QUICK START GUIDE

PARAMETERS

USA units

FP FEP/14 / iSP RCF
FrigoSoft A.6

CONDENSER

FS A.6.2-3x

Automatic to OPERATOR menu approx. 2 s after switching on

FrigoSoftA6.2_3a XXXT4-6 1.3x → OPERATOR menu at level 1

Type / Value	Description	Further information
02:tc1__tc2 TEMP Y.Y YY.Y "C	Measured values __._ __._ "C	Condensor: Condensing temperatures	9.1.2/3
03:pc1__pc2 PRES Y.Y YY.Y bar	Measured values __._ __._ "C	Compressor rack: Saturated evaporating and condensing temp.	
04:pc1___pc2 DEV Y.Y YY.Y bar	Deviations __._ __._ %	Condensor: Condensing pressure deviations	
07:VfG ELEC A_Hz Y.Y Y.Y Hz	Measured values __._ __._ Hz	Variable-speed Compressor: Motor current, Motor frequency	9.1.4
08:Ar_Si_Lmt_VfG = YYYY	Measured values _ _	Status: Auto Restart_Start inhibited_pc limited_VfG	9.1.5
09:CD tdlt__tstp YY.Y YY.Y "C	Measured values __._ __._ "C	Floating ambient control: Setpoints AC: (tc - tamb) or HP: (te - tamb)	9.1.6
10:CD VfG %_tamb YY.Y YY.Y "C	Measured values __._ __._ "C	Condensor: Variable-speed fan / Ambient	
18:AIN4 ACTV VAL = YY.Y %	Measured value ___._ %	AIN4: Actuating value:	
19:DIGITAL I/O = YYYY >>	Measured value ____	Digital inputs and outputs (See page 3 and 10 for more details)	

Measured Values

- *Condensor:*
- *Variable-speed fan Groups (VfG)*
- *Open, closed and floating control*

Settings

Condenser

- *Condensing pressure pc*

			Setting	Description	
218 psig	**45:pc1 SETPOINT1** → 15.0 bar	- 35 °C*	Setting 1 _._ bar	pc1, Setpoint 1: 0.0 ... 30.0 bar	8.3.2
292 psig	**46:pc1 SETPOINT2** → 20.1 bar	- 46 °C*	Setting 1 _._ bar	pc1, Setpoint 2: 0.0 ... 30.0 bar	
218 psig	**47:pc2 SETPOINT1** → 15.0 bar	- 35 °C*	Setting 2 _._ bar	pc2, Setpoint 1: 0.0 ... 30.0 bar	
292 psig	**48:pc2 SETPOINT2** → 20.1 bar	- 46 °C*	Setting 2 _._ bar	pc2, Setpoint 2: 0.0 ... 30.0 bar	

- *Refrigerant*

50:REFRIGERANT → R404A	Selection R____	Refrigerant: R404A, R507C, R407C, R410A, R717, R134a, R22, ..	8.3.9

Variable-speed fan Groups (VfG)

- *Frequency range:*
- *Resonance avoidance:*
- *Time settings:*

61:VfG CURR MAX → FFF.FF A	Limit value ___._ A	VfG, Maximum current: 0.00 ... 999.99 A	8.3.4
62:VfG FREQ MAX → 50.0 Hz	Limit value __._ Hz	VfG, Maximum frequency: 15.0 ... 90.0 Hz	
63:VfG FREQ MAX2 → 40.0 Hz	Limit value __._ Hz	VfG, Maximum frequency 2: 15.0 ... 90.0 Hz	
65:VfG FREQ MIN → 10.0 Hz	Limit value __._ Hz	VfG, Minimum frequency: 15.0 ... 90.0 Hz	
66:VfG SKIP FREQ → 0.0 Hz	Setting __._ Hz	VfG, Skip frequency: 15.0 ... 90.0 Hz	
67:VfG SKIP BAND → 0.0 Hz	Setting __._ Hz	VfG, Skip frequency band: 0.0 ... 10.0 Hz	
70:VfG tinh TIME → 20.0 s	Limit value ___._ s	VsC, Minimum OFF time: 0.1 ... 3000.0 s	
71:VfG tstt TIME → 5.0 s	Limit value ___._ s	VfG, Start pulse time: 0.1 ... 3000.0 s	
74:VfG tmon fmin → 600.0 s	Setting __._ s	VfG, Minimum capacity for monitoring 0.0 ... 3000.0 s	
76:VfG tacc/tdec → 10.0 s	Setting __._ s	VfG: Shortest acceleration time to fmax 0.0 ... 3000.0 s	

Fan groups (FnG)

- *Time settings*
- *Verflüssigerauslegung:*

81:FnG ton DLY → 10 s	Setting ___ s	FnG, Switch-on delay: 1 ... 3000 s	8.3.5
82:FnG toff DLY → 10 s	Setting __ s	FnG, Switch-off delay: 1 ... 3000 s	
83:FnG NUMBER → 1	Selection _	FnG, Number of compressors: 0 ... 7	

Controllers

- *VfG: pc Controller:*

92:pc/VfG CT PGN → 10.0	Setting _._	VsF, pc controller, Proportional gain: 0.1 ... 100.0	8.3.8

