



Wiring Diagram

DHP-H

DHP-H
DHP-H Opti
DHP-H Opti Pro
DHP-H Opti Pro+

Danfoss A/S is not liable or bound by warranty if these instructions are not adhered to during installation or service.

The English language is used for the original instructions.
Other languages are a translation of the original instructions.
(Directive 2006/42/EC)

© Copyright Danfoss A/S

Table of Contents

1	Legend	4
1.1	Legend	4
2	DHP-H	6
2.1	DHP-H 6-8kW 230V 1N	6
2.2	DHP-H 10-12kW 230V 1N	9
2.3	DHP-H 6-8kW 400V 3N	12
2.4	DHP-H 10-16kW 400V 3N	15
2.5	DHP-H Opti 4-12kW 230V 1N	18
2.6	DHP-H Opti 4kW 400V 3N	22
2.7	DHP-H Opti 6-16kW 400V 3N	26
2.8	DHP-H Opti Pro 6-12kW 230V 1N	30
2.9	DHP-H Opti Pro + 6-13kW 400V 3N	34

Wiring Diagram

DHP-H

1 Legend

1.1 Legend

Number/Note	Description
1	Heat pump
3	Outdoor unit
36	Circulation pump (system)
40	Expansion card
50	Outdoor sensor
51	System supply line sensor
52	Sensor for EM-Modul module/ret.line sensor
53	Hot water starting sensor
55	Hot water sensor top
62	Room Sensor
69	Shunted loop
71	Flow guard
115	Immersion heater
117	Additional heater
301	Compressor
302	Brine pump
303	Radiator pump
304	Circulation pump
305	Fan
306	System circulation pump
307	Distribution circulation pump
308	Condenser pump
309	Hot gas pump
310	Reversing valve
311	4 way valve
312	Bypass valve
313	Electronic expansion valve
317	Immersion heater
340	Temperature guard
341	Thermal overload relay
342	Circuit breaker
343	Line circuit breaker
344	Alarm relay
345	Contactors
350	Soft start
351	Capacitor
353	Drip tray heater
354	Compressor Heater
355	Drip tray heater cable
362	Shunt valve control

Number/Note	Description
363	Reversing valve hot-water
364	Shunt valve hot-water
365	Supply line sensor
366	Return line sensor
367	System shunt
368	Distribution circuit shunt
369	Pool heating valve
370	2nd distribution circuit pump
371	Auxiliary heating Oil/El
372	Auxiliary top heating
373	Distribution circuit shunt 2
374	Shunt defroster
375	Brine valve
376	Shunt cooling
403	Operating pressure switch
405	Heating out sensor
406	Room sensor
407	HGW sensor
408	EVU
410	Hot water
411	Heating return sensor
412	Brine out sensor
413	Brine in sensor
414	High pressure switch
415	Low pressure switch
416	Discharge pipe sensor
417	Defrost sensor
418	Refrigerant 1 sensor
419	Refrigerant 2 sensor
420	Pressure transmitter
421	Suction gas sensor
422	Dewpoint sensor
423	Sensor pool
424	Sensor cooling
425	Sensor buffer tank
426	Sensor system supply line
427	Sensor distribution circuit 1
428	Sensor distribution circuit 2
451	Control unit
452	I/O controller
453	Display

Wiring Diagram

DHP-H

Number/Note	Description
454	Electronic expansion valve controller
455	Indoor hub controller
456	Current limiter
457	WM-HPC Control module
458	HPC-RM Relay module
459	HPC-EM Expansion module
460	HPC-CM Cooling module
461	HPC-OP Operator panel
* Note 1	Strapped at delivery
* Note 2	blue
* Note 2	brown
* Note 2	grey
* Note 2	green
* Note 2	yellow
* Note 2	violet
* Note 2	pink
* Note 2	red
* Note 2	black
* Note 2	white
* Note 3	Can be connected to 230V single phase if auxiliary heater is disconnected.
* Note 4	When connected to 230V single phase straps to auxiliary heater shall be removed.
* Note 5	Remove jumper when using separate supply of control circuit

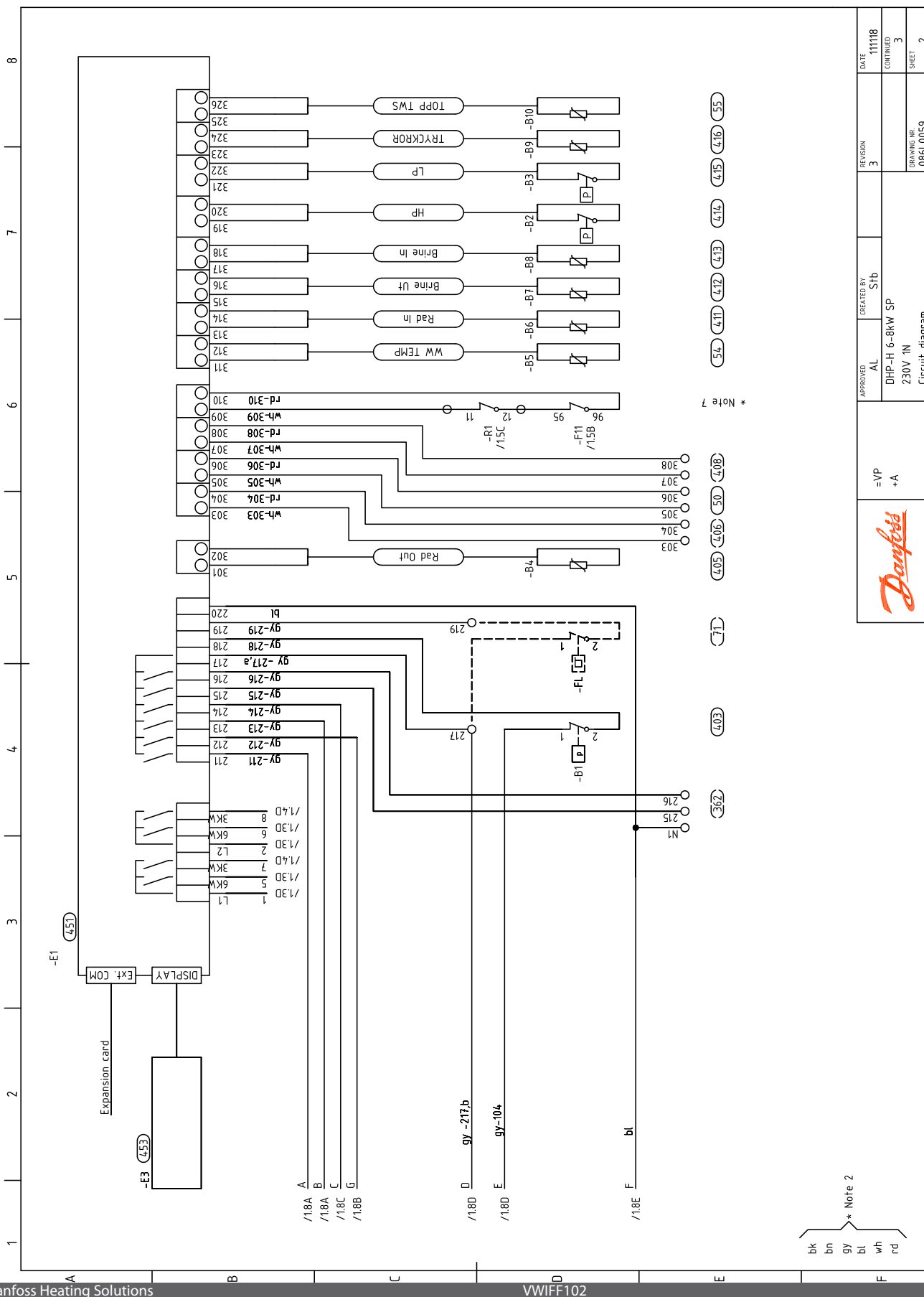
Number/Note	Description
* Note 6	Remove jumper when using flowguard
* Note 7	Overload relay trip/tripped out
* Note 8	Alarm
* Note 9	Speed control
* Note 10	Please make sure that all supply lines are disconnected before attending any work to internal electrical parts!
* Note 11	Fan overload relay
* Note 12	To indoor unit
* Note 13	To slave unit
* Note 14	To electronic expansion unit
* Note 15	Immersion heater or external auxiliary heater
* Note 16	Potential free contact
* Note 17	To outdoor unit
* Note 18	To expansion Unit
* Note 19	Communication
* Note 20	Passive cooling Brine circuit
* Note 21	Passive cooling Radiator circuit
* Note 22	Combined heat source system
* Note 23	Passive cooling
* Note 24	Remove jumper when EVU
* Note 25	EVU constant power supply
* Note 26	Remove jumper if EVU is supplied separately
* Note 27	Remove jumper when flowguard or pressure switch Brine is used

