service and factory password all parameters can be changed. The password numbers are listed on page 49.

For only viewing the parameter it isn't necessary to enter a password. For this purpose the parameter menu will be called by pressing the info-key F followed by the up-key ↑ pressed together.

Before inserting Code-menu must be called first by pressing the info-key F followed by the down-key ↓ pressed together. Now, the 4-digit password numbers must be inserted. It will be started with the first digit. The up-key ↑ to increase the digit. The down-key ↓ to decrease it. After the first digit is correct shown on display, the enter-key ↵ saves the input and the next digit can be setting. If the forth digit is programmed and the display shows a correct password after pressing the info-key F the parameter menu will shown on display. Parameters can be changed with the access authorization level of inserted password. (To input the codes also see "Additional Codes" on Page49.)

To change a parameter the enter-key ↵ has to be pressed first. Now the parameter value is blinking. With the up ↑ and down ↓ keys the value can be increased and decreased. If a parameter has been adjusted ,pressing the info-key F will save and store the value. If a parameter value should not be saved, pressing ↺ will abort the programming and the original value will be displayed.

The units for pressure and temperature have been setting before selling. In the pressure-menu, parameter 5 (page21) in bar, psi or MPa and for temperature in the temperature-menu, parameter 1 (page24) in °C or °F.

Controller broadcast mode :

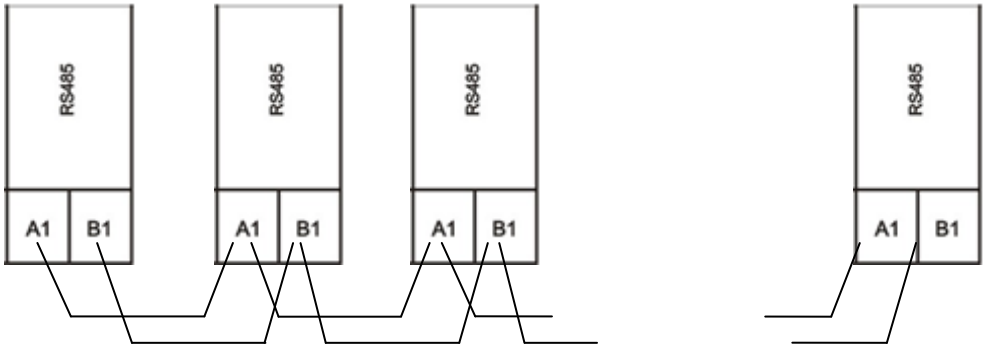
Self interlock control overview :

Air Compressor self interlock control method, from 1~8 set(Up to 8 set)air compressor connection form of a bus, through the RS485 communication port and connect the control network, all machines to the network in order to send and receive messages, and process the messages, make every machine work status and other operating parameters the information publicly available on the network. Any one machines operating on a network, all working condition of the entire network can be monitored. A machine can easily join and exit control network, and don't affect the work of other machines on the network. Self interlock control network advantage is simple and reliable , the connection easy and low cost. Control methods to stabilize the system pressure, satisfy the balance work between all air compressor, make multiple machines operation in stable balance working state, keep the pipeline pressure between the upper and lower limits in the set pressure of the pipeline, improve the working efficiency and lifetime of the machines.

Connection method :

Will need to be interlock controlled of the first air compressor controller communication port, with two cores shield twisted pair wire connect, ex: A1、B1. According to the situation as far as machines of parallel terminal resistor 330Ω(Don't necessarily need).
Note: internal control limit 8 set .

#1 # 2 #3 - - - - - - - - - - #8



Parameter setting：

- According to the actual situation will air compressor individual number (PORT1),will machine number input controllers, in the interlock control can only be set to 1-8, refer to the Remote control menu " PORT1 RS458 Address ".
- Remote Mode setting: "SLAVE" method, refer to the Hardware Menu " Remote mode ".
- Sequence start time setting : when pressure is low, the all machine set in accordance with the order of start (or load) time intervals.
- Sequence unload time setting : when high pressure all machine set in accordance with the order of unload time intervals.
- Sequence change time: When stable for a long time operation, operation the rotation of machine set and spare set operation time interval, the initial default value is setting to 100 hours.
- The interlock control operation time is defined as, after the switch machine set to the remote control mode of operation time. The time automatic zero resetting is powered down, or exit the network. In the time included in the broadcast message.
- Selection of control pressure with the highest exhaust pressure in interlock control machine set as standard, require all machine set to load /unload pressure must be setting to the same.

Operation steps and operating condition:

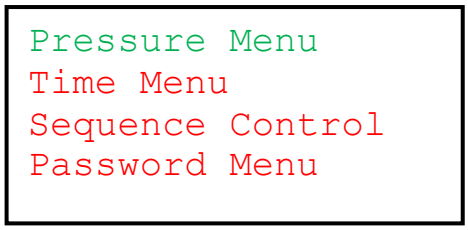
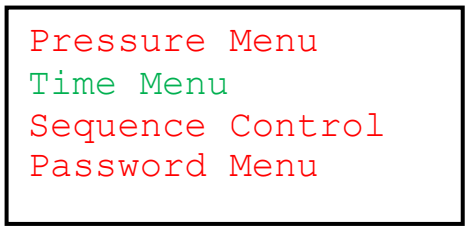
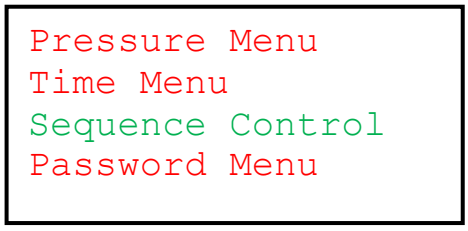
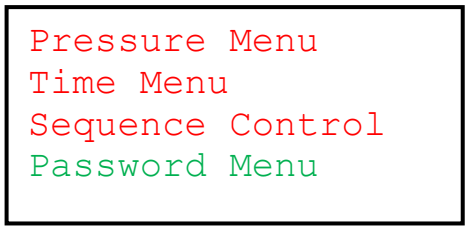
- That will be ready for interlock control of air compressor set to " remote control "**,** communication mode is set to " Master " and in accordance with the sequential number of the machine set(Range:1~8), no duplicates.
- Press the start button of any air compressor, started immediately.
- When controlled pressure(highest discharge pressure in the entire machine set for pipe network pressure) still less than loading pressure **+** 0.02MPa, then interlocking operation time shortest machine set first start ; If the control operation the same time, to start in the minimum number of machine set. First machine set started after the " Seq. Sl. Strt. Del" delayed start,and so on.
- When controlled pressure greater than the unload pressure -0.02mpa, the longest operation in interlocking control machine set priority unload; If operation the same time, to follow the largest number to unload.

- In interlocking control system of pipe network pressure adjustment range is native of unload pressure -0.02mpa~native of load pressure +0.02mpa, when pipe network pressure be in this range, operation status of the machine set unchanged, when outside this range adjust the machine set.
- When the user's air consumption for stability, there is no switching machine set for a long time, for the balance the interlock control system of the air compressor operation time, when the largest interlock control of operating time and minimum interlock control of operating time difference greater than " Seq. Change Time",and interlock control operating time the smallest machine set, when the state was in stop,will be smallest interlock control operating time machine set to join the operating.
- When press the stop button of any machine set, this air compressor immediately unload and shut down. And then the all machine set in accordance with the order shut down, until all air compressor stopped operating.
- If the machine set malfunction or in the single control state, the network will ignore this machine set and will not affect the operation of the other machine set. Make control system with good shielding failure of the machine set features. In addition, if the communication cable fracture occurred, the whole network is divided into two unrelated Child Network. For the whole network machine set operation should not have a big impact. Even if only one machine set , should still be able to stable operation.

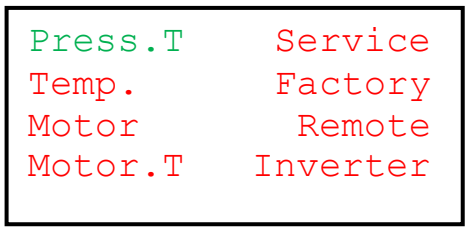
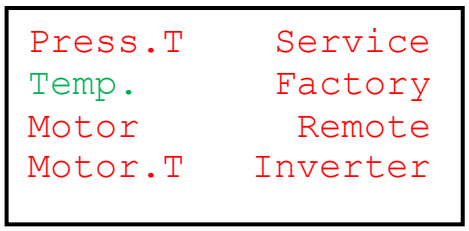
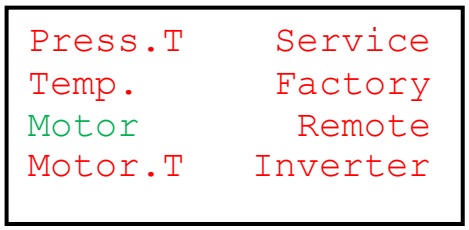
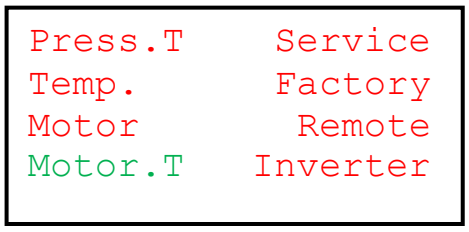
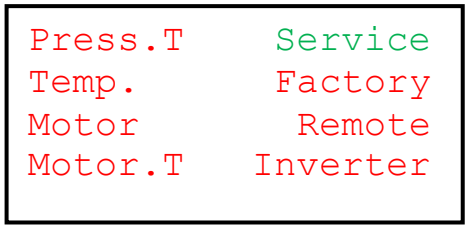
➢ Programming:

Code-menu must be called by pressing the info-key F followed by the down-key ↓ pressed together, Enter the corresponding password, Then press the info-key F to enter the corresponding menu interface.

