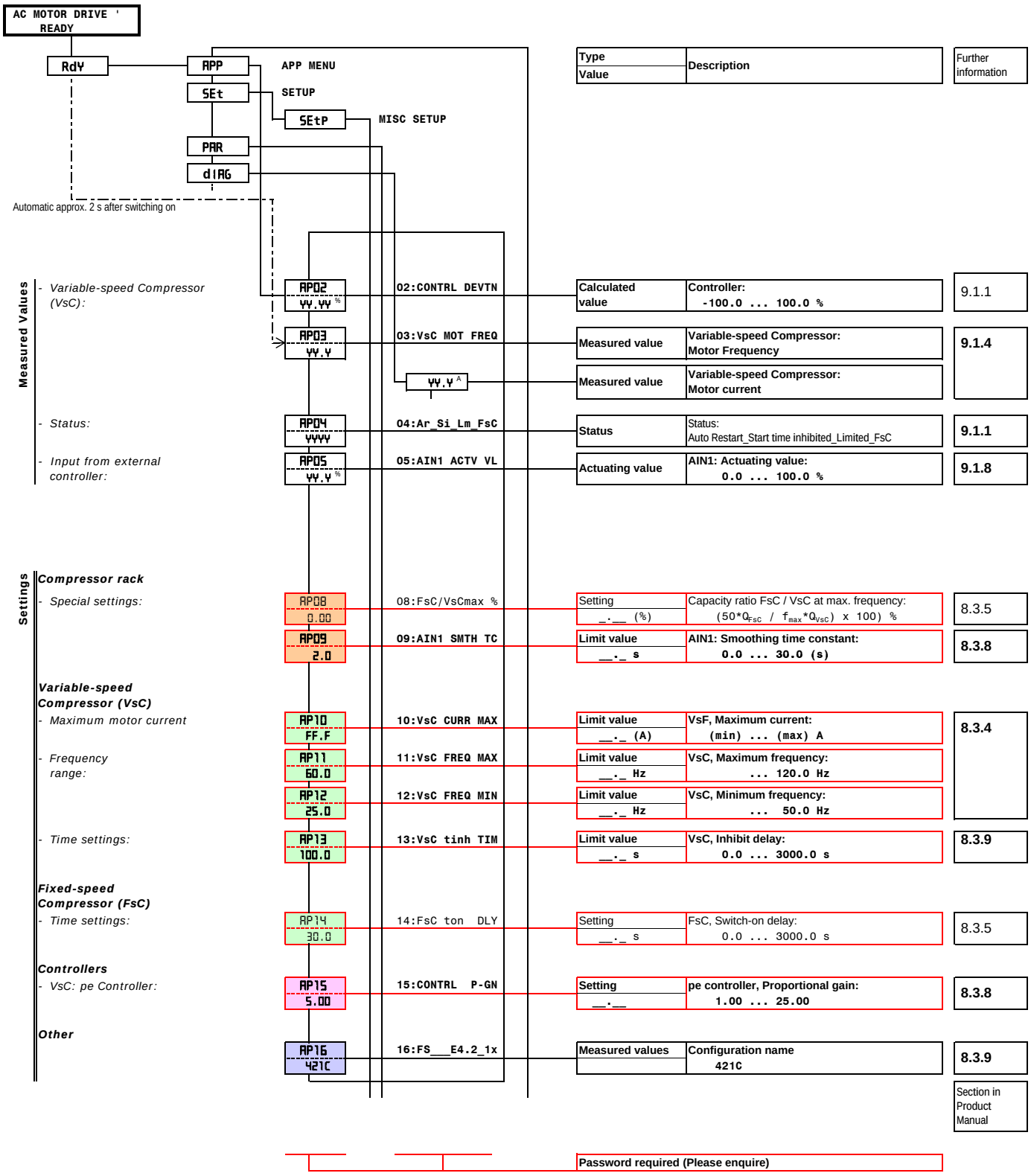
QUICK START GUIDE

FP E FMV/15 / iSE RCF.M/15
FrigoSoft E4

EXT CNTR BSC
FS E4.2_1c

Refrigeration HVAC

PARAMETERS

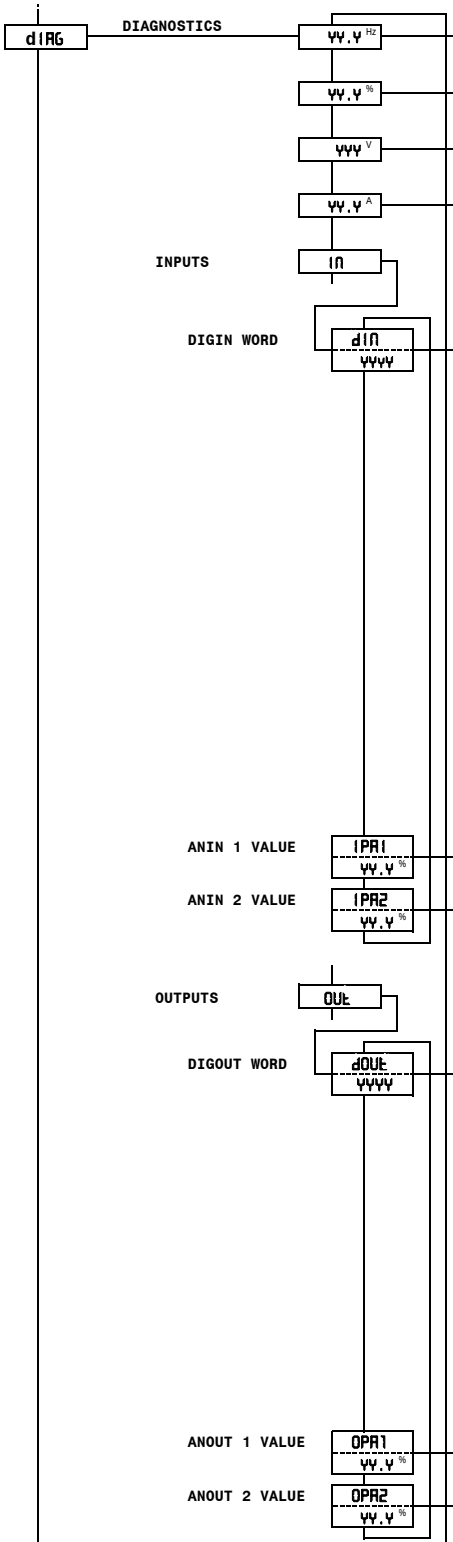


Type / Value	Description	Further information
Calculated value	Controller: -100.0 ... 100.0 %	9.1.1
Measured value	Variable-speed Compressor: Motor Frequency	9.1.4
Measured value	Variable-speed Compressor: Motor current	
Status	Status: Auto Restart_Start time inhibited_Limited_FsC	9.1.1
Actuating value	AIN1: Actuating value: 0.0 ... 100.0 %	9.1.8
Setting _._ (%)	Capacity ratio FsC / VsC at max. frequency: (50*Q_{FsC} / f_{max}*Q_{VsC}) x 100) %	8.3.5
Limit value __._ s	AIN1: Smoothing time constant: 0.0 ... 30.0 (s)	8.3.8
Limit value __._ (A)	VsF, Maximum current: (min) ... (max) A	8.3.4
Limit value __._ Hz	VsC, Maximum frequency: ... 120.0 Hz	
Limit value __._ Hz	VsC, Minimum frequency: ... 50.0 Hz	
Limit value __._ s	VsC, Inhibit delay: 0.0 ... 3000.0 s	8.3.9
Setting __._ s	FsC, Switch-on delay: 0.0 ... 3000.0 s	8.3.5
Setting __.__	pe controller, Proportional gain: 1.00 ... 25.00	8.3.8
Measured values	Configuration name 421C	8.3.9
		Section in Product Manual
Password required (Please enquire)		

Abbreviations	
VsC:	Variable-speed Compressor
FsC:	Fixed-speed Compressor
YYY.Y %:	Measured value depending on operating point
FF.F %:	Factory default value depending on frame size and rated power

(min): Minimum value is 50 % of the maximum rated current of frequency inverter