Other settings

A1:AOUT1 FUNCTN → INPUT 1	Selection _	AOUT1 - Function selection (see page 8): INPUT 0...2 1 ≙ Rck Cap.	8.3.9
A2:AOUT2 FUNCTN → INPUT 0	Selection _	AOUT2 - Function selection (see page 8): INPUT 0...1 0 ≙ FnGC	
A3:AOUT3 FUNCTN → INPUT 1	Selection _	AOUT3 - Function selection (see page 8): INPUT 0...4 1 ≙ FnGD	
A4:DOUT1 FUNCTN → INPUT 2	Selection _	DOUT1 - Function selection (see page 8): INPUT 0...7 7 ≙ (Ready)	
A6:CONTRL FUNCTN → 0000	Selection ____	FrigoSoft - Function selection (see page 12): 0000 ... 1031	
A7:AIN4 TIM CNST → 5.0 s	Selection ____	AIN4 - Filter time constant: 0.0 ... 3000.0 s	
A9:LANGUAGE → ENGLISH	Selection _	Language selection: ENGLISH ... NEDERLANDS	

* Factory setting for R404A

\+ Also time at 50 Hz if automatic speed-up is activated (DATA 1 LOGIC 1)

Password required (Please enquire)

Only available with pressure control activated:
DATA 2 LOGIC 4 : TRUE

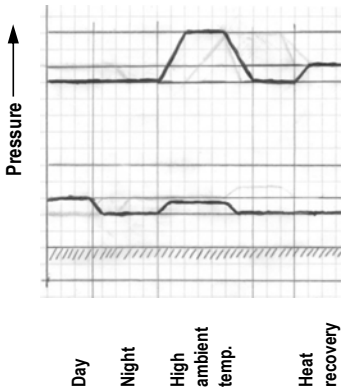
Siehe Seite 4:

Abbreviations	
VfG:	Variable-speed fan group
FfG:	Variable-speed fan Group (Condenser / Dry cooler)
FnG:	Fan Groups (Condenser/Dry cooler)

=	YYY.YY %	: Measured value depending on operating point
→	FFF.F s	: Factory default value depending on frame size and rated power

FIRST TIME POWER UP: Go to page 12

Explanation of adjustable operating pressures:



46:pc1 SETPOINT2
45:pc1 SETPOINT1
48:pc2 SETPOINT2
47:pc2 SETPOINT1

Suggested refrigeration settings:

Based on EN 12900

45:pc1 SETPOINT1 → 15.0 bar
46:pc1 SETPOINT2 → 20.1 bar
47:pc2 SETPOINT1 → 15.0 bar
48:pc2 SETPOINT2 → 20.1 bar
50:REFRIGERANT → R404A

HP: 0 ... 30 bar | 0 ... 40 bar → Pressure transducers →

Factory setting

R404A / R507			R407C		R22			R134a		R410A	
LT	MT	HT	MT	HT	LT	MT	HT	MT	HT	MT	HT
35.. °C/ 15.0	35.. °C/ 15.0	35.. °C/ 15.0	35.. °C/ 14.5	35.. °C/ 14.5	35.. °C/ 12.5	35.. °C/ 12.5	35.. °C/ 12.5	35.. °C/ 8.0	35.. °C/ 8.0	35.. °C/ 15.4	35.. °C/ 15.4
46.. °C/ 20.1	46.. °C/ 20.1	46.. °C/ 20.1	46.. °C/ 19.2	46.. °C/ 19.2	46.. °C/ 16.7	46.. °C/ 16.7	46.. °C/ 16.7	46.. °C/ 10.9	46.. °C/ 10.9	46.. °C/ 27.0	46.. °C/ 27.0
-30 °C/ 1.0	-7 °C/ 3.8	8 °C/ 6.7	-7 °C/ 2.6	8 °C/ 5.0	-30 °C/ 0.6	-7 °C/ 2.9	8 °C/ 5.4	-7 °C/ 1.3	8 °C/ 2.9	-7 °C/ 5.3	8 °C/ 9.2
7 °C/ 6.4	7 °C/ 6.4	7 °C/ 6.4	10 °C/ 5.5	10 °C/ 5.5	10 °C/ 5.8	10 °C/ 5.8	10 °C/ 5.8	12 °C/ 3.4	12 °C/ 3.4	12 °C/ 10.5	12 °C/ 10.5
R404A/R507			R407C		R22			R134a		R410A	

* Modified settings required, see Special Settings, page 4

Diagnostics

DIAGNOSTICS menu at level 1 (M / E)

Electrical values:

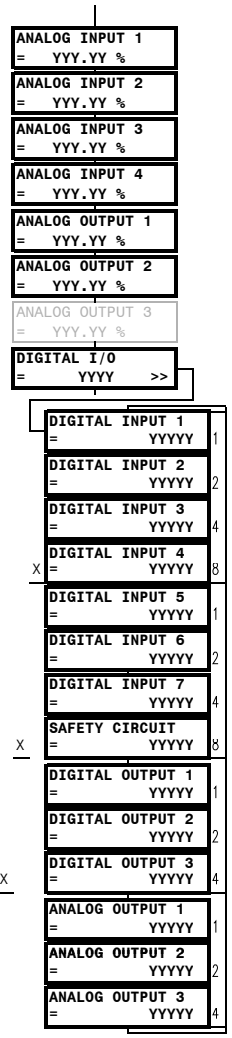
DRIVE FREQUENCY = YY.YY Hz	Internal value	Variable-speed Compressor: Motor Frequency
MOTOR CURRENT A = YY.Y A	Measured value	Variable-speed Compressor: Motor current [A]
MOTOR CURRENT % = YY.YY %	Internal value	Variable-speed Compressor: Motor current [%]
DC LINK VOLTS = YYY V	Measured value	Variable-speed Compressor: DC link voltage
BASE FREQ ACTIVE = YY.Y Hz	Internal value	Variable-speed Compressor: Active base frequency
BASE VOLT ACTIVE = YYY.Y V	Internal value	Variable-speed Compressor: Active base voltage
TERMINAL VOLTS = YYY V	Measured value	Variable-speed Compressor: Motor voltage
TORQUE FEEDBACK = YY.YY %	Internal value	Variable-speed Compressor: Calculated torque
FIELD FEEDBACK = YY.YY %	Internal value	Variable-speed Compressor: Calculated magnetic motor field
ELECTRICAL POWER = YY.Y kW	Measured value	Variable-speed Compressor / Rack: Calculated / Measured electrical power
ELECTRICL ENERGY = YYY kWh	Measured value	Variable-speed Compressor / Rack: Calculated / Measured electrical energy

9.2.1

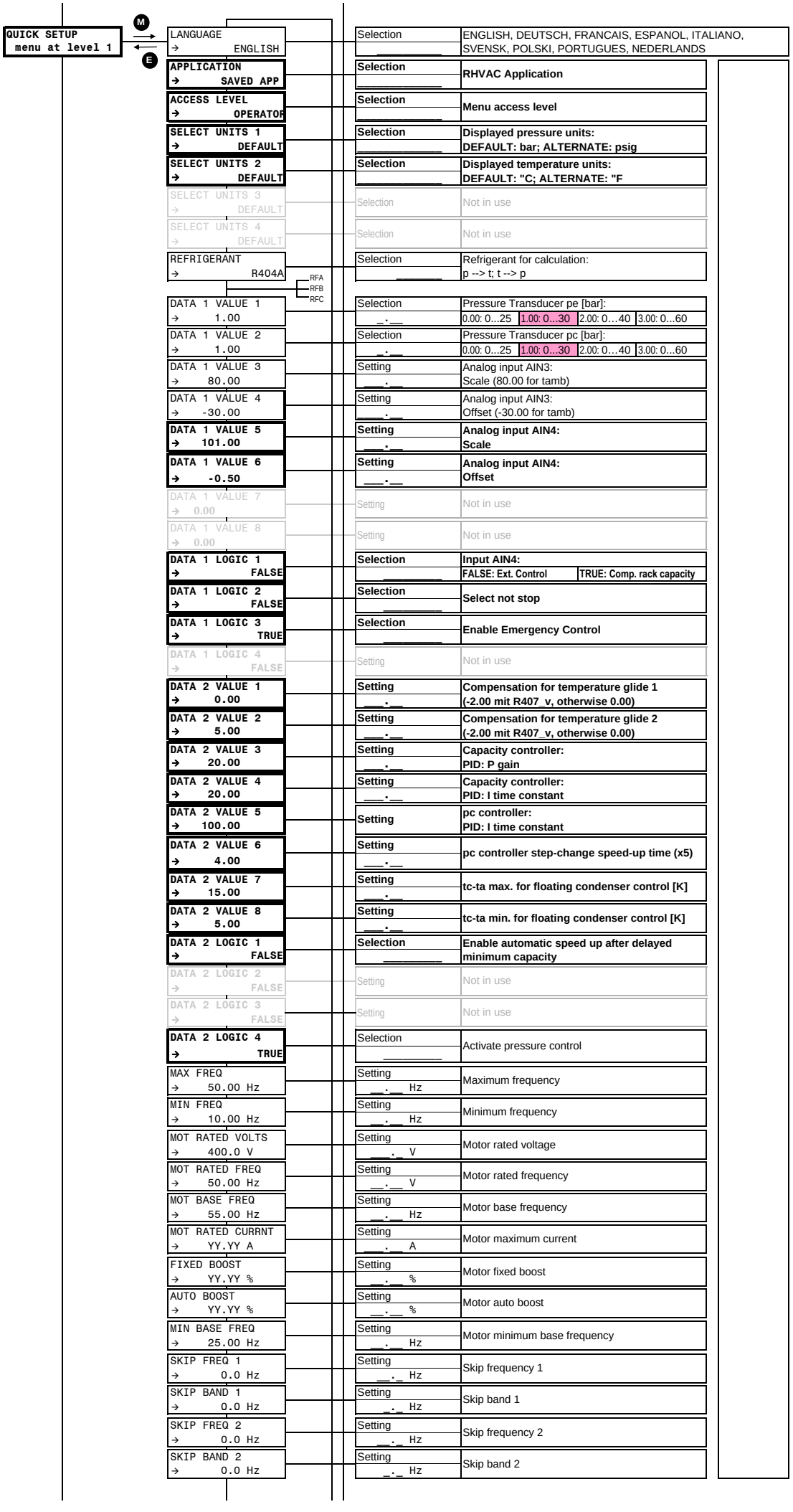
Stage controller:

SC STAGE NUMBER = Y	Internal value	Compressor rack: Number of stages
SC CAPACITY CNTR = YYYYY	Command	Compressor rack: Capacity Control activated
SC OUTPUT = YYYY	Internal value	Compressor rack: Output control signal
SCC OUTPUT 1 = YYYYY	Command	Compressor rack: Output control signal 1
SCC OUTPUT 2 = YYYYY	Command	Compressor rack: Output control signal 2
SCC OUTPUT 3 = YYYYY	Command	Compressor rack: Output control signal 3
SCC OUTPUT 4 = YYYYY	Command	Compressor rack: Output control signal 4
SC CAPACITY = Y.YY	Internal value	Compressor rack: Calculated total power
SC CAPACITY % = YY.YY %	Internal value	Compressor rack: Calculated total power in %
SC DIAGNOSTIC = Y	Internal value	Compressor rack: Diagnostics

9.2.2



AIN1 (X2:2) Analog input 1	pc, High-pressure transducer 1: 4 ... 20 mA; 0.0 ... 100.0 %	6.3.1 /
AIN2 (X2:3) Analog input 2	pc, High-pressure transducer 2: 4 ... 20 mA; 0.0 ... 100.0 %	
AIN3 (X2:4) Analog input 3	Ambient temperature: PT1000 / External signal	
AIN4 (X2:5) Analog input 4	Ext. act. value / setpoint: 0 ... 10 V; 0.0 ...100.0 %	
AOUT1 (X2:6) Analog output 1	- / FnG capacity / VfG frequency	6.3.2
AOUT2 (X2:7S-7G) Analog output 2	- / FnG capacity / - / -	
Analog output 3	Not in use	
Menü	Digital inputs and outputs	5.2
DIN1 (X2:12) Digital input 1	Start	5.2.1-4
DIN2 (X2:13) Digital input 2	Force maximum speed	5.3
DIN3 (X2:14) Digital input 3	Activate Setpoint / Limit pe2	5.2.2/4
DIN4 (X2:15) Digital input 4	NOT activate Setpoint pc1	
DIN5 (X2:16) Digital input 5	Activate external actating value of speed at AIN4	5.3
DIN6 (X2:17) Digital input 6	All fan groups "Ready" (no fault)	5.3
DIN7 (X2:18) Digital input 7	Pulses from external energy meter	5.3
DIN8 (X2:19) Digital input 8	Enable (Safety circuit without fault)	5.4
DOUT1 (X:21-22) Digital output 1	Ready (Health) / Multiplex	6.3.4
DOUT2 (X2:23-24) Digital output 2	Operating	6.3.4
DOUT3 (X2:25-26) Digital output 3	Activate FfGB (Fan Group B)	6.3.4
AOUT1 (X2:6) Analog output 1	- / - / - / -	6.3.2
AOUT2 (X3:7A-7B) Digital output A2	Activate FnGC / - / - / -	6.3.4
AOUT3 (X3:8A-8B) Digital output A3	Activate FnGC / Activate FnGD / - / Min.cap.del. / Min.cap. / Not pc limit.	6.3.4
Internal value	Actuating value of Freq.: % of maximum frequency	8.1.13
Internal value	Remote setpoint: % of maximum frequency	
Internal value	Frequency Setpoint: Frequency	
Internal value	Comms command setpoint: % of maximum frequency	
Internal value	Local setpoint: % of maximum frequency	
Internal value	Jog setpoint: % of maximum frequency	
Trips	Active trips: First set	10.2-4
Trips	Active trips: Second set	
Warning	Warnings: First set	
Warning	Warnings: Second set	
Trip	Trip which caused shut down	
Trip	Trip 1 (newest) which caused shut down	
Trip	Time trip 1 occured	
Trip	Trip 10 (oldest) which caused shut down	
Trip	Time trip 10 occured	
Measured value	Time powered up	10.2-4
Measured value	Time VsC running	
Measured value	Number of VsC starts	
Internal value	Autorestart logic: Attempts left	
Internal value	Autorestart logic: Time to next start attempt	
Status	iSpeed: Chopper active	
Status	Operating status: Sequencer control state	
Status	VsC operating status: Sequencer control state	