User parameter menu description:

Pressure menu 	Entering the password of user parameter in the code menu, Pressing the info-key F enter user parameter menu. The Pressure menu option is flashing after entering, At this time by pressing the shift key ↵ to enter the Pressure menu option to modify related parameters.
Time Menu 	Pressing the down-key ↓ will switch to the Time menu option which is flashing. At this time by pressing the shift key ↵ to enter the Time menu option to modify time and date.
Sequence Control 	Pressing the down-key ↓ will switch to the Sequence Control option which is flashing. At this time by pressing the shift key ↵ to enter the Sequence Control option to modify related parameters.
Password Menu 	Pressing the down-key ↓ will switch to the Password Menu option which is flashing. At this time by pressing the shift key ↵ to enter the Password Menu option to modify related parameters. Press the down-key ↓ again, switching to the first option.(Pressure Menu)

Factory parameter menu description:

Press.T 	Entering the password of factory parameter in the code menu, Pressing the info-key F enter factory parameter menu. The Press.T menu option is flashing after entering， At this time by pressing the shift key ↵ to enter the Press.T option to modify related parameters.
Temp. 	Pressing the down-key ↓ will switch to the Temp. option which is flashing. At this time by pressing the shift key ↵ to enter the temperature menu option to modify temperature parameter.
Motor 	Pressing the down-key ↓ will switch to the Motor menu option which is flashing. At this time by pressing the shift key ↵ to enter the Motor option to modify related parameters.
Motor.T 	Pressing the down-key ↓ will switch to the Motor.T menu option which is flashing. At this time by pressing the shift key ↵ to enter the Motor.T option to modify related parameters.
Service 	Pressing the down-key ↓ will switch to the Service menu option which is flashing. At this time by pressing the shift key ↵ to enter the Service option to modify related parameters.

Factory Press.T Service Temp. Factory Motor Remote Motor.T Inverter	Pressing the down-key ↓ will switch to the Factory menu option which is flashing. At this time by pressing the shift key ↵ to enter the Factory option to modify related parameters.
Remote Press.T Service Temp. Factory Motor Remote Motor.T Inverter	Pressing the down-key ↓ will switch to the Remote menu option which is flashing. At this time by pressing the shift key ↵ to enter the Remote option to modify related parameters.
Inverter Press.T Service Temp. Factory Motor Remote Motor.T Inverter	Pressing the down-key ↓ will switch to the Inverter menu option which is flashing. At this time by pressing the shift key ↵ to enter the Inverter option to modify related parameters. Press the down-key ↓ again, switch to the first option.(Press.T menu)

The voltage of power supply parameters menu description:

Voltage Menu 《Parameter Menu》 Voltage Menu	Entering the password of power parameter in the code menu, Pressing the info-key F enter power parameter menu. By pressing the shift key ↵ to enter the Voltage Menu option to modify related parameters.

Vendor maintenance parameters menu description:

Factory Maintenance Menu 《Parameter Menu》 Factory Maint. Menu	Entering the password of factory maintenance parameter in the code menu, Pressing the info-key F enter factory maintenance menu. By pressing the shift key ↵ to enter the Factory Maintenance Menu option to modify related parameters.

Programming：

Pressure menu：

Parameter 1	<<Parameter Menu>> Pressure Menu Cut-in 1st Band 6.0bar	Cut-in pressure of the 1st pressure range. (1,0 ... Cut-out pressure 1st range – 0,5)
Parameter 2	<<Parameter Menu>> Pressure Menu Cut-out 1st Band 7.1bar	Cut-out pressure of the 1st pressure range. (Cut-in pressure 1st range + 0.5 …Sys.safety limit-0.5)
Parameter 3	<<Parameter Menu>> Pressure Menu Cut-in 2nd Band 6.5bar	Cut-in pressure of the 2nd pressure range. The second pressure-range is necessary when 2 compressors should operate in sequence. The selection of the active pressure-range can be done manually via parameter 6, or automatically via the weekly-autotimer. (1, ... ,Cut-out pressure 2nd range – 0.5)
Parameter 4	<<Parameter Menu>> Pressure Menu Cut-out 2nd Band 7.5bar	Cut-out pressure of the 2nd pressure range. (Cut-in pressure 2nd range + 0,5 …Sys.safety limit-0.5)
Parameter 5	<<Parameter Menu>> Pressure Menu Unit for Pressure bar	The unit for the pressure values can be changed here (bar, psi or MPa).
Parameter 6	<<Parameter Menu>> Pressure Menu Set Press. Range 1st Band	The 1st a pressure range 、 2nd pressure range and External empty or load switch can be manually changed here. If the 1st pressure range is active the symbol Ⅰ is on ; if the 2nd pressure range is active the symbol Ⅱ is on; if the External empty or load switch is active the symbol Ⅲ is on.

Parameter 7	<<Parameter Menu>> Pressure Menu Operating Mode Automatic	The operating mode can be changed here. **Manual** = Continuous-operation mode (compressor does not shut down). **Automatic** = Automatic-operation mode (intermission) (compressor shuts down after idling after-run time).
Parameter 8	<<Parameter Menu>> Pressure Menu Method of Drive Star/ Delta	This parameter defines the method of drive. **Star/Delta** 、**Direct** = Direct start 、**Inverter**、**Pulse**
Parameter 9	<<Parameter Menu>> Pressure Menu Sys.press cut-in 0.5bar	This parameter defines the system pressure cut-in limit. The main drive motor will start only if the system pressure is below this limit (0,5..12bar).
Parameter 10	<<Parameter Menu>> Pressure Menu Sys.safety limit 9.0bar	This parameter defines the safety system pressure cut-out limit. If the system pressure exceeds the cut-out pressure limit the compressor will shut down (1.. Sensor range-1).
Parameter 11	<<Parameter Menu>> Pressure Menu Build up limit 1.0bar	This parameter defines a system pressure build up limit. When the compressor starts on load and the system pressure has not been build up to this limit, after a preset time (Pressure-time value", parameter 3), the compressor will shut down(0,5..4bar).
Parameter 12	<<Parameter Menu>> Pressure Menu Max difference 1.2bar	This parameter is the maximum allowable pressure difference between system pressure and net pressure(Monitoring of separator element ΔP). ("Pressure-time value", parameter 2 for adjusting difference delay time.) (0.5..2bar)

Programming :

Pressure-time menu:

Parameter 1	<<Parameter Menu>> Pressure Time Menu Safety limit delay 0002sec	This parameter defines the delayed shut-down time for the safety shut-down pressure value. This function ensures that the compressor does not shut down immediately if the cut-out pressure is exceeded for a short time. ("Pressure Menu", Parameter 10 for pressure value.) (2..20s)
Parameter 2	<<Parameter Menu>> Pressure Time Menu Difference delay 0090sec	This parameter defines the delayed shut-down time for the safety shut-down if the difference between the system and net pressure becomes greater than the set value ("Pressure Menu", Parameter 12 for pressure value.) (2..300s).
Parameter 3	<<Parameter Menu>> Pressure Time Menu Build up delay 0030sec	This parameter defines the time in which the compressor has to reach a pre-set system pressure after the load starts. The pressure value can be set in the pressure menu under parameter 12. (2…99s).
Parameter 4	<<Parameter Menu>> Pressure Time Menu Intake Filt. Delay 0090sec	This parameter defines the time-delay for a warning message with intake filter. (2...300s)
Parameter 5	<<Parameter Menu>> Pressure Time Menu Oil filter delay 0090sec	This parameter defines the time-delay for a warning message with oil filter. (2...300s)

Programming:

Temperature menu :

Parameter 1	<<Parameter Menu>> Temperature Menu Unit for Temperature °C	The unit of temperature values can be changed here. (°C and °F)
Parameter 2	<<Parameter Menu>> Temperature Menu Frost P. warn up 10 °C	This parameter defines the warm-up temperature of frost-protection when the compressor will stop the heat up mode. (10…30°C) To be updated.
Parameter 3	<<Parameter Menu>> Temperature Menu FP Mot Start delay 0003sec	This parameter defines the time-delay for start the compressor at frost-protection temperature. (2...99s) To be updated.
Parameter 4	<<Parameter Menu>> Temperature Menu Shut-down limit 100°C	This parameter defines the upper temperature shut-down limit. If the compressor temperature reaches this adjustable limit it will shut-down. (85...110°C)
Parameter 5	<<Parameter Menu>> Temperature Menu Compressor temp. warn 95 °C	This parameter defines the upper temperature warning limit. If the compressor temperature reaches this adjustable limit it will give out a warning and the compressor is still in operation. (85...110°C)
Parameter 6	<<Parameter Menu>> Temperature Menu Frost Protection off	FP = Frost Protection，ON/OFF To be updated

Parameter 7	<<Parameter Menu>> Temperature Menu Rated Fan Control disable	The parameter defines the fan motor operating mode selection between continuous operating and temperature controlled (Enable/disable)
Parameter 8	<<Parameter Menu>> Temperature Menu Fan Motor On temp. 87 ℃	The parameter defines the start temperature of fan motor in temperature controlled mode. (Parameter(9) +10℃~110℃)
Parameter 9	<<Parameter Menu>> Temperature Menu Fan Motor Off temp 73 ℃	The parameter defines the stop temperature of fan motor in temperature controlled mode. (Parameter: 25~Parameter 8 -10℃)

Programming:

Time/Date menu：

Parameter 1	<<Parameter Menu>> Time / Date Menu Set date 04.06	In this sub-menu the real-time-clock can be adjusted. The first parameter indicates the day (left) and the month (right). Pressing enter ↵ will make the month -parameter blink and it can be adjusted now. Pressing enter ↵ again the new value is saved and the parameter day is blinking and can be adjusted now. Pressing enter F again will save the new value.
Parameter 2	<<Parameter Menu>> Time / Date Menu Set year 2012	The second parameter displays the year.
Parameter 3	<<Parameter Menu>> Time / Date Menu Set time 12.03	At parameter 3 the time can be adjusted. Pressing enter ↵ will make the hours-parameter (left) blink and it can be adjusted now. Pressing enter ↵ again the new value is saved and the parameter minutes (right) is blinking and can be adjusted now. Pressing enter F again will save the new value.

