

Industrial Automation Solution

Vector Drive

P200 Series



Puma[®]
The power you can Trust!

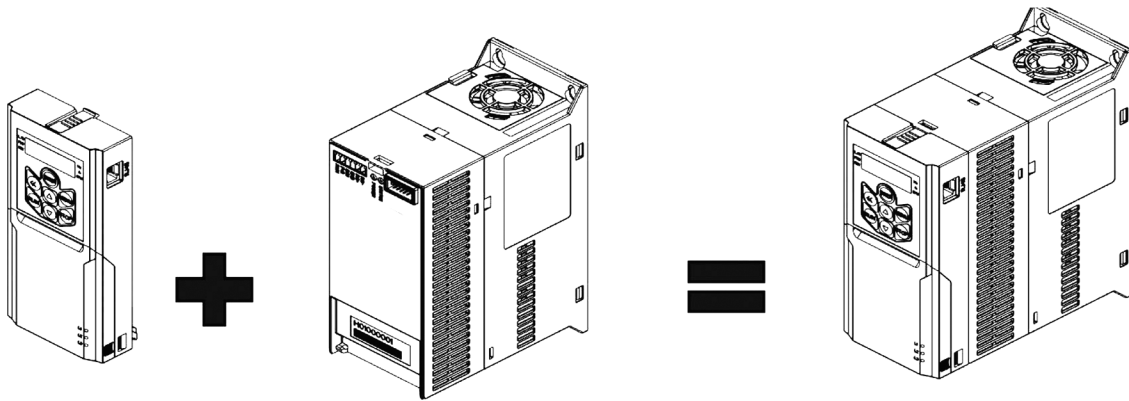
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P200 – Modularity solution with high performance Vector Control for Multiple applications.

Modularity design include Power unit (PU), Control Unit (CU), External keypads and option cards.

Power range from 0.37kw~415kw.

1. One minute understanding P200 Modularity



CU0L + P200 PU (software version V0.37) = P200L

Interface and Special Processes Control Motor and General Application Control

Selection of Power units (PU):

	Model	Power Range	Description	Independent Working
	PU00	0.37~415KW	NO DI/DO/RS485	YES
	PU01	0.37~7.5KW	2DI 1DO 1 RS485	
		11~22KW	3DI/1AI/1 10V/1 RELAY/ 1 RS485	
PXXX	~	Customizing		

Selection of Control Units(CU):

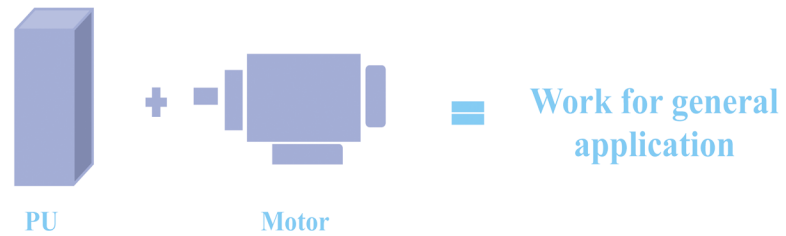
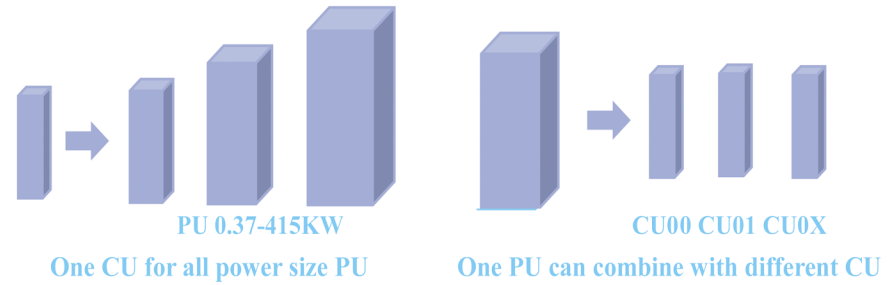
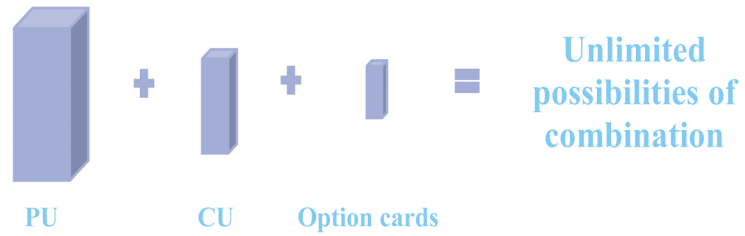
	Model	Power	Description
	CU00	Can be used for all power range PU	6DI+2AI+AO+DO+2Relay+RS485, 5 digital LED Keypad 1 option card
	CU01	Can be used for all power range PU	6DI+2AI+AO+DO+2Relay+RS485, Pluggable 5 digital LED Keypad 2 option cards, Support customer modification software
	CUXX	Can be used for all power range PU	Customizing

Selection of option cards:

	Option cards	Description
	PG01	Common mode incremental encoder
	PG02	Differential mode incremental encoder
	PG03	Resolver for speed/position sense
	DP01	Profibus-DP
	PN01	ProfiNet
	XX	Customizing

