

MOTOR CONTROL CENTER



Features

Space saving

All maintenance such as external cable connection and inspection of each unit can be made on the front of the motor control center, eliminating the need for maintenance space on the rear side.

Easy maintenance

The motor control panel uses detachable terminal blocks for external control wiring. This allows for easy connection and disconnection, improving maintenance efficiency and wiring work.

Additionally, it enables flexible customization to suit various applications.



The Power supply port for the unit test is standard.
Function checking the circuits also easy.



Safety operation

Safety interlock is provided which cannot open the door unless the MCCB is in open possession. And MCCB cannot close when the door is open





Draw out unit

All components are mounted on the plugin starter frame, which composes MCCB, fuse, contactor, thermal overload relay, connectors, and command device.

COMPOSITION AND STRUCTURE

◆ CABINET

All main components, such as shelves, top panels, and floor panels, are processed with panel work, forming a sturdy cabinet. Unit-related components, such as unit tables and doors, can be easily attached and removed.



Busbar

- The horizontal busbar is located at the top of the cabinet, and since there are no obstacles once the ceiling cover is removed, all parts can be easily inspected. The rated busbar current ranges from 600A to 4000A, and various wiring methods, including three-phase three-wire and three-phase four-wire systems, are supported.
- The vertical busbars are independently separated on the front and back sides using copper trays and are positioned in the central area of the cabinet's front and rear. Each vertical busbar is supported by a structure that penetrates through resin-molded insulating materials. The vertical busbar chamber is compartmentalized, which minimizes the risk of incidents spreading to other areas in the event of an accident occurring in one part of the vertical busbar.
- The front and rear busbars are independent, ensuring that the rear storage unit and the front storage unit have the same phase sequence.
 This design prevents cable connection errors and the reversal of motor rotation due to incorrect connections, while also allowing for compatibility between the front and rear units.





◆ Draw-out type unit - device

This unit -device is a sliding draw-out type features a structure that enhances shielding effectiveness against the busbars, preventing the spread of internal short-circuit accidents within the units while stored in the cabinet. The main circuit and control circuit have a separated structure. The main circuit is standardized according to the motor's rated capacity and starting method, while the control circuit is standardized based on the control operation method.

Connection method

The power supply side and load side of the main circuit are designed with an automatic connection method as the standard to facilitate the easy transportation of the unit. The control circuit is connected using a manually detachable connector provided in the control unit. (In the case of \square -B wiring type, the cable is connected directly to the connector.)

Locking device

The operating unit of the wiring circuit breaker features a compact and smart design, utilizing an N-type operating handle that excels in operability and visibility. The operating handle is equipped with a locking function, ensuring prevention of accidental operation and maintaining safety.







Rating and Specification

plie	cable Standard			JEM 1195			
pe (of Unit			Draw-Out Type		Fixed T	ype
	Rated Insulation Voltage			AC600V			
ı	Rated Voltage			AC200V , AC220V ,AC4	00V , AC440V		
ı	Rated Frequency			50 / 60 Hz			
ı	1		Horizontal Bus	600 ~ 4000A			
	Rated Current		Vertical Bus	600A			
	Rated Short-Time Current		Horizontal Bus	Thermal: 42kA (r.m.s) , i	Mechanical: 88	l.2kA (pea	k)
/			Vertical Bus	Thermal: 42kA (r.m.s) , f	Mechanical: 88	l.2kA (pea	k)
/	Rated Control Voltage	AC100V, AC110V, AC20	0V,AC220V				
	Degree of Protection			JEM 1195-IP2X			
ı	Single Face or Back-to-Back1	уре		Single-Face / Dual Face	Туре		
ı				Thin Plate Bus			
	Bus Insulation		Vertical Bus	Thin Plate Bus			
İ	Connection Type	***************************************	B-B,B-C,C-B,C-C				
SPECIFALIONS	Main Circuit Breaker			Wiring Circuit Breaker			
	Maximum Line Start, No Capacity Line Start, Re		n-Reversible	55kW(200V) , 110kW(400V)		100kW(200V), 200kW(400V	
			versible				
		Star-Delta		22kW(200V) , 45kW(400	N)		
	F	Feeder		225	Fixed Unit-Dev	ice ; 400A	or more
		Transformer		-	Up to 10kVA (3Φ)		ЮkVA (3Ф)
	Cabinet		Height	2300mm			
			Depth	800mm			
			Width	700mm	n		
ı	Panel Thickness			Door: 1.6mm or more,	Sideboard:	2.3mm	Other 2.0mm
	Mass / Column			Single-Face Type :250kg	(approx) , Dual	Face Туре	a :350kg(approx)
	Cabinet		Surface	Painting 5Y7/1			
			Interior	Galvanized			
			Unittable	Galvanized			
I	Cabinet		Unit-device part				
n			Control panel				
U			MCCB handle				
	Main Circuit						

Unit Specification

Main

circuit

Direct single line unit(DIRECT)