Password menu:

Parameter 1	<<Password Menu>> Password Menu User password 1111	Allow user to adjust to their personal user password at parameter 1. (0000...9999)

Programming:

Motor Menu :

Parameter 1	<<Parameter Menu>> Motor Menu Max Current 050.0A	Parameter 1 defines allowable max. current of main motor.
Parameter 2	<<Parameter Menu>> Motor Menu Rated Current 050.0A	Parameter 2 defines rated current of main motor.
Parameter 3	<<Parameter Menu>> Motor Menu CT Rate 100/0.1	Parameter 3 defines main motor transmission ratio of current transformer.
Parameter 4	<<Parameter Menu>> Motor Menu Fan Motor CT Rate 30/5mA	Parameter 4 defines fan motor transmission ratio of current transformer.
Parameter 5	<<Parameter Menu>> Motor Menu Max Fan Current 05.0A	Parameter 5 defines allowable max. current of fan motor. (1...30A)

Parameter 6	<<Parameter Menu>> Motor Menu Phase-sequence enable	Parameter 6 defines phase-sequence protection for power source. (disable/enable) VSD model(disable)
Parameter 7	<<Parameter Menu>> Motor Menu Motor Overload Check enable	Parameter 7 defines overload check protection for main motor current. (disable/enable) VSD model(disable)
Parameter 8	<<Parameter Menu>> Motor Menu Fan Motor Overload enable	Parameter 8 defines overload check protection for fan motor current. (disable/enable)

Programming:

Motor-Time Menu :

Parameter 1	<<Parameter Menu>> Motor Time Menu Run-on time 0008sec	Parameter 1 defines the run-on time of the main drive motor before switching from star to delta. (2…20s) When using the inverter, the Run-on time setting should satisfy the formula: Run-on time>= Motor Min. Frequency*35s / Motor Max. Frequency
Parameter 2	<<Parameter Menu>> Motor Time Menu Star-delta time 0020ms	Parameter 2 defines the star delta switch over time. (time between switching star off and delta on.) (20..99ms)
Parameter 3	<<Parameter Menu>> Motor Time Menu Min.run time 001min	Parameter 3 defines the minimum motor run time between motor's start and motor's stop. (0...30min)
Parameter 4	<<Parameter Menu>> Motor Time Menu Idle time 020min	Parameter 4 defines the motor after-run time (Idling-time). (0…50min)
Parameter 5	<<Parameter Menu>> Motor Time Menu Delay power-fail off	Parameter 5 defines the delayed power up time after power failure. (0…60s) 0 = Deactivates this option.
Parameter 6	<<Parameter Menu>> Motor Time Menu Dryer fail delay 001min	Parameter 6 defines the time-delay for a warning message with missing dryer. (0…20 min)

Parameter 7	<<Parameter Menu>> Motor Time Menu Stop Delay 0015sec	Parameter 7 defines the run time-delay after manual stop. (1…250 sec)
Parameter 8	<<Parameter Menu>> Motor Time Menu Idle after Start 0003sec	Parameter 8 defines the idle time between motor start-up and first load. (1…30 sec)
Parameter 9	<<Parameter Menu>> Motor Time Menu Fan Stop Delay 000min	Parameter 9 defines the fan's stop time after motor's stop. (1…20 min)

Programming：

Service Menu：

Parameter 1	<<Parameter Menu>> Service Menu Motor service off <<Parameter Menu>> Service Menu Motor service released <<Parameter Menu>> Service Menu Motor service 2000H	Parameter 1 = Motor service interval (100...30000h) Off = Interval turned off On = Interval turned on If the interval is reached the controller stops counting and on the 4th row "released" is visible. If the interval is turned on the interval time is displayed briefly. To change the interval time the enter key has to be pressed for 2 sec. during the interval time display.
Parameter 2	<<Parameter Menu>> Service Menu Compressor Service ON	Parameter 2 = Compressor service interval. (100...20000h) To change the value see Parameter 1.
Parameter 3	<<Parameter Menu>> Service Menu Oil-filter service ON	Parameter 3 = Oil-filter service interval. (100...10000h) To change the value see Parameter 1.
Parameter 4	<<Parameter Menu>> Service Menu Oil service ON	Parameter 4 = Air-end service interval. (100...16000h) To change the value see Parameter 1
Parameter 5	<<Parameter Menu>> Service Menu Belt service ON	Parameter 5 = Belt service interval. (100...25000h) To change the value see Parameter 1.

Parameter 6	<<Parameter Menu>> Service Menu Separator service ON	Parameter 6 = Separator service interval. (100...10000h) To change the value see Parameter 1.
Parameter 7	<<Parameter Menu>> Service Menu Air-filter service ON	Parameter 7 = Air-filter service interval. (100...10000h) To change the value see Parameter 1.
Parameter 8	<<Parameter Menu>> Service Menu Cycle counter ON	Parameter 8 = Cycle counter interval. (10000...2000000) To change the value see Parameter 1.

Programming：

Factory Menu :

Parameter 1	<<Parameter Menu>> Factory Menu Systempr. Sensor disable	Optionally system pressure sensor: disable = no system pressure sensor enable = a system pressure sensor was built in the compressor If there is a system pressure sensor in the system it has to be switch to enable.
Parameter 2	<<Parameter Menu>> Factory Menu Temp offset cal. 031.0℃ 100%	Temperature offset calibration, maximum is 110%. (90…110%)
Parameter 3	<<Parameter Menu>> Factory Menu Netpress.cal 05.87bar 100%	Net pressure gain calibration referring to the max value 110%. (90…110%)
Parameter 4	<<Parameter Menu>> Factory Menu Systempress.cal. 00.00bar 100%	System pressure gain calibration referring to the max value 110%. (90…110%)
Parameter 5	<<Parameter Menu>> Factory Menu CurrentA cal. 00.00A 100%	Phase A main motor current calibration, maximum value 110%. (90...110%)
Parameter 6	<<Parameter Menu>> Factory Menu CurrentB cal. 00.00A 100%	Phase B main motor current calibration, maximum value 110%. (90...110%)

Parameter 7	<<Parameter Menu>> Factory Menu Fan CurrentA cal. 00.00A 100%	Phase A fan motor current calibration, maximum value 110%. (90...110%)
Parameter 8	<<Parameter Menu>> Factory Menu Fan CurrentB cal. 00.00A 100%	Phase B fan motor current calibration, maximum value 110%. (90...110%)
Parameter 9	214.3V 100%	Voltage calibration, maximum value 110%. (90...110%)
Parameter 10	<<Parameter Menu>> Factory Menu Analog OutputA Cal. 100%	Analog output A calibration, maximum value 110%.
Parameter 11	<<Parameter Menu>> Factory Menu Analog OutputB Cal. 100%	Analog output B calibration, maximum value 110%.
Parameter 12	<<Parameter Menu>> Factory Menu Mod. load count 000000	A parameter to modify the load change counter.
Parameter 13	<<Parameter Menu>> Factory Menu Mod. Motor Strts 000000	A parameter to modify the motor starts.
Parameter 14	<<Parameter Menu>> Factory Menu Pressure Sensor Range 16.00bar	A parameter to modify maximum sensor range. (2…25bar)

Programming：

Remote Menu：

Parameter 1	<<Parameter Menu>> Remote Menu Remote Input Mode Off	This parameter defines the remote-mode. **Off** = Remote de-activated (Local operation) **Start** = Remote ON/OFF
Parameter 2	<<Parameter Menu>> Remote Menu Input reversed 00010000 00000000	Reversed bit for Input port.
Parameter 3	<<Parameter Menu>> Remote Menu Output reversed 00000100 00000000	Reversed bit for output port.
Parameter 4	<<Parameter Menu>> Remote Menu Input Function	Digital input function setup.
Parameter 5	<<Parameter Menu>> Remote Menu Output Function	Digital output function setup

Parameter 6	<<Parameter Menu>> Remote Menu Analog Output Fun.	Analog output function setup
Parameter 7	<<Parameter Menu>> Remote Menu Analog Input Fun.	Analog output function setup
Parameter 8	<<Parameter Menu>> Remote Menu Input Delays 0003sec	This Parameter defines the signal delay of digital inputs. If the signals are shorter than it, they were ignored by controller. (Delay range: off...60 sec)
Parameter 9	<<Parameter Menu>> Remote Menu PORT1 RS485 Address 00001	This Parameter defines the controller address for the RS485-Bus. (Address range: 1...127)
Parameter 10	<<Parameter Menu>> Remote Menu PORT1 RS485 Baudrate 09600	This Parameter defines the data transfer speed (Baudrate) of RS485-Bus. 4,800bps or9,600 bps (Bit per second) or 14,400 bps or 19,200 bps.
Parameter 11	<<Parameter Menu>> Remote Menu PORT1 RS485 Errorcheck EVEN	This Parameter defines the check bit of RS485-Bus. EVEN/ODD/NONE