2. Friendliness of P200

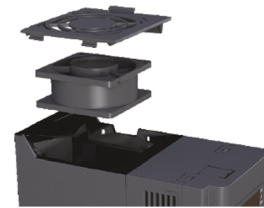
Business Flexibility



Easy Installation & Maintenance

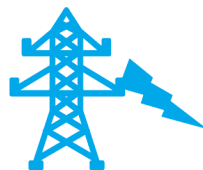


Pluggable terminals



Removable fan

Reliable Quality



Tough Grid



-10°C~50°C



High humidity



High dust

High Control Performance

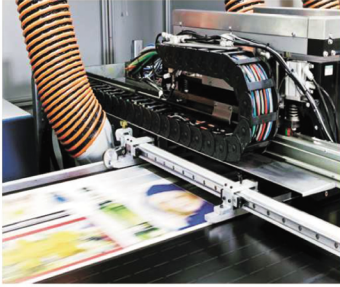


IM/IPM/SPM/SRM



Vector/VF/SOL/SCL/TOL/TCL Control

3. P200 Industry Applications



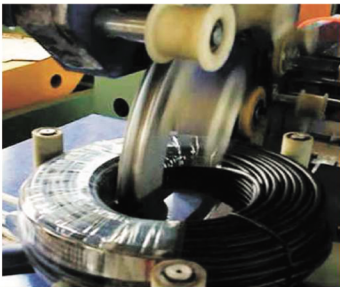
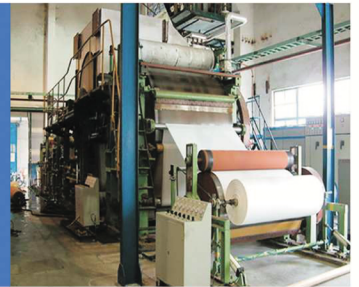
Printing &
Packaging

Crane



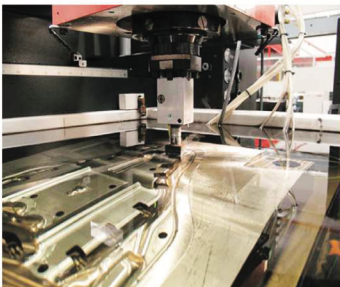
Textile

Paper
Making



Cable

Automated
Product
Line



Machine
Tool

Warm Air
Conditioning



Petrochemical
Industry

4. P200 Specification

P200 Power Unit PU00/PU01 Specification

Item		Specification	
Line in	Voltage	Single Phase 200~240V -15%~+10%; 3 Phase 380~480V -15%~+10%;	
	Frequency	50/60Hz±5%	
	Unbalance	3%;	
Out put	Voltage	3 Phase 0~100% Line in voltage	
	Frequency	0~590Hz;	
Main Control	Control algorithm	V/F control, Vector Control	
	Start Torque	0.5Hz 150%;	
	Overload	Heavy load type: 150% 60s, 180% 3s Light load type: 120% 60s, 150% 3s	
	Switching Frequency	0.37~22Kw: 2k~16kHz; ≥ 30Kw: 2k~12kHz	
	Speed resolution	Digital: 0.001Hz; Analogue: 0.5‰ of the maximal setup;	
	Speed accuracy at Speed Open Loop	±0.5% of Nominal speed	
	Source of Control Command	Keypad, DI inputs, Bus communication	
	Source of Reference	Keypad, Analogue inputs, Pulse inputs, Bus communication	
	Acieration/ Deceleration setup	4 sets of acceleration/deceleration time, range: 0.05-6000.00s;	
Basic Functions	Speed open loop/speed close loop, Process close loop, torque control (with/without speed sensor), Motor auto tuning, Load compensation, auto DC voltage regulation, DC brake/AC brake, speed limit, current/torque limit, fly start, KEB etc. Note: Speed close loop or torque control with speed sensor is OK only when a control unit and PG card are installed		
Application Functions	Multistage speed control by terminals or PLC function, S ramp, Mechanic brake, counter, ProcessPID, Jog etc.		
Protection Functions	Short circuit, Ground fault, line phase loss, under voltage, over voltage, over current, overload, over temperature, motor thermal protection, motor phase loss, control wire broken etc.		
Control Terminals	0.37-7.5KW	DI (Only PU01)	2 Dis for NPN and voltage input
		DO (Only PU01)	1 DO of 40mA
		RS485(Only PU01)	
	11-22KW	DI (Only PU01)	3 Dis for NPN and voltage input
		AI (Only PU01)	1AI of Current and Voltage input
		10V (Only PU01)	10V of 10mA
		RL (Only PU01)	1RL for SPST with 3A/250V
		RS485(Only PU01)	1 RS485/Modbus, maximal 38400bit/s;
Connector		10 Pin IDC connector	
Operation Environment	Protection Level	IP20;	
	Operation Ambient Temperature	Operating range: -10°C ~ 60°C As heavy load type: Nominal current to 50°C, derate from 50°C As light load type: Nominal current to 40°C, derate from 40°C	
	Operation Ambient Humidity	5%-85% (No condensing at 95%);	
	Vibration	1.14g;	
	Altitude	1000m, derate from 1000m	
	Motor cable length	Shielded Cable: 50m; Un-shielded cable:100m	
Others	Brake Chopper	Built in as default up to 22kW	