QUICK SETUP
menu at level 1
M
E
Basic settings:
Special settings:
VsC motor settings:
RFA
RFB
RFC
LANGUAGE → ENGLISH
Selection — ENGLISH, DEUTSCH, FRANCAIS, ESPANOL, ITALIANO, SVENSK, POLSKI, PORTUGUES, NEDERLANDS
APPLICATION → SAVED APP
Selection — RHVAC Application
ACCESS LEVEL → OPERATOR
Selection — Menu access level
SELECT UNITS 1 → DEFAULT
Selection — Displayed pressure units: DEFAULT: bar; ALTERNATE: psig
SELECT UNITS 2 → DEFAULT
Selection — Displayed temperature units: DEFAULT: "C; ALTERNATE: "F
SELECT UNITS 3 → DEFAULT
Selection — Not in use
SELECT UNITS 4 → DEFAULT
Selection — Not in use
REFRIGERANT → R404A
Selection — Refrigerant for calculation: p --> t; t --> p
DATA 1 VALUE 1 → 1.00
Selection — Pressure Transducer pe [bar]: 0.00: 0...25 | 1.00: 0...30 | 2.00: 0...40 | 3.00: 0...60
DATA 1 VALUE 2 → 1.00
Selection — Pressure Transducer pc [bar]: 0.00: 0...25 | 1.00: 0...30 | 2.00: 0...40 | 3.00: 0...60
DATA 1 VALUE 3 → 80.00
Setting — Analog input AIN3: Scale (80.00 for tamb)
DATA 1 VALUE 4 → -30.00
Setting — Analog input AIN3: Offset (-30.00 for tamb)
DATA 1 VALUE 5 → 101.00
Setting — Analog input AIN4: Scale
DATA 1 VALUE 6 → -0.50
Setting — Analog input AIN4: Offset
DATA 1 VALUE 7 → 0.00
Setting — Not in use
DATA 1 VALUE 8 → 0.00
Setting — Not in use
DATA 1 LOGIC 1 → FALSE
Selection — Input AIN4: FALSE: Ext. Control | TRUE: Comp. rack capacity
DATA 1 LOGIC 2 → FALSE
Selection — Select not stop
DATA 1 LOGIC 3 → TRUE
Selection — Enable Emergency Control
DATA 1 LOGIC 4 → FALSE
Setting — Not in use
DATA 2 VALUE 1 → 0.00
Setting — Compensation for temperature glide 1 (-2.00 mit R407_v, otherwise 0.00)
DATA 2 VALUE 2 → 5.00
Setting — Compensation for temperature glide 2 (-2.00 mit R407_v, otherwise 0.00)
DATA 2 VALUE 3 → 20.00
Setting — Capacity controller: PID: P gain
DATA 2 VALUE 4 → 20.00
Setting — Capacity controller: PID: I time constant
DATA 2 VALUE 5 → 100.00
Setting — pc controller: PID: I time constant
DATA 2 VALUE 6 → 4.00
Setting — pc controller step-change speed-up time (x5)
DATA 2 VALUE 7 → 15.00
Setting — tc-ta max. for floating condenser control [K]
DATA 2 VALUE 8 → 5.00
Setting — tc-ta min. for floating condenser control [K]
DATA 2 LOGIC 1 → FALSE
Selection — Enable automatic speed up after delayed minimum capacity
DATA 2 LOGIC 2 → FALSE
Setting — Not in use
DATA 2 LOGIC 3 → FALSE
Setting — Not in use
DATA 2 LOGIC 4 → TRUE
Selection — Activate pressure control
MAX FREQ → 50.00 Hz
Setting — Maximum frequency
MIN FREQ → 10.00 Hz
Setting — Minimum frequency
MOT RATED VOLTS → 400.0 V
Setting — Motor rated voltage
MOT RATED FREQ → 50.00 Hz
Setting — Motor rated frequency
MOT BASE FREQ → 55.00 Hz
Setting — Motor base frequency
MOT RATED CURRNT → YY.YY A
Setting — Motor maximum current
FIXED BOOST → YY.YY %
Setting — Motor fixed boost
AUTO BOOST → YY.YY %
Setting — Motor auto boost
MIN BASE FREQ → 25.00 Hz
Setting — Motor minimum base frequency
SKIP FREQ 1 → 0.0 Hz
Setting — Skip frequency 1
SKIP BAND 1 → 0.0 Hz
Setting — Skip band 1
SKIP FREQ 2 → 0.0 Hz
Setting — Skip frequency 2
SKIP BAND 2 → 0.0 Hz
Setting — Skip band 2