(max): Maximum value is the maximum rated current of the frequency inverter



Measured values	Variable-speed Compressor: Motor frequency
Measured values	VsC: Actuating value of Frequency: % of maximum frequency
Measured values	DC link voltage
Measured values	Variable-speed Compressor: Motor current
Measured values	Inputs
Measured values	Digital inputs: 0000 ... 0073 (hex)

dIn	DIN7 [13]	DIN6 [12]	DIN5 [11]	DIN2 [8]	DIN1 [7]
00X0	X	X	X	0	0
00X1	X	X	X	0	1
00X2	X	X	X	1	0
00X3	X	X	X	1	1
000X	1	0	0	X	X
001X	1	0	1	X	X
002X	1	1	0	X	X
003X	1	1	1	X	X
004X	0	0	0	X	X
005X	0	0	1	X	X
006X	0	1	0	X	X
007X	0	1	1	X	X
	Safety Circuit	Not in use	Not in use	Lubric. f>=50 Hz	Start

Refer to page 7 for more details

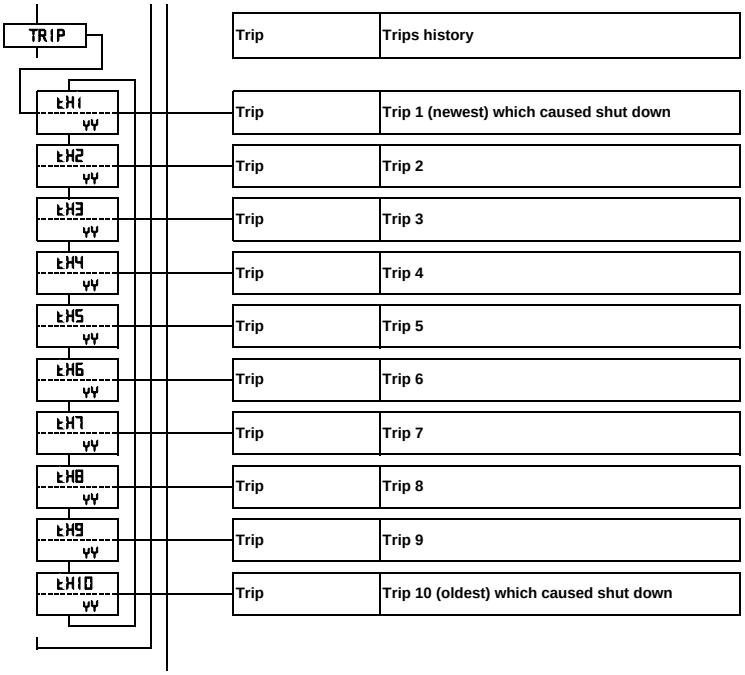
Measured values	Analog input 1: 0.0 ... 100.0 (%)
Measured values	Analog input 2: 0.0 ... 100.0 (%)
Measured values	Outputs
Measured values	Digital outputs: 0000 ... 0006 (hex)

dOUt	DOUT3 [RL1A-B]	DOUT2 [10A-10B]	DOUT1 [9A-9B]	
0000	1	0	0	Ready
0001	1	0	1	Operation VsC
0003	1	1	1	Operation VsC + FsC
0004	0	0	0	Trip
0006	0	1	0	Emergency operation FsC
	VsC Ready	Activate FsC	VsC in Operation	

Refer to page 7 for more details

Measured values	Analog output 1: 0.0 ... 100.0 (%)
Measured values	Analog output 2: 0.0 ... 100.0 (%)

Diagnostics



Trip	Trips history
Trip	Trip 1 (newest) which caused shut down
Trip	Trip 2
Trip	Trip 3
Trip	Trip 4
Trip	Trip 5
Trip	Trip 6
Trip	Trip 7
Trip	Trip 8
Trip	Trip 9
Trip	Trip 10 (oldest) which caused shut down

Trip coding. Refer to page 10 for more details.