2.1 DHP-H 6-8kW 230V 1N



Wiring Diagram

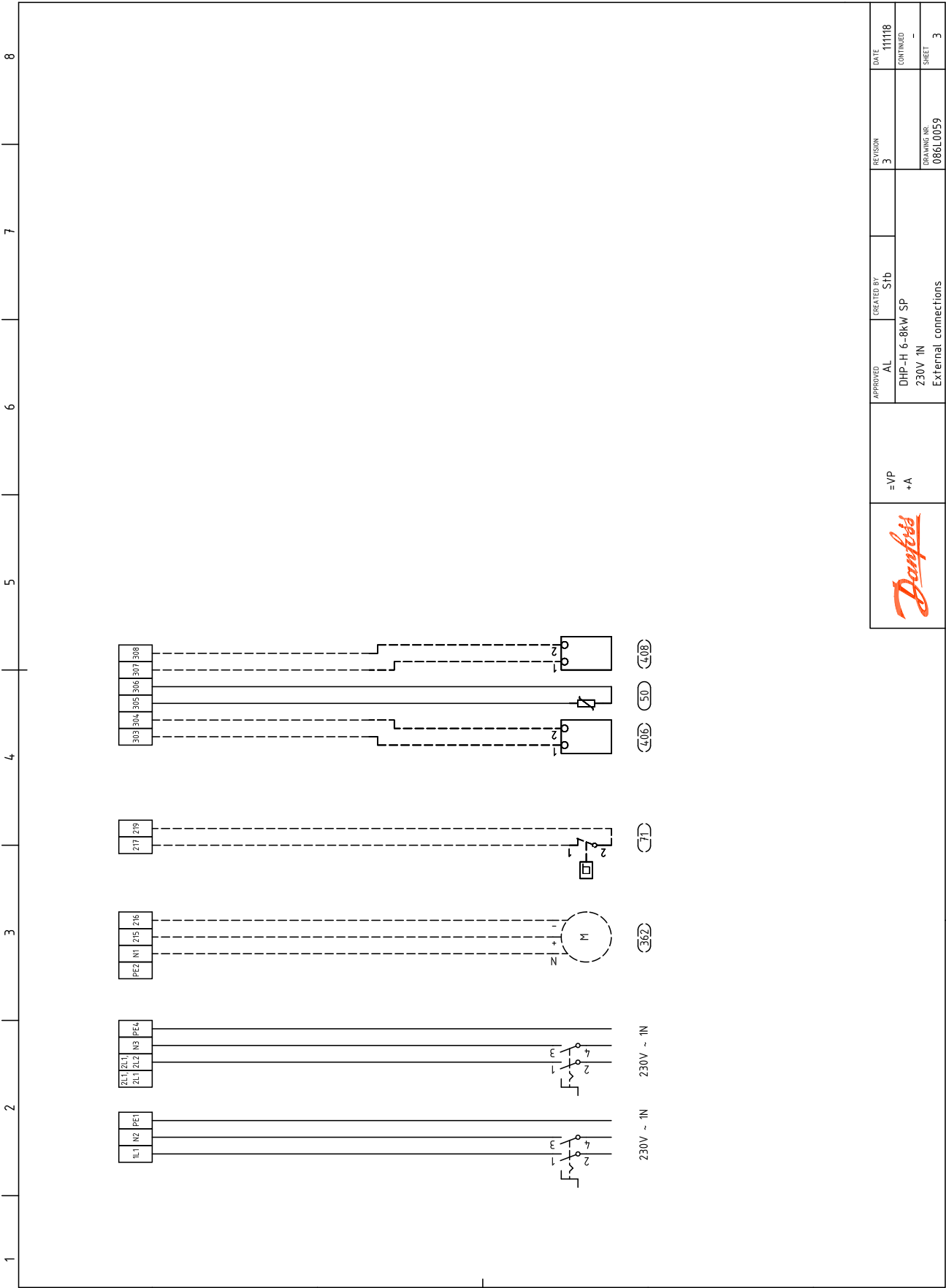
DHP-H




DATE	11/11/18
REVISION	3
CREATED BY	Sfb
APPROVED	AL
DHP-H 6-8kW SP	
230V 1N	
Circuit diagram	
DRAWING NR.	086L0059
SHEET	2
CONTINUED	3

Wiring Diagram

DHP-H



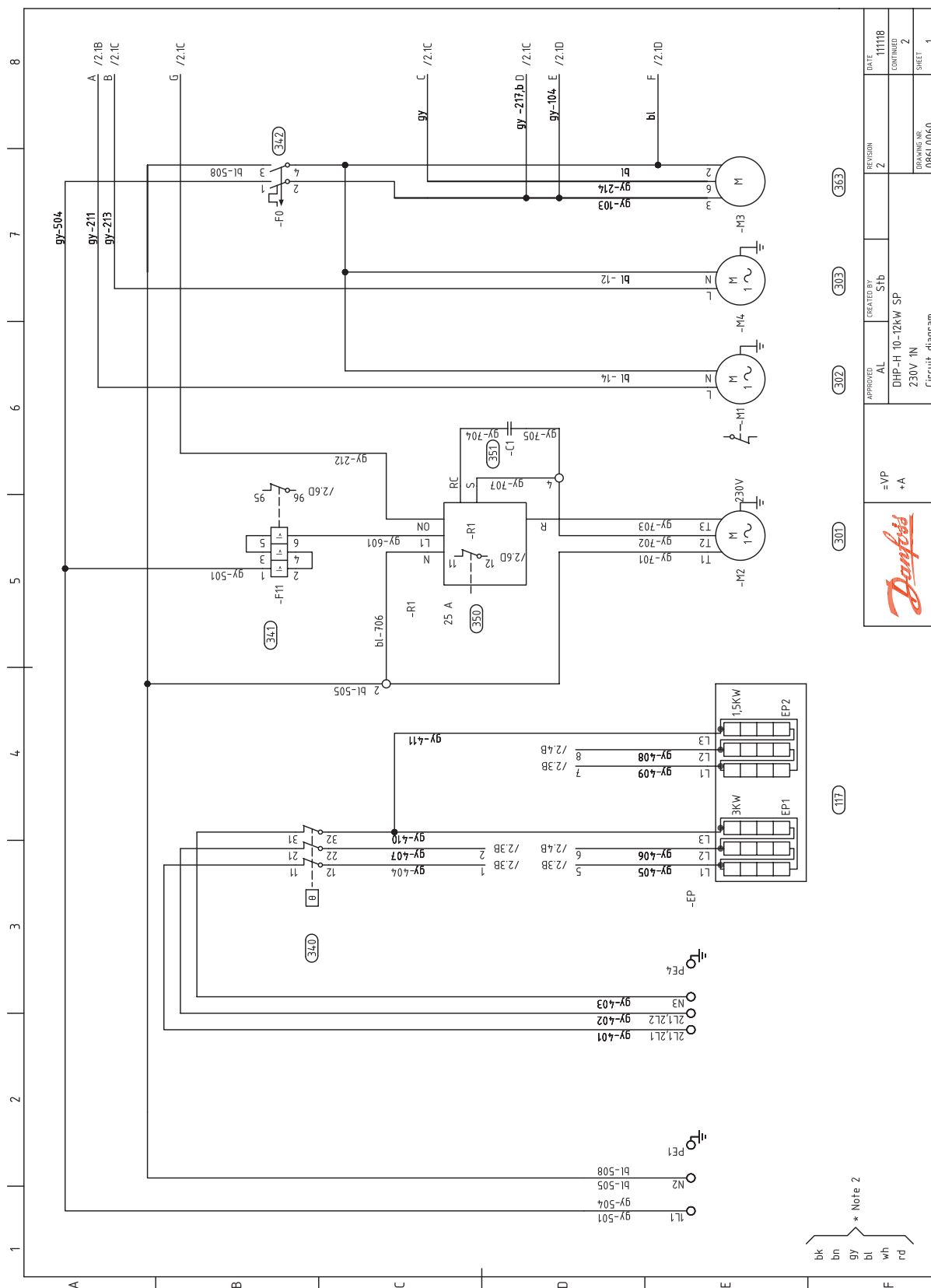
	= VP + A	APPROVED AL	CREATED BY Stb	REVISION 3	DATE 111118
					CONTINUED -
					SHEET 3

