



WIRING DIAGRAM

Sigrin

Brine/water heat pump

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1 Table item number

The following numbers/notes are used for the heat pump. Which number/note is used depends on the heat pump model.

Number/ Note	Description
5	Heat pump unit
7	Indoor unit for air to water heat pump
29	System shunt valve 230VAC
31	Circulation pump (HWC)
32	Circulation pump (pool)
33	Circulation pump (shunt auxiliary heater)
34	Circulation pump (hot gas)
35	Circulation pump (WCS)
36	Circulation pump (system)
38	Circulation pump (cooling circuit)
39	Circulation pump (heat dump)
40	Expansion card
48	External brine in sensor
49	External brine out sensor
50	Outdoor sensor
51	System supply line sensor
52	System return line sensor
53	Hot water sensor lower
54	Sensor (WCS)
55	Hot water sensor top
56	Sensor HWC return line
57	Return line sensor cooling tank
58	Supply line sensor cooling circuit
59	Sensor cooling tank
60	Sensor pool
61	Return line sensor heat dump
62	Room sensor
63	Sensor hot water
64	Sensor cold water
71	Flow guard/sensor
72	External auxiliary heater shunt
73	Control valve WCS
74	Shunt valve cooling circuit
75	Mixing valve HW
76	Reversing valve heat dump
77	Reversing valve hot water
78	Reversing valve cooling
79	Reversing valve active cooling
101	Reversing valve pool
107	Shunt (distribution circuit 1)
108	Supply line sensor (distribution circuit 1)
109	Circulation pump (distribution circuit 1)
115	Auxiliary heater hot gas boiler
117	External auxiliary heater
118	Auxiliary heater (anti-legionella)
119	Control signal dry cooler
132	Passive room sensor
136	Buffer tank sensor
143	Return line shunt
150	Exhaust battery sensor
151	Condenser circuit pressure transmitter
152	Brine circuit pressure transmitter

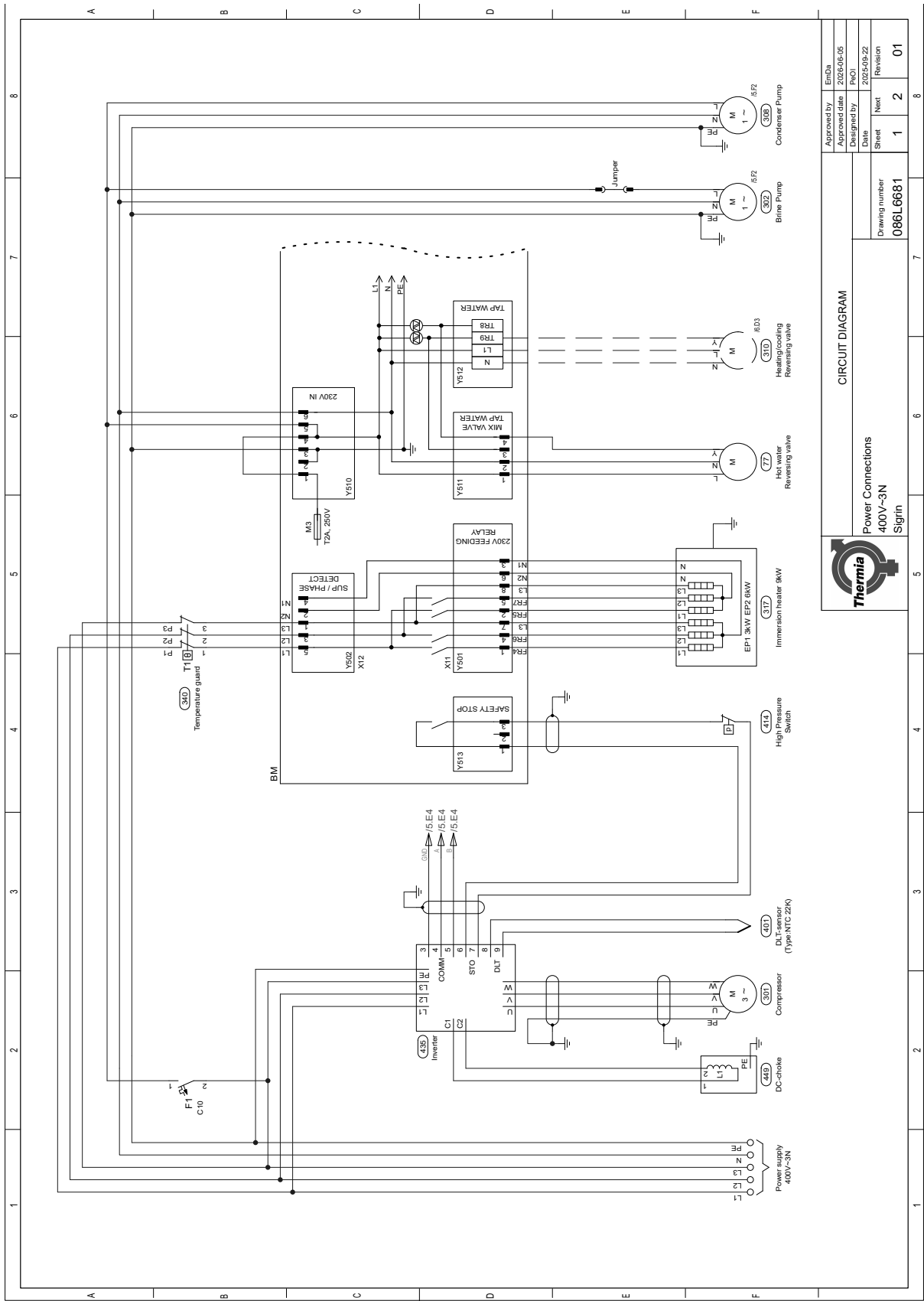
Number/ Note	Description
170	System circ. pump A
171	System circ. pump B
172	Auxiliary circ. pump (brine)
173	BMS/Building management system
174	Accessory
175	Accessory monitoring online
176	External heater burn out pump
180	Tank sensor TWC (hot gas boiler)
181	Return line sensor (cooling circuit)
182	Supply line sensor heat dump
183	Supply line sensor pool
184	Reversing valve hot gas boiler
185	Reversing valve cooling mode
186	Reversing valve individual pool
207	Shunt (distribution circuit 2-5)
208	Supply line sensor (distribution circuit 2-5)
209	Circulation pump (distribution circuit 2-5)
210	Return line sensor (distribution circuit 2-5)
211	Valve zone 1
212	Valve zone 2
213	Room sensor zone 1
214	Room sensor zone 2
250	Shunt pool circuit
251	Shunt valve heat dump
301	Compressor
302	Brine pump
304	Spare circulation pump
305	Fan
308	Condenser pump
310	Reversing valve
311	4 way valve
312	Bypass valve
313	Electronic expansion valve
314	Electronic injection valve
317	Immersion heater
318	Circulation pump secondary unit
319	Solenoid valve
320	Gas separator
340	Temperature guard
341	Start signal
342	External pool off
343	External WCS start
344	Alarm relay
345	Start signal internal brine
346	Start signal cooling
347	Cooling mode
353	Compressor thermostat
354	Compressor heater
355	Drip tray heater cable
364	Shunt valve hot water
365	Supply line sensor secondary
366	Return line sensor secondary
370	Secondary circuit pump
375	Brine valve
377	Reversing valve volume tank