P200 Control Unit CU00 Specification

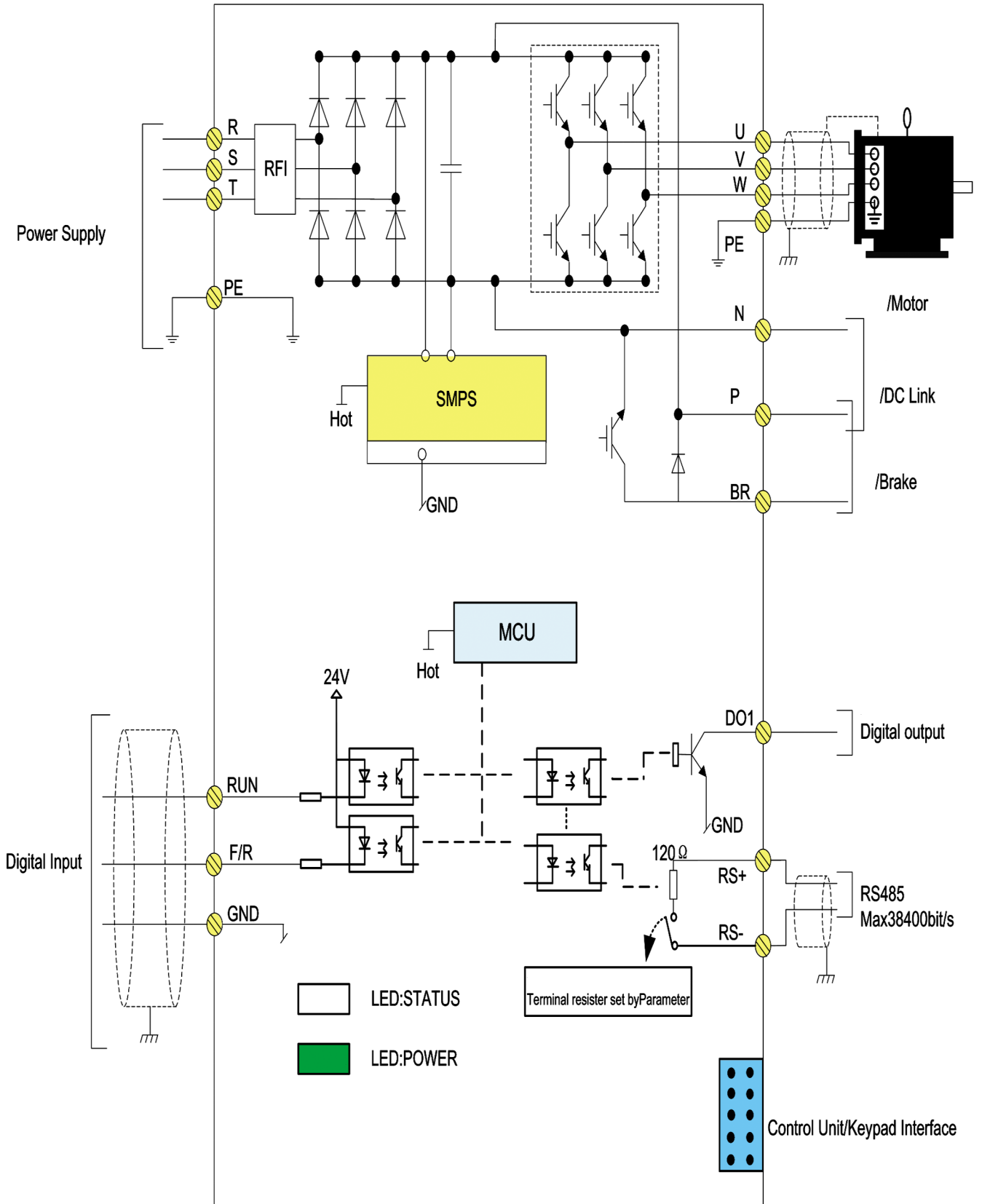
Name	Function	Specification
FWD, REV, DI1, DI2, DI3, DI4	Digital inputs	Input type: NPN; PNP Input Voltage: 0~30V; Input Impedance: 3.6K ω ; DI4 can be configured as pulse input
DI4	Pulse Input	Frequency Range: 0.00~100.00kHz; Power Supply Range: 24V \pm 20%; Duty Cycle Range: 40%~60%;
DO1	Digital Output	Output type: Open Collector; Output Current: 0~40mA; Output Voltage: 0~30V; Can be configured as pulse output: Load Capacity: Resistive>1k Ω , capacitive <10nf; Frequency Range: 0.00~100.00kHz; Duty Cycle Range: 40%~60%;
RS+, RS-	RS485 Communication	Max Baud Rate: 38400bit/s; Configurable termination resistor, open in default
FA-FB-FC KA-KB	Relay Output	Resistive Load: 250VAC 3A/30VDC 3A; Inductive Load: 250VAC 0.2A/24VDC 0.1A (cos ϕ =0.4);
AI1, AI2	Analogue Inputs	Configurable as analogue voltage inputs, analogue current inputs as well as digital inputs. 1 . As Analogue Voltage Inputs: Input Impedance: 10k Ω ; Input Voltage Range: 0~10V; 2 . As Analogue Current Inputs: Input Impedance: \leq 500 Ω ; Input Current Range: 0~20mA; 3 . As Digital Inputs: a) Input Type: NPN PNP b) Input Impedance: 10k Ω ; c) Input Voltage Range: 0-30V
AO1	Analogue Output	Configurable as analogue voltage output or current output Output Range: 0~10V or 0~20mA; Load Capacity: As Voltage Output: Impedance > 500 Ω ; As Current Output: Impedance < 500 Ω ;
VDD	24V Power Supply	Max 200mA
+10V	10V signal power supply	Max 10mA
GND	Signal Ground	
PE	Safety Ground	
Other Connectors:		
Connector for Option Card		Support one option card of different types, at the bottom of the Control Unit
Connect for External Keypad		RJ45 for external keypad, at the top of right side of the Control Unit