Volt

Motor capacity (kW)

ain	11-14				
		Motor	Unit High	nt (mm)	
R D	ELTA				
400		90			
	200	45	72	20	
н	400	55	000	,0	
200		37	600		
	400	45	400	600	
	200	22	480	600	
10	400	22	360	460	
-(Ā	200	11		480	
:B	400	7.5	240	300	
	200	3.7	240	360	

Unit Hight (mm)

with RELAY

without RELAY

FOR-REV Main

circuit	Volt	capacity (kW)	without RELAY	with RELAY
Ŷ	200	3.7	360	480
* MCCB	400	7.5	300	460
(Ā)	200	11	480	
(0)	400	22	480	600
MSF MSR	200	22	000	
	400	45	600	600
ТН	200	37		
] "	400	55		
	200	45		
*	400	90		

Motor

Ma	in		Motor	Unit High	nt (mm)
oiro		Volt	capacity (kW)	without RELAY	with RELAY
Ŷ		200	3.7		
, MOC	18	400	7.5		
	A)	200	11		
=	_	400	22		
1	1	200	22		
	\vdash	400	45		
Бтн	\ MS	200	37		
		400	55		
	٥	200	45		

400

-	*
	* моов
	E(A
-	
	*

11	Main circuit	Volt
11	Ŷ	200
	× MCCB	400
11	(Ā)	200
	# 3	400
11		200
		400
11		
7 1		

Ŷ	200
× MCCB	400
1(Ā)	200
# 3	400
	200
	400

capacity (A) 50 50 100

100 225

225

Unit Hight (mm)

without RELAY

240

Unit Hight (mm)

360 480

OPTION

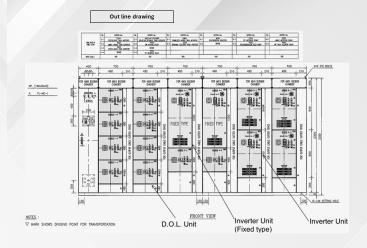
Main	Motor		Unit High	Unit Hight (mm)	
circuit	Volt	capacity (kVA)	without RELAY	with RELAY	
Ŷ	200	1	24		
₩ мосв	400	1	24	U	
	200	3			
M 10 OPT	400	3	36	U	
M OPT					
FUSE					

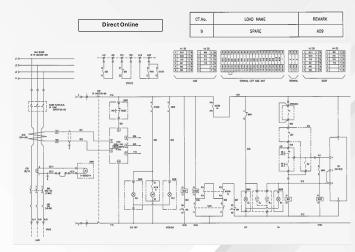
Manufacture

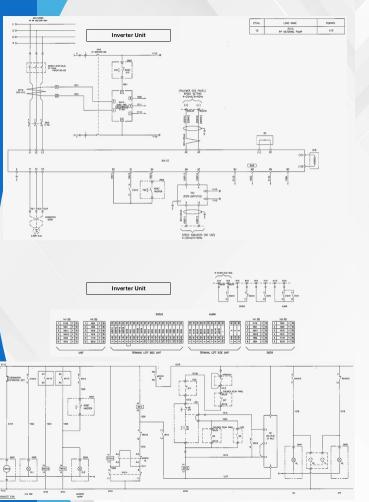
Cabinet	Steel plate		
Unitframe	Zinc plate		
	Thin Plate copper		
Busbar	Segregated by steel plate		
Rated current of vertical busbar A	500		
Degree of protection	IP 30 IP 41		
	3ф3W, 3ф4W		
Draw - out unit	Service – test position		
All services and the services and the services are services as the services are services are services as the services are servi	Door interlocked with MCCB handle		
Base channel	Provided		
Hook bolt	Provided		
Cable entry	Bottom		
VVVFunit	Available		
Starting reactor unit	Available		
Star-delta unit	Available		
Pole – change unit	Available		

Terminal chamber arrangement

Wiring system	B - B	B - C	C-B	C-C
Main circuit	В	В	С	С
Control circuit	В	С	В	С
Front view	CONTROL POWER	CONTROL POWER	CONTROL POWER	CONTROL POWER
Side view		FRONT REAR	FRONT REAR	FRONT REAR







Company Name THAI AICHI DENKI CO., LTD.

Establishment Year

1973

(Joint venture with AICHI ELECTRIC INDUSTRY Co., Ltd It was founded in February1972 and was established in June

1973)

486 million baht

Capital Amount Ja

Japanese shareholders 49%

Thai shareholders 51%

Japanese Government Investment License Number 146

Board of Directors Managing Director

Director

: Mr.

: Mr. NAOKI NAGAHASHI : Mr. MIRA WISRIYA

Director : Mr. YUKITOSHI KAWAMURA Director : Mr. KAZUTAKA MIZUNO

Employees : Main Banks :

: 156 (Japanese 11) persons as of April 2024 : BANGKOK BANK PUBLIC LIMITED COMPANY

THAI MILITARY BANK PUBLIC LIMITED COMPANY

Sales : THB 300 MILLION in 2023

Domestic

Delivery Destination

80 %

Overseas 20 %

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