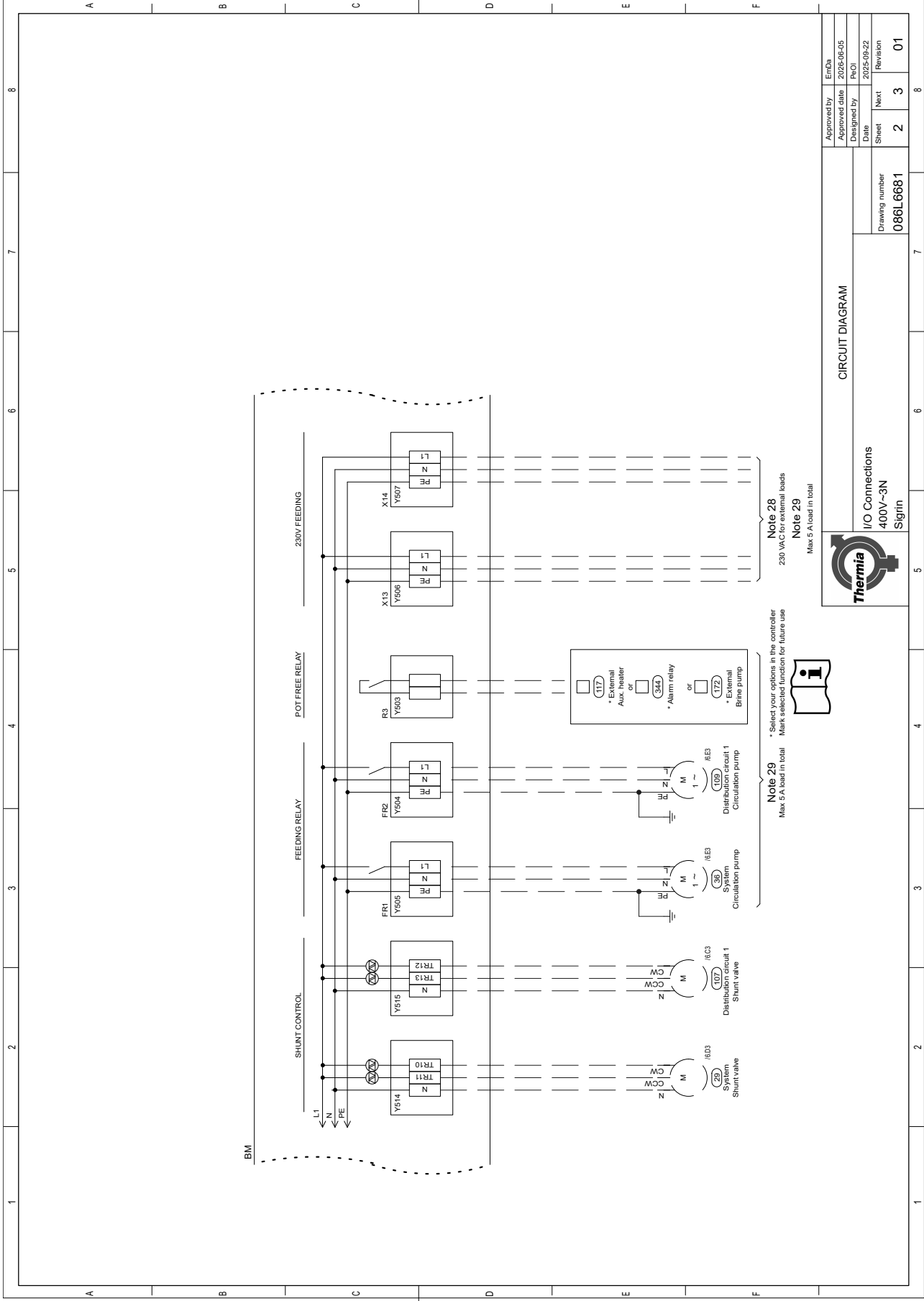
Number/ Note	Description
401	DLT sensor
402	Volume tank sensor
403	Operating pressure switch
404	Brine in sensor cooling mode
405	Radiator out sensor
407	HGW sensor
408	EVU/Smart grid 1
409	Smart grid 2
410	Compressor oil temp
411	Radiator return sensor
412	Brine out sensor
413	Brine in sensor
414	High pressure switch
416	Discharge pipe sensor
417	Defrost sensor
419	Evaporation out sensor
420	Evaporation in sensor
421	Suction gas sensor
422	Dew point sensor
425	Flow meter
431	Liquid line sensor
432	Signal compressor in operation
433	Low pressure transmitter
434	High pressure transmitter
435	Inverter
436	DI 1
437	DI 2
438	DI 3
439	DI 4
440	Spare
441	Communication card
442	Main PCB
443	Sub PCB
444	External alarm
445	DI 5
446	DI 6
447	DI 7
448	DI 8
449	DC-choke
453	Display
455	Indoor hub controller
456	Current Limiter
501	Frost protection sensor
502	Injection sensor
503	Air out sensor
504	Oil sump sensor
505	EVI pressure transmitter
506	Condenser out sensor
507	Condenser in sensor
508	Air in sensor
509	Refrigerant leakage sensor
510	Differential pressure switch
511	Differential pressure transmitter
600	Outdoor unit with compressor and inbuilt electrical immersion heater
* Note 8	Alarm