5. P200 Wiring Diagram

Power Unit PU00/PU01 Electrical Diagram

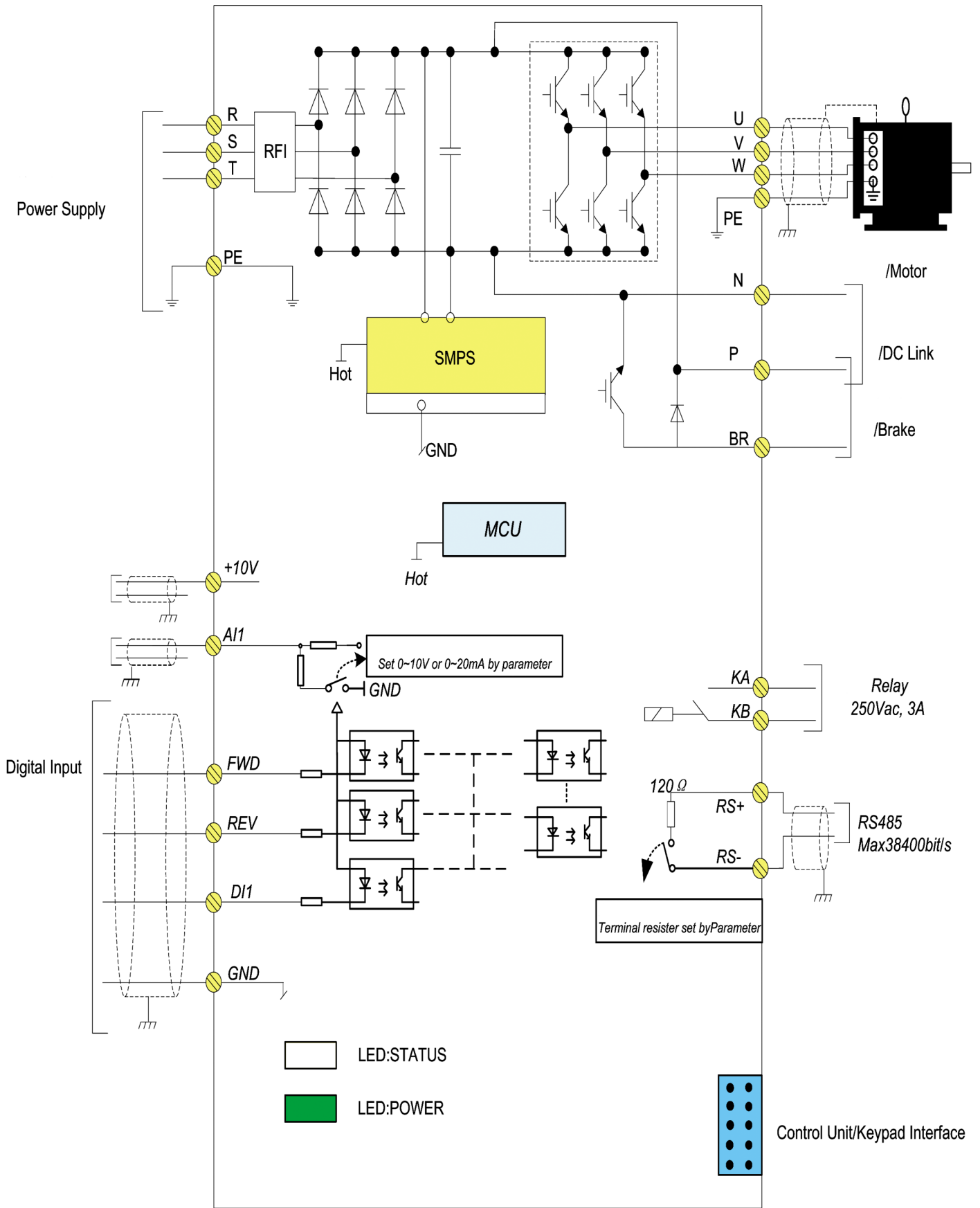
0.37-7.5KW PU00/01 Diagram

Note: For PU00, there is no terminals for IO Ports (RUN/F/R,DI1,DO1, RS+,RS- and no Status LED lights.)