1:	OVERVOLTAGE
2:	UNDERVOLTAGE
3:	OVERCURRENT
5:	EXTERNAL TRIP
6:	INVERSE TIME
7:	CURRENT LOOP
17:	MOTOR OVERTEMP
24:	DESAT (OVER I)
00:	OTHER

Special settings

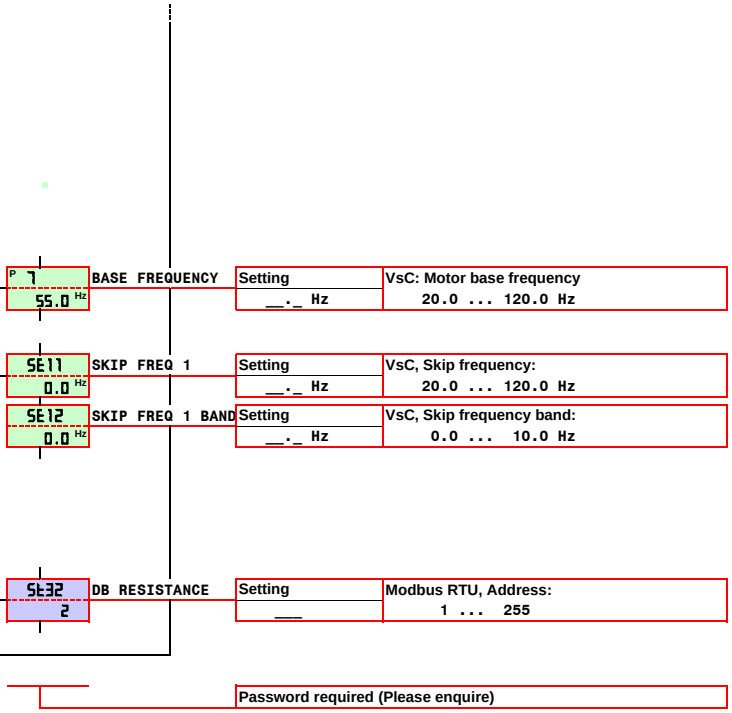
Variable-speed Compressor (VsC)

Frequency range:

- Resonance avoidance:

Communication

- Modbus RTU: Address

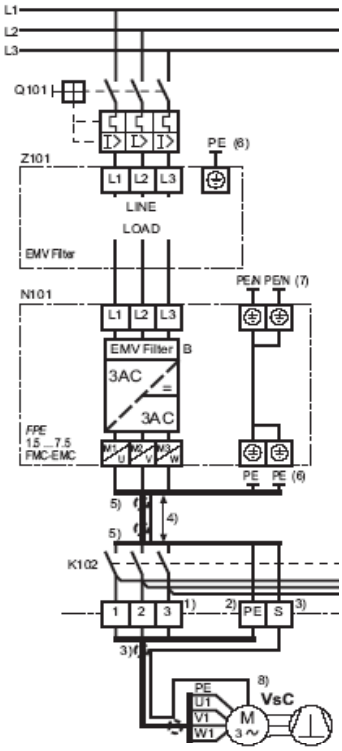


Setting __._ Hz	VsC: Motor base frequency	20.0 ... 120.0 Hz
Setting __._ Hz	VsC, Skip frequency:	20.0 ... 120.0 Hz
Setting __._ Hz	VsC, Skip frequency band:	0.0 ... 10.0 Hz
Setting ___	Modbus RTU, Address:	1 ... 255

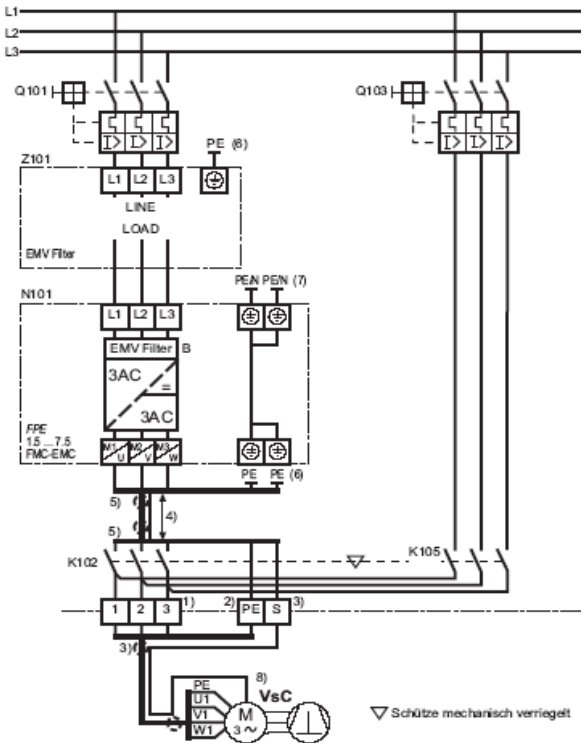
Password required (Please enquire)