DHP-H 6-8kW SP
230V 1N
External connections

Wiring Diagram

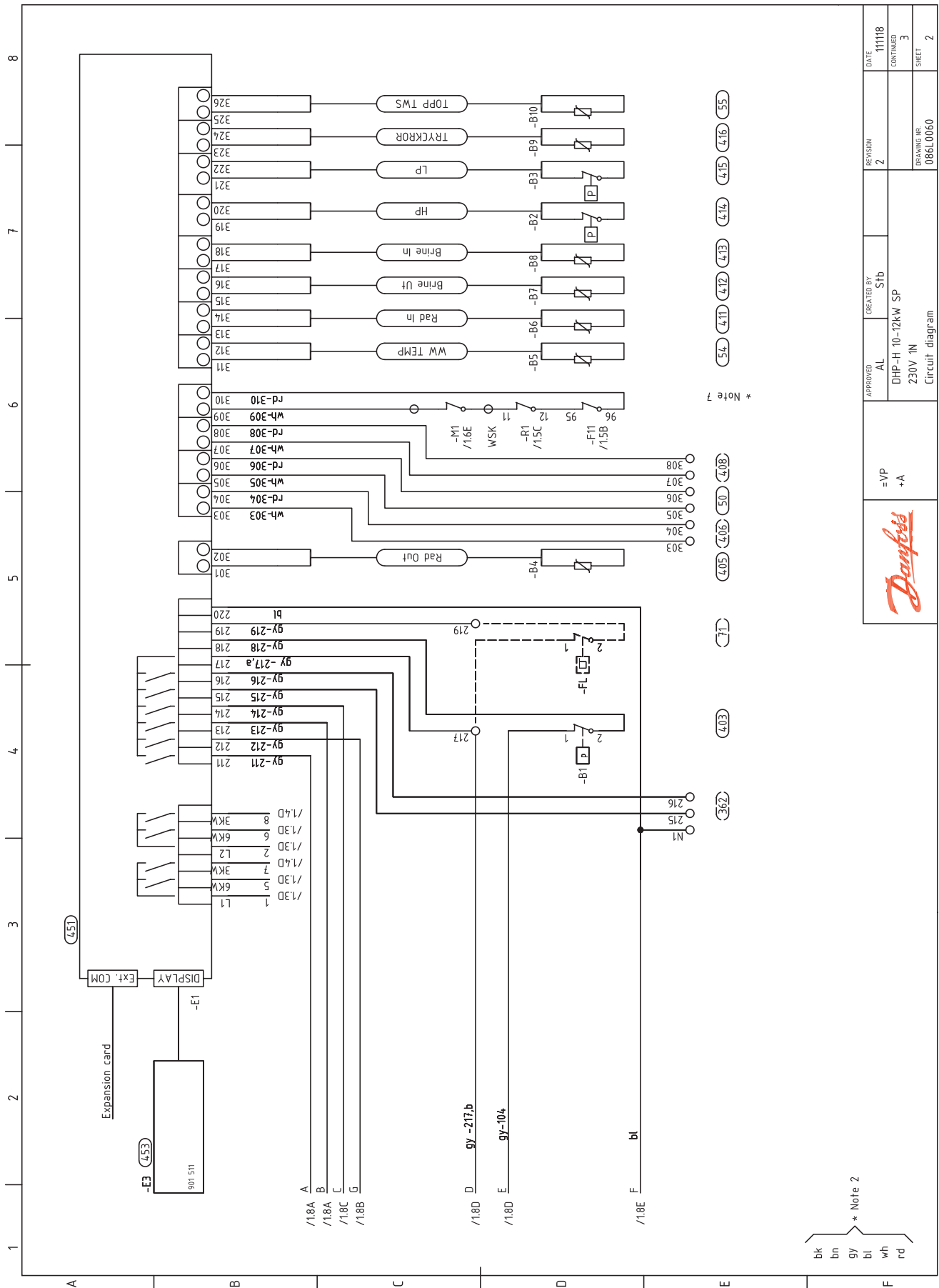
DHP-H

2.2 DHP-H 10-12kW 230V 1N



Wiring Diagram

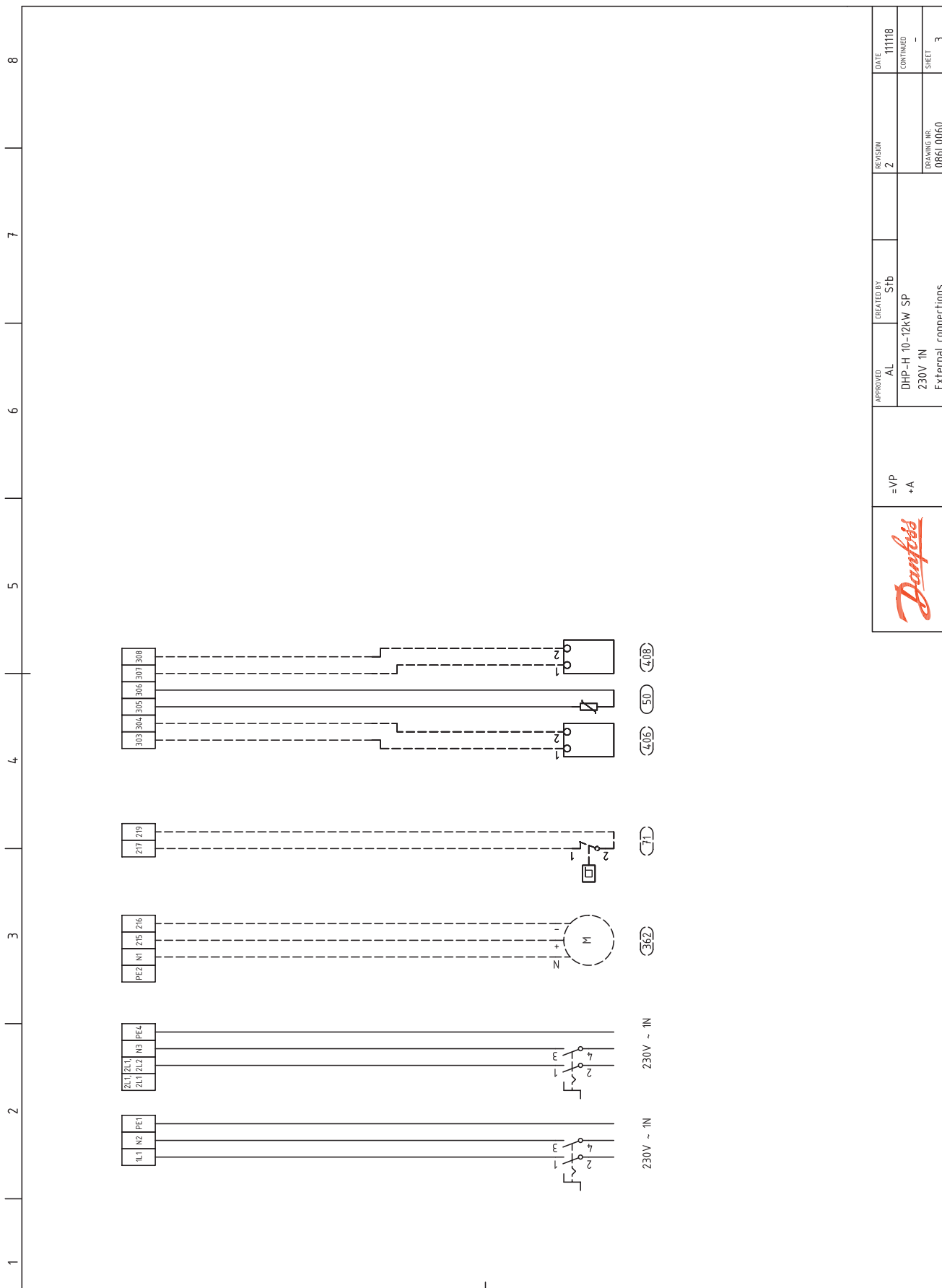
DHP-H



DATE	111118	REVISION	2	CREATED BY	Sth	APPROVED	AL	DHP-H 10-12kW SP	230V 1N	Circuit diagram	DRAWING NO.	08610060	SHEET	2
CONTINUED	3													

Wiring Diagram

DHP-H

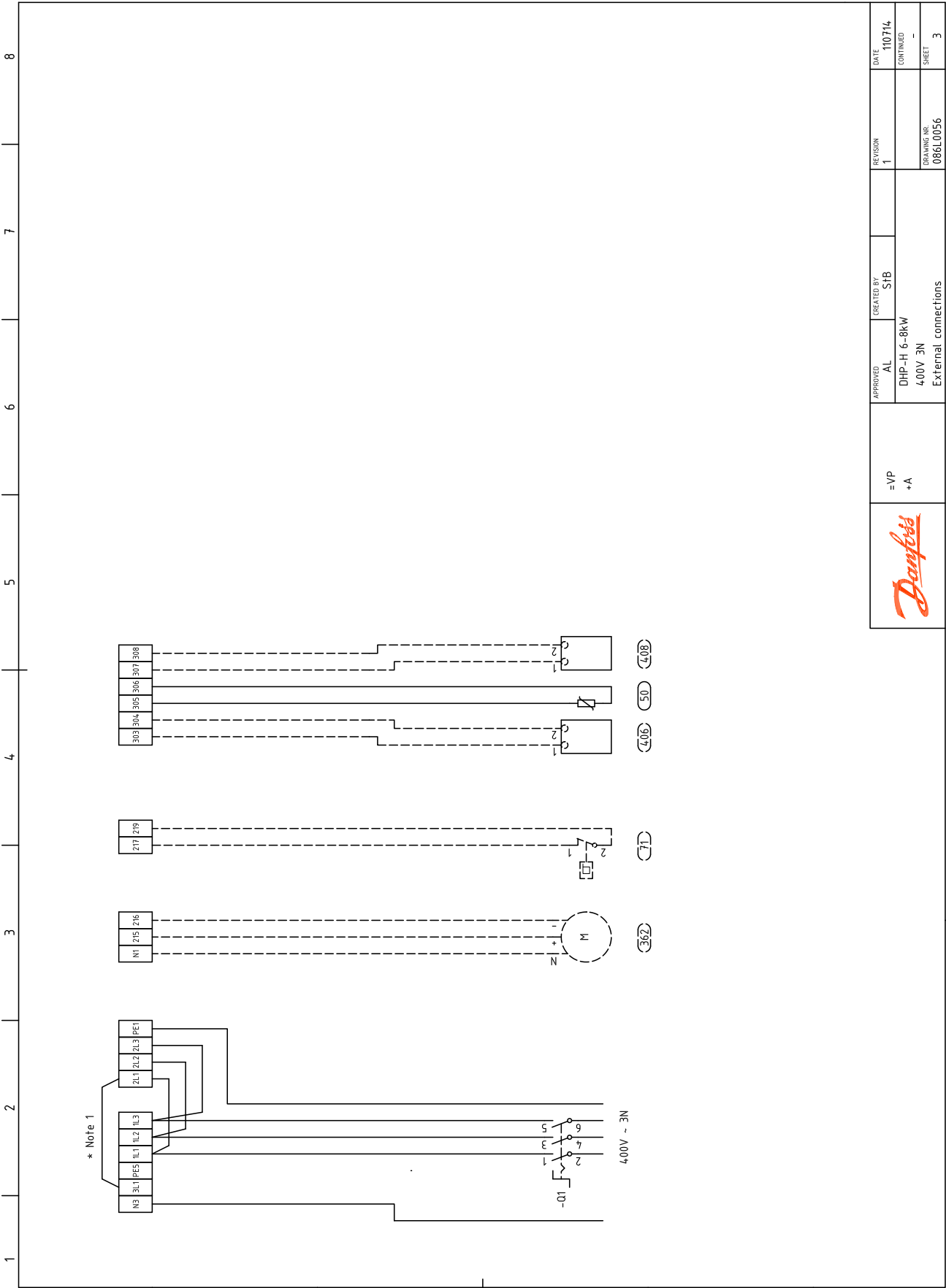


	=VP +A	APPROVED AL	CREATED BY Stb	REVISION 2	DATE 111118
					CONTINUED -
					DRAWING NR. 0861.0060
					SHEET 3
DHP-H 10-12kW SP 230V 1N External connections					