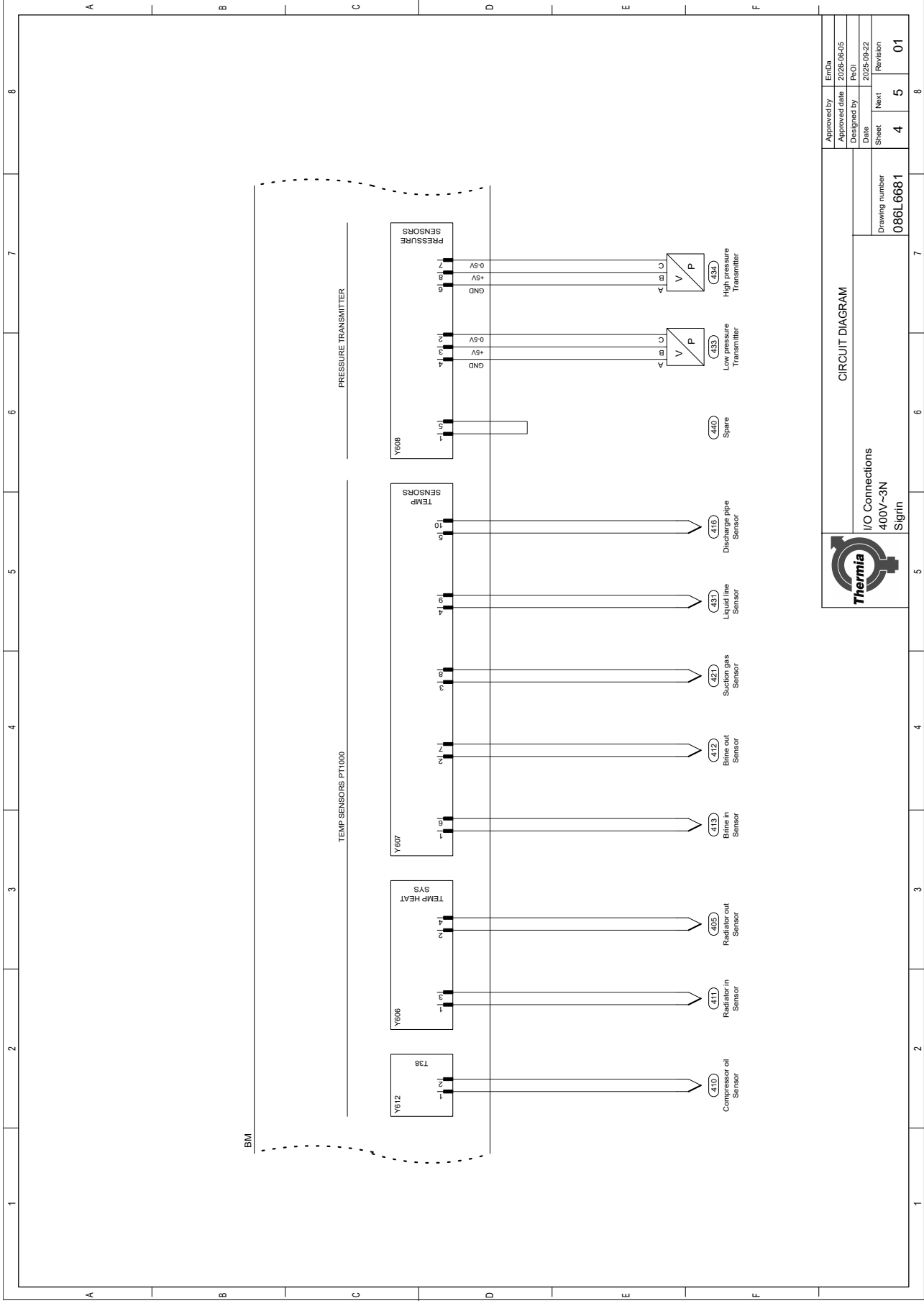
Number/ Note	Description
* Note 9	Speed control
* Note 15	Immersion heater or external auxiliary heater
* Note 16	Potential free contact
* Note 17	To outdoor unit
* Note 18	To expansion unit
* Note 19	Communication
* Note 28	230VAC for external loads
* Note 29	Max 5A load
* Note 30	24VAC for external loads
* Note 31	Max 1A load in total
* Note 32	The outdoor unit is equipped with a modbus communication card, which is not shown in this circuit diagram. Terminal F1/F2 is connected to the communication card, instead of to main PCB.
* Note 33	15kW immersion heater is optional
* Note 34	Works only together with EM3-card
* Note 35	External safety fan for 230V contactor control circuit only