Parameter 12	<<Parameter Menu>> Remote Menu PORT2 RS485 Address 00001	This Parameter defines the controller address for the RS485-Bus. (Address range: 1...127)
Parameter 13	<<Parameter Menu>> Remote Menu PORT2 RS485 Baudrate 09600	This Parameter defines the data transfer speed (Baudrate) of RS485-Bus. 4,800bps or9,600 bps (Bit per second) or 14,400 bps or 19,200 bps.
Parameter 14	<<Parameter Menu>> Remote Menu PORT2 RS485 Errorcheck EVEN	This Parameter defines the check bit of RS485-Bus. EVEN/ODD/NONE

Programming：

Sequence Menu：

Parameter 1	<<Parameter Menu>> Sequence Menu Remote Mode SLAVE	This Parameter defines the controller run as SLAVE or MASTER via RS485-Bus. This parameter is available for port1.
Parameter 2	<<Parameter Menu>> Sequence Menu Seq - Units 00008	This Parameter setup how many units run under interlock control. It was only available when controller run as "MASTER " unit. (1~8)
Parameter 3	<<Parameter Menu>> Sequence Menu Seq. Load Delay 00030sec	This Parameter defines the controller when the pipeline pressure to set a lower pressure limit, standby machine for load in need of continued delay time. (1~120 sec)
Parameter 4	<<Parameter Menu>> Sequence Menu Seq. Idle Delay 00030sec	This Parameter defines the controller when the pipeline pressure to set a lower pressure limit, standby machine for unload in need of continued delay time. (1~120 sec)
Parameter 5	<<Parameter Menu>> Sequence Menu Seq. Change Time 100H	This Parameter defines the controller when the same pipeline interlock systems operation time difference between the maximum and minimum values for this parameter, system can forced to start next need to start the machine, when to 0 to cancel the rotation time. (0~600 hours)
Parameter 6	<<Parameter Menu>> Sequence Menu Seq.Sl.Strt.Del 0030sec	This Parameter defines the controller when the pipeline pressure to set a lower pressure limit, standby machine for start in need of continued delay time. (1~120 sec)

Programming：

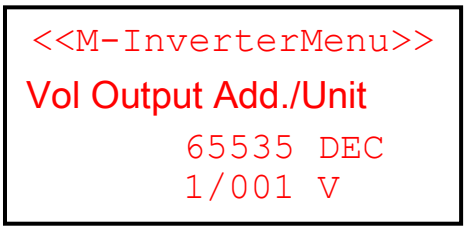
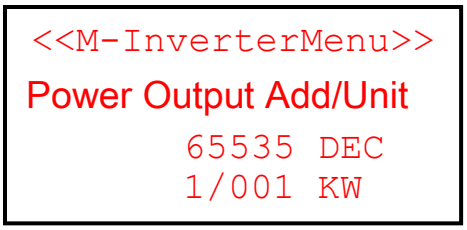
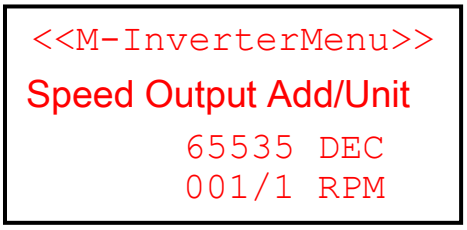
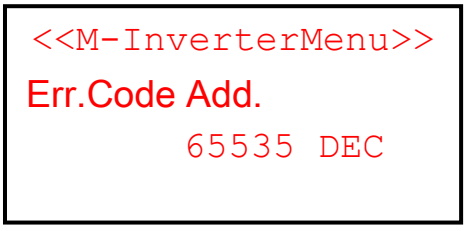
Inverter Control Menu：

Parameter 1	<<Parameter Menu>> Inverter Control Menu Motor Inverter Control Off	This parameter defines the inverter control mode. **Off** = Inverter control de-activated **ON** = Inverter control enable
Parameter 2	<<Parameter Menu>> Inverter Control Menu Motor Inverter Param Set	Motor inverter parameter setting.
Parameter 3	<<Parameter Menu>> Inverter Control Menu M.Export H-Frequency 060.0Hz	Motor Max. Frequency It meant the output signal of controller is 20mA at Motor Max. Frequency. (40Hz, …,400Hz) It takes about 30s to from the min. frequency (0Hz) up to the max. frequency (Motor Max. Frequency).
Parameter 4	<<Parameter Menu>> Inverter Control Menu Motor High Frequency 060.0Hz	The highest frequency of main motor operating. (If analog output set 6 in Table 4, the frequency should be set as same as Parameter 11.) (30,…,400 Hz)
Parameter 5	<<Parameter Menu>> Inverter Control Menu Motor Low Frequency 024.0Hz	The lowest frequency of main motor operating. (10,…,100 Hz)
Parameter 6	<<Parameter Menu>> Inverter Control Menu Control pressure 06.60bar	The target pressure value for a compressor variable frequency control. (Load pressure < = Target pressure < unload pressure)

Parameter 7	<<Parameter Menu>> Inverter Control Menu Fan Inverter Control Off	Activate fan motor variable frequency control function.
Parameter 8	<<Parameter Menu>> Inverter Control Menu Fan Inverter Param Set	Fan inverter parameter setting.
Parameter 9	<<Parameter Menu>> Inverter Control Menu F.Export H-Frequency 060.0Hz	Fan Max. frequency It meant the output signal of controller is 20mA at Fan Max. Frequency. (40 …400Hz) It takes about 30s to from the min. frequency (0Hz) up to the max. frequency (Fan Max. Frequency).
Parameter 10	<<Parameter Menu>> Inverter Control Menu Fan High Frequency 060.0Hz	The highest frequency of fan motor operating. (10,…,400 Hz)
Parameter 11	<<Parameter Menu>> Inverter Control Menu Fan Low Frequency 024.0Hz	The lowest frequency of fan motor operating. (10,…,100 Hz)
Parameter 12	<<Parameter Menu>> Inverter Control Menu Control Temperature 085.0℃	The target temperature value for a fan variable frequency control. (Fan start temp. < = Target temp. < Fan stop temp.)

M-Inverter Menu：

Parameter 1	<<M-InverterMenu>> Inverter Unit No/Mode Off Controller PID	Device address and control mode of VFD. Inverter NO. range（Off，1，…，255） Mode range（Controller PID，VFD PID） On the menu, for the first time, Pressing the shift key ↵ to change the Inverter NO.. After the modification is completed, press the info-key F to save.Then press the shift key ↵ again to chang the Inverter Mode, After the modification is completed, press the info-key F to save.
Parameter 2	<<M-InverterMenu>> Run Freq.Add./Unit 65535 DEC	It indicates the address of the buffer that stores the run frequency data and the run frequency data unit. Address range（0，…，65534，65535（This function is not valid）） Function is not valid means controller will neglect any read or write instructions from inverter at this situation. Unit range（1/1，1/10，1/100） At the menu, For the first time, Pressing the shift key ↵ to change the Inverter NO.. After the modification is completed, press the info-key F to save.Then press the shift key ↵ again to chang the Inverter Mode, After the modification is completed, press the info-key F to save.
Parameter 3	<<M-InverterMenu>> Curr.Output Add./Unit 65535 DEC 1/001 A	It indicates the address of the buffer that stores the Current Output data and the Current Output data unit Address range（0，…，65534，65535（This function is not valid）） Function is not valid means controller will neglect any read or write instructions from inverter at this situation. Unit range（1/1，1/10，1/100） The setting method of Address and unit refer to "Run Freq. Add. / Unit" setting method of address and unit.

Parameter 4		It indicates the address of the buffer that stores the Voltage Output data and the Voltage Output data unit Address range（0，…，65534，65535（This function is not valid）) Function is not valid means controller will neglect any read or write instructions from inverter at this situation. Unit range（1/1，1/10，1/100） The setting method of Address and unit refer to "Run Freq. Add. / Unit" setting method of address and unit.
Parameter 5		It indicates the address of the buffer that stores the Power Output data and the Power Output data unit. Address range（0，…，65534，65535（This function is not valid） Function is not valid means controller will neglect any read or write instructions from inverter at this situation. Unit range（1/1，1/10，1/100）) The setting method of Address and unit refer to "Run Freq. Add. / Unit" setting method of address and unit.
Parameter 6		It indicates the address of the buffer that stores the Speed Output data and the Speed Output data unit. Address range（0，…，65534，65535（This function is not valid）) Function is not valid means controller will neglect any read or write instructions from inverter at this situation. Unit range（1/1，1/10，1/100） The setting method of Address and unit refer to "Run Freq. Add. / Unit" setting method of address and unit.
Parameter 7		It indicates the address of the buffer that stores the Err.Code data. Address range（0，…，65534，65535（This function is not valid）） Function is not valid means controller will neglect any read or write instructions from inverter at this situation. The setting method of Address refer to "Run Freq. Add. / Unit"setting method

		of address.
Parameter 8	<<M-InverterMenu>> Err.Bit Output Add. 65535 DEC 0/16 BIT	It indicates the address of the buffer that stores the Err.Bit Output data and the Bit of Error. Address range（0，…，65534，65535（This function is not valid）） Function is not valid means controller will neglect any read or write instructions from inverter at this situation. Bit range（0,…，15） The setting method of Address and Bit refer to "Run Freq. Add. / Unit" setting method of address and unit.
Parameter 9	<<M-InverterMenu>> Command Add./Unit 65535 DEC 1/00001	It indicates the address of the buffer that stores the Command data and the Command data unit Address range（0，…，65534，65535（This function is not valid）） Function is not valid means controller will neglect any read or write instructions from inverter at this situation. Unit range（1/1,1/10,1/100,1/1000,1/10000） The setting method of Address and unit refer to "Run Freq. Add. / Unit" setting method of address and unit.
Parameter 10	<<M-InverterMenu>> Start/Stop Add./Bit 65535 DEC 0/16 BIT	It indicates the address of the buffer that stores the Start/Stop data and the Bit of Start/Stop. Address range（0，…，65534，65535（This function is not valid）） Function is not valid means controller will neglect any read or write instructions from inverter at this situation. Bit range（0,…，15） The setting method of Address and Bit refer to "Run Freq. Add. / Unit" setting method of address and unit.