Wiring Diagram

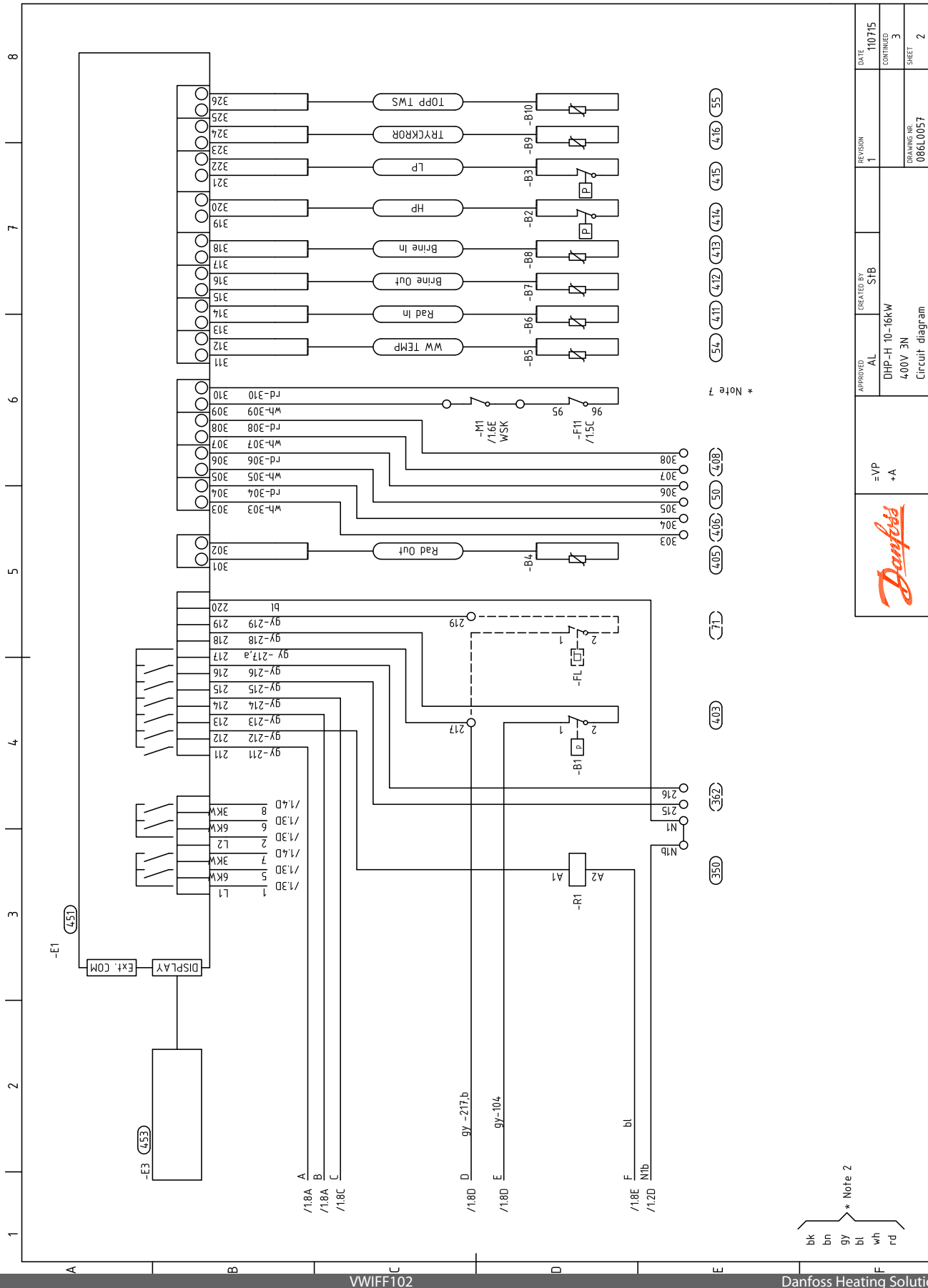
DHP-H



	=VP +A	APPROVED	AL	CREATED BY STB	REVISION 1	DATE 110714			
						CONTINUED -			
						DRAWING NR. 086L0056			
					DHP-H 6-8kW 400V 3N External connections				SHEET 3

Wiring Diagram

DHP-H



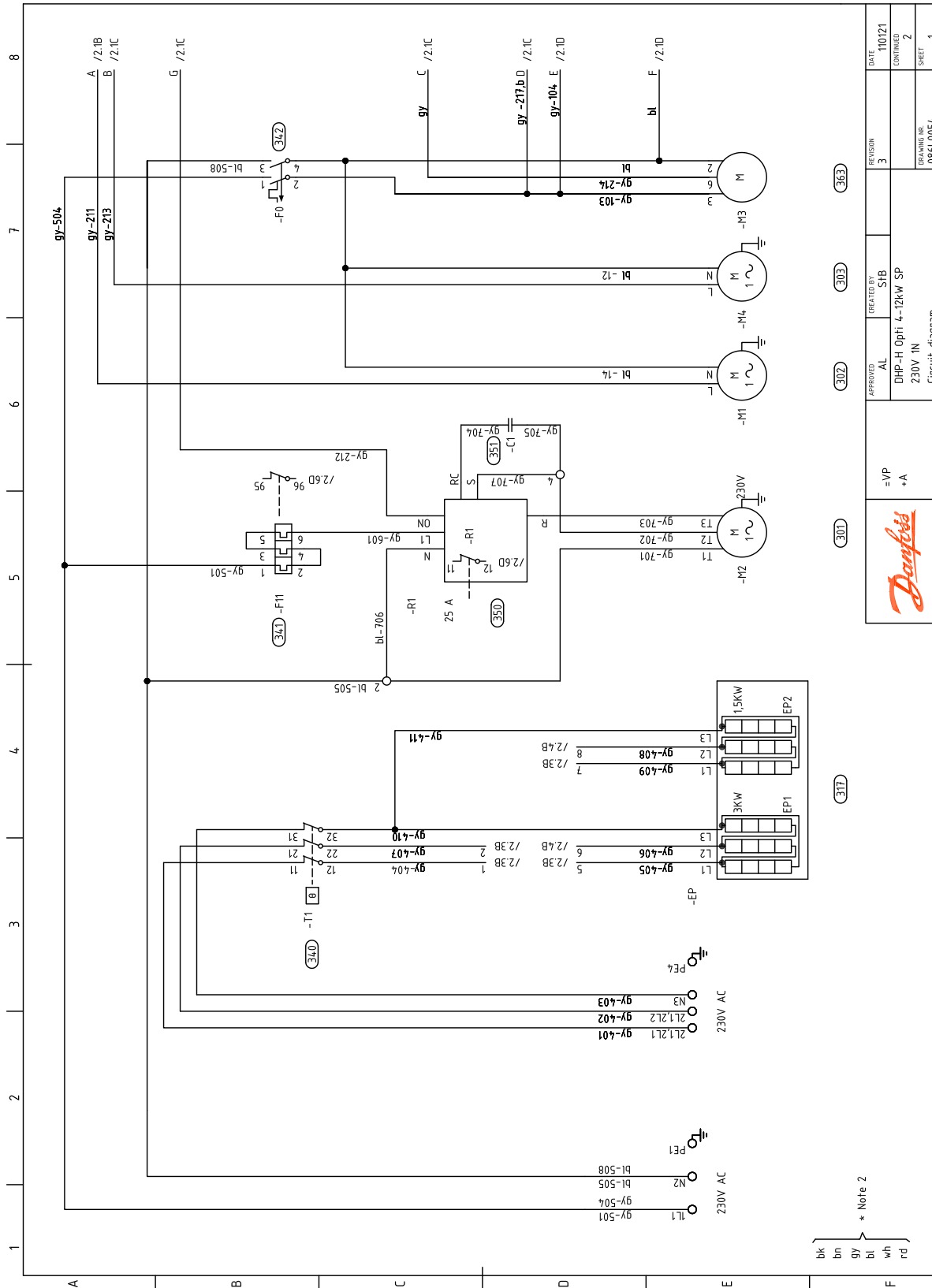
DATE	110715
REVISION	1
CREATED BY	SHB
APPROVED	AL
DHP-H 10-16kW	
400V 3N	
Circuit diagram	
DRAWING NR.	086L0057
SHEET	2
CONTINUED	3



Wiring Diagram

DHP-H

2.5 DHP-H Opti 4-12kW 230V 1N



DATE	110121
REVISION	3
CONTINUED	2
SHEET	1
DRAWING NO.	086L0054
APPROVED	AL
CREATED BY	STB
DHP-H Opti 4-12kW SP	
230V 1N	
Circuit diagram	
= VP	
+ A	