POWER SECTION

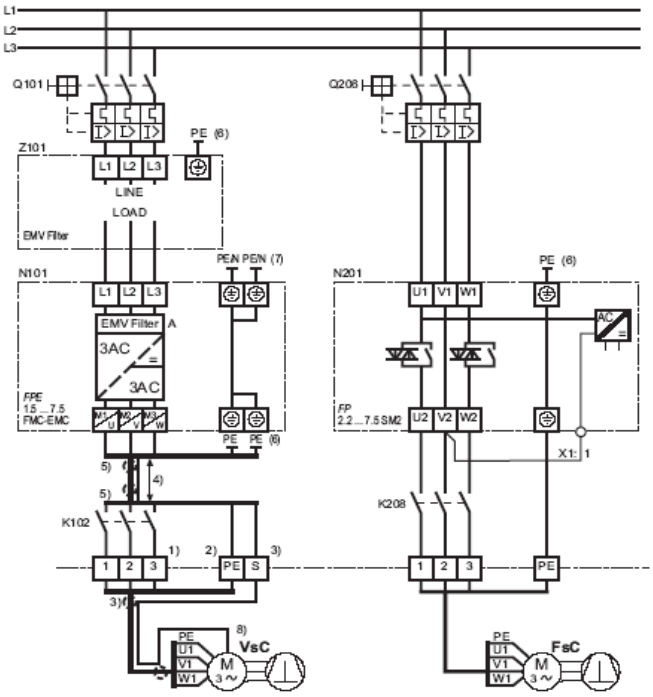
Power connections



FPE FMV / iSE RCF.M:
Power wiring



FPE FMV / iSE RCF.M:
Power wiring
(with bypass for Emergency Operation)



FPE FMV / iSE RCF.M:
Power wiring with two compressors

Power terminals

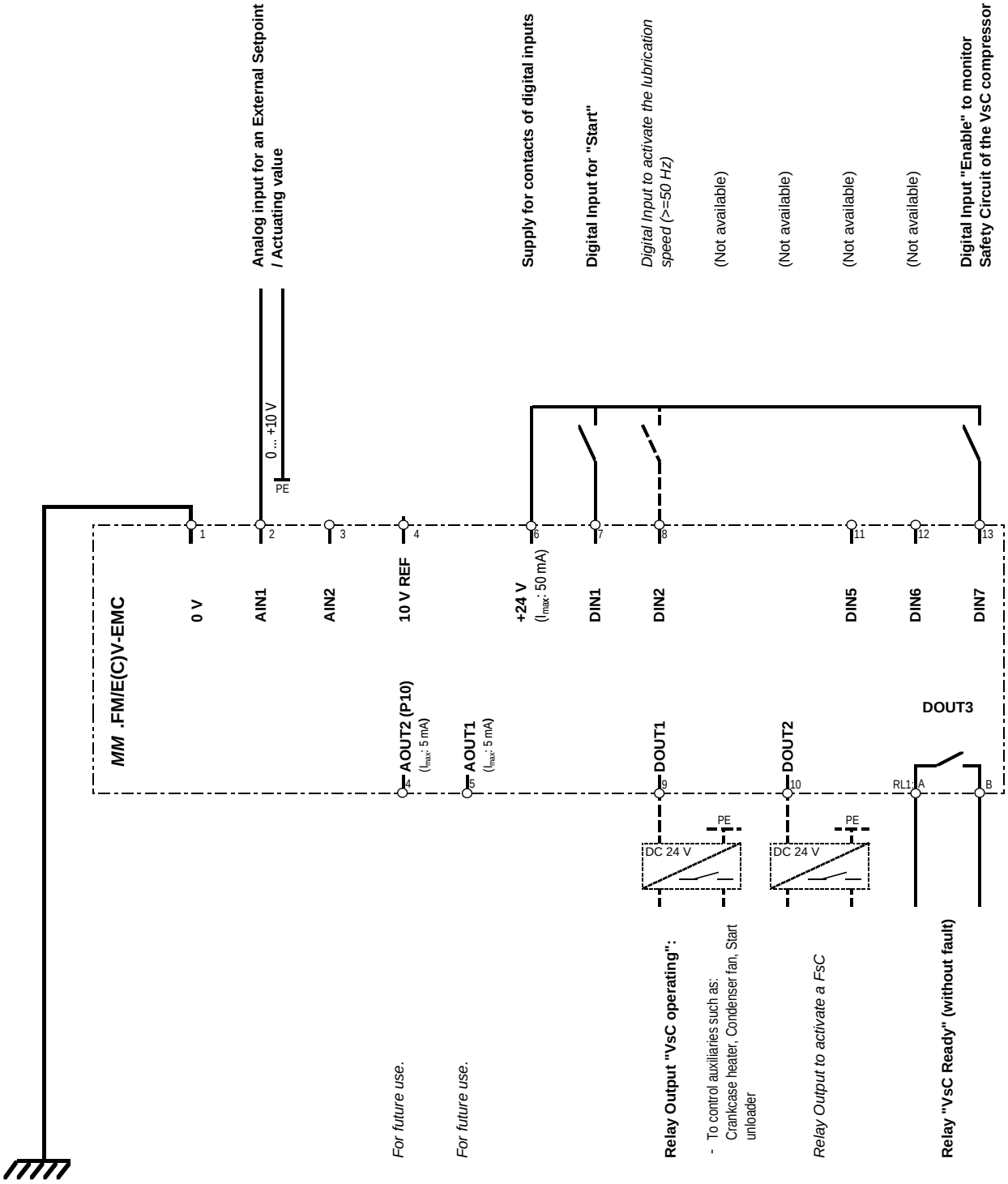
Terminal / Designation	Signal / Function	Explanation	Further information
PE, PE	**Protective earth connections (both to be earthed)**	- Observe all safety and EMC requirements	**7.7.1**
L1	**Three phases of voltage supply**	- Ensure that supply voltage agrees with data on FrigoPack / iSpeed name plate	
L2/N			
L3			
DC+		- Do not use otherwise risk of damage to FrigoPack / iSpeed	
DBR			
(DC-)			
M1/U	**Compressor motor**	- Variable-speed Compressor via safety contactor	**7.7.1/ 7.7.2**
M2/V			
M3/W			
PE	**Protective earth connection to compressor motor**		**7.7.2**
(DBR+)		- Do not use otherwise risk of damage to FrigoPack / iSpeed	
(DBR-)			

Terminals for motor protection

Terminal / Designation	Signal / Function	Explanation	Further information
X2:			
FPE 1.5...7.5FMV-EMC: **T H 1A - T H 1 B**	**Alternative a), Without processing:**	- Thermistor protection is processed in safety circuit, these two terminals must be linked	**6.2**
	Alternative b), Direct processing of motor thermistors:	- Connect motor thermistors between these two terminals	
	Alternative c), Processing an external thermistor relay:	- Connect the "normally open" contacts of external thermistor relay (e.g. KRIWAN) between these two terminals	
	Alternative d), Processing an external thermistor relay:	- Connect the "Normally open" contacts of an auxiliary relay wired to an external thermistor relay (e.g. KRIWAN) between these two terminals.	