Parameter 11	<<M-InverterMenu>> Command Range MIN 00000 MAX 00600	The minimum and maximum value of the VFD command range is as below： MIN range（0，…，65535） MAX range（0，…，65535） The decimal digits according to the unit of the given instruction When the unit is 1, no decimal； When the unit is 1/10, accuracy of 0.1； When the unit is 1/100, accuracy of 0.01； When the unit is 1/1000, accuracy of 0.001； When the unit is 1/10000, accuracy of 0.0001. The setting method of MIN and MAX refer to "Run Freq. Add. / Unit" setting method of address and unit.

F-Inverter Menu：

Parameter 1	<<F-InverterMenu>> Inverter Unit No/Mode Off Controller PID	Device address and control mode of VFD. Inverter NO. range（Off，1，…，255） Mode range（Controller PID，VFD PID） At the menu, for the first time, Pressing the shift key ↵ to change the Inverter NO.. After the modification is completed, press the info-key F to save.Then press the shift key ↵ again to chang the Inverter Mode, After the modification is completed, press the info-key F to save.
Parameter 2	<<F-InverterMenu>> Run Freq.Add./Unit 65535 DEC	It indicates the address of the buffer that stores the Run Frequency data and the Run Frequency data unit. Address range（0，…，65534，65535（This function is not valid）） Function is not valid means controller will neglect any read or write instructions from inverter at this situation. Unit range（1/1，1/10，1/100） At the menu, for the first time, Pressing the shift key ↵ to change the Inverter NO.. After the modification is completed, press the info-key F to save.Then press the shift key ↵ again to chang the Inverter Mode, After the

		modification is completed, press the info-key F to save.
Parameter 3	<<F-InverterMenu>> Curr.Output Add./Unit 65535 DEC 1/001 A	It indicates the address of the buffer that stores the Current Output data and the Current Output data unit. Address range（0，…，65534，65535（This function is not valid）） Function is not valid means controller will neglect any read or write instructions from inverter at this situation. Unit range（1/1，1/10，1/100） The setting method of Address and unit refer to "Run Freq. Add. / Unit" setting method of address and unit.
Parameter 4	<<F-InverterMenu>> Vol Output Add./Unit 65535 DEC 1/001 V	It indicates the address of the buffer that stores the Voltage Output data and the Voltage Output data unit. Address range（0，…，65534，65535（This function is not valid）） Function is not valid means controller will neglect any read or write instructions from inverter at this situation. Unit range（1/1，1/10，1/100） The setting method of Address and unit refer to "Run Freq. Add. / Unit" setting method of address and unit.
Parameter 5	<<F-InverterMenu>> Power Output Add/Unit 65535 DEC 1/001 KW	It indicates the address of the buffer that stores the Power Output data and the Power Output data unit. Address range（0，…，65534，65535（This function is not valid）） Function is not valid means controller will neglect any read or write instructions from inverter at this situation. Unit range（1/1，1/10，1/100） The setting method of Address and unit refer to "Run Freq. Add. / Unit" setting method of address and unit.

Parameter 6	<<F-InverterMenu>> Speed Output Add/Unit 65535 DEC 001/1 RPM	It indicates the address of the buffer that stores the Speed Output data and the Speed Output data unit. Address range（0，…，65534，65535（This function is not valid）） Function is not valid means controller will neglect any read or write instructions from inverter at this situation. Unit range（1/1，1/10，1/100） The setting method of Address and unit refer to "Run Freq. Add. / Unit" setting method of address and unit.
Parameter 7	<<F-InverterMenu>> Err.Code Add. 65535 DEC	It indicates the address of the buffer that stores the Err.Code data. Address range（0，…，65534，65535（This function is not valid）） Function is not valid means controller will neglect any read or write instructions from inverter at this situation. The setting method of Address refer to "Run Freq. Add. / Unit" setting method of address.
Parameter 8	<<F-InverterMenu>> Err.Bit Output Add. 65535 DEC 0/16 BIT	It indicates the address of the buffer that stores the Err.Bit Output data and the Bit of Error. Address range（0，…，65534，65535（This function is not valid）） Function is not valid means controller will neglect any read or write instructions from inverter at this situation. Bit range（0,…，15） The setting method of Address and Bit refer to "Run Freq. Add. / Unit" setting method of address and unit.
Parameter 9	<<F-InverterMenu>> Command Add./Unit 65535 DEC 1/00001	It indicates the address of the buffer that stores the Command data and the Command data unit. Address range（0，…，65534，65535（This function is not valid）） Function is not valid means controller will neglect any read or write instructions from inverter at this situation. Unit range（1/1,1/10,1/100,1/1000,1/10000） The setting method of Address and unit refer to "Run Freq. Add. / Unit" setting

		method of address and unit.
Parameter 10	<<F-InverterMenu>> Start/Stop Add./Bit 65535 DEC 0/16 BIT	It indicates the address of the buffer that stores the Start/Stop data and the Bit of Start/Stop. Address range（0，…，65534，65535（This function is not valid）） Function is not valid means controller will neglect any read or write instructions from inverter at this situation. Bit range（0,…，15） The setting method of Address and Bit refer to "Run Freq. Add. / Unit" setting method of address and unit.
Parameter 11	<<F-InverterMenu>> Command Range MIN 00000 MAX 00600	The minimum and maximum value of the VFD command range is as below： MIN range（0，…，65535） MAX range（0，…，65535） The decimal digits according to the unit of the given instruction When the unit is 1, no decimal； When the unit is 1/10, accuracy of 0.1； When the unit is 1/100, accuracy of 0.01； When the unit is 1/1000, accuracy of 0.001； When the unit is 1/10000, accuracy of 0.0001. The setting method of MIN and MAX refer to "Run Freq. Add. / Unit" setting method of address and unit.

Programming：

Voltage Menu：

Parameter 1	<<Parameter Menu>> Voltage Menu Rated Voltage 380.0V	Parameter 1 defines main motor rated voltage.

Parameter 2	<<Parameter Menu>> Voltage Menu Voltage High 110%	Parameter 2 defines allowable higher percentage of main motor rated voltage. (100...115%)
Parameter 3	<<Parameter Menu>> Voltage Menu Voltage Low 90%	Parameter 3 defines allowable lower percentage of main motor rated voltage. (85...100%)
Parameter 4	<<Parameter Menu>> Voltage Menu Voltage Check enable	Parameter 4 defines voltage check protection for main motor. (disable/enable) VSD model(disable)

Programming：

Factory Maintain Menu：

Parameter 1	<<Parameter Menu>> Factory Maintain Menu Factory Maintain Fun. off	A parameter to set vendor maintenance function.
Parameter 2	<<Parameter Menu>> Factory Maintain Menu Factory Maintain Time 00500H	A parameter to set vendor maintenance time.

Parameter 3	<<Parameter Menu>> Factory Maintain Menu Mod. Load time 00000H	A parameter to modify the load operating time.
Parameter 4	<<Parameter Menu>> Factory Maintain Menu Mod. Total time 00000H	A parameter to modify the total operating time.
Parameter 5	<<Parameter Menu>> Factory Maintain Menu Lowest Temperature 0 °C	This parameter defines the frost-protection temperature limit. To be updated.

Additional codes：

Code menu - - - - - - - - - - Please insert Code : 0__ Code menu - - - - - - - - - - Please insert Code : 03__	Pressing the info-key F followed by the down-key ↓ pressed together, the main screen will display the Code-menu. The up-key ↑ increases values. The down-key ↓ decreases values.
Code menu - - - - - - - - - - Please insert Code : 030_	The enter-key ↵ saves the last input and the next value can be programmed.
Code menu - - - - - - - - - - Please insert Code : 0302	If the third digit is programmed pressing the info-key F will activate the function.

Code List：

0101 = Switch to English screen
0102 = Switch to Traditional Chinese screen
0103 = Switch to Simplified Chinese screen
0104 = Switch to Portuguese screen
0105 = Switch to Spanish screen
0201 = Clear fault history messages
0202 = Clear alarm history messages
0301 = Clear alarm and service message on control panel (After eliminating trip trouble, enter the code to switch off the fault light on control panel)
0302 = Clear trip message on control panel (After eliminating trip trouble, enter the code to switch off the fault light on control panel)
0541 = All parameters are restored to the factory default

Password List：

1111= User

Emergency stop：

////////\\\\\\\\ << Emergency >> << S-T-O-P >> \\\\\\\\//////////	If the Emergency Stop Button was pushed the display shows “Emergency stop” and the compressor stopped immediately. The compressor can’t be started now. After release (pull Emergency Stop Button) the controller changes to normal operating mode.