2 Wiring diagram

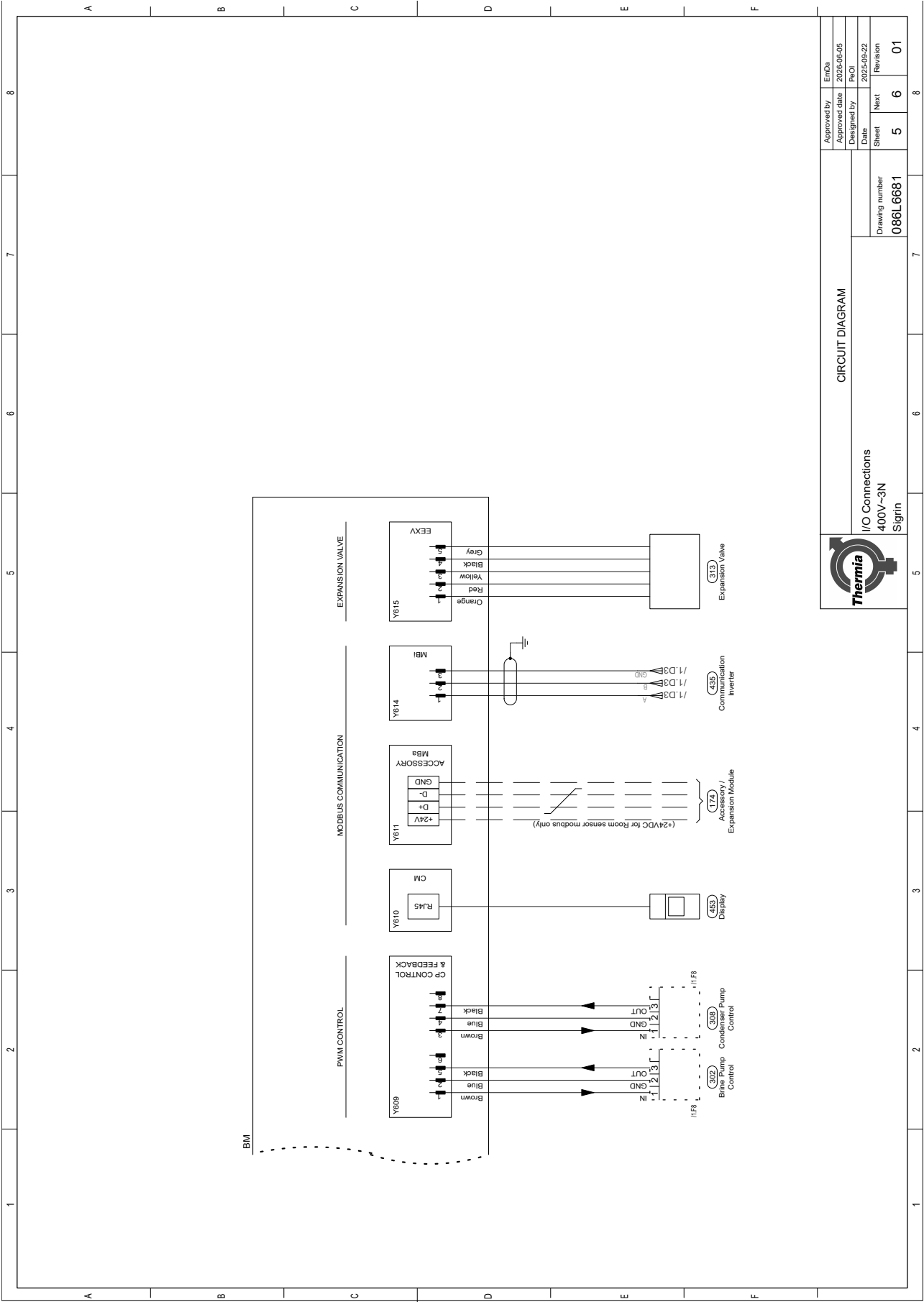
2.1 Sigrin 400V







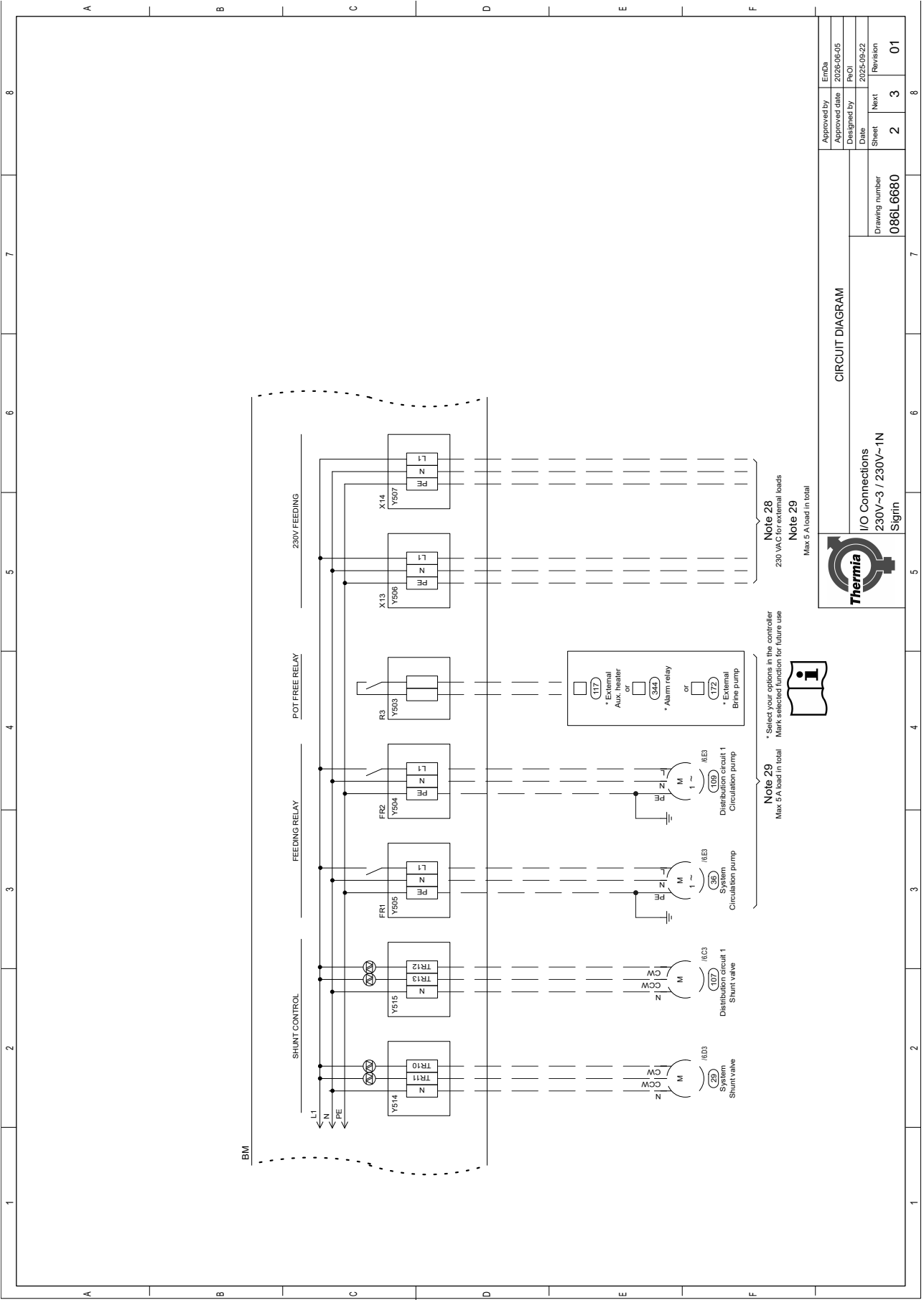
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				Designed by R.O.O	2025-09-22
				Date	Sheet
				Next	Revision
				4	5
				086L 668 1	01