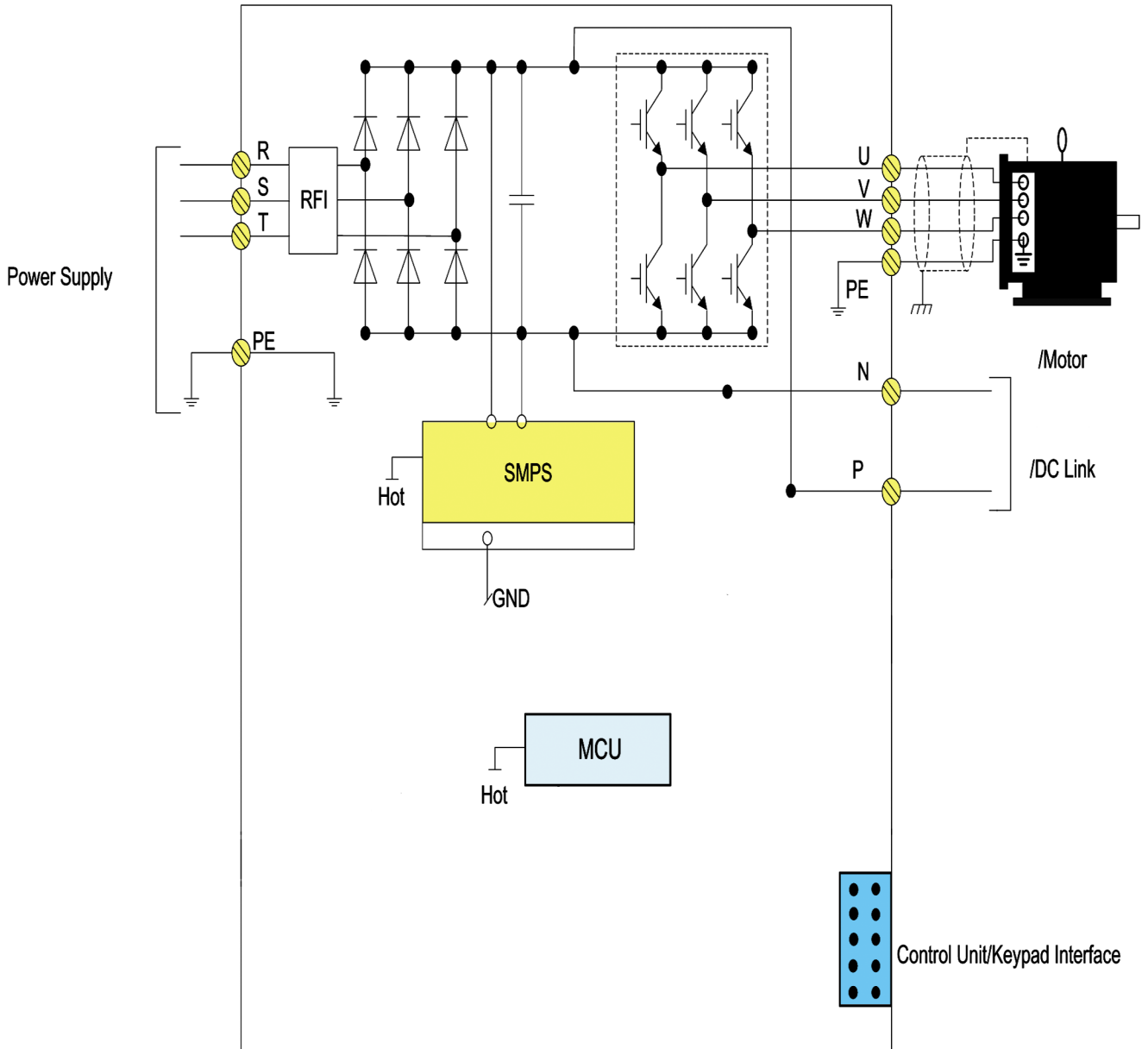
11-22KW PU00/01 Diagram

Note: For PU00, there is no terminals for IO Ports (RUN,/F/R,DI1,DO1, RS+,RS- and no Status LED lights.)