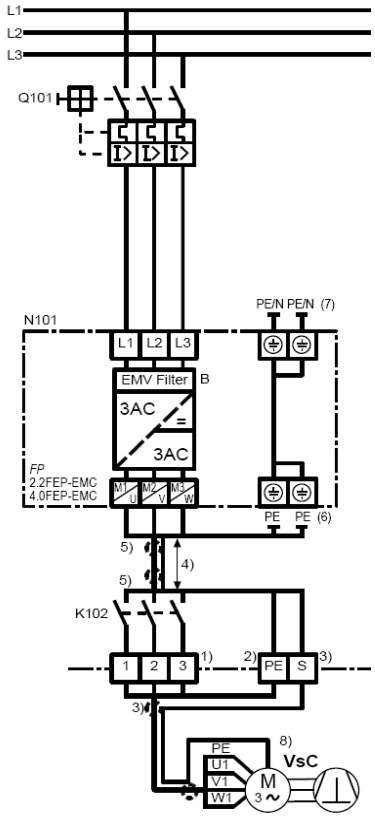
Energy meter:	ENERGY MET RESET → FALSE	Selection _____	Energy meter: Reset at FALSE --> TRUE --> FALSE
	ENERGY MET MODE → INTERNAL	Selection _____	Energy meter: Mode: Internal= VsC; External= Rack
	ENERGY MET SCALE → 1.0 kW	Setting __._ kW	Energy meter: Scale: 1 kWh each pulse
Serial communications:	P3 EI ASCII UID → 1	Setting _	P3 RS232 port with EI ASCII protocoll: Unit Identifier address
	MDBS RTU ADDRESS → 1	Setting _	RS485 Interface option: Modbus RTU address
	MDBS RTU PARITY → 0	Selection _____	RS485 Interface option: Modbus RTU parity
Analog input types:	AIN 1 TYPE → 4..20 mA	Selection _____	Analog input AIN1: Type
	AIN 2 TYPE → 4..20 mA	Selection _____	Analog input AIN2: Type
	AIN 3 TYPE → +1..+5 V	Selection _____	Analog input AIN3: Type
	AIN 4 TYPE → 0..+10 V	Selection _____	Analog input AIN4: Type
Compressor rack:	SC FsD+ DELAY → FFF s	Setting ___ s	Stage controller: FsC switch-on delay
	SC FsD+ FORCE → FALSE	**Selection _____**	**Stage controller, Manual force: One stage more at FALSE>TRUE>FALSE**
	SC FsD- DELAY → FF s	Setting ___ s	Stage controller: FsC OFF delay
	SC FsD- FORCE → FALSE	**Selection _____**	**Stage controller, Manual force: One stage less at FALSE>TRUE>FALSE**
	SC FsD RUN MAX → 6000 s	Setting ____ s	Stage controller: FsC maximum run time
	SC FsD RUN MIN → 60 s	Setting ___ s	Stage controller: FsC minimum run time
	SC FsD STOP MAX → 600 s	Setting ____ s	Stage controller: FsC maximum stop time
	SC FsD STOP MIN → 60 s	Setting ___ s	Stage controller: FsC minimum stop time
	SC CC ACTIVE MAX → 300 s	Setting ___ s	Stage controller, Capacity Control: FsC CC maximum active time
	SC CC RECOVR MIN → 15 s	Setting ___ s	Stage controller, Capacity Control: FsC CC minimum recovery time
	SC FAST STOP DLY → 2 s	Setting ___ s	Stage controller: FsC OFF delay at fast stop
	SC FsD TOT OP RS → FALSE	Selection _____	Stage controller: FsC reset total operating times
	SC FsD NMB ST RS → FALSE	Selection _____	Stage controller: FsC reset total start count
	SC STAGE NMB MAX → 1	Setting _	Stage controller: FsC maximum number of stages
	SC LOGIC TYPE → 1	Setting _	Stage controller, FsC type of logic: 0: Normal; 1: Swop 1 (FsC); 2: Swop 2
	SC CODE TYPE → 0	Setting _	Stage controller, FsC type of code: 0: MBC; 1: GBC; 2: MGBC
	SC CODE OFFSET → 0	Setting _	Stage controller: FsC code offset:
	SC CC OUT → 0	Setting _	Stage controller: Internal Capacity Control output activated
	SC VsD CAPACITY → 100.00	**Setting ___.__**	**Stage controller: Set VsD capacity**
	SC VsD CC CPCTY → 100.00 %	**Setting ___.__ %**	**Stage controller: Set VsD capacity when capacity controlled**
	SC FsD FREQ → 50.00 Hz	Setting __.__ Hz	Stage controller: Set FsD frequency
	SC FsD0 CAPACITY → 100.00	Setting	Not in use
	SC FsD0 CC CPCTY → 0.00 %	Setting	Used as AIN4 test input (if no external analog input)
	SC FsD1 CAPACITY → 100.00	**Setting ___.__**	**Stage controller: Set FsD1 capacity**
	SC FsD1 CC CPCTY → 100.00 %	**Setting ___.__ %**	**Stage controller: Set FsD1 capacity when capacity controlled**
	SC FsD2 CAPACITY → 100.00	**Setting ___.__**	**Stage controller: Set FsD2 capacity**
	SC FsD2 CC CPCTY → 100.00 %	**Setting ___.__ %**	**Stage controller: Set FsD2 capacity when capacity controlled**
	SC FsD3 CAPACITY → 100.00	**Setting ___.__**	**Stage controller: Set FsD3 capacity**
	SC FsD3 CC CPCTY → 100.00 %	**Setting ___.__ %**	**Stage controller: Set FsD3 capacity when capacity controlled**
	SC FsD4 CAPACITY → 100.00	**Setting ___.__**	**Stage controller: Set FsD4 capacity**
	SC FsD4 CC CPCTY → 100.00 %	**Setting ___.__ %**	**Stage controller: Set FsD4 capacity when capacity controlled**
	SC CAPACITY TYPE → 1	Selection	Not in use
	SC DIAGNOST SEL → 1	**Selection _**	**Stage controller: Diagnostic select**

0: FsD with longest run time		**1: Longest run time**		**Output value:**
2: FsD with longest stop time		**3: Longest stop time**		
4: Run/Stop : times 10:	**11: Total : running 17: times**	**18: Total : number 24: of starts**	**FsD1: : FsD7:**	DIAGNOSTICS SC DIAGNOSTIC