317

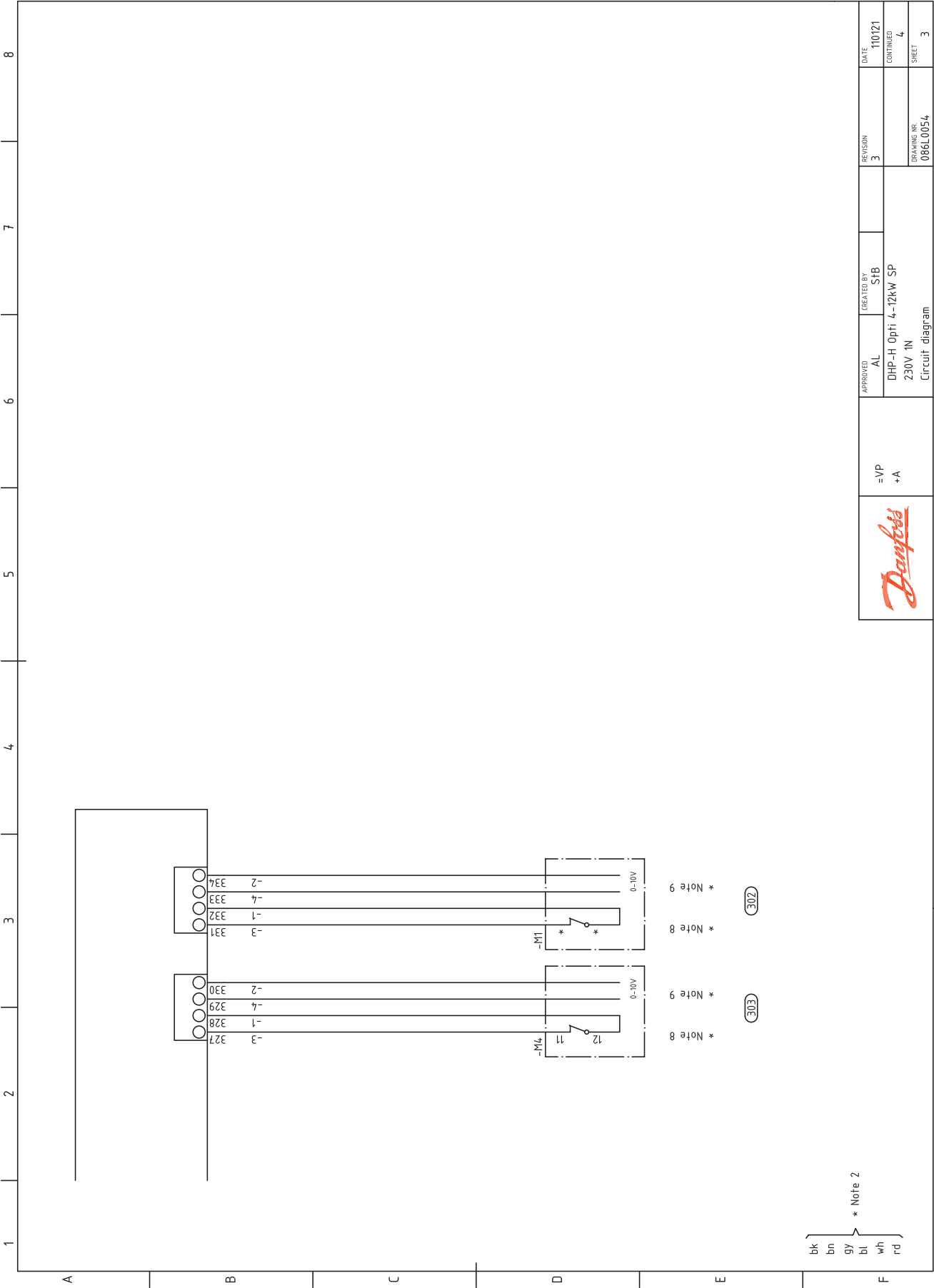
* Note 2


bk bn gy bl wh rd



Wiring Diagram

DHP-H



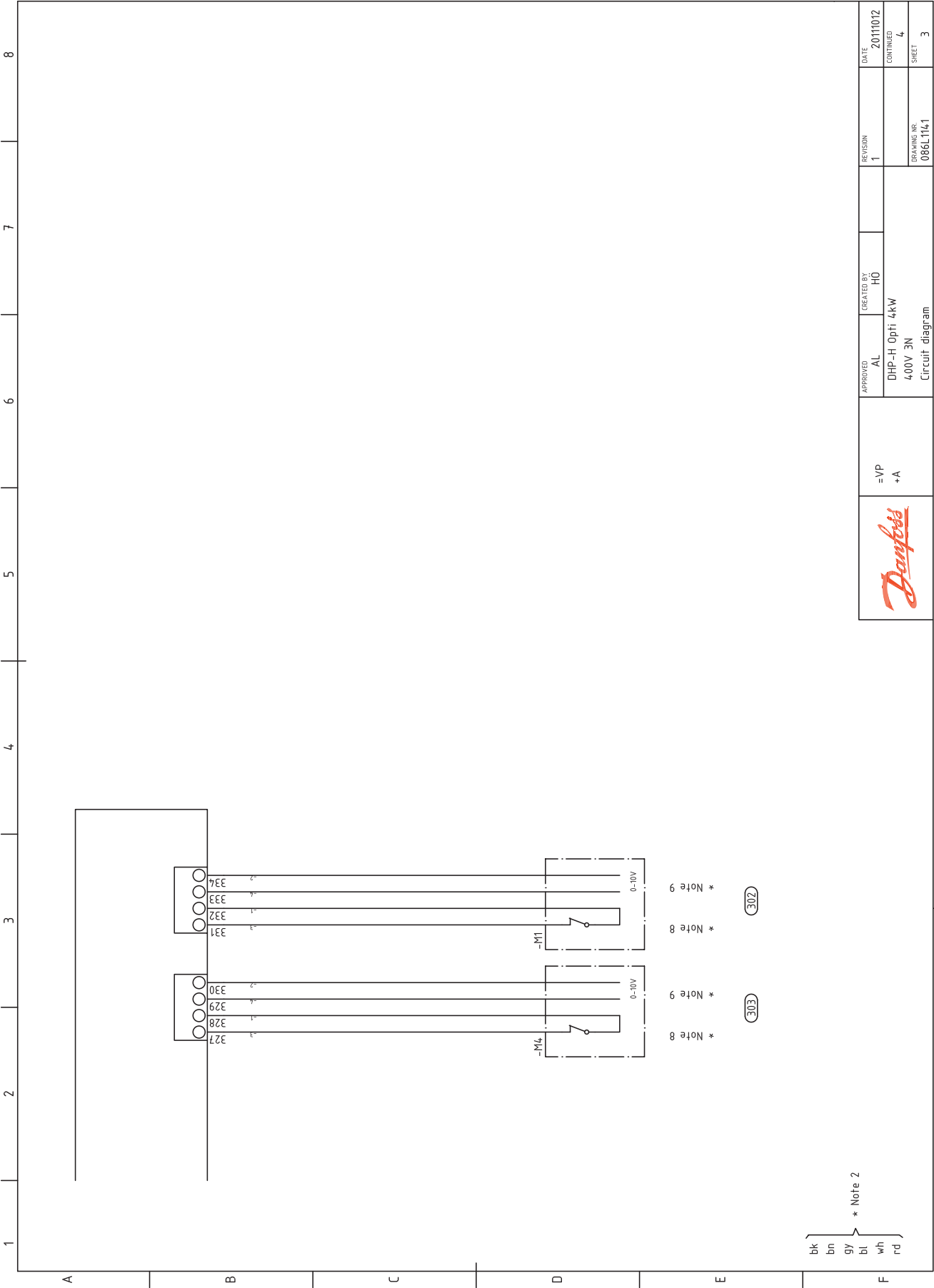
	=VP +A	APPROVED AL	CREATED BY SHB	REVISION 3	DATE 110121
					CONTINUED 4
					SHEET 3






Wiring Diagram

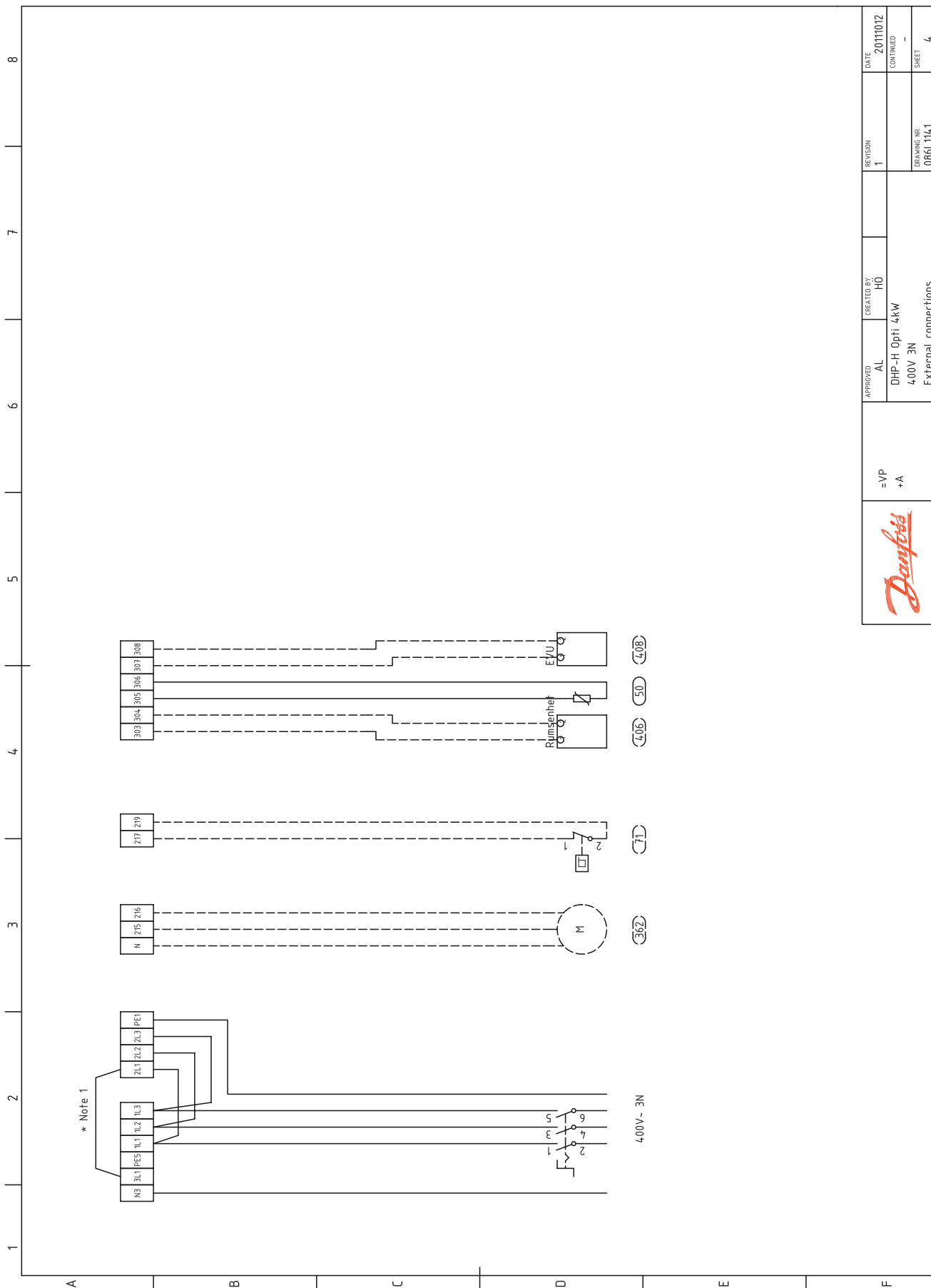
DHP-H



	=VP +A		APPROVED	AL	CREATED BY HÖ	REVISION	DATE
						1	2011012
			DHP-H Opti 4kW			DRAWING NO. 086L114.1	SHEET 3
			400V 3N				
			Circuit diagram				