Table1:SC-3000 Controller Parameters

Main Menu	Item	Sub Menu	Range	Default	Description
Pressure menu	**1**	Cut-in 1st Band	1~(2)-0.5 Bar	6.0bar	Cut-in pressure of the 1st pressure range: (1,0 ... Cut-out pressure 1st range – 0,5)
	2	Cut-out 1st Band	(1)+0.5~(10)-0.5 Bar	7.1bar	Cut-out pressure of the 1st pressure range: (Cut-in pressure 1st range + 0.5 …Sys.safety limit-0.5)
	3	Cut-in 2nd Band	1~(4)-0.5 Bar	6.5Bar	Cut-in pressure of the 2nd pressure range: (4, ... ,Cut-out pressure 2nd range – 0.5)
	4	Cut-out 2nd Band	(3)+0.5~(10) Bar	7.5Bar	Cut-out pressure of the 2nd pressure range: (Cut-in pressure 2nd range + 0,5 …Sys.safety limit-0.5)
	5	Unit for Pressure	bar/psi/Mpa	Bar	Pressure unit selection
	6	Set Press Range	1st Band/ 2nd Band/External switch	1st Band	Pressure Selection
	7	Operating Mode	Automatic/Manual	Automatic	Compressor shuts down after idling after-run time.
	8	Method of Drive	Star-Delta/Direct/Inverter/Pulse	Star-Delta	Define compressor drive method
	9	Sys.press cut-in	0.5~12 Bar	0.5 Bar	This parameter defines the system pressure cut-in limit.
	10	Sys.safety limit	1~ Pressure Sensor Range-0.5 Bar	12Bar	This parameter defines the safety system pressure cut-out limit.
	11	Build up limit	0.5~4 Bar	1 Bar	This parameter defines a system pressure build up limit.
	12	Max difference	0.5~2.5 Bar	1.2 Bar	This parameter is the maximum allowable pressure difference between system pressure and net pressure.
Pressure-time menu	**1**	Safety limit delay	02~20Sec	02Sec	This parameter defines the delayed shut-down time for the safety shut-down pressure value.

	2	Difference delay	02~300Sec	90Sec	This parameter defines the delayed shut-down time for the safety shut-down if the difference between the system and net pressure becomes greater than the set value.
	3	Build up delay	02~99Sec	30Sec	This parameter defines the time in which the compressor has to reach a pre-set system pressure after the load starts.
	4	Intake Filt. Delay	02~300Sec	90Sec	This parameter defines the time-delay for a warning message with intake filter.
	5	Oil filter delay	02~300Sec	90Sec	This parameter defines the time-delay for a warning message with oil filter.
Temperature menu	**1**	Unit for temperature	℃/℉	℃	Temperature unit selection.
	2	Frost P. warn up	10~30℃	10℃	Trip when the temperature is above the frost- protection upper limit.
	3	FP Mot start delay	02~99Sec	03Sec	This parameter defines the time-delay for start the compressor at frost-protection temperature.
	4	Shut-down limit	85~110℃	100℃	This parameter defines the upper temperature shut-down limit.
	5	Compressor temp. Warn	85~110℃	95℃	This parameter defines the upper temperature warning limit.
	6	Frost Protection	ON/OFF	OFF	Frost protection function activation.
	7	Rated Fan Control	Enable/disable	disable	Temperature control option for fan motor operation.
	8	Fan Motor On temp.	(9)+10~110℃	87℃	Temperature of fan motor start.
	9	Fan Motor Off temp.	25~(8)-10℃	73℃	Temperature of fan motor stop.
Time/Date menu	**1**	Set date		05.06	Set actual date at moment.
	2	Set year		2012	Set actual year at moment.
	3	Set time		09.45	Set actual time at moment.
Motor Menu	**1**	Max Current	Rated Current*S.F.	Rated Current*S.F.	Set allowable max. current of main motor.
	2	Rated Current	3~800A	50A	Set rated motor current.
	3	CT Rate	20~800	100/0.1	Set main motor transmission ratio of current transformer.
	4	Fan Motor CT Rate	5~50/5mA	30/5mA	Set fan motor transmission ratio of current transformer.
	5	Max Fan Current	1~30A	By order	Set rated fan motor current.

	6	Phase-sequence	disable/enable	disable	Disable/enable Phase-Sequence protection.
	7	Motor Overload Check	disable/enable	disable	Disable/enable Motor Overload Check protection.
	8	Fan Motor Overload	disable/enable	disable	Disable/enable Fan Motor Overload protection.
Motor-time menu	**1**	Run-on time	2~20Sec	8Sec (< = 100HP) 10~12Sec (> = 125HP)	This parameter defines the run-on time of the main drive motor before switching from star to delta.
	2	Star-delta time	20~99ms	20ms	This parameter defines the star delta switch over time.
	3	Min.run time	0~30min	1min	This parameter defines the minimum motor run time between motor's start and motor's stop.
	4	Idle time	0~50min	20min	This parameter defines the motor after-run time (idling-time).
	5	Delay power-fail	0~60s	0s(disable)	This parameter defines the delayed power up time after power failure.
	6	Dryer fail delay	0~20min	1min	This parameter defines the time-delay for a warning message with missing dryer.
	7	Stop Delay	1~250Sec	15Sec	This parameter defines the run time-delay after manual stop.
	8	Idle after Start	1~30Sec	3Sec	This parameter defines the idle time between motor start-up and first load.
	9	Fan Stop Delay	0~20min	0min	This parameter defines the fan's stop time after motor's stop.
Service menu	**1**	Motor service	100~30000	2000Hr	Enable/disable motor service prompt and modify the service prompt time.
	2	Compressor Service	100~20000	2000Hr	Enable/disable compressor service prompt and modify the service prompt time.
	3	Oil-filter service	100~10000	500Hr	Enable/disable oil filter service prompt and modify the service prompt time.
	4	Oil service	100~16000	500Hr	Enable/disable lube service prompt and modify the service prompt time.
	5	Belt service	100~25000	4000Hr	Enable/disable belt service prompt and modify the service prompt time.

	6	Separator service	100~10000	4000Hr	Enable/disable oil fine separator service prompt and modify the service prompt time.
	7	Air-filter service	100~10000	2000Hr	Enable/disable air filter service prompt and modify the service prompt time.
	8	Cycle counter	10000~200000	200000	Enable/disable Service Reminding service interval prompt and modify the service prompt cycles.
Factory menu	**1**	System pr. sensor	disable/enable	enable	Enable/disable system pressure measurement.
	2	Temp offset cal.	90~110%	By order	Correct temperature sensor error within 10% .
	3	Net press.cal	90~110%	By order	Correct net pressure sensor error within 10%.
	4	System press.cal.	90~110%	By order	Correct system pressure error within 10%.
	5	CurrentA cal.	90~110%	By order	Correct main motor Phase A current error within 10%.
	6	CurrentB cal.	90~110%	By order	Correct main motor Phase B current error within 10%.
	7	Fan CurrentA cal.	90~110%	By order	Correct fan motor Phase A current error within 10%.
	8	Fan CurrentB cal.	90~110%	By order	Correct fan motor Phase B current error within 10%
	9	Voltage cal.	90~110%	By order	Correct voltage transformer measurement error within 10%.
	10	Analog Output A Cal.	80~120%	By order	
	11	Analog Output B Cal.	80~120%	By order	
	12	Mod. load count	0~90000		Preset the counting of load/unload.
	13	Mod. Motor Strts	0~65000		Preset the motor start times.
	14	Pressure Sensor Range	2~25bar	16bar	Set pressure sensor range
Sequence menu	**1**	Remote Input Mode	Start/Close	Close	Remote / Local control switches
	2	Input reversed	0000 0000 ~1111 1111	0000 0000	Set reverse bit of input port.
	3	Output reversed	0000 0000 ~1111 1111	0000 0000	Set reverse bit of output port.
	4	Input Function	IN 0~7 (0~26)	IN0:0	Set function of digital input (See

				IN1:1 IN2:2 IN3:3 IN4:4 IN5:5 IN6:6 IN7:15	Table 2).
	5	Output Function	OUT 0~7 (0~10)	OUT0:3 OUT1:4 OUT2:5 OUT3:6 OUT4:7 OUT5:8 OUT6:0 OUT7:1	Set function of digital output (See Table 3).
	6	Analog Output Fun.	0~12	12	Set function of analog output(See Table 4).
	7	Analog Input Fun.			No Function
	8	Input Delays	off~60Sec	3Sec	Set the delay to determine the validity of digital input.
	9	PORT1 RS485 Address	1~127	1	Set PORT1 Modbus station of the control unit.
	10	PORT1 RS485 Baud rate	4800/9600/14400 /19200 BPS	9600	Set PORT1 Baud Rate.
	11	PORT1 RS485 Error Check	EVEN/ODD/ NONE	EVEN	Set PORT1 Address parity bit.
	12	PORT2 RS485 Address	1~127	1	Set PORT2 Modbus station of the control unit.
	13	PORT2 RS485 Baud rate	4800/9600/14400 /19200 BPS	9600	Set PORT2 Baud Rate.
	14	PORT2 RS485 Error Check	EVEN/ODD/ NONE	EVEN	Set PORT1 Address parity bit.
Hardware menu	**1**	Remote Mode	Master/ Slave	Slave	Each unit can be sorted automatically in automatic mode via the operating time of each unit and can be sorted manually in manual mode via the unit station number.
	2	Seq - Units	1~8	8	Set compressor quantity to be sequenced.
	3	Seq. Load Delay	1~120Sec	30Sec	Set sequence control load delay.