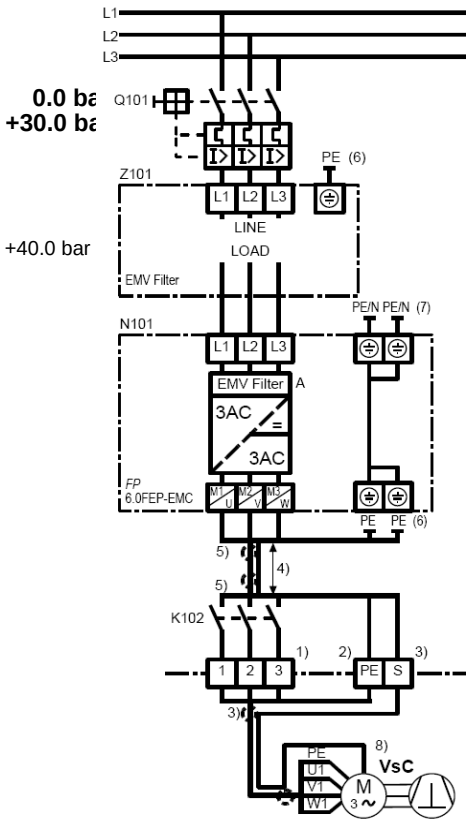
POWER SECTION

POWER SECTION

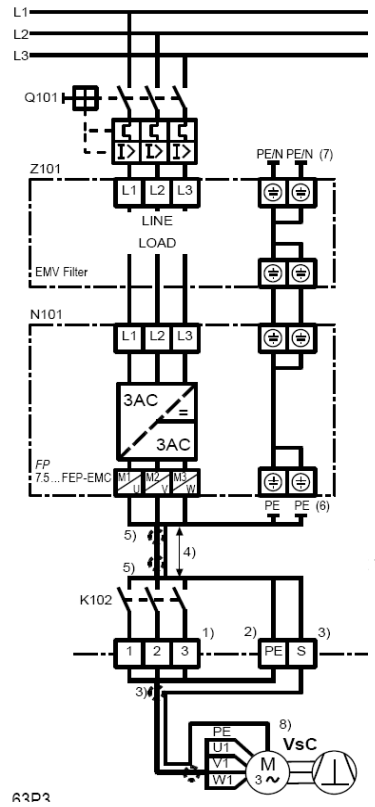
Power connections



FP 4.0FEP / iS RCF9.5:
Power wiring



FP 6.0FEP / iS RCF14:
Power wiring



FP 7.5 ... 90FEP / iS RCF23 ... 205:
Power wiring

to activate Ph controller:

Anmerkungen:
- Zeichnungen noch auszutauschen
- Augansschütze werden nicht benötigt
- Motorfilter manchmal notwendig

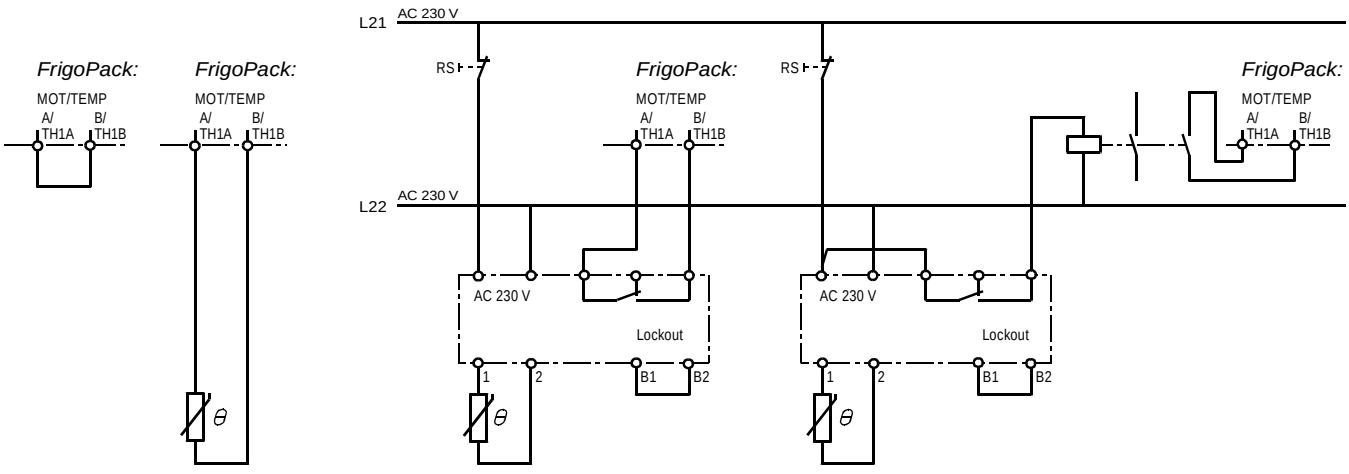
Power terminals

Terminal / Designation	Signal / Function		Explanation	Further information
PE, PE	FP ...30FEP-EMC / iS RCF23 ... 73: Protective earth connections (both to be earthed)		- Observe all safety and EMC requirements	7.7.1
PE	FP 37... FEP-EMC / iS RCF87...: Protective earth connection			
L1	Three phases of voltage supply		- Ensure that supply voltage agrees with data on FrigoPack / iSpeed name plate	7.7.1
L2/N				
L3				
DC+			- Do not use otherwise risk of damage to FrigoPack / iSpeed	
(DBR)				
DC-				
M1/U	Fan motor groups		- Variable-speed Fan motor groups	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-)				
AUX1	Only with: FP 55...FEP-EMC / iS		- Supply externally	6.7
AUX2	2AC 230 supply for equipment fan			6.8.4