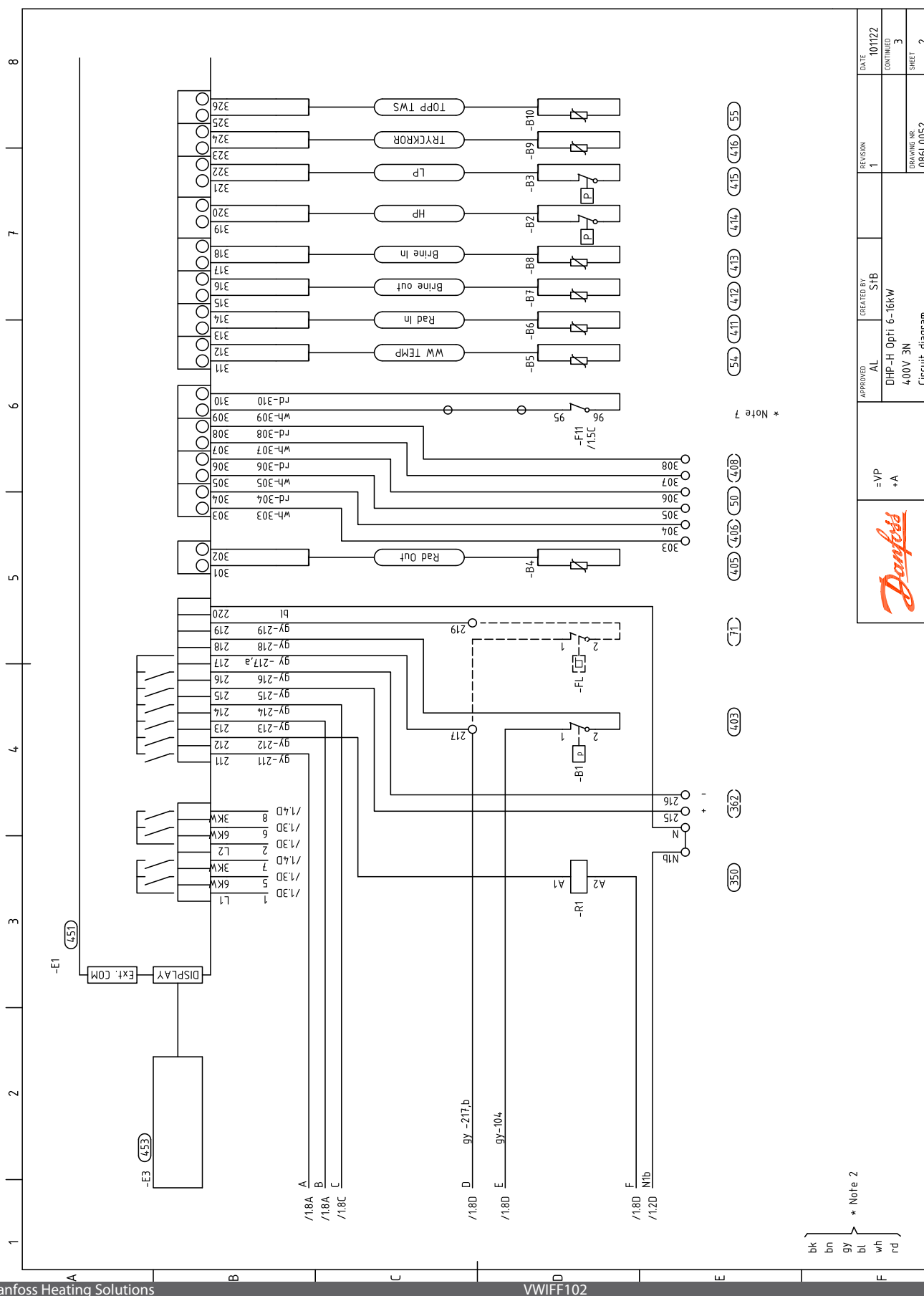
Wiring Diagram

DHP-H



Wiring Diagram

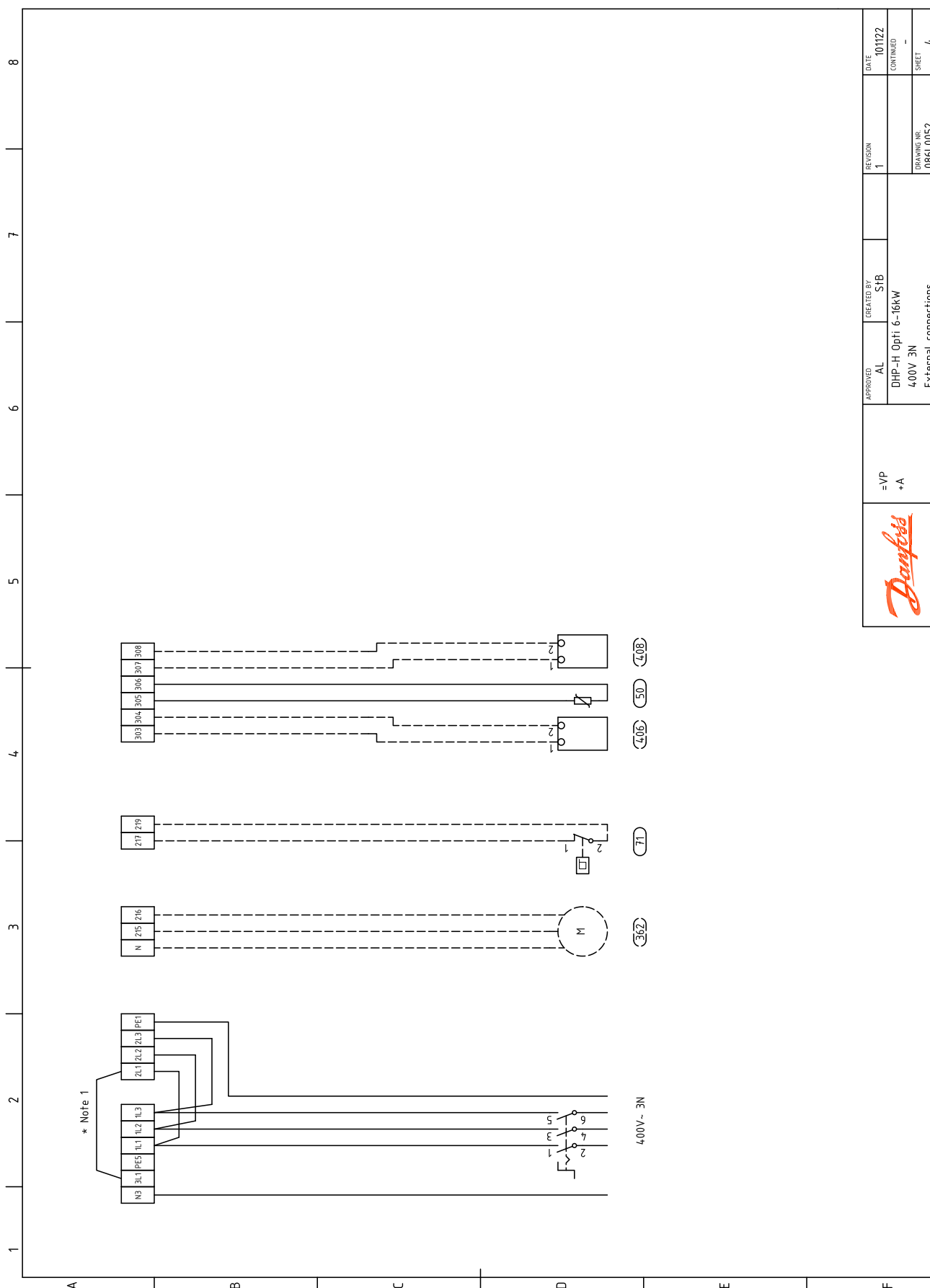
DHP-H





Wiring Diagram

DHP-H

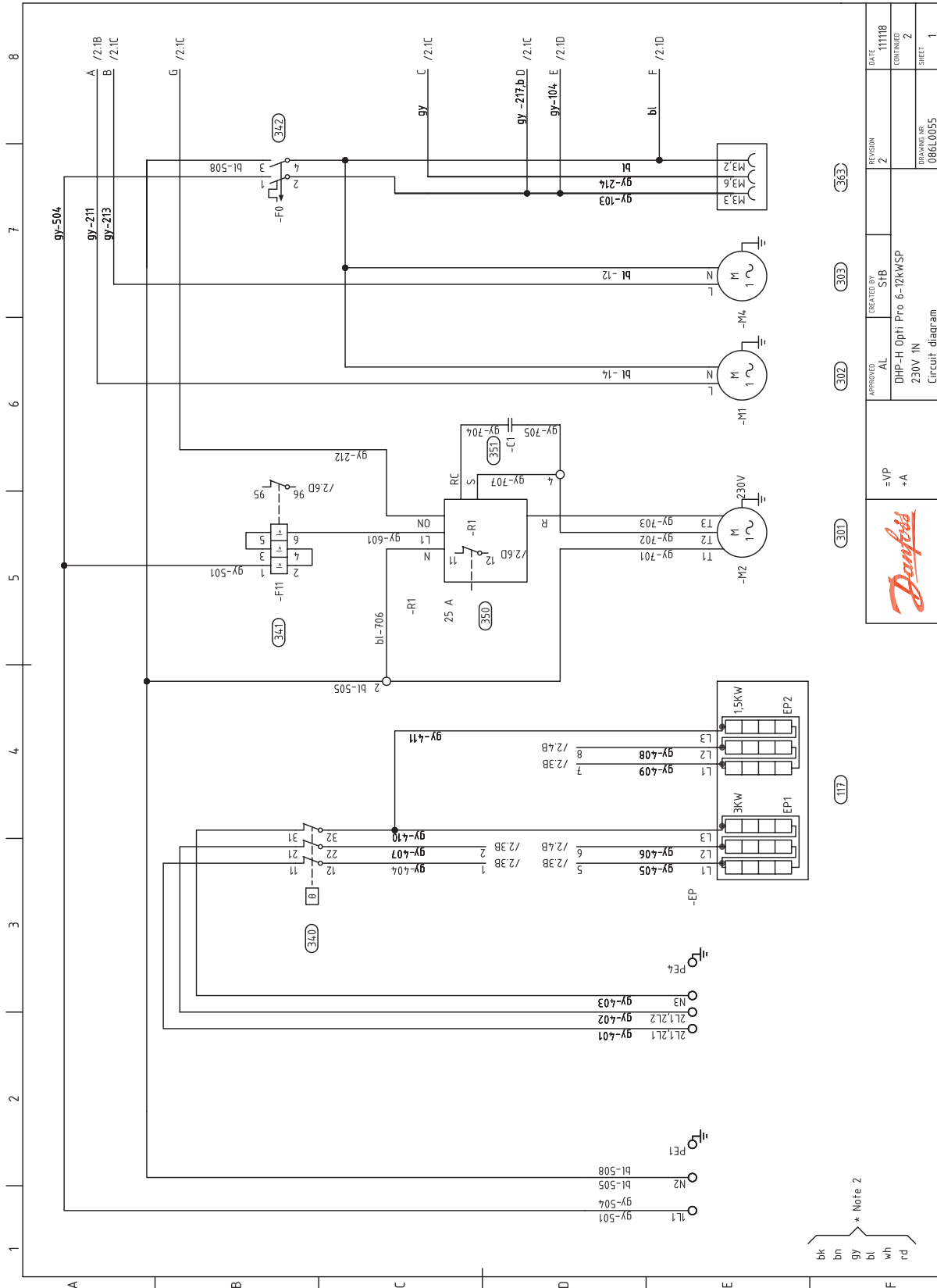


	=VP +A	APPROVED		CREATED BY StB	REVISION 1	DATE 10/12/22
		AL				CONTINUED =
	DHP -H Opti 6-16kW 400V 3N					DRAWING NR. 086L 0052
	External connections					SHEET 4