CONTROL SECTION

Control connections



VsC: Variable-speed Compressor (Inverter operation)
FsC: Fixed-speed Compressor

Terminals for control functions

Terminal / Designation		Signal / Function	Explanation	Further information
1	0 V	Ground for analog signals	- Not available	
2A **- 2**B	**AIN1**	**External setpoint / actuating value for operation with external controller:** **0 V: Minimum speed** **10 V: Maximum speed**	**-** External setpoint / actuating value for operation with external controller	**7.7.4**
3A - 3B	AIN2	Do not use:		
4S - 4G	P10	Internal +10 V reference	- Do not use	
5S - 5G	AOUT1	Do not use:		
6	+24 V	Supply for contacts of digital inputs	- Not available	
7P **- 7**	**DIN1**	**Digital Input for "Start":** **0 V: Controlled stop** **+24 V: Start**	**-** Start	**5.2.1-3, 7.7.3**
8P - 8	*DIN2*	*Digital Input to activate the lubrication speed (>=50 Hz):* *0 V: No action* *+24 V: Activated*	- *Force to Lubrication Speed* - *Optional use*	*5.2.2/3, 7.7.3*
9P - 9	DIN3	Digital Input	- Not available	
9A - **9**B	**DOUT1**	**Relay Output "VsC operating":** Open: **VsC: Inhibited / Not operating** Closed: **VsC: Starting / Operating**	**-** To control auxiliaries such as: Crankcase heater, Condenser fan, Start unloader **-** Max contact load: AC 230 V; 250 VA	**7.7.3**
10P - 10	DIN4	Digital Input	- Not available	
10A - 10B	*DOUT2*	*Relay Output to activate a FsC:* *Open: Not activated* *Closed: Activated*	- *Activate FsC Fixed-speed Compressor* - *Max contact load: AC 230 V; 250 VA*	*7.7.3*
11P **- 11**	**DIN5**	**Digital Input to activate the external actuating value:** 0 V: **No action** +24 V: **Activate External Actuating Value**	Activate External Actuating Value	
12P - 12	*DIN6*	*Digital Input to enable Emergency Control:* *0 V: No Emergency Control* *+24 V: Enable Emergency Control*	- *Emergency operation (Operation with a defect inverter or compressor)* - *Optional use*	*5.3, 7.7.3*
13P - 13	*DIN7*	*Digital Input "Enable" to monitor Safety Circuit of the VsC compressor:* *0 V: Fault (immediate stop)* *+24 V: Without fault*	- *Safety circuit without fault* - *Must be used* - *Interrupt if there is a fault (Required to stop inverter operation)*	*5.4, 7.7.3*
RL 1A **- RL 1**B	**DOUT3**	**Relay output "Ready" (without fault):** Open: **No supply, fault or alarm** Closed: **Ready (no fault)**	**-** Ready to operate **-** Max contact load: AC 230 V; 250 VA	**5.4, 7.7.3**