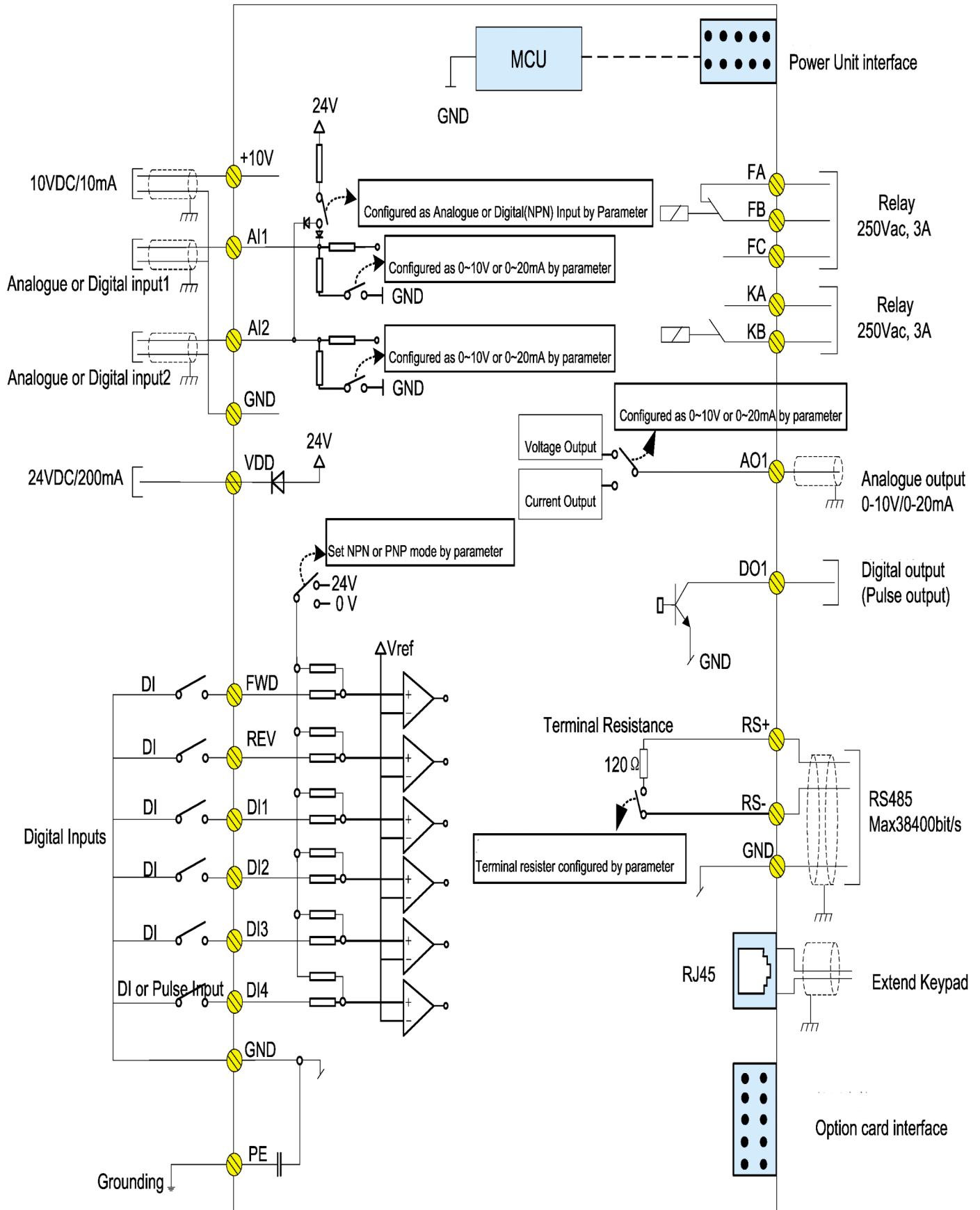


30-415KW PU00 Diagram

P200 Power Unit Wire Diagram



Control Unit CU00 Electrical Diagram



6. P200 Selection Guide

P200 Power Unit PU00/PU01 Selection Guide

Model Type	Power (kW)	Voltage (V)	Heavy Load		Light Load		Air (m ³ /h)
			Input(A)	Output(A)	Input(A)	Output(A)	
P200-2SD37-PU00	0.37	1×200-240	6.5	2.5	-	-	17.2
P200-2SD75-PU00	0.75	1×200-240	9.3	4.5	-	-	17.2
P200-2SID5-PU00	1.5	1×200-240	15.5	7.5	-	-	17.2
P200-2S2D2-PU00	2.2	1×200-240	23	9.6	-	-	17.2
P200-4TD75H/1D5L-PU00	0.75/1.5	3×380-440	3.7	2.3	5.8	3.7	17.2
		3×440-480	3.2	2.1	5.0	3.4	
P200-4T1D5H/2D2L-PU00	1.5/2.2	3×380-440	6	3.8	8.5	5.3	17.2
		3×440-480	5.2	3.5	7.3	4.8	
P200-4T2D2H/4D0L-PU00	2.2/4.0	3×380-440	8.5	5.3	14.0	8.5	17.2
		3×440-480	7.3	4.8	12.4	8.2	
P200-4T4D0H/5D5L-PU00	4.0/5.5	3×380-440	15	9.6	18.6	11.2	45.5
		3×440-480	12.9	8.8	18.1	11.0	
P200-4T5D5H/7D5L-PU00	5.5/7.5	3×380-440	20.8	13.0	24.7	15.5	90
		3×440-480	19.1	11.8	21.4	14.2	
P200-4T7D5H/011L-PU00	7.5/11	3×380-440	27.1	17.0	33.1	22.0	90
		3×440-480	23.4	15.5	30.2	21.0	
P200-4T011H/015L-PU00	11/15	3×380-440	35.9	25.0	42.5	31.0	124
		3×440-480	31.4	22.7	39.8	28.5	
P200-4T015H/18DL-PU00	15/18.5	3×380-440	43.4	32.0	50.2	36.0	170
		3×440-480	40.2	29.1	45.8	34.0	
P200-4T18DH/022L-PU00	18.5/22	3×380-440	51.5	38.0	58.5	42.5	230
		3×440-480	46.1	34.5	54.0	40.0	
P200-4T022H/030L-PU00	22/30	3×380-440	61	45.0	79.0	56.0	272
		3×440-480	54.5	40.9	73.0	51.0	
P200-4T030H/037L-PU00	30/37	3×380-440	82.5	61.0	98.0	71.0	303
		3×440-480	74	52.0	90.0	65.0	
P200-4T37H/045L-PU00	37/45	3×380-440	72	75.0	87.0	90.0	374
		3×440-480	65	68.0	79.0	80.0	
P200-4T045H/055L-PU00	45/55	3×380-440	88	91.0	102.0	104	408
		3×440-480	80	82.0	99.0	101	

Model Type	Power (kW)	Voltage (V)	Heavy Load		Light Load		Air (m ³ /h)
			Input (A)	Output (A)	Input (A)	Output (A)	
P200-4T055H/075L-PU00	55/75	3×380-440	110	112	142	145	476
		3×440-480	100	102	132	136	
P200-4T075H/090L-PU00	75/90	3×380-440	148	150	170	175	595
		3×440-480	135	140	150	155	
P200-4T090H/110L-PU00	90/110	3×380-440	175	180	192	202	646
		3×440-480	155	160	172	179	
P200-4T110H/132L-PU00	110/132	3×380-440	206	215	245	255	714
		3×440-480	183	190	225	235	
P200-4T132H/160L-PU00	132/160	3×380-440	251	260	290	305	850
		3×440-480	231	240	285	295	
P200-4T160H/185L-PU00	160/185	3×380-440	304	315	334	350	1029
		3×440-480	291	302	307	322	
P200-4T185H/200L-PU00	185/200	3×380-440	350	365	370	385	1190
		3×440-480	320	335	336	352	
P200-4T200H/220L-PU00	200/220	3×380-440	381	395	409	425	1292
		3×440-480	348	361	375	390	
P200-4T220H/250L-PU00	220/250	3×380-440	420	435	453	461	1411
		3×440-480	383	398	419	425	
P200-4T250H/280L-PU00	250/280	3×380-440	472	480	509	525	1564
		3×440-480	436	443	461	478	
P200-4T280H/315L-PU00	280/315	3×380-440	525	540	568	585	1700
		3×440-480	475	490	510	522	
P200-4T315H/355L-PU00	315/355	3×380-440	590	605	621	634	1870
		3×440-480	531	540	557	566	
P200-4T355H/415L-PU00	355/415	3×380-440	647	660	694	725	2125
		3×440-480	580	590	628	655	
P200-4T415H/450L-PU00	415/450	3×380-440	718	745	776	805	2380
		3×440-480	653	678	708	735	

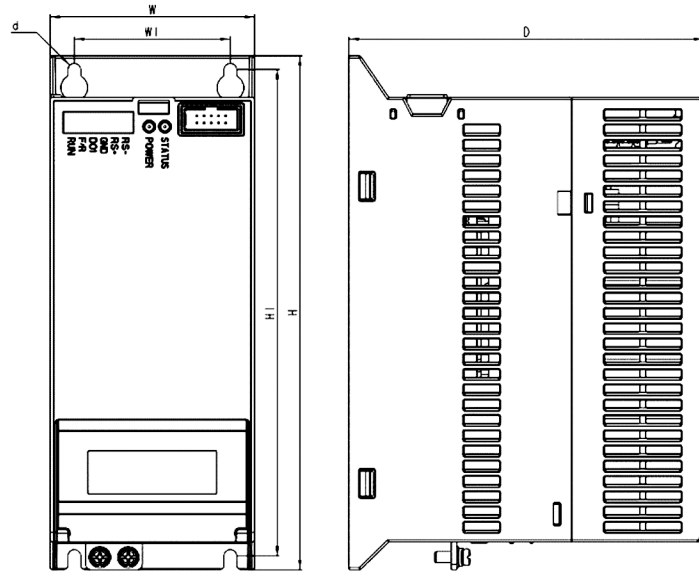
Note: Only models of PU00 are listed above, specifications of PU01 are the same as PU00 if the power is same.