Wiring Diagram

DHP-H

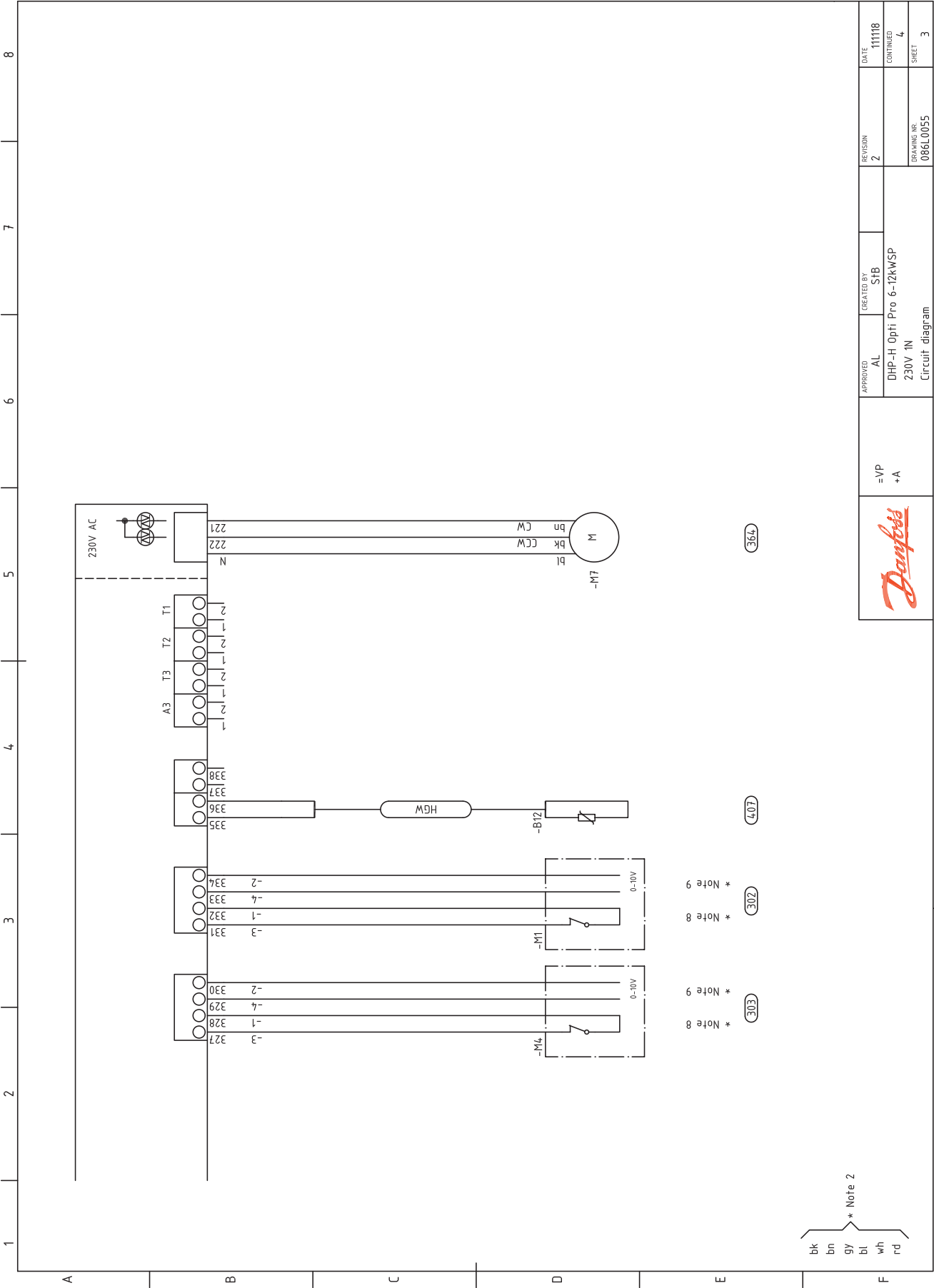
2.8 DHP-H Opti Pro 6-12kW 230V 1N





Wiring Diagram

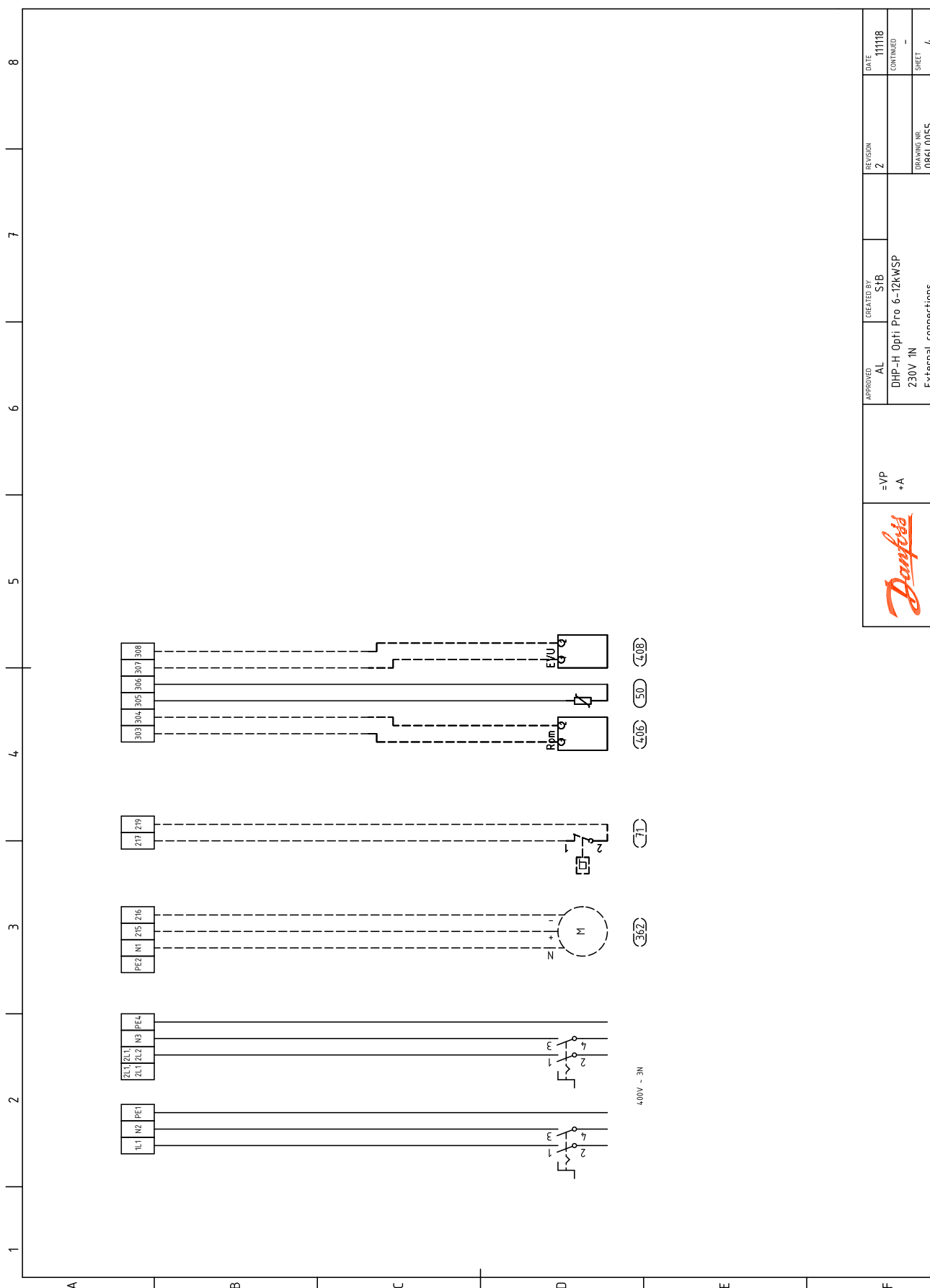
DHP-H



DATE	111118	REVISION	2	CREATED BY	SfB	APPROVED	AL	DHP-H Opti Pro 6-12kWSP 230V 1N Circuit diagram	=VP +A	Danfoss
CONTINUED	4	DRAWING NO.	086L0055							
SHEET	3									