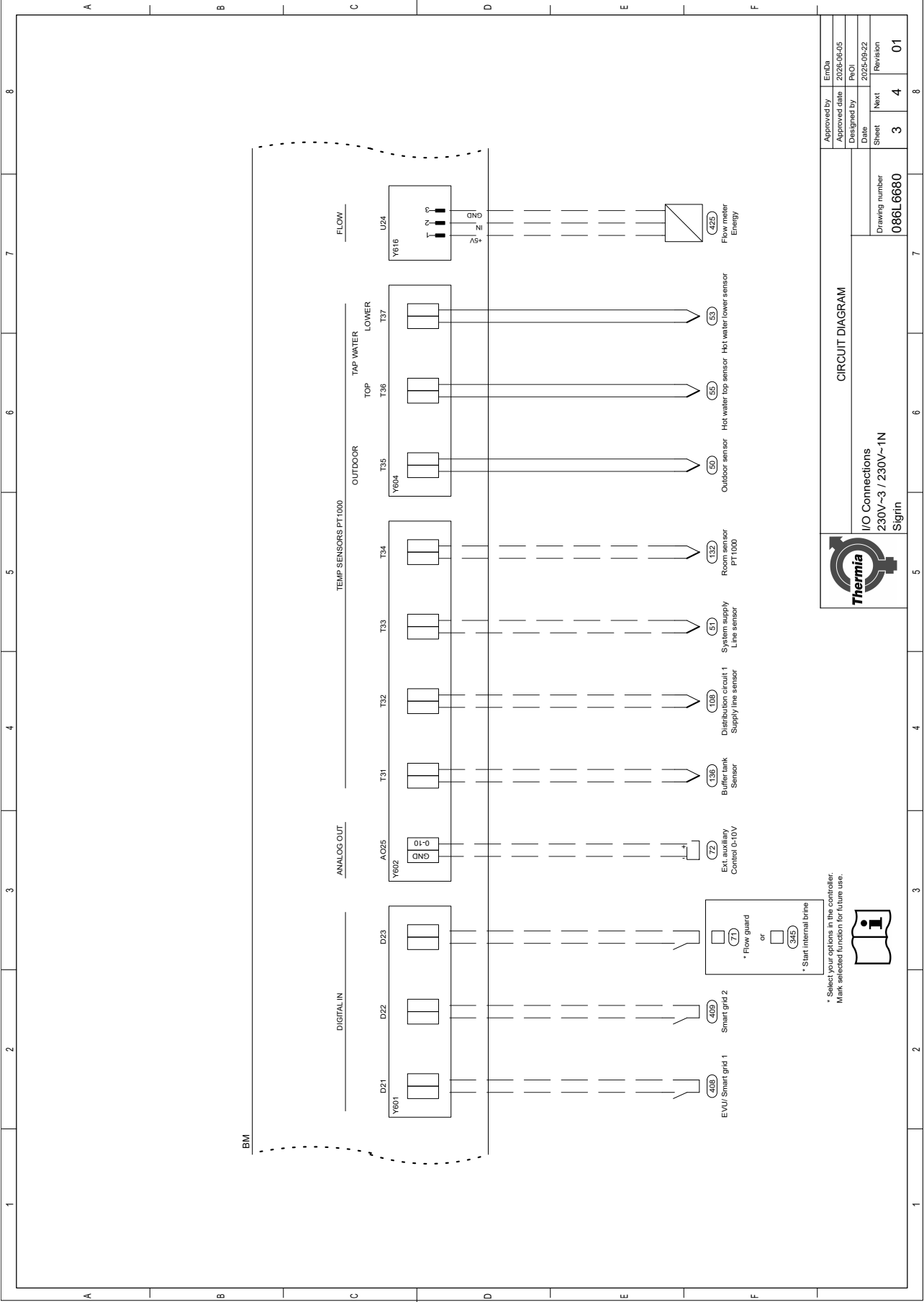


Sigrin 230V

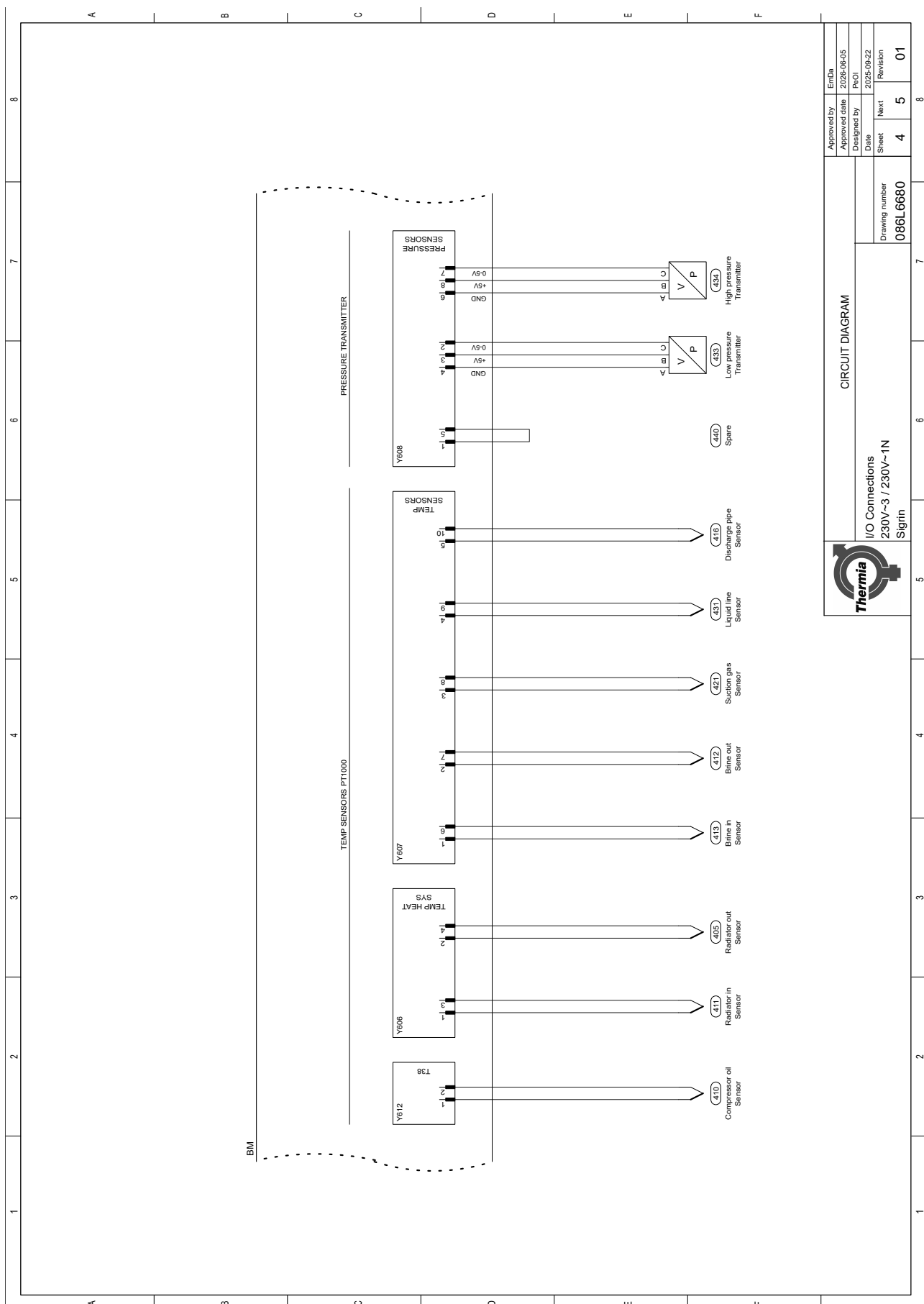


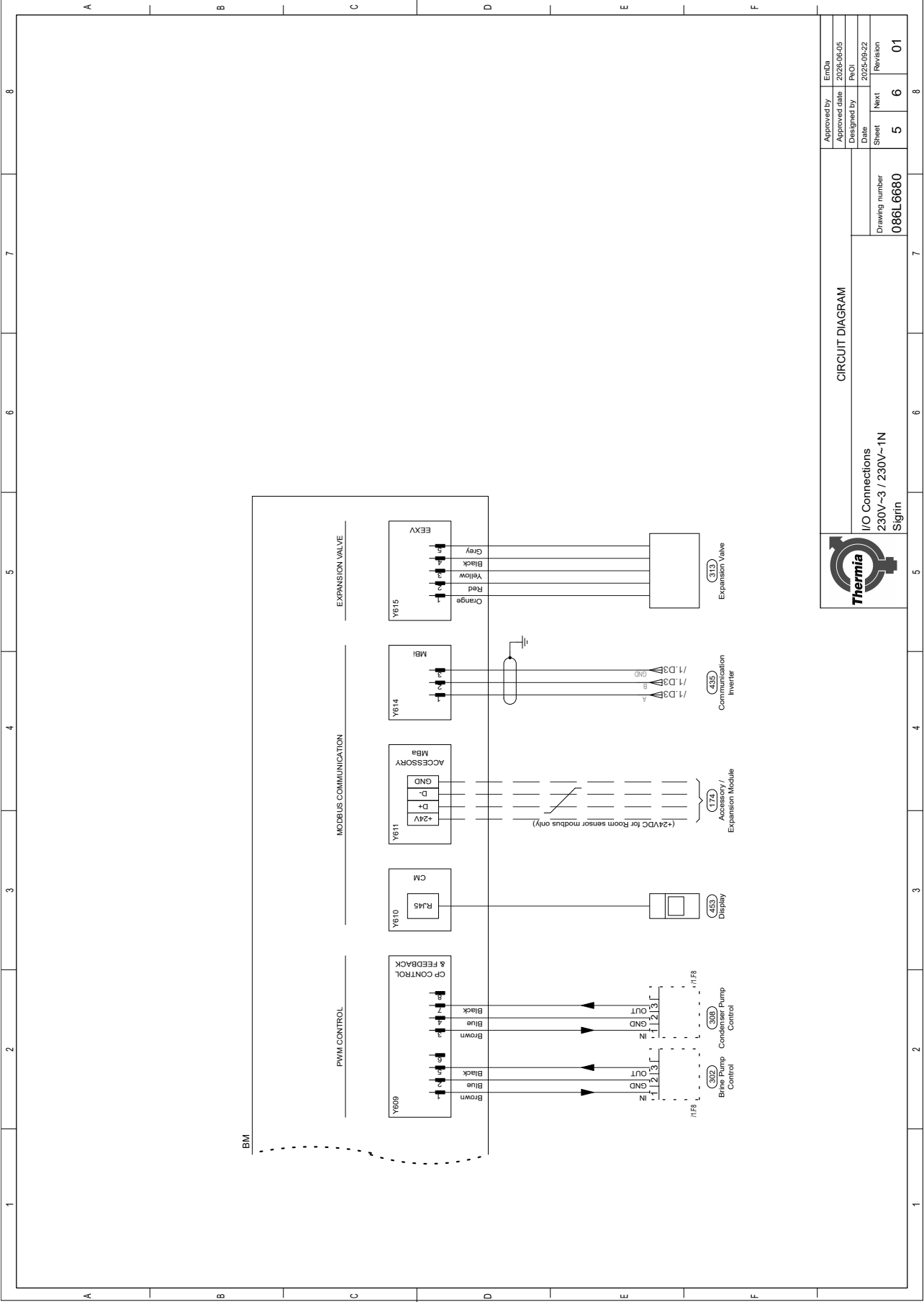


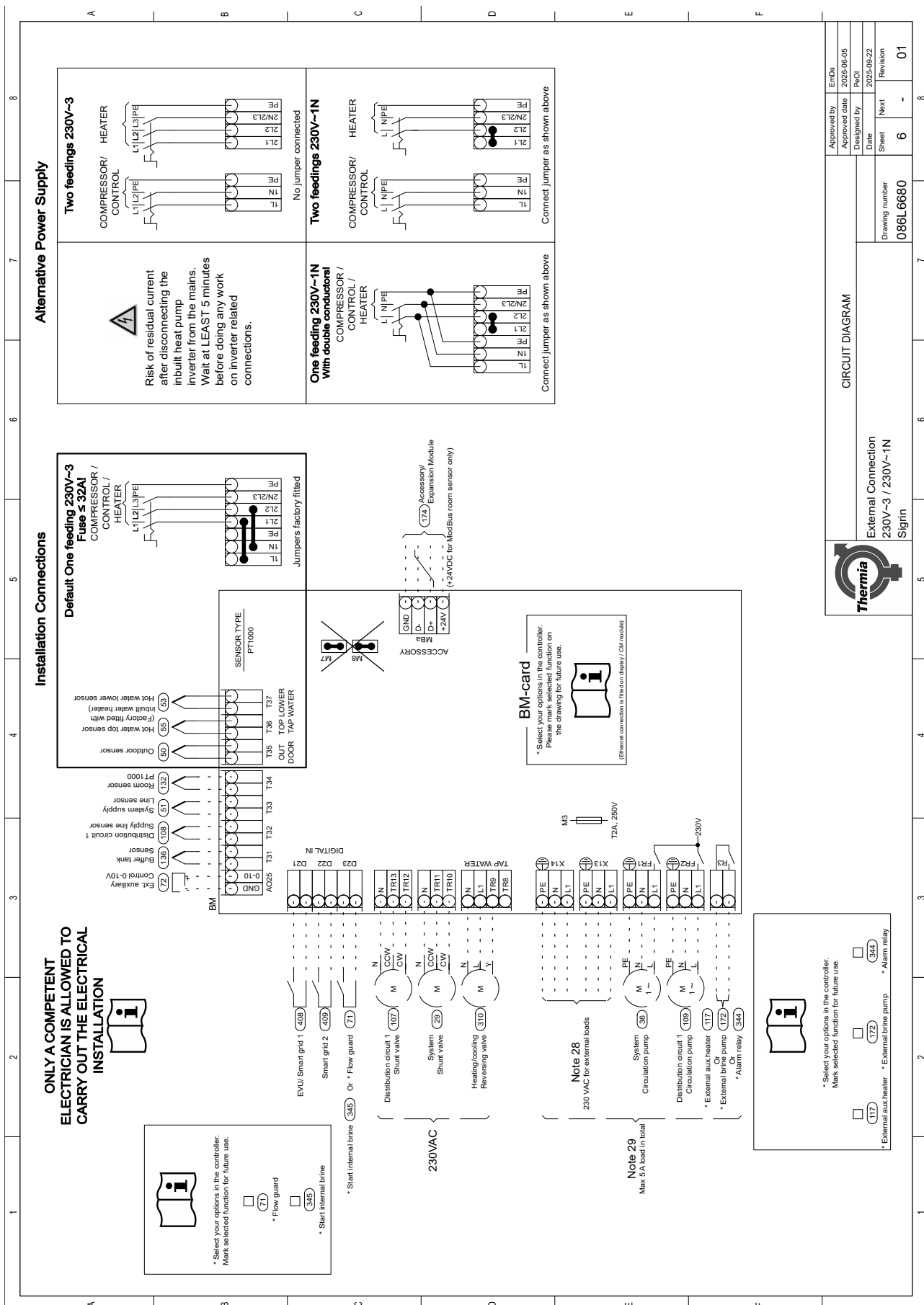
CIRCUIT DIAGRAM			
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Thermia		Signin	
Approved by	EmDa	Sheet	Next
Approved date	2025-06-05	2	3
Designed by	RsO	Revision	
Date	2025-09-22	01	



Approved by		EmDa
Approved date		2025-06-05
Designed by		RsO
Date		2025-09-22
Sheet	Next	
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Drawing number		086L 6680
Revision		01









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