P200 Control Unit Selection Guide

Model Type	Apply to PU Power	Apply to PU Voltage
P200CU00	0.37-415 KW	1×200-240 V; 3×440-480 V
P200CU01	0.37-415 KW	1×200-240 V; 3×440-480 V

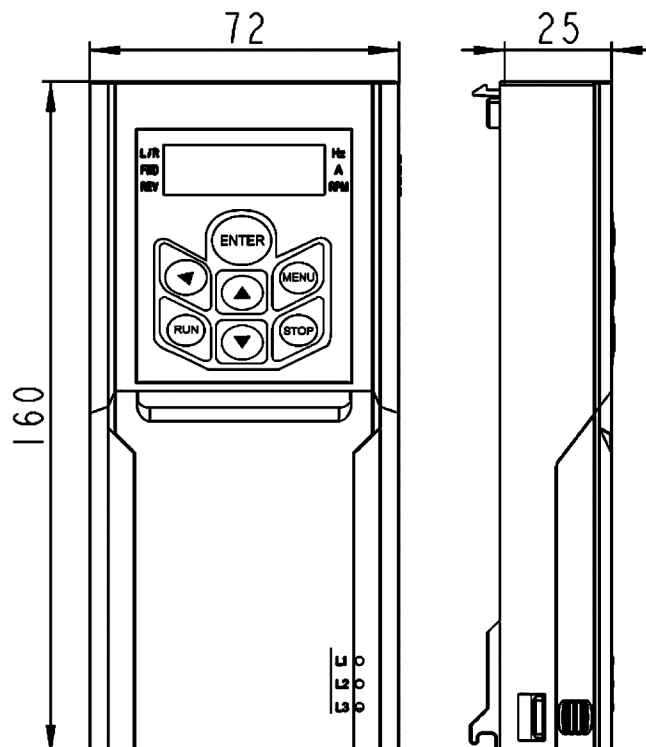
7. P200 Dimensions

P200 Power Unit PU00/PU01 Dimensions



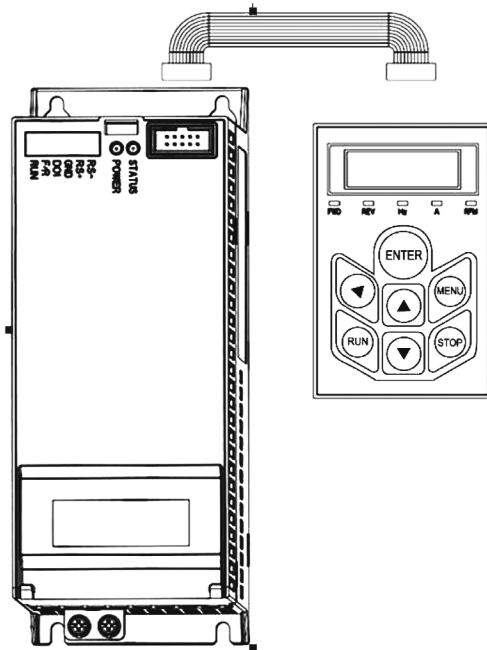
Frame	Rated Power (Heavy Load Model)		Dimensions (mm)					
	1×200-240V	3×380-480V	W	H	D	W1	H1	d
D1	0.37-1.5kW	0.75-2.2kW	72	185	125	55	175	4.5
D2	2.2kW	4.0kW	88	215	130	70	205	4.5
D3	-	5.5-7.5kW	100	250	135	80	240	4.5
D4	-	11-22kW	170	370	150	145	355	6.5
TBD	-	30~415Kw	TBD					