Wiring Diagram

DHP-H

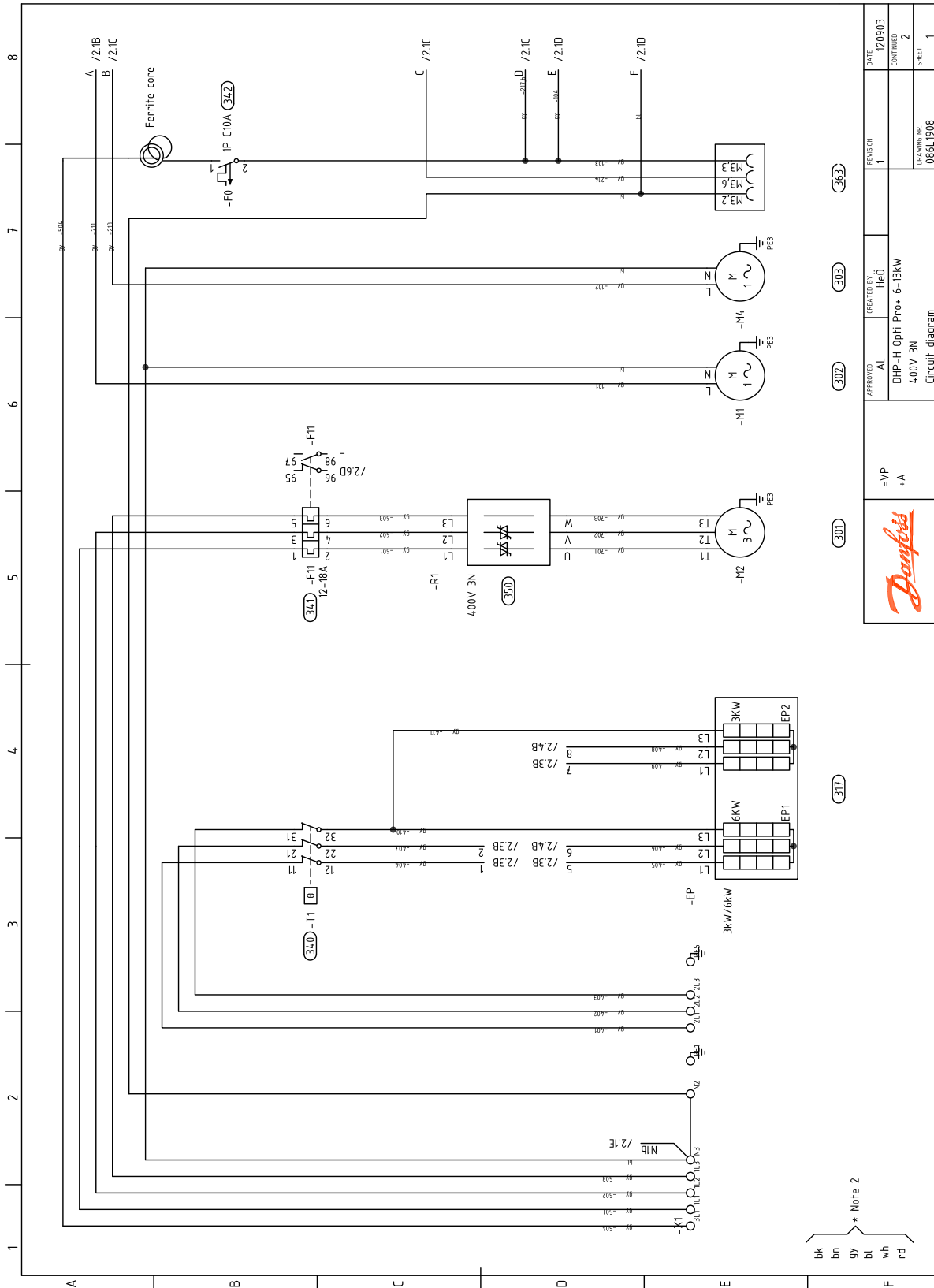


	= VP + A	APPROVED AL	CREATED BY SFB	REVISION 2	DATE 11/11/18
					CONTINUED -
					SHEET 4

Wiring Diagram

DHP-H

2.9 DHP-H Opti Pro + 6-13kW 400V 3N

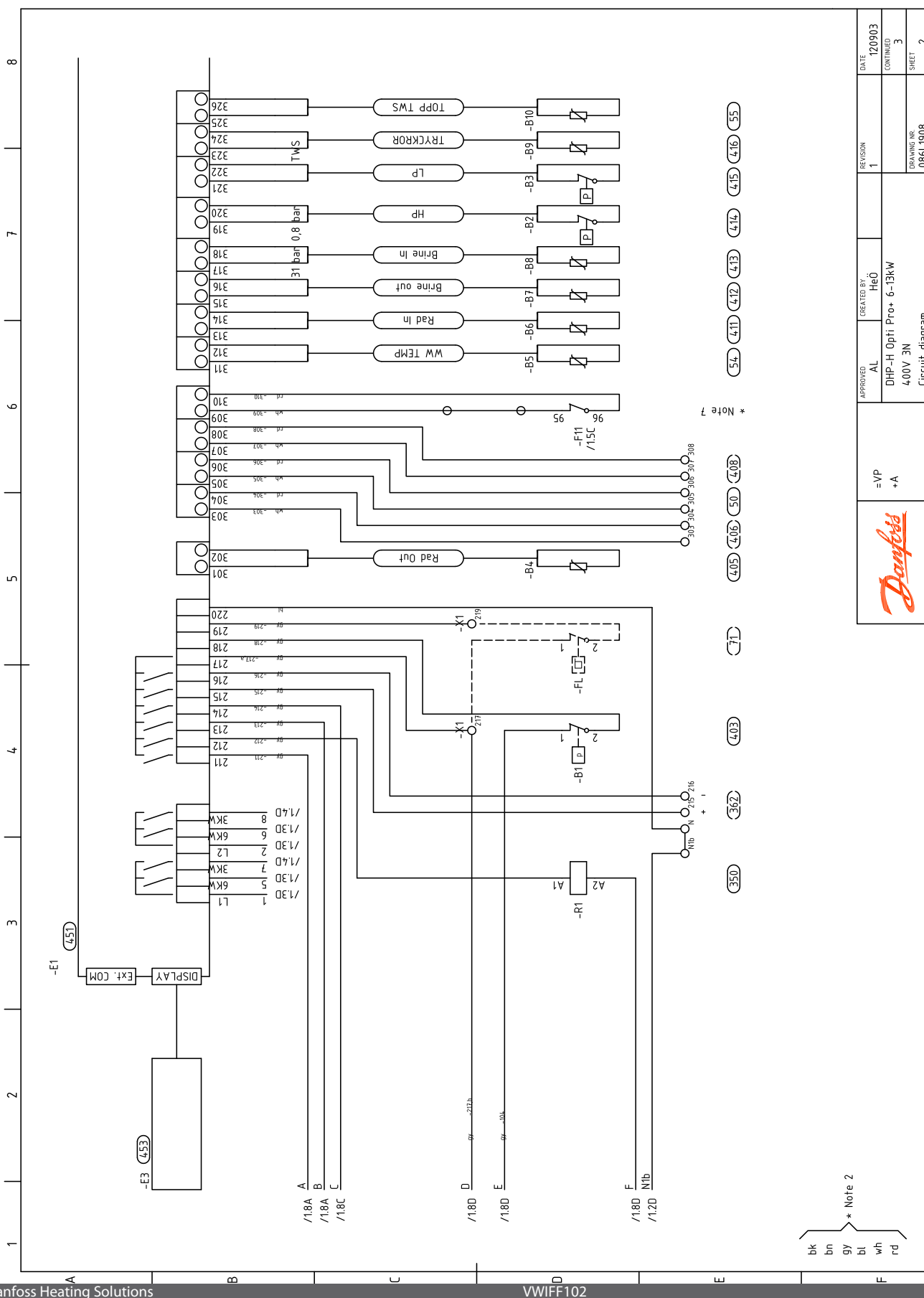


* Note 2
bk
bn
gy
bl
wh
rd

DATE	120903
REVISION	1
CREATED BY	HeO
APPROVED	AL
DHP-H Opti Pro+ 6-13kW 400V 3N	
Circuit diagram	
TRAINING NR	086L1908
SHEET	2
1	

Wiring Diagram

DHP-H



DATE	120903
REVISION	1
CREATED BY	He0
APPROVED	AL
DHP-H Opti Pro+ 6-13kw	
400V 3N	
Circuit diagram	
DRAWING NR.	0861/1908
SHEET	3
	2

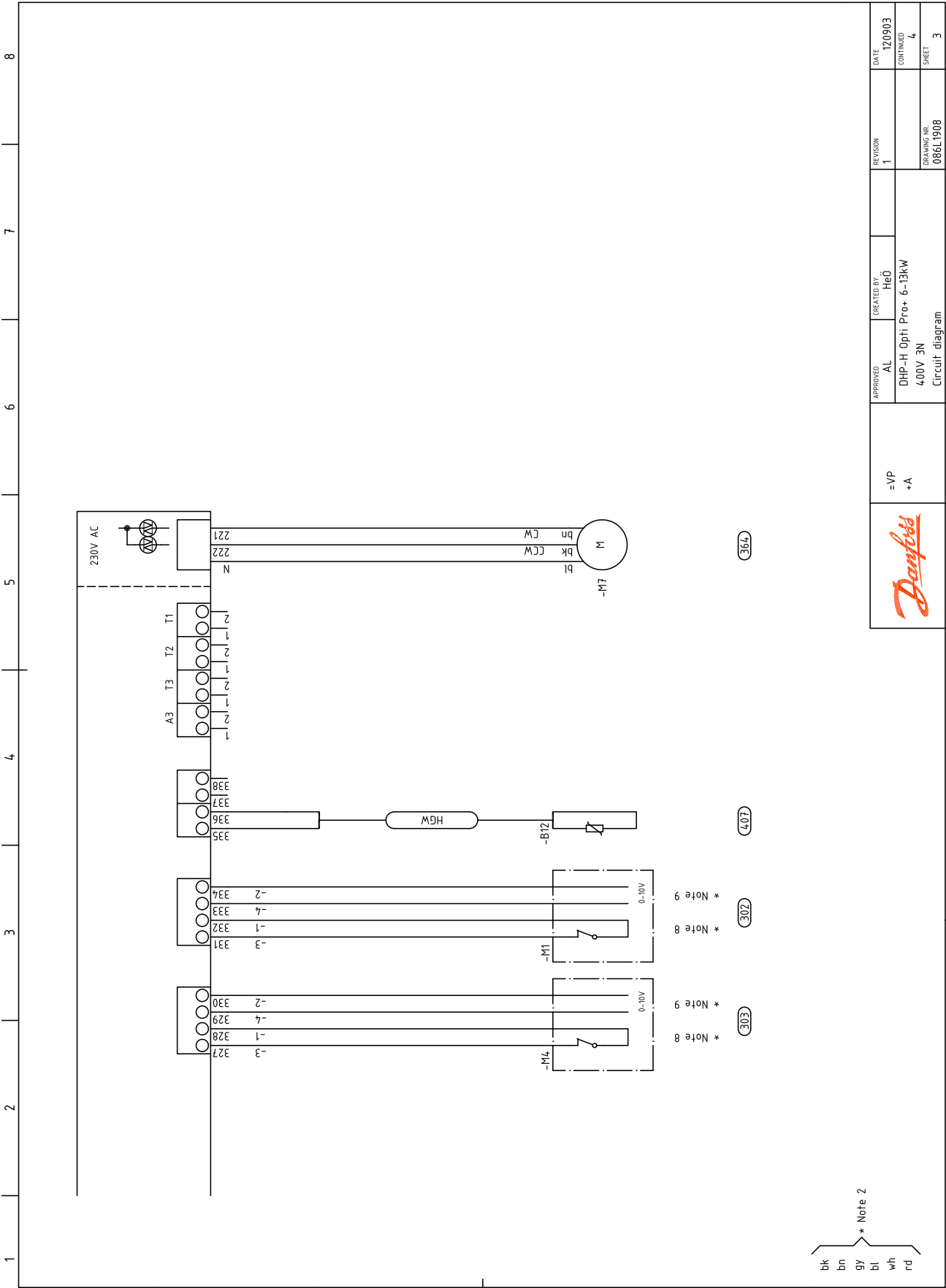
Danfoss

* Note 2

bk
bn
gy
bl
wh
rd

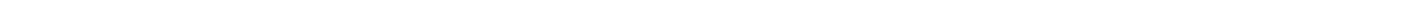
Wiring Diagram

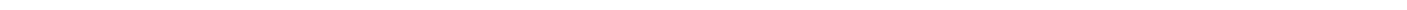
DHP-H



= VP + A	APPROVED AL	CREATED BY He0	DHP-H Opti Pro+ 6-13kW 400V 3N Circuit diagram	REVISION 1	DATE 120903
					CONTINUED 4
				DRAWING NR. 086L1908	SHEET 3







Danfoss Heat Pumps
Box 950
671 29 ARVIKA
Phone +46 570 81300
E-mail: dhpinfo@danfoss.com
Internet: www.heating.danfoss.com

Danfoss can accept no responsibility for possible errors in catalogues, brochures and other printed material. Danfoss reserves the right to alter its products without notice. This also applies to products already on order provided that such alterations can be made without subsequential changes being necessary in specifications already agreed. All trademarks in this material are property of the respective companies. Danfoss Heating Solutions and the Danfoss Heating Solutions logotype are trademarks of Danfoss A/S. All rights reserved.