VsC: Variable-speed Compressor (Inverter operation)
FsC: Fixed-speed Compressor

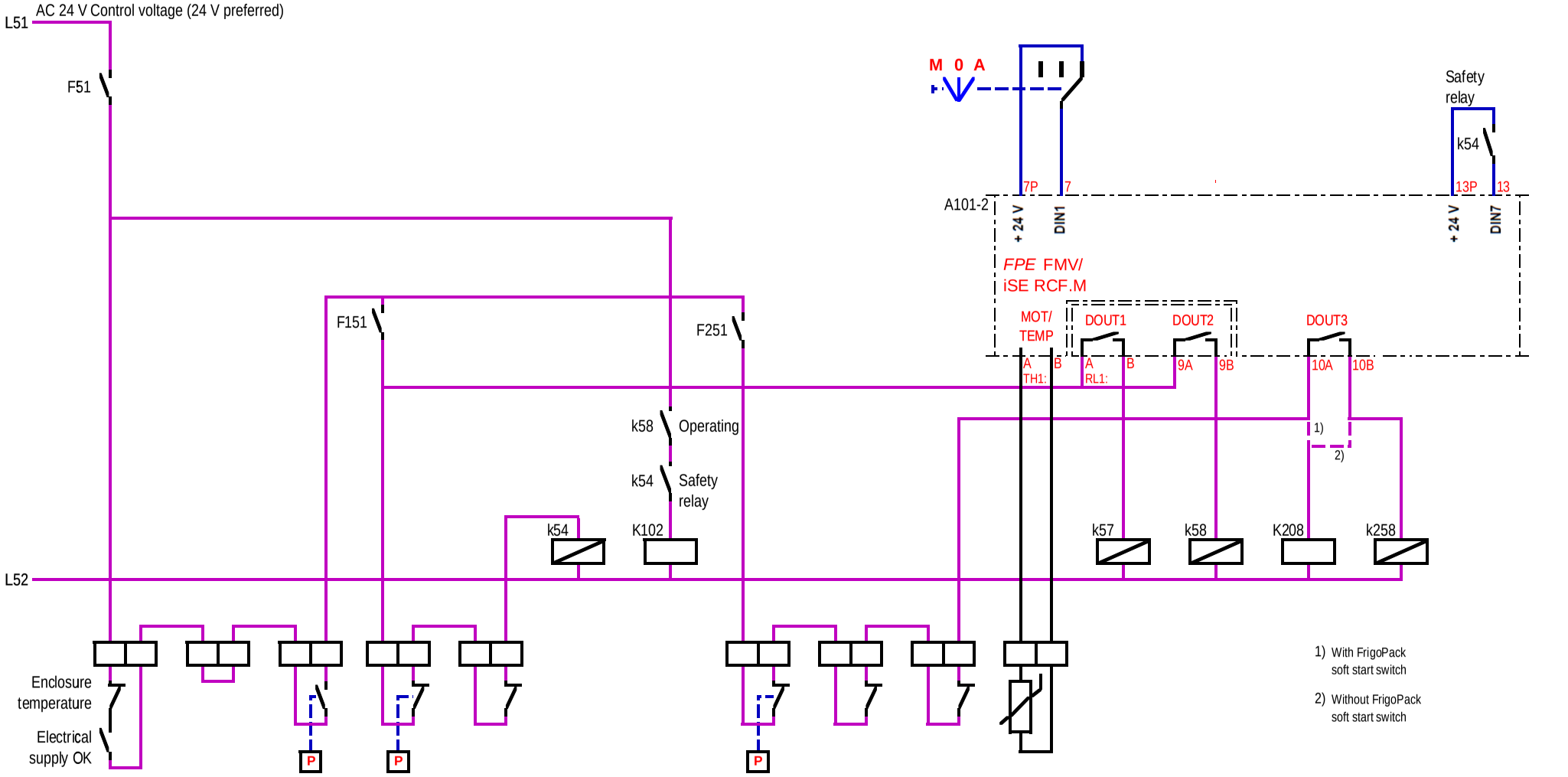
Safety and control circuits

The following simplified overview of the safety and control wiring of a typical system only includes the wiring for AUTOMATIC operation.

It is recommended that the following additional functions are included in the control system:
- MANUAL mode of operation using a "Pump Down" circuit
- A security circuit to provide:
  - Automatic selection of MANUAL operation in an emergency
  - Means of stopping the evaporators if compressors are not available.

- Standard suggestions for the safety and control wiring with these features are available on request.

- KIMO RHVAC / Parker SPORLAN can assist with the planning of complex systems or systems with special requirements.



FIRST TIME POWER UP

Mounting and electrical safety:

Ensure that all recommendations in the Product Manual have been adhered to.

UL compliance where appropriate:

Ensure that all recommendations in the Product Manual for UL compliance have been adhered to.

EMC compliance:

Ensure that all recommendations in the Product Manual for EMC compliance have been adhered to.

Language selection:

The language is only relevant when the two-line keypad from the FP(E) FEP / iSE/P RCF ranges are used for commissioning. The language is programmed in the refrigeration software and cannot be changed. The language required must be stated at the time of purchase.

Selection of this refrigeration application, Restoring factory settings:

- **This refrigeration application is programmed in the refrigeration application software.**
- **On no account attempt to load the default factory settings as this will result in the refrigeration application being deleted.**

Storing configurations and parameter changes:

Storing parameter changes is automatic with CP FMV/ iSE RCF.

Pressure transducers:

This refrigeration application is designed for use with the following pressure transducers:

- pe: -0.5 ... 7.0 bar -7.25 ... 101.53 psi Relative (gauge) pressure

WARNING: Only use approved pressure transducers.

Recommended basic commissioning steps:

- **Verify that the power circuit corresponds to the suggestions on pages 4 and 5.**
- **In particular ensure that a safety contactor is fitted between the FrigoPackE FMV / iSpeedE RCF and the compressor.**
- **Verify that the control circuit corresponds to the suggestions on page 8.**
- **In particular ensure that two isolated contacts of a safety relay are connected to the safety contactor and also to input DIN7 (terminals 13P-13).**
- **Apply power with terminal 7 disconnected.**
- *Verify that the blue LED near terminals 3A and 3B from the suction pressure transducer lights. If not, then check the wiring to the transducer.*

- **Measure the pressures with a refrigeration pressure gauge. Verify that the pressure indicated at parameters AP01: and AP03: agree with these external measurements.**

Filling with refrigerant:

- **Ensure that FrigoPack/iSpeed RCF is not running by putting the control switch in the OFF position or by removing the connection to DIN1 at terminal 7.**
- **Switch to LOCAL mode as follows depending on which keypad is used:**

  - **Small keypad fitted:**
    - **Press key 'E' until Rdy is displayed.**
    - **Press key 'O' until a hand is displayed.**
  - **Large external keypad used:**
    - **Press key 'L/R'. LEDs "SEQ" and "REF" should light.**

- **Start the compressor by pressing the green key 'I'. After the start sequence the compressor will operate at the minimum set frequency.**
- **Stop the compressor by pressing the red key 'O'.**
- **The compressor will not restart until the time set by parameter AP13 has elapsed.**
- **Switch back to automatic operation on completion process by removing the electrical power, waiting until the keypad is dark, and then re-applying the electrical power.**