P200 Control Unit CU00 Dimensions

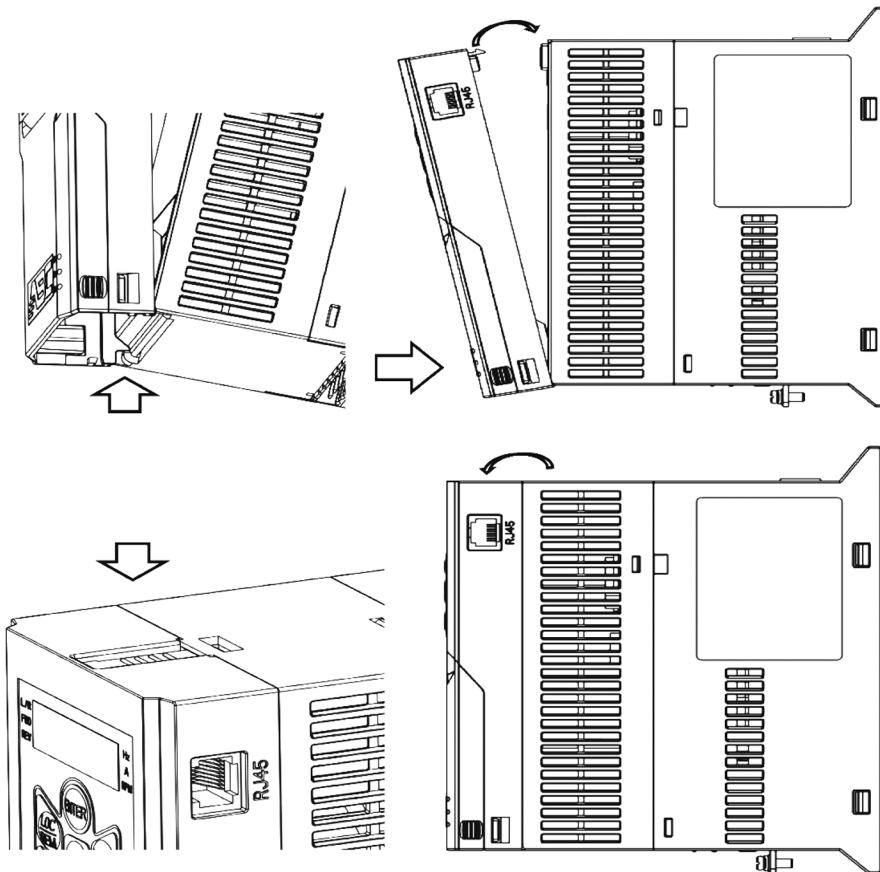


8. P200 Combination

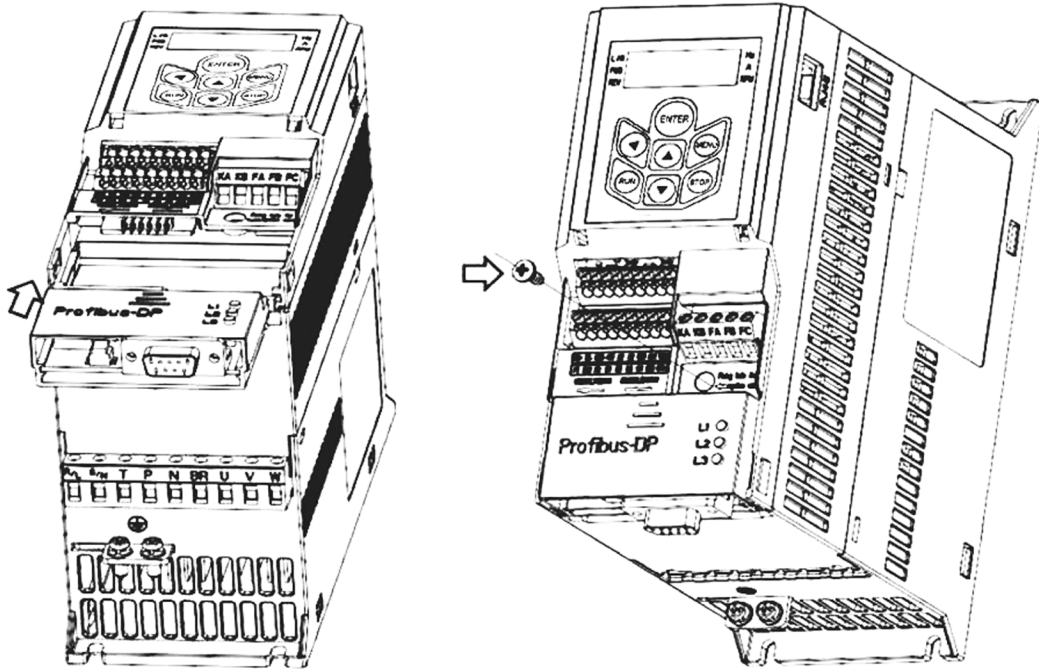
Power Unit PU00/PU01 works alone



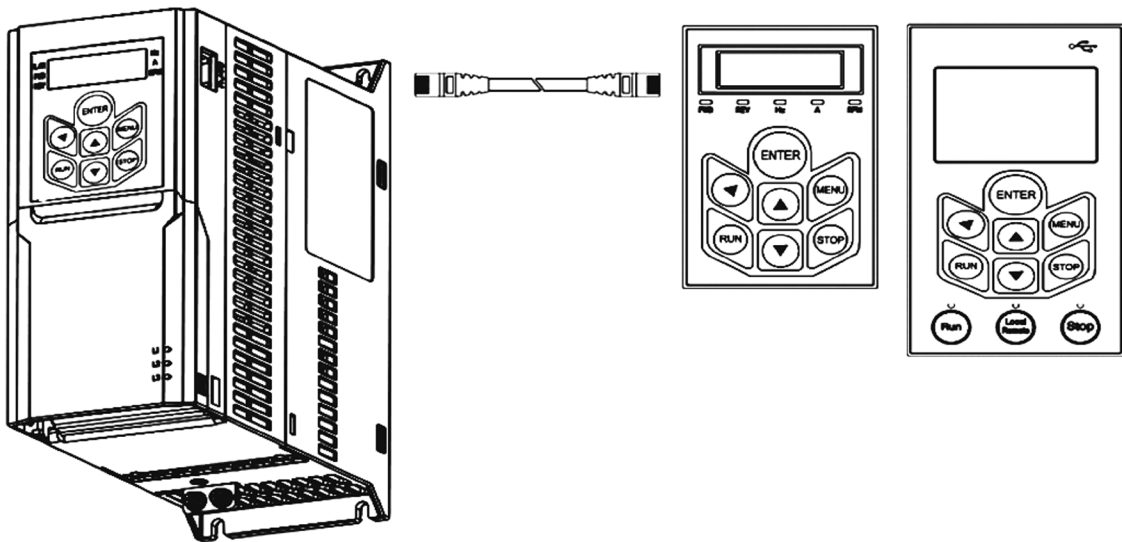
Combine the Control Unit with Power Unit



Use option card or keypad on Control Unit



Option cards on the CU



External Keypad on the CU

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*We reserve the right to change the information in this Catalogue without prior notice.



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