	4	Seq. Idle Delay	1~120Sec	30Sec	Set sequence control idle delay.
	5	Seq. Change Time	1~600Hr	100Hr	Set the operating interval changing from a compressor to another via auto-sequencing method.
	6	Seq.Sl.Strt.Del.	1~120Sec	30Sec	Set sequence control start interval.
Inverter control menu	**1**	Motor Inverter Control	ON/OFF	OFF	Enable/disable variable speed control
	2	Motor Inverter Param Set	Brand		See Motor VFD parameter configuration table
	3	M.Export H-Frequency	40~400Hz	60Hz	Set the corresponding frequency of the controller output 20mA current.
	4	Motor High Frequency	30~100Hz	60Hz	Set allowable highest frequency of main motor working.
	5	Motor Low Frequency	10~100Hz	24Hz	Set allowable lowest frequency of main motor working.
	6	Control pressure	Cut in-Cut out pressure	By order	Target pressure of variable speed control.
	7	Fan Inverter Control	ON/OFF	OFF	Enable/disable variable speed control of fan motor.
	8	Fan Inverter Param Set	Brand		See Fan VFD parameter configuration table
	9	F.Export H-Frequency	40~400Hz	60Hz	Set the corresponding frequency of the controller output 20mA current.
	10	Fan High Frequency	10~400Hz	60Hz	Set highest frequency of fan motor working.
	11	Fan Low Frequency	10~100Hz	24Hz	Set lowest frequency of fan motor working.
	12	Control Temperature	Stop-Start temperature	85℃	Set target temperature of fan motor variable speed control.
Voltage Menu	**1**	Rated Voltage	90~470V	By order	Set rated voltage of main motor
	2	Voltage High	100~115%	110%	Set allowable voltage high of power source.
	3	Voltage Low	85~100%	90%	Set allowable voltage low of power source.
	4	Voltage Check	disable/enable	disable	Disable/enable Voltage Check protection.
Factory Maintain Menu	**1**	Factory Maintain Fun.	Off/On	Off	Set vendor maintenance function.
	2	Factory Maintain Time	0~25000Hr	500Hr	Set vendor maintenance time.
	3	Mod. load time	0~90000Hr		Preset the operating time of loading.
	4	Mod. total time	0~60000Hr		Preset the total operating time.

	5	Lowest Temperature	-20~0℃	0℃	When the temperature is lower than the setting, no startup or activate heating function.

Motor VFD parameter configuration table:

Motor VFD parameter configuration	1	Inverter Unit No/Mode	NO.：off~255 Mode： Controller PID/VFD PID	off Controller PID	Set communication address of VFD and Control mode of VFD
	2	Run Freq.Add./Unit	Add.： 0~65534 Unit： 1/1~1/100	Add. 65535 Unit 1/1	Set the address of the buffer that stores the Run Freq. Data and the Run Freq. data unit（65535 indicates that this function is closed）
	3	Curr.Output Add./Unit	Add.： 0~65534 Unit： 1/1~1/100	Add. 65535 Unit 1/1	Set the address of the buffer that stores the Current Output data and the Current Output data unit（65535 indicates that this function is closed）
	4	Vol Output Add./Unit	Add.： 0~65534 Unit： 1/1~1/100	Add. 65535 Unit 1/1	Set the address of the buffer that stores the Voltage Output data and the Voltage Output data unit（65535 indicates that this function is closed）
	5	Power Output Add/Unit	Add.： 0~65534 Unit： 1/1~1/100	Add. 65535 Unit 1/1	Set the address of the buffer that stores the Power Output data and the Power Output data unit（65535 indicates that this function is closed）
	6	Speed Output Add/Unit	Add.： 0~65534 Unit： 1/1~1/100	Add. 65535 Unit 1/1	Set the address of the buffer that stores the Speed Output data and the Speed Output data unit（65535 indicates that this function is closed）
	7	Err.Code Add.	0~65534	65535	Set the address of the buffer that stores the Error Code data（（65535 indicates that this function is closed）
	8	Err.Bit Output Add./Bit	Add.： 0~65534 Bit:0~15	Add. 65535 Bit 0/15	Set the address of the buffer that stores the Error Bit Output data and the Error Bit Output data Bit（65535 indicates that this function is closed）
	9	Command Add./Unit	Add.： 0~65534 Unit： 1/1~1/10000	Add. 65535 Unit 1/1	Set the address of the buffer that stores the Command data and the Command data unit（65535 indicates that this function is closed）

	10	Start/Stop Add./Bit	Add.： 0~65534 Bit:0~15	Add. 65535 Bit 0/15	Set the address of the buffer that stores the Start/Stop data and the Start/Stop data Bit（65535 indicates that this function is closed）
	11	Command Range	MIN 0~65535 MAX 0~65535	MIN 0 MAX 600	Set the minimum and maximum value of the VFD to receive instruction data.（65535 indicates that this function is closed）

Fan VFD parameter configuration table:

Motor VFD parameter configuration	1	Inverter Unit No/Mode	NO.：off~255 Mode： Controller PID/VFD PID	off Controller PID	Set communication address of VFD and Control mode of VFD
	2	Run Freq.Add./Unit	Add.： 0~65534 Unit： 1/1~1/100	Add. 65535 Unit 1/1	Set the address of the buffer that stores the Run Freq. Data and the Run Freq. data unit（65535 indicates that this function is closed）
	3	Curr.Output Add./Unit	Add.： 0~65534 Unit： 1/1~1/100	Add. 65535 Unit 1/1	Set the address of the buffer that stores the Current Output data and the Current Output data unit（65535 indicates that this function is closed）
	4	Vol Output Add./Unit	Add.： 0~65534 Unit： 1/1~1/100	Add. 65535 Unit 1/1	Set the address of the buffer that stores the Voltage Output data and the Voltage Output data unit（65535 indicates that this function is closed）
	5	Power Output Add/Unit	Add.： 0~65534 Unit： 1/1~1/100	Add. 65535 Unit 1/1	Set the address of the buffer that stores the Power Output data and the Power Output data unit（65535 indicates that this function is closed）
	6	Speed Output Add/Unit	Add.： 0~65534 Unit： 1/1~1/100	Add. 65535 Unit 1/1	Set the address of the r buffer that stores the Speed Output data and the Speed Output data unit（65535 indicates that this function is closed）

	7	Err.Code Add.	0~65534	65535	Set the address of the buffer that stores the Error Code data （（65535 indicates that this function is closed）
	8	Err.Bit Output Add./Bit	Add.：0~65534 Bit:0~15	Add. 65535 Bit 0/15	Set the address of the buffer that stores the Error Bit Output data and the Error Bit Output data Bit （65535 indicates that this function is closed）
	9	Command Add./Unit	Add.：0~65534 Unit：1/1~1/10000	Add. 65535 Unit 1/1	Set the address of the buffer that stores the Command data and the Command data unit（65535 indicates that this function is closed）
	10	Start/Stop Add./Bit	Add.：0~65534 Bit:0~15	Add. 65535 Bit 0/15	Set the address of the buffer that stores the Start/Stop data and the Start/Stop data Bit（65535 indicates that this function is closed）
	11	Command Range	MIN 0~65535 MAX 0~65535	MIN 0 MAX 600	Set the minimum and maximum value of the VFD to receive instruction data.（65535 indicates that this function is closed）