<u>On no account forget to reconnect DIN1 and to select automatic operation.</u>

TROUBLE SHOOTING LIST

TRIP MESSAGE	POSSIBLE CAUSE	Hints for fault finding	REMEDIES
*** TRIPPED *** OVERVOLTAGE Code: 1 → dCH 1	* Voltage of supply too high	- Measure and document the voltage in all three input phases	- Rectify cause of any high voltage
	* Safety contactor not controlled correctly	- Check wiring of control circuit and compare function with KIMO RHVAC recommendations	- Modify wiring
	* Compressor motor defect	- Test if compressor motor will run with DOL supply	- Replace compressor motor
		- Measure resistance of motor winding and compare with manufacturer's data - Check insulation beween phases and to earth	
*** TRIPPED *** UNDERVOLTAGE	* Voltage of supply too low	- Measure and document the voltage in all three input phases	- Rectify cause of any low voltage
*** TRIPPED *** VDC RIPPLE	* Phase of supply voltage missing		
*** TRIPPED *** DESAT (OVER I)	* Safety contactor not controlled correctly	- Check wiring of control circuit and compare function with KIMO RHVAC recommendations	- Modify wiring
*** TRIPPED *** OVERCURRENT Code: 2 → dCLO	* Compressor motor defect	- Test if compressor motor will run with DOL supply	- Replace compressor motor
		- Measure resistance of motor winding and compare with manufacturer's data	
Code: 25 → dCrP		- Check insulation beween phases and to earth	
Code: 24 → ShrE	* Power section of FrigoPack / iSpeed faulty	- Remove motor cable connections to FrigoPack / iSpeed	- Replace FrigoPack / iSpeed
Code: 3 → OC		Check if operation of CondensPack / iSpeed without a motor connected is possible (No trip message: Probably OK; Trip message: Probably defect)	
		- Test for operation with a small test motor	
	* Incorrect motor connection	- Check wiring to motor terminals (choice of star/delta, part winding etc.)	- Modify wiring
*** TRIPPED *** EXTERNAL TRIP	* Safety contactor not controlled correctly	- Check wiring of control circuit and compare function with KIMO RHVAC recommendations	- Modify wiring
Code: 5 → Et	* Safety device in safety circuit tripped	- Check safety circuits. Possibly supply undervoltage at a monitoring device.	- Reset if necessary
	* DC 24 V control voltage missing	- Check DC 24 V control voltage at FrigoPack / iSpeed	- Modify wiring
		- Short circuit with DC 24 V control voltage	
*** TRIPPED *** CURRENT LOOP	* Suction-pressure transducer not connected or connections swapped	- Check if blue LED at the input of FrigoPack / iSpeed lights	- Verify correct connection to transducer for suction pressure. Exchange leads if necessary
Code: 7 → LOOP		- Measure current from transducer for suction pressure at input to FrigoPack / iSpeed (must be at least +4 mA)	
	* Transducer for suction pressure faulty		- Replace transducer for suction pressure
*** TRIPPED *** INVERSE TIME	* Compressor start aborted	- Liquid refrigerant in compressor?	- Contact KIMO RHVAC / Parker-CIC for advice
Code: 6 → It		- Defect compressor - Incorrect size of FrigoPack / iSpeed or motor connected in delta instead of star.	
*** TRIPPED *** MOTOR OVERTEMP	* Link TH1A-TH1B or MOT/TEMP missing	- Check wiring of motor protection circuit	- Modify wiring
Code: 17 → Ot	* No connection to motor protection PTC		
	* Faulty connection to external PTC relay		
	* Motor winding too hot	- Compressor overloaded	- Contact KIMO RHVAC / Parker-CIC for advice
*** TRIPPED *** ?ANYTHING ELSE?	* Anything else		- Contact KIMO RHVAC / Parker-CIC for advice

Important note:

These messages are of common trips likely to occur during commissioning.
Other trip messages can occur in fault conditions.

When requesting advice from your supplier, always make an exact note of the following:
- Exact trip message (if appropriate message indicated in both lines of display)
- Message displayed when key 'E' is pressed for at least 10 s.

CHECKLIST

KIMO Problem Code		Part of installation	Checklist of questions for PROBLEM REPORT	Explanation	Terminals	Answer/ Confirmation
ES		Electrical:				
		- Supply	• Are there any known power supply interruptions ?			Yes ☐ No ☐
			• Do these power supply interruptions occur at the same time each day ?	- Indicate approx. times		Yes ☐ No ☐ When: _____
			• By what amount does the supply voltage vary ?	- Indicate min. and max. voltages		Min.: _____ [V] Max.: _____ [V]
EI		- Installation	• Motor cable: Approx. Length ?			_____
			• Motor cable: Type of screen ?	- Copper braid ?, Steel braid ?, - Steel conduit ?, none ?		Cu brd. ☐ Fe brd. ☐ Fe cond. ☐ None ☐
			• Motor cable: Screen connected to mounting plate?	- Recommendations: - Contact with large surface area		Yes ☐ No ☐
			• Motor cable: Screen connected to metal motor housing ?	- Make sure no "pig tails"		Yes ☐ No ☐
			• Is a galvanised mounting plate used in the electrical enclosure ?			Yes ☐ No ☐
			• Is a motor filter used between the CondensPack / iSpeed CFF and the compressor motor ?	- If yes, indicate KIMO product code		Yes ☐ No ☐ Pr. Cde: _____
MT		Compressor motor	• Have motor currents been entered into the PROBLEM REPORT ?	- Operating point - Start up		Yes ☐ No ☐ Yes ☐ No ☐
MM		*FrigoPack* / iSpeed:				
MM	CI	- Control and sensor inputs	• Protective Earth of FrigoPack / iSpeed connected to mounting plate (two separate short connections) ?	- Terminal:	2x PE	Yes ☐ No ☐
			• Is the DC P24 control voltage present ?	- Terminal:	6P - PE	Yes ☐ No ☐
			• Connection of PTC motor protection ?	- Without processing - Direct processing of motor thermistors		☐ ☐
				- Processing an external thermistor relay		Relay ☐
				- Terminal FPE FMV:	TH1 A-B	
			• Safety circuit OK ?	- Terminals for measuring:	13 - PE	Yes ☐ No ☐
			• Enable signal present ?	- Terminals for measuring:	7 - PE	Yes ☐ No ☐
			• Signal from suction-pressure transducer present ?	- Terminals for measuring:	3B - PE	_____ [V]
			• *Signal from high-pressure transducer present ?* *	- *Terminals for measuring:*	*2B - PE*	_____ *[V]*
			* If used	- Terminal for measuring: - Measured against:	.. ..	
MM	PS	- Power section	• Reserved for future use			
MM	CA	- Control assembly	• Reserved for future use			
MM	CS	- Control settings, parameter	• Operating Mode LOCAL (Programming Pad: LEDs SEQ + REF light) ?	- Not suitable for normal operation, only use for commissioning:		Yes ☐ No ☐
			• Refrigeration / cooling parameters set ?	- The following parameters must be set: **AP06 ... AP09**		Yes ☐ No ☐
RI		Refrigeration:				
	AP	- Application	• Required Refrigeration Power entered into PROBLEM REPORT ?			Yes ☐ No ☐
			• Number of cooling outputs entered into the PROBLEM REPORT ?			Yes ☐ No ☐
			• Operating pressure and temperatures entered into PROBLEM REPORT ?	- Operating point		Yes ☐ No ☐
				- At start up		Yes ☐ No ☐
			• On/Off times of compressor pack entered into PROBLEM REPORT ?	- Enter variable and fixed speed compressor times separately		Yes ☐ No ☐
RI	IN	- Installation	• Reserved for future use	- tbd		
RI	PS	- Pressure transducers	• Approx. cable length			_____ [m]
			• Type of screen	- Copper braid ?, Steel braid ?, - Steel conduit ?, none ?		Cu brd. ☐ Fe brd. ☐ Fe cond. ☐ None ☐
			• Screen NOT connected at sensor end ?			Yes ☐ No ☐
			• Screen connected to mounting plate of electricial enclosure ?	- Large area contact, no pig tails		Yes ☐ No ☐
			• Are measured pressures stable ?	- Indicate range of variation within 30 s		Yes ☐ No ☐ pe/LP ____ pc/HP ____ [bar]
RI	RC	- Refrigeration compressor	• Oil present ?			Yes ☐ No ☐
			• Basic data entered into PROBLEM REPORT ?			Yes ☐ No ☐