POWER SECTION

Terminals for motor protection

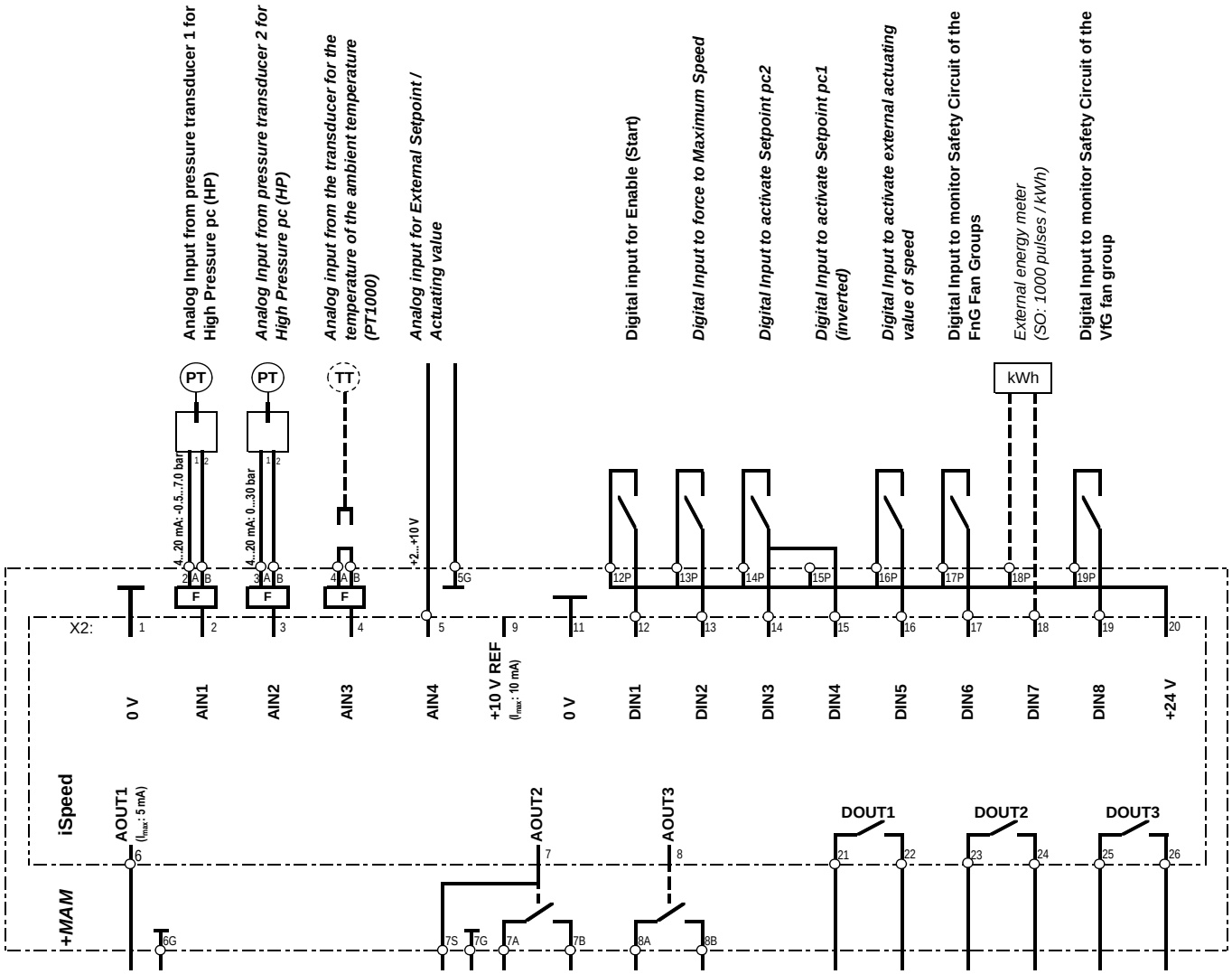
Terminal / Designation	Signal / Function		Explanation	Further information
X2:				
MOT/ TEMP	Alternative a), Without processing:		- Thermistor protection is processed in safety circuit, these two terminals must be linked	6.2
	Alternative b), Direct processing of motor thermistors:		- Connect motor thermistors 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.	



a) b) c) d)

CONTROL SECTION

Control connections



- **Not in use**
- Relative Capacity of Condenser
- VfG Condenser fan: Speed [%]

Analog Output depending on setting:

A1:AOUT1 FUNCTN

10 s

- **VfGC: Activate**
- Relative Capacity of Condenser

Analog Output / Relay depending on setting:

A2:AOUT2 FUNCTN

- VfGC: Activate
- **VfGD: Activate**
- Not in use
- Minimum capacity delayed
- Minimum capacity

Analog Output / Relay depending on setting:

A3:AOUT3 FUNCTN

- Ready (no fault)
- Optional additional functions with multiplex

Relay contact depending on setting:

A4:DOUT1 FUNCTN

- "VfG Operating"

Relay contact:

- VfGB: Activate

Relay contact:

VfG: Variable-speed fan Group (Condenser / Dry cooler)

FP FEP/14 / iSP RCF
FrigoSoft A.6

Special settings

A1:AOUT1 FUNCTN

Setting		Function
-	INPUT 0	Not in use
-	**INPUT 1**	**Relative Capacity of Condenser**
-	INPUT 2	VfG Condenser fan: Speed [%]

A2:AOUT2 FUNCTN

Setting		Function	
-	**INPUT 0**		**#NV**
-	INPUT 1		#NV

A3:AOUT3 FUNCTN

Setting		Function
-	INPUT 0	VfGC: Activate
-	**INPUT 1**	**VfGD: Activate**
-	INPUT 2	Not in use
-	INPUT 3	Minimum capacity delayed
-	INPUT 4	Minimum capacity

A4:DOUT1 FUNCTN

Refer to Page 10