Digital I/O and Analog Input/output Function Description

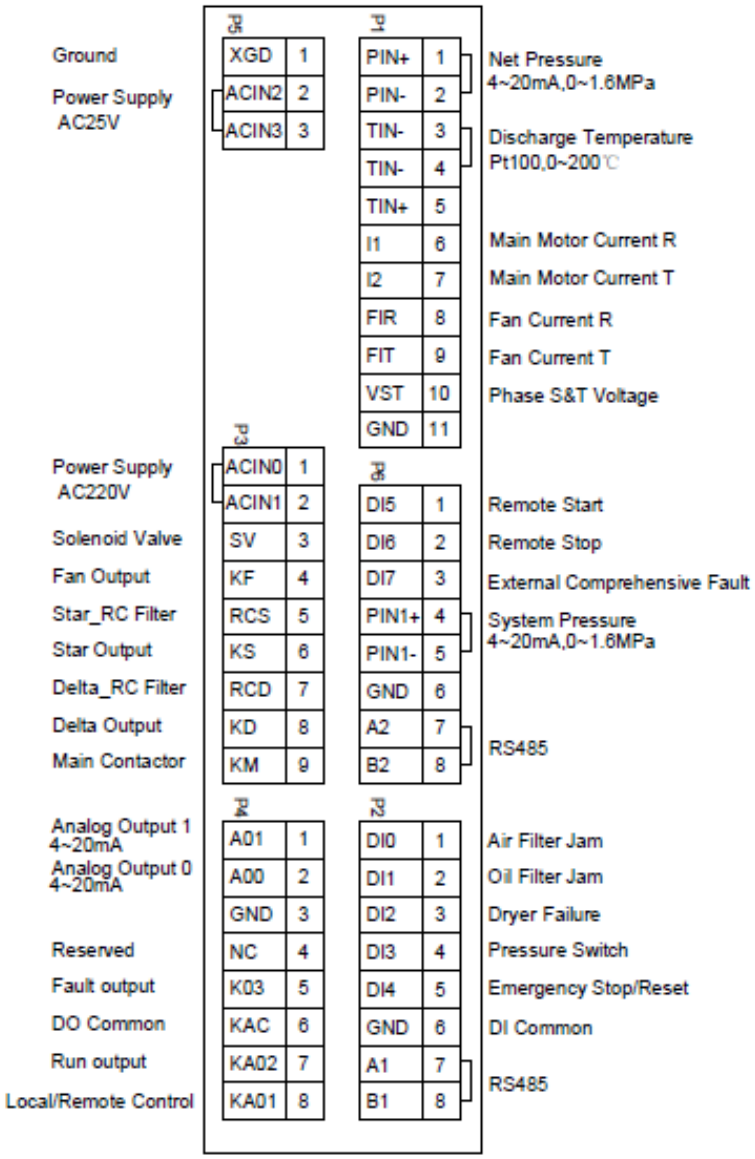


Table 2: Digital Input Function Description

0	Air Filter Differential Pressure	The input is activated, "Air Filter jam" alerted, but not to trip.
1	Oil Filter Differential Pressure	The input is activated, "Oil Filter jam" alerted, but not to trip.
2	Oil Fine Separator Differential Pressure	The input is activated, "Separator jam" alerted, but not to trip.
3	Pressure Switch	The input is activated, the compressor unloads.
4	Emergency Stop(Normally Closed)	Emergency stop.
5	Remote Start	The input is activated in remote mode, the compressor runs.
6	Remote Stop	The input is activated, the compressor stops.
7	Receiver Temperature Switch	The input is activated, "Tank Temp.High" alerted and tripped.
8	Motor Overload	The input is activated, "Motor Overload " alerted and tripped.
9	Fan Overload	The input is activated, "Fan Motor Overload " alerted and tripped.
10	Motor Temperature Switch	The input is activated, "High Motor Temperature" alerted and tripped.
11	Temperature Switch of Compressed Air Tank	The input is activated, "Air Tank Temp High" alerted and tripped.
12	Inlet Pressure Switch	The input is activated, "Input Pressure Err" alerted and tripped.
13	Oil Pressure Switch	The input is activated, "Low Oil Pressure" alerted and tripped.
14	Outer Phase Sequence	The input is activated, "Phase Blunder" alerted and tripped.
15	Electrical Fault	The input is activated, "Electrical failure" alerted and tripped.
16	Dryer Fault	The input is activated, "Dryer Err" alerted and tripped.
17	Motor Run Feedback	Main motor abnormality happens, alerted and tripped.
18	Fan Run Feedback	Fan motor abnormality happens, alerted and tripped.

19	Low Water Level	The input is activated, "Water Level Low" alerted and tripped.
20	High Water Level	The input is activated, "Water Level High" alerted and tripped.
21	Water Loss	The input is activated, "Lost cooling water" alerted and tripped.
22	Inverter Fault	The input is activated, "Inverter Err" alerted and tripped.
23	Water Pump Overload	The input is activated, "Water Pump OverLoad " alerted and tripped.
24	Oil Pump Overload	The input is activated, "Oil Pump OverLoad" alerted and tripped.
25	Soft Start Fault	The input is activated, "Soft Start Err " alerted and tripped.
26	High Voltage Cabinet Fault	The input is activated, "High Voltage Cabinet Fault" alerted and tripped.
27	External switch	The input is activated, the compressor load.

Note: Not all values can be used, some applications maybe have difference.

Table 3: Digital Output Function Description

0	Running Output	Motor is running.
1	Fault Output	Compressor faulted and tripped.
2	Alarm Output	Compressor alerted or service reminds.
3	M	Main contactor output.
4	D	Motor Delta contactor output.
5	S	Motor Star contactor output.
6	F	Fan contactor output.
7	DF	Load valve output.
8	Remote Control	Remote control output.
9	High Discharge Temperature	Discharge temperature too high and trip.
10	Variable Frequency Status	The status output of inverter controlled.

Note: Not all values can be used, some applications maybe have difference.

Table 4: Analog Output Function Description

0	Discharge Temperature	0-200℃
1	Reserved	
2	Net Pressure	0- Sensor maximum range.
3	System Pressure	0- Sensor maximum range.
4	Phase R of Motor Current	0- Current transformer maximum range.
5	Motor Voltage	0- Voltage transformer maximum range.
6	Variable Frequency of Motor	Directly regulate motor speed of rotation by inverter.
7	Target Pressure	0- Sensor measurement range.
8	Phase T of Motor Current	0- Current transformer maximum range.
9	Variable Frequency of Fan	Directly regulate fan speed of rotation by inverter.
10	Phase R of Fan Current	0- Current transformer maximum range.
11	Phase T of Fan Current	0- Current transformer maximum range.
12	Variable Frequency Method Compliant with SE	Pressure output of original SE method.

Note: Not all values can be used, some applications maybe have difference.

Table 5: Alarm Meaning

Item	Alarm Content	Description	Action
0	Air-filter service	Air filter used time reaches a preset value, remind user to replace air filter.	Alert, not trip
1	Air Filter Jam	An input bit whose function is programmed as 0 is active, remind air filter jam.	Alert, not trip
2	Oil-filter service	Oil filter used time reaches a preset value, remind user to replace oil filter.	Alert, not trip
3	Oil Filter Jam	An input bit whose function is programmed as 1 is active, remind oil filter jam.	Alert, not trip
4	Separator service	Oil fine separator used time reaches a preset value, remind user to replace the separator.	Alert, not trip
5	Separator Jam	An input bit whose function is programmed as 2 is active or when compressor is loading, the difference of system pressure and net pressure is above a preset value (system pressure sensor is enabled and Net pressure > 5.5bar).	Alert, not trip
6	Oil Service	Lube used time reaches a preset value, remind user to replace lube.	Alert, not trip
7	Discharge temp. high	The discharge temperature is above a preset warning value.	Alert, not trip
8	Room temperature Low	The ambient temperature inside the controller is below 5℃.	Alert, not trip
9	Room temperature High	The ambient temperature inside the controller is above 65℃.	Alert, not trip
10	Motor Grease	The grease used time of motor bearing reaches a preset value, remind user to replace the grease.	Alert, not trip
11	Motor Over Current	The motor current is greater than motor max current.	Alert and unload, not trip
12	Belt service	The belt used time reaches a preset value, remind user to replace the belt.	Alert, not trip
13	Compressor service	The compressor service time reaches a preset value, remind user to service it.	Alert, not trip
14	Service Reminding	The Load/no-load switch times reaches a preset value, remind user to service it.	Alert, not trip

15	Dryer Err	An input bit whose function is programmed as 16 is active, which means the dryer fault.	Alert, not trip
16	Discharge temp. high	The discharge temperature is above a preset trip limit.	Alert and trip
17	Net Pressure High	The net pressure is above sys. safety limit value.	Alert and trip
18	Temp. Sensor error	The air end temperature sensor whose wire is broken, short-circuited or unfixed	Alert and trip
19	Netpress. sensor err	The net pressure sensor whose wire is broken, short-circuited or unfixed.	Alert and trip
20	Motor Overload	An input bit whose function is programmed as 8 is active or the motor current thermal accumulation exceeds normal range(relevant with the parameter setting of rated current)	Alert and trip
21	Fan Motor Overload	An input bit whose function is programmed as 9 is active or the fan current thermal accumulation exceeds normal range(relevant with the parameter setting of rated current)	Alert and trip
22	Lost cooling water	An input bit whose function is programmed as 21 is active.	Alert and trip
23	Phase Blunder	An input bit whose function is programmed as 14 is active or phase sequence detecting circuit determines open-phase or phase reversal.	Alert and trip
24	Room temperature Low	The discharge temperature is below a preset lower limit.	Alert and trip
25	Voltage High	The bus voltage is greater than voltage high value.	Alert and trip
26	Voltage Low	The bus voltage is less than voltage low value.	Alert and trip
27	System Temp.High	An input bit whose function is programmed as 7 is active.	Alert and trip
28	System pressure high	The system pressure is above sys. safety limit value.	Alert and trip
29	Motor Current err	The motor actual current is 10% less than a preset value or greater than 80% of a preset value when unloading.	Alert and trip

30	Syspress. sensor err	The system pressure sensor short-circuited, unfixed or whose wire is broken.	Alert and trip
31	No Build up sys press	The System pressure can not rise to more than build up limit value at the start of the delay time.	Alert and trip
32	Electrical failure	An input bit whose function is programmed as 15 is active.	Alert and trip
33	Water Level Low	An input bit whose function is programmed as 19 is active.	Alert and trip
34	Air Tank Temp High	An input bit whose function is programmed as 11 is active.	Alert and trip
35	Low Oil Pressure	An input bit whose function is programmed as 13 is active.	Alert and trip
36	Input Pressure Err	An input bit whose function is programmed as 12 is active.	Alert and trip
37	Inverter Err	An input bit whose function is programmed as 22 is active.	Alert and trip
38	Water Pump OverLoad	An input bit whose function is programmed as 23 is active.	Alert and trip
39	Oil Pump OverLoad	An input bit whose function is programmed as 24 is active.	Alert and trip
40	Soft Start Err	An input bit whose function is programmed as 25 is active.	Alert and trip
41	M-Inverter Com.Err	Error in communication with motor inverter	Alert and trip
42	F-Inverter Com.Err	Error in communication with Fan inverter	Alert and trip
43	Motor Temp High	An input bit whose function is programmed as 10 is active.	Alert and trip