FPE FMV/15 / iSE RCF.M/15
FrigoSoft E4

EXT CNTR BSC
FS E4.2_1c

Parker SPORLAN KIMO
Refrigeration HVAC

CONFIGURATION OVERVIEW / PROBLEM REPORT

Application	Refrigeration ☐	No. of cooling outlets ____	Air Conditioning ☐	Condenser ☐	Other ____				
Refrigerant	R404A..... ☐	R407C..... ☐	R134a..... ☐	Total refrig. Power ____ [kW]	Other ____				
	R507A..... ☐	R22..... ☐	R.....		____				
Compressor 1	Piston ☐	No. of cylinders ____	Scroll ☐	Screw ☐	Other ____				
	Start unloader ☐	Part Winding ☐	Variable speed ☐ **OR**	Fixed speed ☐	No. of compressors ____				
	Capacity control ____ [%]	____ [%]	____ [%]	____ [%]					
	Manufacturer ____		Model ____		Anything special ____				
Compressor 2	Piston ☐	No. of cylinders ____	Scroll ☐	Screw ☐	Other ____				
	Start unloader ☐	Part Winding ☐	Variable speed ☐ **OR**	Fixed speed ☐	No. of compressors ____				
	Capacity control ____ [%]	____ [%]	____ [%]	____ [%]					
	Manufacturer ____		Model ____		Anything special ____				
Operating point	Suction pressure ____	High (discharge) pressure ____	Pascal/ ☐ bar/ ☐ lb/in² ☐	Suction gas temperature ____ [°C]	Discharge gas temperature ____ [°C]	Motor current ____ [A]			
Start up	Suction pressure ____	High (discharge) pressure ____	gauge/ ☐ absolute ☐	Anything special ____		Motor current ____ [A]			

FrigoPack Frequency inverter	**FrigoPack/iSpeed/**MotorMaster Type FPE/MM/iSE Serial number ____	**Pressure sensors** Suction pressure ____ Discharge pressure ____	**FrigoSoft refrigeration/ A/C software** FS E4.2_1c Version ____ Mode ____
FrigoPack Soft Starter	**FrigoPack/iSpeed/**SoftCompact, LEKTROMIK Type FP/MM/iS Serial number ____	**Compressor switching times** Variable-speed compressor (VsC) t_{ON} ____ [s] t_{PERIOD} ____ [s] Fixed speed compressor(s) (FsCs) t_{ON} ____ [s] t_{PERIOD} ____ [s]	

Report

List of Measured Values in the APP MENU menu

AP02 02:CONTRL DEVTN	___._ [%]
AP03 03:VsC MOT FREQ	___._ [Hz]
AP04 04:Ar_Si_Lm_FsC	____
AP05 05:AIN1 ACTV VL	___._ [%]

List of Adjustable Parameters in the APP MENU menu

AP08 08:FsC/VsCmax %: 0.00	____ [%]
AP09 09:AIN1 SMTH TC: 2.0 s	____ [s]
AP10 10:VsC CURR MAX: FF.F	____ [A]
AP11 11:VsC FREQ MAX: 60.0	____ [Hz]
AP12 12:VsC FREQ MIN: 25.0	____ [Hz]
AP13 13:VsC tinh TIM: 100.0	____ [%]
AP14 14:FsC ton DLY: 30.0	____ [s]
AP15 15:VsC CNTR PGN: 5.00	____
AP16 16:FS___E4.2_1x: 421C	____

Special settings:

P7 BASE FREQUENCY: 55.0 Hz	____ [Hz]
St11 SKIP FREQ 1: 0.0 Hz	____ [Hz]
St12 SKIP FREQ 1 BAND: 0.0 Hz	____ [Hz]

TRIP HISTORY

TRIP

1 (NEWEST)	2	3	4	5	
6	7	8	9	10 (OLDEST)	

Manufacturer	**Agent / Partner**	**Customer**	**Installation**
KIMO Refrigeration HVAC Ltd EUR: Tel.: +49 911-8018778 Fax: +49 911-9976118 applications@frigokimo.com www.frigokimo.com **Parker Hannifin Corporation** **Parker Hannifin Ltd:** Tel.: +44 1226-273400 Fax: +44 1226-273401 eurocold@parker.com www.sporlan.com Sporlan Division: Tel.: +1 636-239-1111 Fax: +1 636-239-0414 svd_techsupport@parker.com www.sporlan.com			Name: Date: