CATALOG 2011

e-Front runners

Low Voltage Distribution and Control Equipment

FUJI ELECTRIC

FUJI ELECTRIC

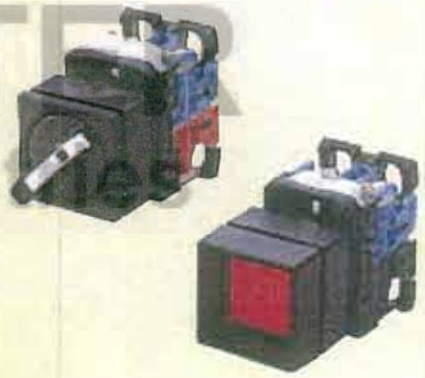
e-Front runners

FUJI ELECTRIC

COMMAND SWITCHES

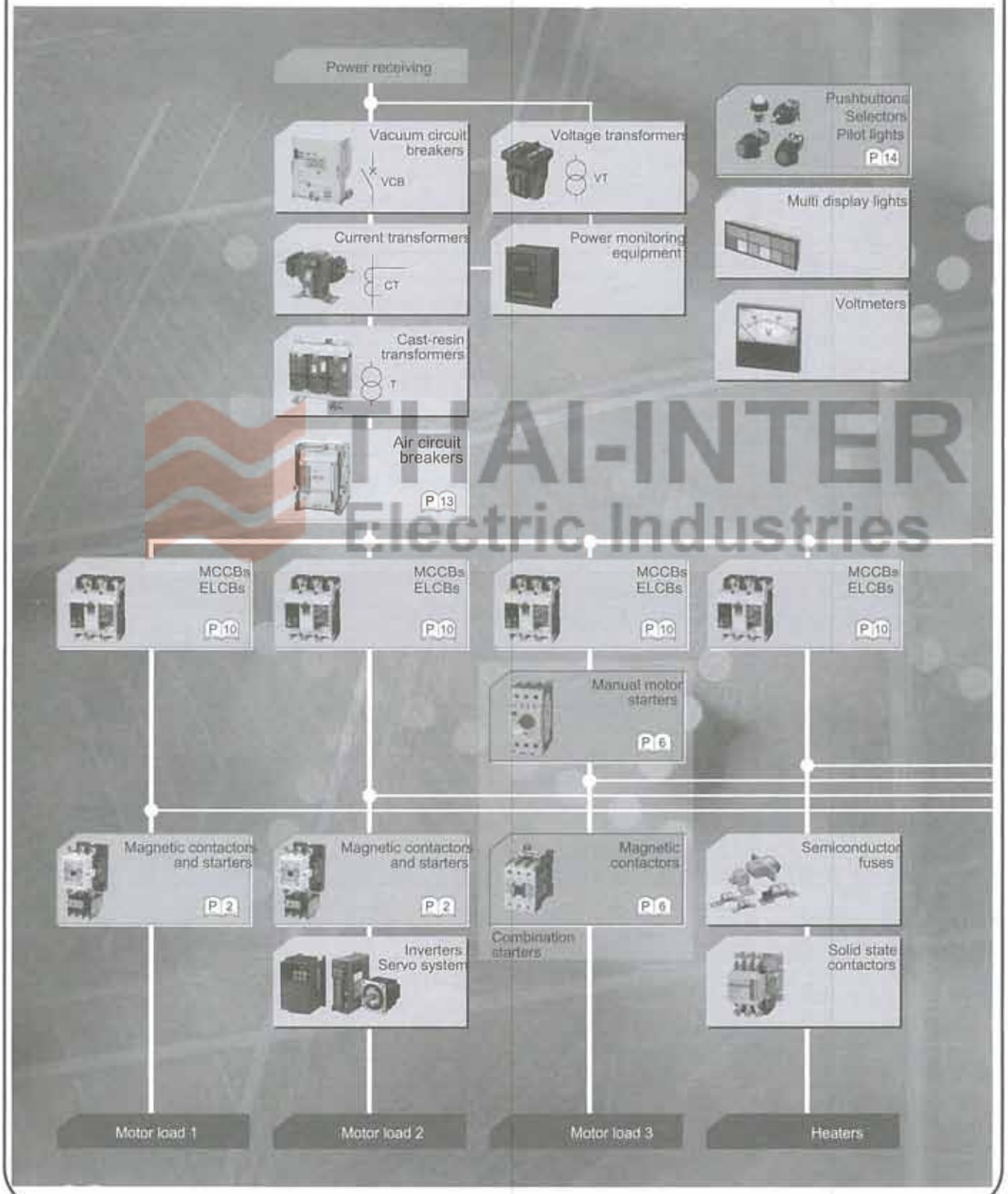
R SERIES AR22• DR22/AR30•DR30

22mm/30mm Diameter

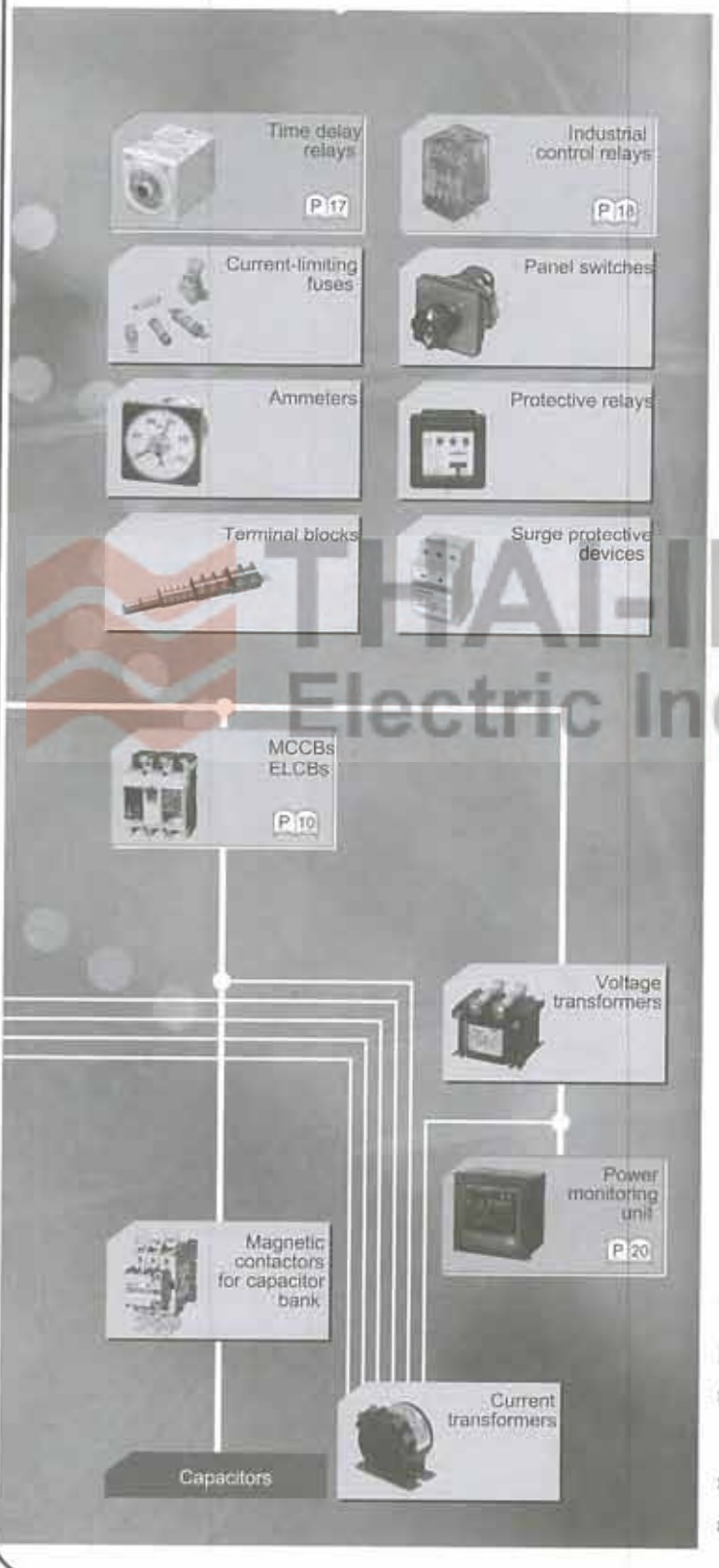


สารบัญ

Fuji Electric FA



FUJI ELECTRIC

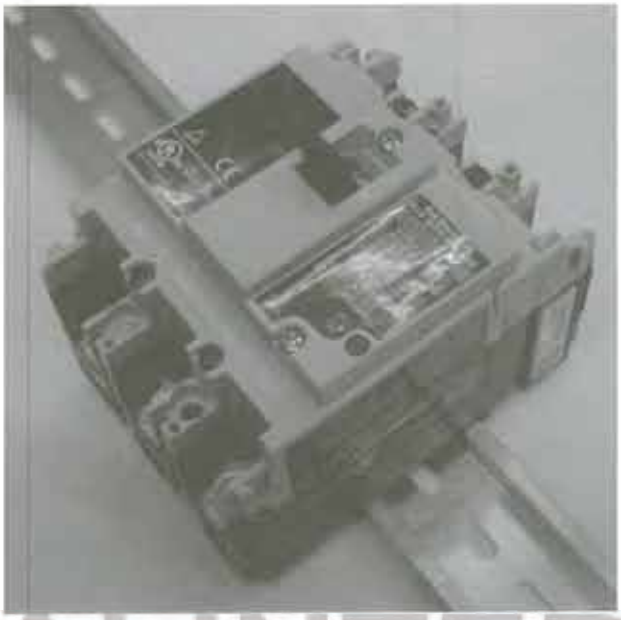


" Meets customer needs with a wide range of products and solid reliability "

Fuji Electric FA Components & System Co.,Ltd. provides a wide range of component equipment and system products, such as power distribution, control, and drive control equipment, to support the operation and safty of factory FA lines, inteligent building, and other applications.

FUJI ELECTRIC

Molded Case Circuit Breaker

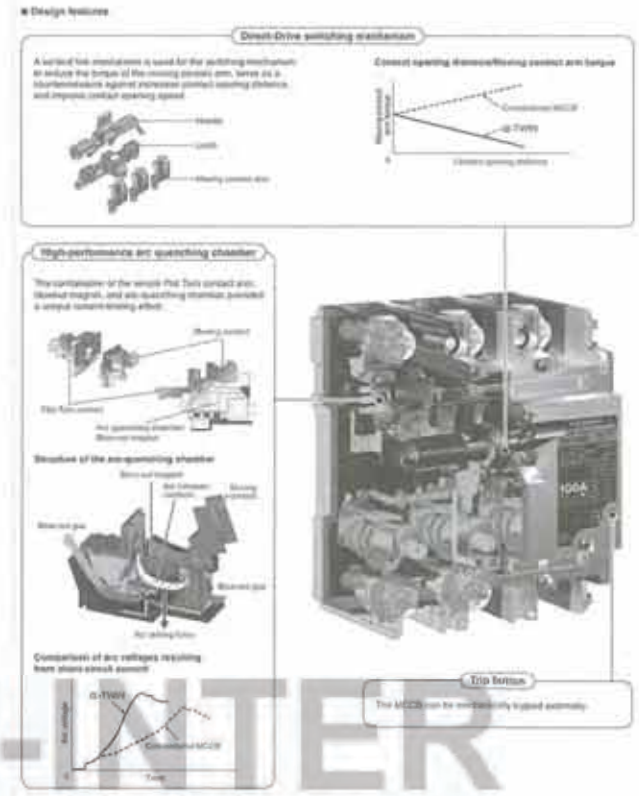


BW-Series

รุ่น (Type)		BW32AAG	BW32AAG	BW50EAG	BW50EAG
Number of Poles		2	3	2	3
Rated Current (A)		3,5,10, 15,20,30,32	3,5,10, 15,20,30,32	5,10,15,20, 30,32,40,50	5,10,15,20, 30,32,40,50
Rated Insulation Ui (VAC)		690	690	690	690
Rated Breaking	230 VAC	2.5	2.5	5	5
Capacity, Icu (kA)	380 VAC	1.5	1.5	2.5	2.5
Dimension (mm.)	กว้าง	50	75	50	75
	สูง	100	100	100	100
	ลึก	60	60	60	60
ราคาต่อหน่วย		**600.-**	**860.-**	**1,260.-**	**1,720.-**
หมายเหตุ		สามารถติดตั้ง บนรางได้	สามารถติดตั้ง บนรางได้	สามารถติดตั้ง บนรางได้	สามารถติดตั้ง บนรางได้
Alarm Switch		BZ6KR10C	BZ6KL10C	BZ6KR10C	BZ6KL10C
ราคาต่อหน่วย		1,140.-	1,140.-	1,140.-	1,140.-
Auxiliary Switch		BZ6WR10C	BZ6WL10C	BZ6WR10C	BZ6WL10C
ราคาต่อหน่วย		1,140.-	1,140.-	1,140.-	1,140.-
Undervoltage trip		BZ6R[ ]10C	BZ6R[ ]10C	BZ6R[ ]10C	BZ6R[ ]10C
ราคาต่อหน่วย		5,340.-	5,340.-	5,340.-	5,340.-
Shunt trip		BZ6F[ ]10C	BZ6F[ ]10C	BZ6F[ ]10C	BZ6F[ ]10C
ราคาต่อหน่วย		1,030.-	1,030.-	1,030.-	1,030.-
Operating Handle N-Type		BZ6N10C	BZ6N10C	BZ6N10C	BZ6N10C
ราคาต่อหน่วย		โปรดสอบถาม	โปรดสอบถาม	โปรดสอบถาม	โปรดสอบถาม

FUJI ELECTRIC

Molded Case Circuit Breaker

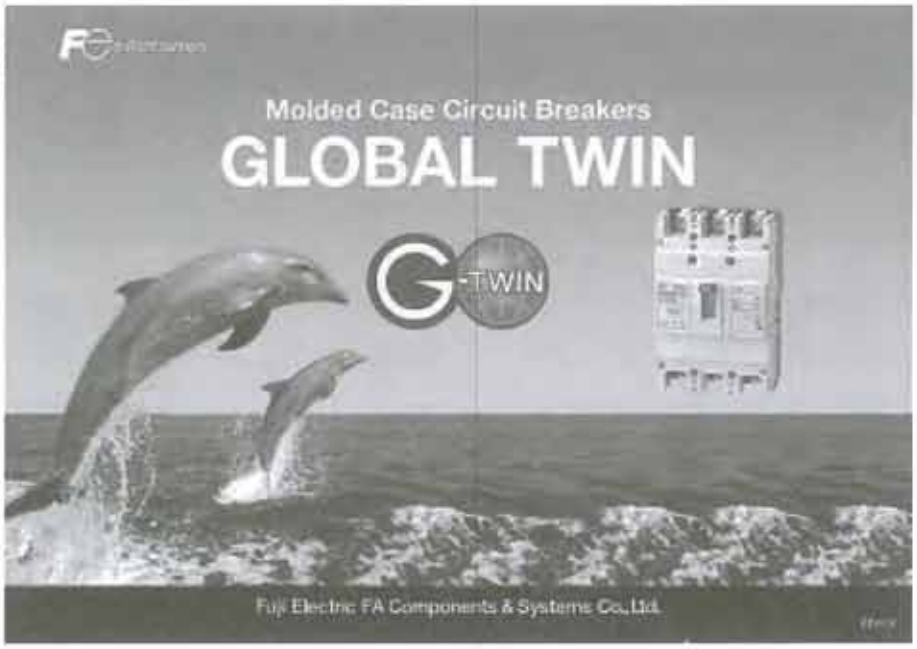


BW-Series

รุ่น (Type)		BW63EAG	BW63EAG	BW100EAG	BW100EAG
Number of Poles		2	3	2	3
Rated Current (A)		60,63	60,63	50,60,63,75,100	50,60,63,75,100
Rated Insulation Ui (VAC)		690	690	690	690
Rated Breaking	230 VAC	5	5	25	25
Capacity, Icu (kA)	380 VAC	2.5	2.5	10	10
Dimension (mm.)	กว้าง	50	75	50	75
	สูง	100	100	100	100
	ลึก	60	60	60	60
ราคาต่อหน่วย		1,390.-	1,940.-	2,260.-	3,040.-
หมายเหตุ		สามารถติดตั้งบนรางได้	สามารถติดตั้งบนรางได้	สามารถติดตั้งบนรางได้	สามารถติดตั้งบนรางได้
Alarm Switch		BZ6KR10C	BZ6KL10C	BZ6KR10C	BZ6KL10C
ราคาต่อหน่วย		1,140.-	1,140.-	1,140.-	1,140.-
Auxiliary Switch		BZ6WR10C	BZ6WL10C	BZ6WR10C	BZ6WL10C
ราคาต่อหน่วย		1,140.-	1,140.-	1,140.-	1,140.-
Undervoltage trip		BZ6R[ ]10C	BZ6R[ ]10C	BZ6R[ ]10C	BZ6R[ ]10C
ราคาต่อหน่วย		5,340.-	5,340.-	5,340.-	5,340.-
Shunt trip		BZ6F[ ]10C	BZ6F[ ]10C	BZ6F[ ]10C	BZ6F[ ]10C
ราคาต่อหน่วย		1,030.-	1,030.-	1,030.-	1,030.-
Operating Handle N-Type		BZ6N10C	BZ6N10C	BZ6N10C	BZ6N10C
ราคาต่อหน่วย		โปรดสอบถาม	โปรดสอบถาม	โปรดสอบถาม	โปรดสอบถาม

FUJI ELECTRIC

Molded Case Circuit Breaker

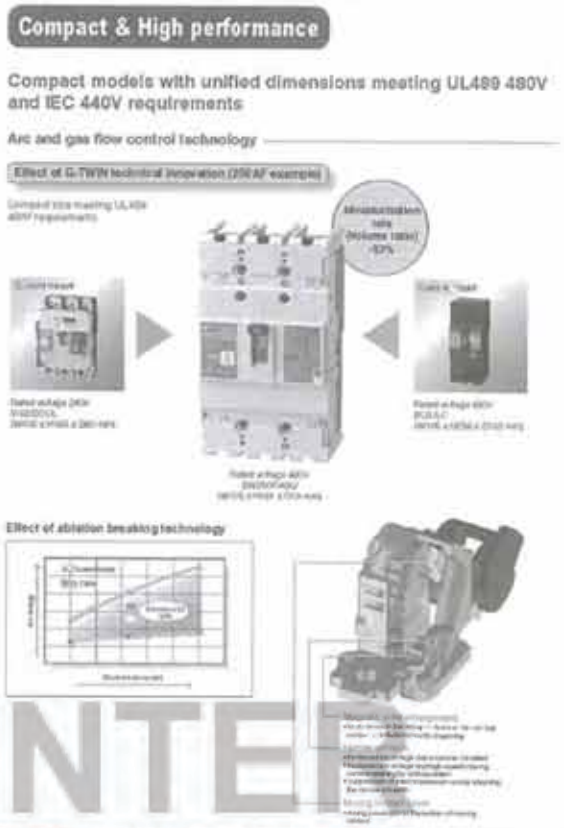


BW-Series

รุ่น (Type)		BW160EAG	BW160EAG	BW250EAG	BW400EAG
Number of Poles		2	3	3	3
Rated Current (A)		125,150,160	125,150,160	175,200,225,250	250,300,350,400
Rated Insulation Ui (VAC)		690	690	690	690
Rated Breaking	230 VAC	36	36	36	50
Capacity, Icu (kA)	380 VAC	18	18	18	30
Dimension (mm.)	กว้าง	105	105	105	140
	สูง	165	165	165	257
	ลึก	68	68	68	103
ราคาต่อหน่วย		4,800.-	6,450.-	6,450.-	15,000.-
หมายเหตุ		ขนาดเท่ากับ MITSUBISHI รุ่น NF250-CW 2P (สามารถใช้แทนได้ทันที)	ขนาดเท่ากับ MITSUBISHI รุ่น NF250-CW 3P (สามารถใช้แทนได้ทันที)	ขนาดเท่ากับ MITSUBISHI รุ่น NF250-CW 3P (สามารถใช้แทนได้ทันที)	ขนาดเท่ากับ FUJI EA403B,C และ MITSUBISHI NF400-CW (สามารถใช้แทนได้ทันที)
Alarm Switch		BW9K1SG0-R	BW9K1SG0-R	BW9K1SG0-R	BW9K1SHA
ราคาต่อหน่วย		1,500.-	1,500.-	1,500.-	2,360.-
Auxiliary Switch		BW9W1SG0-R	BW9W1SG0-R	BW9W1SG0-R	BW9W1SHA
ราคาต่อหน่วย		1,360.-	1,360.-	1,360.-	2,360.-
Undervoltage trip		-	BW9RGA[ ]	BW9RGA[ ]	BW9RHA-[ ]
ราคาต่อหน่วย		-	8,000.-	8,000.-	8,750.-
Shunt trip		BW9F[ ]G0	BW9F[ ]G0	BW9F[ ]G0	BW9FHA-[ ]
ราคาต่อหน่วย		3,390.-	3,390.-	3,390.-	4,600.-
Operating Handle N-Type		BW9N0GA	BW9N0GA	BW9N0GA	BW9N0HA
ราคาต่อหน่วย		โปรดสอบถาม	โปรดสอบถาม	โปรดสอบถาม	โปรดสอบถาม

FUJI ELECTRIC

Molded Case Circuit Breaker



BW-Series

รุ่น (Type)		BW630EAG	BW800EAG
Number of Poles		3	3
Rated Current (A)		500,600,630	700,800
Rated Insulation Ui (VAC)		690	690
Rated Breaking	230 VAC	50	50
Capacity, Icu (kA)	380 VAC	36	36
Dimension (mm.)	กว้าง	210	210
	สูง	275	275
	ลึก	103	103
ราคาต่อหน่วย		**23,400.-**	**36,700.-**
หมายเหตุ		ขนาดเท่ากับ FUJI รุ่น EA603B และ EA603C (สามารถใช้แทนได้ทันที)	ขนาดเท่ากับ FUJI รุ่น EA803B,C และ MITSUBISHI NF800-CW (สามารถใช้แทนได้ทันที)
Alarm Switch		BW9K1SHA	BW9K1SHA
ราคาต่อหน่วย		2,360.-	2,360.-
Auxiliary Switch		BW9W1SHA	BW9W1SHA
ราคาต่อหน่วย		2,360.-	2,360.-
Undervoltage trip		BW9RHA-[ ]	BW9RHA-[ ]
ราคาต่อหน่วย		8,750.-	8,750.-
Shunt trip		BW9FHA-[ ]	BW9FHA-[ ]
ราคาต่อหน่วย		4,600.-	4,600.-
Operating Handle N-Type		BW9N0JA	BW9N0JA
ราคาต่อหน่วย		โปรดสอบถาม	โปรดสอบถาม

FUJI ELECTRIC

Molded Case Circuit Breaker

BW-Series

รุ่น (Type)		BW32SAG	BW32SAG	BW50SAG	BW50SAG
Number of Poles		2	3	2	3
Rated Current (A)		3,5,10,15,20,30,32	3,5,10,15,20,30,32	5,10,15,20,30,32,40,50	5,10,15,20,30,32,40,50
Rated Insulation Ui (VAC)		690	690	690	690
Rated Breaking	230 VAC	5	5	10	10
Capacity, Icu (kA)	380 VAC	2.5	2.5	7.5	7.5
Dimension (mm.)	กว้าง	50	75	50	75
	สูง	100	100	100	100
	ลึก	60	60	60	60
ราคาต่อหน่วย		**1,180.-**	**1,700.-**	**1,430.-**	**2,040.-**
หมายเหตุ		สามารถติดตั้งบนรางได้	สามารถติดตั้งบนรางได้	สามารถติดตั้งบนรางได้	สามารถติดตั้งบนรางได้
Alarm Switch		BZ6KR10C	BZ6KL10C	BZ6KR10C	BZ6KL10C
ราคาต่อหน่วย		1,140.-	1,140.-	1,140.-	1,140.-
Auxiliary Switch		BZ6WR10C	BZ6WL10C	BZ6WR10C	BZ6WL10C
ราคาต่อหน่วย		1,140.-	1,140.-	1,140.-	1,140.-
Undervoltage trip		BZ6R[ ]10C	BZ6R[ ]10C	BZ6R[ ]10C	BZ6R[ ]10C
ราคาต่อหน่วย		5,340.-	5,340.-	5,340.-	5,340.-
Shunt trip		BZ6F[ ]10C	BZ6F[ ]10C	BZ6F[ ]10C	BZ6F[ ]10C
ราคาต่อหน่วย		1,030.-	1,030.-	1,030.-	1,030.-
Operating Handle N-Type		BZ6N10C	BZ6N10C	BZ6N10C	BZ6N10C
ราคาต่อหน่วย		โปรดสอบถาม	โปรดสอบถาม	โปรดสอบถาม	โปรดสอบถาม

FUJI ELECTRIC

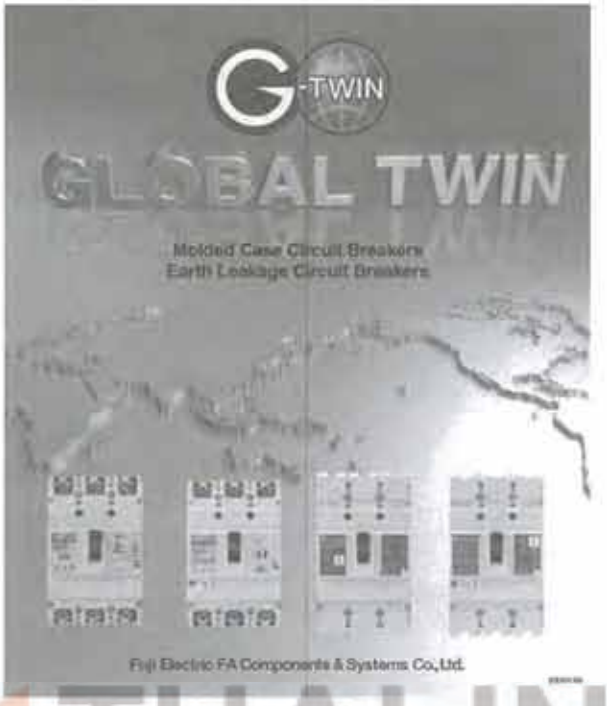
Molded Case Circuit Breaker

BW-Series

รุ่น (Type)		BW50RAG	BW63SAG	BW63SAG
Number of Poles		3	2	3
Rated Current (A)		10,15,20,30,32,40,50	60,63	60,63
Rated Insulation Ui (VAC)		690	690	690
Rated Breaking	230 VAC	25	10	10
Capacity, Icu (kA)	380 VAC	10	7.5	7.5
Dimension (mm.)	กว้าง	75	50	75
	สูง	100	100	100
	ลึก	60	60	60
ราคาต่อหน่วย		2,100.-	1,540.-	2,150.-
หมายเหตุ		สามารถติดตั้งบนรางได้	สามารถติดตั้งบนรางได้	สามารถติดตั้งบนรางได้
Alarm Switch		BZ6KL10C	BZ6KR10C	BZ6KL10C
ราคาต่อหน่วย		1,140.-	1,140.-	1,140.-
Auxiliary Switch		BZ6WL10C	BZ6WR10C	BZ6WL10C
ราคาต่อหน่วย		1,140.-	1,140.-	1,140.-
Undervoltage trip		BZ6R[ ]10C	BZ6R[ ]10C	BZ6R[ ]10C
ราคาต่อหน่วย		5,340.-	5,340.-	5,340.-
Shunt trip		BZ6F[ ]10C	BZ6F[ ]10C	BZ6F[ ]10C
ราคาต่อหน่วย		1,030.-	1,030.-	1,030.-
Operating Handle N-Type		BZ6N10C	BZ6N10C	BZ6N10C
ราคาต่อหน่วย		โปรดสอบถาม	โปรดสอบถาม	โปรดสอบถาม

FUJI ELECTRIC

Molded Case Circuit Breaker



BW-Series

รุ่น (Type)		BW125JAG	BW125JAG	BW125SAG	BW125SAG
Number of Poles		2	3	2	3
Rated Current (A)		15,20,25,30,40,50, 60,75,100,125	15,20,25,30,40,50, 60,75,100,125	15,20,25,30,40,50, 60,75,100,125	15,20,25,30,40,50, 60,75,100,125
Rated Insulation Ui (VAC)		690	690		
Rated Breaking	230 VAC	50	50	85	85
Capacity, Icu (kA)	380 VAC	30	30	36	36
Dimension (mm.)	กว้าง	60	90	90	90
	สูง	155	155	155	155
	ลึก	68	68	68	68
ราคาต่อหน่วย		**2,800.-**	**3,960.-**	**3,700.-**	**5,250.-**
หมายเหตุ		ขนาดหนากว่า FUJI รุ่น SA102BA,C = 8mm. ขนาดยาวกว่า MITSUBISHI รุ่น NF125-CW,SW 2P = 25mm.	ขนาดหนากว่า FUJI รุ่น SA103BA,C = 8mm. ขนาดยาวกว่า MITSUBISHI รุ่น NF125-CW,SW 3P = 25mm.	ขนาดหนากว่า FUJI รุ่น SA102BA,C = 8mm. ขนาดยาวกว่า MITSUBISHI รุ่น NF125-CW,SW 2P = 25mm.	ขนาดหนากว่า FUJI รุ่น SA103BA,C = 8mm. ขนาดยาวกว่า MITSUBISHI รุ่น NF125-CW,SW 3P = 25mm.
Alarm Switch		BW9K1SG0-R	BW9K1SG0-R	BW9K1SG0-R	BW9K1SG0-R
ราคาต่อหน่วย		1,500.-	1,500.-	1,500.-	1,500.-
Auxiliary Switch		BW9W1SG0-R	BW9W1SG0-R	BW9W1SG0-R	BW9W1SG0-R
ราคาต่อหน่วย		1,360.-	1,360.-	1,360.-	1,360.-
Undervoltage trip		-	BW9RGA[ ]	-	BW9RGA[ ]
ราคาต่อหน่วย		-	8,000.-	-	8,000.-
Shunt trip		BW9F[ ]G0	BW9F[ ]G0	BW9F[ ]G0	BW9F[ ]G0
ราคาต่อหน่วย		3,390.-	3,390.-	3,390.-	3,390.-
Operating Handle N-Type		BW9N0CA	BW9N0CA	BW9N0CA	BW9N0CA
ราคาต่อหน่วย		โปรดสอบถาม	โปรดสอบถาม	โปรดสอบถาม	โปรดสอบถาม

FUJI ELECTRIC

Molded Case Circuit Breaker

BW-Series

รุ่น (Type)		BW125RAG	BW125RAG	BW160JAG	BW160JAG
Number of Poles		2	3	2	3
Rated Current (A)		15,20,25,30,40,50, 60,75,100,125	15,20,25,30,40,50, 60,75,100,125	125,150,160	125,150,160
Rated Insulation Ui (VAC)		690	690	690	690
Rated Breaking	230 VAC	100	100	50	50
Capacity, Icu (kA)	380 VAC	50	50	30	30
Dimension (mm.)	กว้าง	90	90	105	105
	สูง	155	155	165	165
	ลึก	68	68	68	68
ราคาต่อหน่วย		4,850.-	6,760.-	5,850.-	8,700.-
หมายเหตุ		ขนาดหนากว่า FUJI รุ่น SA102,103RA, SA102,103RC = 8 mm. ขนาดยาวกว่า MITSUBISHI รุ่น NF125-HW 2P,3P = 25 mm.		ขนาดเท่ากับ MITSUBISHI รุ่น NF160-SW 2P,3P (สามารถใช้แทนได้ทันที)	
Alarm Switch		BW9K1SG0-R	BW9K1SG0-R	BW9K1SG0-R	BW9K1SG0-R
ราคาต่อหน่วย		1,500.-	1,500.-	1,500.-	1,500.-
Auxiliary Switch		BW9W1SG0-R	BW9W1SG0-R	BW9W1SG0-R	BW9W1SG0-R
ราคาต่อหน่วย		1,360.-	1,360.-	1,360.-	1,360.-
Undervoltage trip		-	BW9RGA[ ]	-	BW9RGA[ ]
ราคาต่อหน่วย		-	8,000.-	-	8,000.-
Shunt trip		BW9F[ ]G0	BW9F[ ]G0	BW9F[ ]G0	BW9F[ ]G0
ราคาต่อหน่วย		3,390.-	3,390.-	3,390.-	3,390.-
Operating Handle N-Type		BW9N0CA	BW9N0CA	BW9N0GA	BW9N0GA
ราคาต่อหน่วย		โปรดสอบถาม	โปรดสอบถาม	โปรดสอบถาม	โปรดสอบถาม

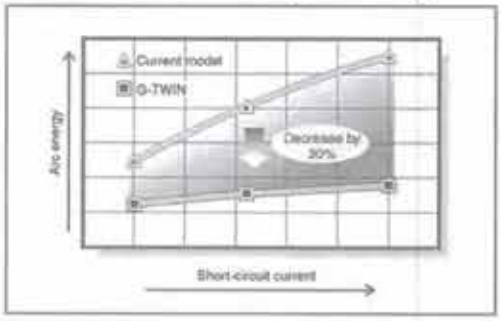
FUJI ELECTRIC

Molded Case Circuit Breaker

FUJI ELECTRIC

Fe

Effect of ablation breaking technology

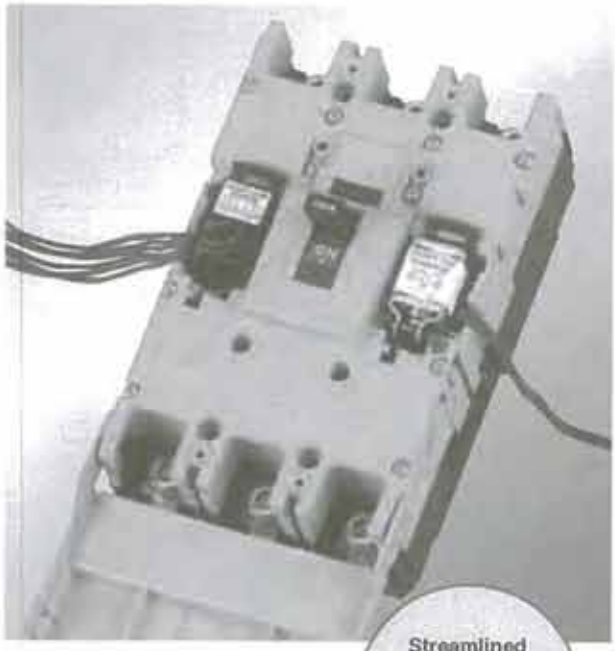


BW-Series

รุ่น (Type)		BW160SAG	BW160SAG	BW160RAG	BW160RAG
Number of Poles		2	3	2	3
Rated Current (A)		125,150,160	125,150,160	125,150,160	125,150,160
Rated Insulation Ui (VAC)		690	690	690	690
Rated Breaking	230 VAC	85	85	100	100
Capacity, Icu (kA)	380 VAC	36	36	50	50
Dimension (mm.)	กว้าง	105	105	105	105
	สูง	165	165	165	165
	ลึก	68	68	68	68
ราคาต่อหน่วย		**6,850.-**	**9,000.-**	**7,200.-**	**10,300.-**
หมายเหตุ		ขนาดเท่ากับ MITSUBISHI รุ่น NF160-SW 2P,3P (สามารถใช้แทนได้ทันที)		ขนาดเท่ากับ MITSUBISHI รุ่น NF160-HW 2P,3P (สามารถใช้แทนได้ทันที)	
Alarm Switch		BW9K1SG0-R	BW9K1SG0-R	BW9K1SG0-R	BW9K1SG0-R
ราคาต่อหน่วย		1,500.-	1,500.-	1,500.-	1,500.-
Auxiliary Switch		BW9W1SG0-R	BW9W1SG0-R	BW9W1SG0-R	BW9W1SG0-R
ราคาต่อหน่วย		1,360.-	1,360.-	1,360.-	1,360.-
Undervoltage trip		-	BW9RGA[ ]	-	BW9RGA[ ]
ราคาต่อหน่วย		-	8,000.-	-	8,000.-
Shunt trip		BW9F[ ]G0	BW9F[ ]G0	BW9F[ ]G0	BW9F[ ]G0
ราคาต่อหน่วย		3,390.-	3,390.-	3,390.-	3,390.-
Operating Handle N-Type		BW9N0GA	BW9N0GA	BW9N0GA	BW9N0GA
ราคาต่อหน่วย		โปรดสอบถาม	โปรดสอบถาม	โปรดสอบถาม	โปรดสอบถาม

FUJI ELECTRIC

Molded Case Circuit Breaker



G-TWIN 125/250 AF

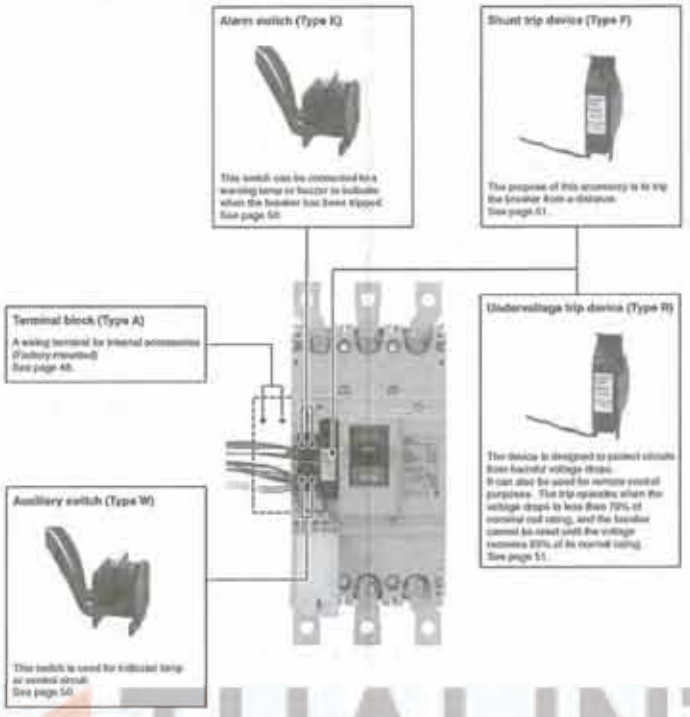
Streamlined appearance and internal accessories incorporated G-TWIN

BW-Series

รุ่น (Type)		BW250JAG	BW250SAG	BW250RAG
Number of Poles		3	3	3
Rated Current (A)		175,200,225,250	175,200,225,250	175,200,225,250
Rated Insulation Ui (VAC)		690	690	690
Rated Breaking	230 VAC	50	85	100
Capacity, Icu (kA)	380 VAC	30	36	50
Dimension (mm.)	กว้าง	105	105	105
	สูง	165	165	165
	ลึก	68	68	68
ราคาต่อหน่วย		8,700.-	10,000.-	10,300.-
หมายเหตุ		ขนาดเท่ากับ MITSUBISHI รุ่น NF250-SW 3P (สามารถใช้แทนได้ทันที)		ขนาดเท่ากับ MITSUBISHI รุ่น NF250-HW 3P (สามารถใช้แทนได้ทันที)
Alarm Switch		BW9K1SG0-R	BW9K1SG0-R	BW9K1SG0-R
ราคาต่อหน่วย		1,500.-	1,500.-	1,500.-
Auxiliary Switch		BW9W1SG0-R	BW9W1SG0-R	BW9W1SG0-R
ราคาต่อหน่วย		1,360.-	1,360.-	1,360.-
Undervoltage trip		BW9RGA[ ]	BW9RGA[ ]	BW9RGA[ ]
ราคาต่อหน่วย		8,000.-	8,000.-	8,000.-
Shunt trip		BW9F[ ]G0	BW9F[ ]G0	BW9F[ ]G0
ราคาต่อหน่วย		3,390.-	3,390.-	3,390.-
Operating Handle N-Type		BW9N0GA	BW9N0GA	BW9N0GA
ราคาต่อหน่วย		โปรดสอบถาม	โปรดสอบถาม	โปรดสอบถาม

FUJI ELECTRIC

Molded Case Circuit Breaker



BW-Series

รุ่น (Type)		BW400SAG	BW400RAG	BW630RAG	BW800RAG
Number of Poles		3	3	3	3
Rated Current (A)		250,300,350,400	250,300,350,400	500,600,630	700,800
Rated Insulation Ui (VAC)		690	690	690	690
Rated Breaking	230 VAC	85	100	100	100
Capacity, Icu (kA)	380 VAC	36	50	50	50
Dimension (mm.)	กว้าง	140	140	210	210
	สูง	257	257	275	275
	ลึก	103	103	103	103
ราคาต่อหน่วย		15,700.-	16,500.-	24,400.-	38,700.-
หมายเหตุ		ขนาดเท่ากับ FUJI SA403B,C และ MITSUBISHI NF400-CW (สามารถใช้แทนได้ทันที)	ขนาดเท่ากับ FUJI SA403R,RC และ MITSUBISHI NF400-SW (สามารถใช้แทนได้ทันที)	ขนาดเท่ากับ FUJI รุ่น SA603R,RC (สามารถใช้แทนได้ทันที)	ขนาดเท่ากับ FUJI รุ่น SA803R,RC และ MITSUBISHI NF800-SEW (สามารถใช้แทนได้ทันที)
Alarm Switch		BW9K1SHA	BW9K1SHA	BW9K1SHA	BW9K1SHA
ราคาต่อหน่วย		2,360.-	2,360.-	2,360.-	2,360.-
Auxiliary Switch		BW9W1SHA	BW9W1SHA	BW9W1SHA	BW9W1SHA
ราคาต่อหน่วย		2,360.-	2,360.-	2,360.-	2,360.-
Undervoltage trip		BW9RHA-[ ]	BW9RHA-[ ]	BW9RHA-[ ]	BW9RHA-[ ]
ราคาต่อหน่วย		8,750.-	8,750.-	8,750.-	8,750.-
Shunt trip		BW9FHA-[ ]	BW9FHA-[ ]	BW9FHA-[ ]	BW9FHA-[ ]
ราคาต่อหน่วย		4,600.-	4,600.-	4,600.-	4,600.-
Operating Handle N-Type		BW9N0HA	BW9N0HA	BW9N0JA	BW9N0JA
ราคาต่อหน่วย		โปรดสอบถาม	โปรดสอบถาม	โปรดสอบถาม	โปรดสอบถาม

FUJI ELECTRIC

Molded Case Circuit Breaker

SA-Series

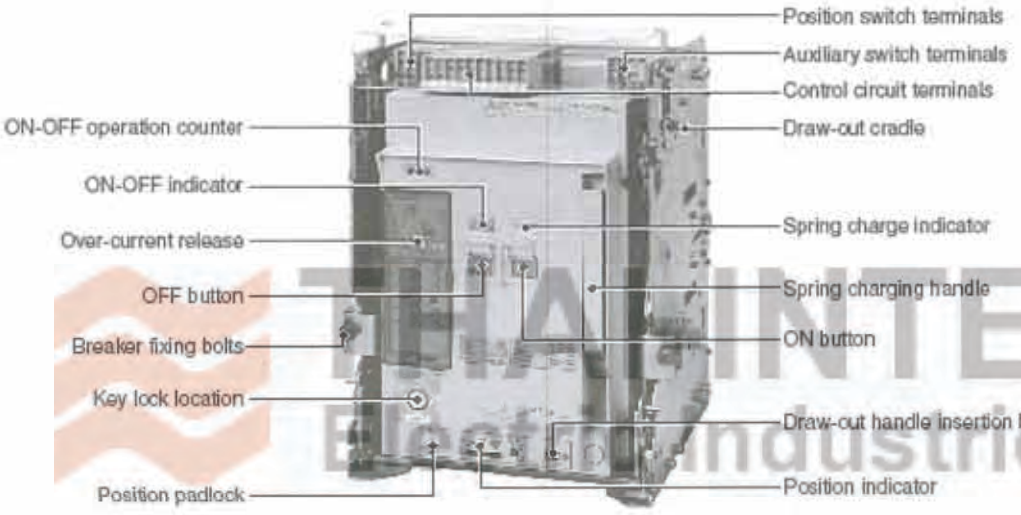
รุ่น (Type)		SA1003E	SA1203E	SA1603E
Number of Poles		3	3	3
Rated Current (A)		Adjustable 500/600/700/	Adjustable 600/700/800/	Adjustable 800/900/1,000/
		800/900/1,000	1,000/1,200	1,200/1,400/1,600
Rated Insulation Ui (VAC)		690	690	690
Rated Breaking	230 VAC	100	100	125
Capacity, Icu (kA)	380 VAC	65	65	85
Dimension (mm.)	กว้าง	210	210	210
	สูง	370	370	370
	ลึก	120	120	140
ราคาต่อหน่วย		71,800.-	86,700.-	136,000.-
หมายเหตุ		Solid-State Tripping Device	Solid-State Tripping Device	Solid-State Tripping Device
		สามารถปรับ Rated Current,	สามารถปรับ Rated Current,	สามารถปรับ Rated Current,
		Short-Time Tripping,	Short-Time Tripping,	Short-Time Tripping,
		Long-Time Tripping,	Long-Time Tripping,	Long-Time Tripping,
		Instanneous Tripping ได้	Instanneous Tripping ได้	Instanneous Tripping ได้
Alarm Switch		K-120	K-120	K-120
ราคาต่อหน่วย		โปรดสอบถาม	โปรดสอบถาม	โปรดสอบถาม
Auxiliary Switch		W-120	W-120	W-120
ราคาต่อหน่วย		โปรดสอบถาม	โปรดสอบถาม	โปรดสอบถาม
Undervoltage trip		R-120[ ]	R-120[ ]	R-120[ ]
ราคาต่อหน่วย		9,500.-	9,500.-	9,500.-
Shunt trip		F-120[ ]	F-120[ ]	F-120[ ]
ราคาต่อหน่วย		โปรดสอบถาม	โปรดสอบถาม	โปรดสอบถาม
Operating Handle N-Type		N-120A	N-120A	N-120A
ราคาต่อหน่วย		โปรดสอบถาม	โปรดสอบถาม	โปรดสอบถาม

* หมายเหตุ : SA1003E,SA1203E และ SA1603E อุปกรณ์เสริมต้องประกอบจากโรงงานเท่านั้น

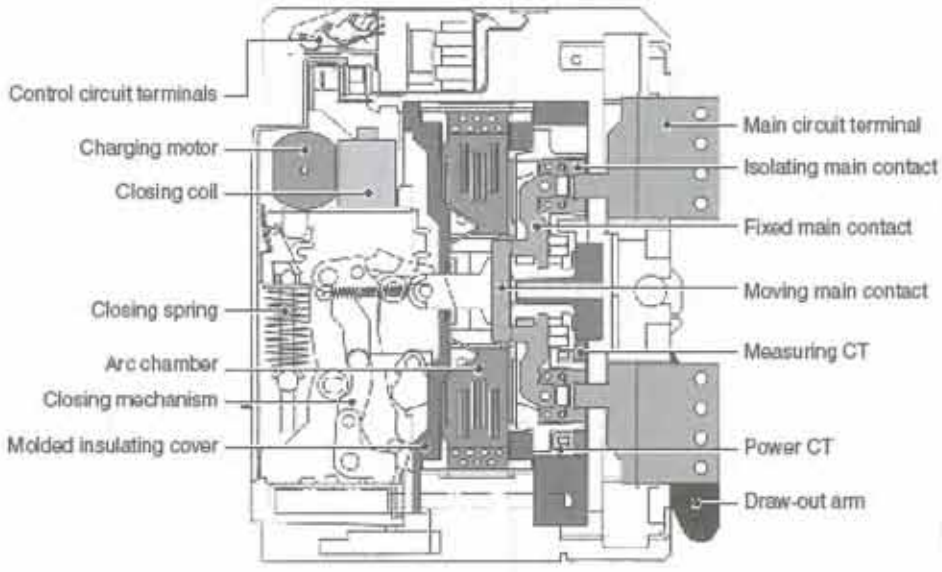
Air Circuit Breaker

Air Circuit Breakers
DH series
Appearance and internal construction

■ Appearance
(Example of draw-out type equipped with full accessories)



■ Internal construction



FUJI ELECTRIC

Air Circuit Breaker

Air Circuit Breaker	Poles	Rated Current (A)	Interrupting Capacity (kA)	Price	
				Standard Type T11BLAL+R2	Ground Fault Type T21BLPG+R2+CT
DH08	3P	800	65	122,900.-	163,400.-
DH12	3P	1,250	65	126,500.-	167,000.-
DH16	3P	1,600	65	142,900.-	183,400.-
DH20	3P	2,000	65	156,200.-	209,500.-
DH25	3P	2,500	85	189,100.-	242,400.-
DH32	3P	3,200	85	202,500.-	255,800.-

Remark :

1. Standard Type ACB : Fixed Type , Manual Operated , Short Time Delay (adj) , Long Time Delay (adj) , Instantaneous , Auxiliary Contact 2NO+2NC , Alarm , Under Voltage Trip (R2) 3 Sec.
2. Ground Fault ACB : Fixed Type , Manual Operated , **Digital Panel**, Short Time Delay (adj) , Instantaneous , Auxiliary Contact 2NO+2NC , Alarm , Under Voltage Trip (R2) 3 Sec. , Ground Fault Trip (adj) , Provided with Neutral CT

Optional Accessories for Air Cuit Breaker (DH Series)

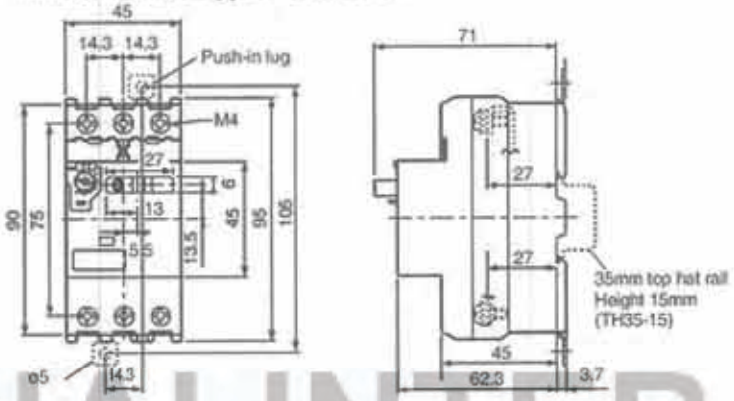
Model	Motor Operated	Shunt Trip	Neutral CT
DH08	10,900.-	3,400.-	13,900.-
DH12	10,900.-	3,400.-	13,900.-
DH16	10,900.-	3,400.-	13,900.-
DH20	11,900.-	3,400.-	26,700.-
DH25	11,900.-	3,400.-	26,700.-
DH32	12,600.-	3,400.-	26,700.-

FUJI ELECTRIC

Motor Circuit Breaker

■ **Dimensions, mm**

• **Rocker handle types BM3RSB**

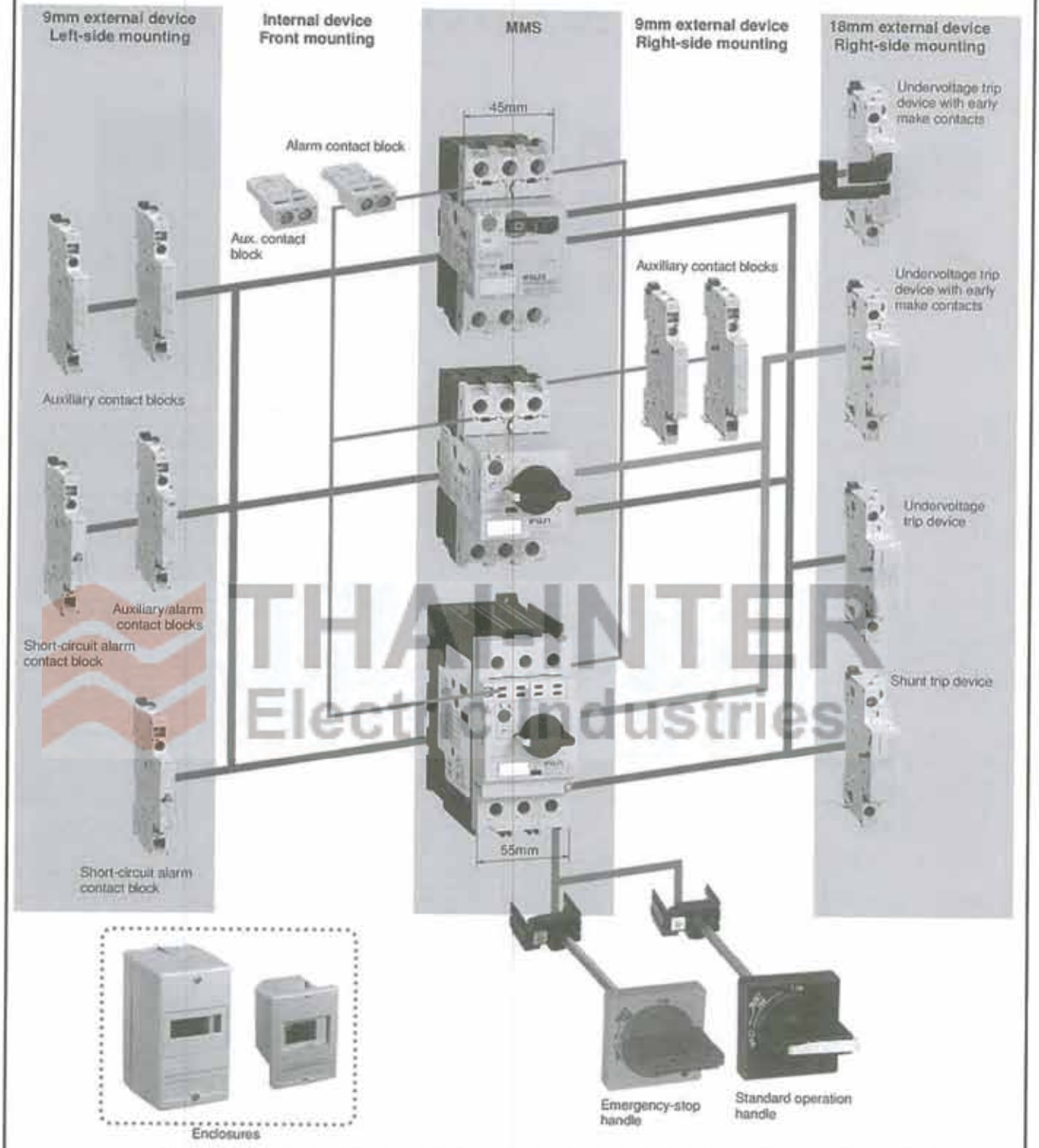


BM3RSB-Series

(สามารถใช้แทน Telemecanique รุ่น GV2-ME ได้ทันที)

พิกัดมอเตอร์ 3P 380VAC		ช่วงปรับกระแส			Icu (kA) at	รุ่น	ราคา	สามารถใช้แทน
KW	HP	โอเวอร์โหลด (A)			415 VAC			Telemecanique รุ่น
0.02	0.027	0.1	-	0.16	100	**BM3RSB-P16**	**1,800.-**	GV2-ME01
0.04	0.055	0.16	-	0.25	100	**BM3RSB-P25**	**1,800.-**	GV2-ME02
0.06	0.08	0.25	-	0.4	100	**BM3RSB-P40**	**1,800.-**	GV2-ME03
0.12	0.17	0.4	-	0.63	100	**BM3RSB-P63**	**1,800.-**	GV2-ME04
0.18	0.25	0.63	-	1	100	**BM3RSB-001**	**1,800.-**	GV2-ME05
0.37	0.5	1	-	1.6	100	**BM3RSB-1P6**	**1,800.-**	GV2-ME06
0.75	1	1.6	-	2.5	100	**BM3RSB-2P5**	**1,800.-**	GV2-ME07
1.5	2	2.5	-	4	100	**BM3RSB-004**	**1,800.-**	GV2-ME08
2.2	3	4	-	6.3	100	**BM3RSB-6P3**	**1,800.-**	GV2-ME10
4	5.5	6.3	-	10	100	**BM3RSB-010**	**1,800.-**	GV2-ME14
5.5	7.5	9	-	13	50	**BM3RSB-013**	**2,150.-**	GV2-ME16
7.5	10	11	-	16	25	**BM3RSB-016**	**2,150.-**	GV2-ME20
9	12	14	-	20	25	**BM3RSB-020**	**2,570.-**	GV2-ME21
11	15	19	-	25	25	**BM3RSB-025**	**2,570.-**	GV2-ME22
15	20	24	-	32	25	**BM3RSB-032**	**3,150.-**	GV2-ME32

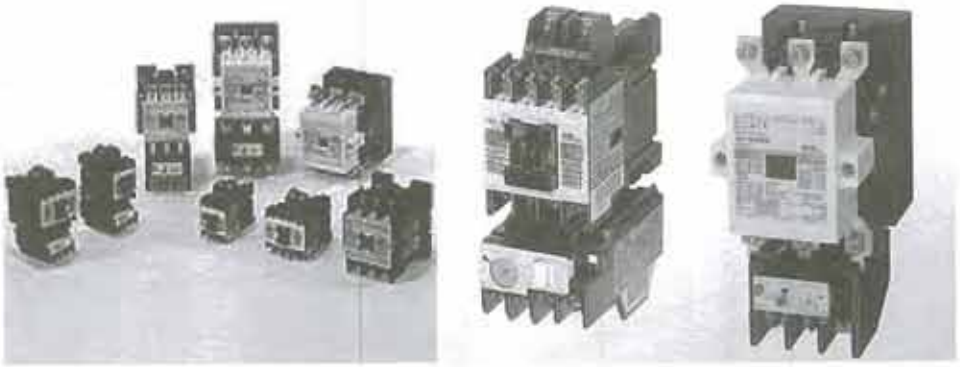
อุปกรณ์เสริมสำหรับ BM3RSB



รายละเอียด	การยึด	ชนิดของคอนแทค	รหัสสินค้า	ราคา
คอนแทคช่วย	ด้านหน้า	1NO	BZ0WIA	230.-
		1NC	BZ0WIB	230.-
	ด้านข้าง(ขวา)	1NO+1NC	BZ0WUABR	420.-
		2NO	BZ0WUAAR	420.-
คอนแทคส่งสัญญาณ เบรกเกอร์ดัดวงจร + คอนแทคช่วย (Aux + Alarm)	ด้านข้าง(ซ้าย)	1NO (Aux) + 1NO (Alarm)	BZ0WKUAA	620.-

FUJI ELECTRIC

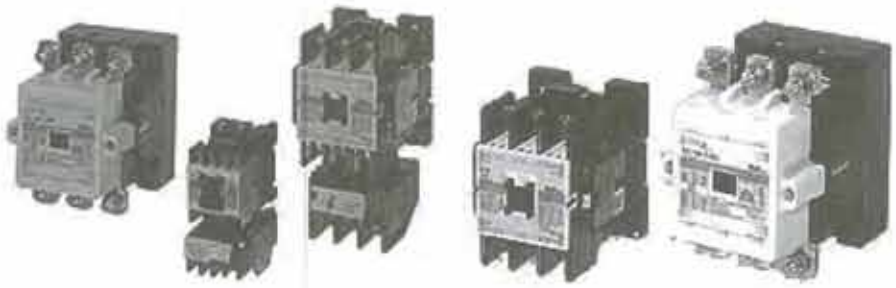
Contactors & Overload Relay



Contactors		SC-03	SC-0	SC-05	SC-4-0	SC-4-1	SC-5-1
Max Motor Capacity (kW) AC-3	220 VAC	2.5	3.5	3.5	4.5	5.5	5.5
	380 VAC	4	5.5	5.5	7.5	11	11
Thermal Current (A) AC-1		20	20	20	25	32	32
Auxiliary Contact		1NO	1NO	1NO+1NC	1NO	1NO	1NO+1NC
Coil Voltage		24,120,240,400VAC					
Price		**640.-**	**700.-**	**880.-**	โปรดสอบถาม	โปรดสอบถาม	**1,260.-**

Thermal Overload Relays	TR-0N/3			TR-5-1N/3		
Setting Range	0.1-0.15	0.1-0.15	0.1-0.15	0.1-0.15	0.1-0.15	0.1-0.15
	0.15-0.24	0.15-0.24	0.15-0.24	0.15-0.24	0.15-0.24	0.15-0.24
	0.24-0.36	0.24-0.36	0.24-0.36	0.24-0.36	0.24-0.36	0.24-0.36
	0.36-0.54	0.36-0.54	0.36-0.54	0.36-0.54	0.36-0.54	0.36-0.54
	0.48-0.72	0.48-0.72	0.48-0.72	0.48-0.72	0.48-0.72	0.48-0.72
	0.64-0.96	0.64-0.96	0.64-0.96	0.64-0.96	0.64-0.96	0.64-0.96
	0.8-1.2	0.8-1.2	0.8-1.2	0.8-1.2	0.8-1.2	0.8-1.2
	0.95-1.45	0.95-1.45	0.95-1.45	0.95-1.45	0.95-1.45	0.95-1.45
	1.4-2.2	1.4-2.2	1.4-2.2	1.4-2.2	1.4-2.2	1.4-2.2
	1.7-2.6	1.7-2.6	1.7-2.6	1.7-2.6	1.7-2.6	1.7-2.6
	2.2-3.4	2.2-3.4	2.2-3.4	2.2-3.4	2.2-3.4	2.2-3.4
	2.8-4.2	2.8-4.2	2.8-4.2	2.8-4.2	2.8-4.2	2.8-4.2
	4-6	4-6	4-6	4-6	4-6	4-6
	5-8	5-8	5-8	5-8	5-8	5-8
	6-9	6-9	6-9	6-9	6-9	6-9
	7-11	7-11	7-11	7-11	7-11	7-11
		9-13	9-13	9-13	9-13	9-13
				12-18	12-18	12-18
					16-22	16-22
Price	**850.-**			**880.-**		
Dimensions (Contactors)	43x80x80	43x80x80	53x80x80	53x80x81	53x0x81	64x80x81
(Starter Open Type)	44x120x80	44x120x80	53x120x80	53x126x81	53x126x81	64x126x81

FUJI ELECTRIC



Contactors		SC-N1	SC-N2	SC-N2S	SC-N3	SC-N4	SC-N5
Max Motor Capacity (kW) AC-3	220 VAC	7.5	11	15	18.5	22	30
	380 VAC	15	18.5	22	30	40	55
Thermal Current (A) AC-1		50	60	80	100	135	150
Auxiliary Contact		2NO+2NC	2NO+2NC	2NO+2NC	2NO+2NC	2NO+2NC	2NO+2NC
Coil Voltage		24,120,240,400 VAC					24,120,240 VAC/DC , 380 VAC
Price		**1,820.-**	**2,420.-**	**2,970.-**	**3,690.-**	**4,950.-**	**5,500.-**

Thermal Overload Relays	TR-N2/3		TR-N3/3		TR-N5/3	
Setting Range	4-6	4-6	7-11	7-11	18-26	18-26
	5-8	5-8	9-13	9-13	24-36	24-36
	6-9	6-9	12-18	12-18	28-40	28-40
	7-11	7-11	18-26	18-26	34-50	34-50
	9-13	9-13	24-36	24-36	45-65	45-65
	12-18	12-18	28-40	28-40	53-80	53-80
	18-26	18-26	34-50	34-50		65-95
	24-36	24-36	45-65	45-65		85-105
		32-42		48-68		
Price	**1,060.-**		**1,350.-**		**3,250.-**	
Dimensions (Contactors)	74x87x96	74x87x96	88x110x111	88x110x111	88x127x117	88x127x132
(Starters Open Type)	74x146x97	74x146x97	88x177x111	88x177x111	88x189x117	88x189x132

Contactors		SC-N6	SC-N7	SC-N8	SC-N10	SC-N11	SC-N12
Max Motor Capacity (kW) AC-3	220 VAC	37	45	55	65	90	120
	380 VAC	60	75	90	110	160	220
Thermal Current (A) AC-1		150	200	260	260	350	450
Auxiliary Contact		2NO+2NC	2NO+2NC	2NO+2NC	2NO+2NC	2NO+2NC	2NO+2NC
Coil Voltage		24,120,240 VAC/DC , 380 VAC					
Price		**8,030.-**	**11,500.-**	**13,200.-**	**18,400.-**	**23,000.-**	**35,500.-**

Thermal Overload Relays	TR-N6/3	TR-N7/3	TR-N8/3	TR-N10/3	TR-N12/3	
Setting Range	45-65	45-65	65-95	85-125	110-160	160-240
	53-80	53-80	85-125	110-160	125-185	200-300
	65-95	65-95	110-160	125-185	160-240	240-360
	85-125	85-125	125-185	160-240	200-300	300-450
		110-160				
Price	**3,350.-**	**4,700.-**	**5,050.-**	**8,580.-**	**12,100.-**	
Dimensions (Contactors)	100x144x138	115x156x140	138x209x174	138x209x174	148x240x195	148x240x195
(Starters Open Type)	100x225x138	155x237x140	138x305x174	138x287x174	148x360x195	148x360x195

FUJI ELECTRIC

Contactors & Overload Relay

Contactors		SC-N14	SC-N16
Max Motor Capacity (kW) AC-3	220 VAC	180	220
	380 VAC	315	440
Thermal Current (A) AC-1		660	800
Auxiliary Contact		2NO+2NC	2NO+2NC
Coil Voltage		24,120,240 VAC/DC , 380 VAC	
Price		**75,000.-**	โปรดสอบถาม
Thermal Overload Relays		**TR-N14/3**	-
Setting Range		240-360	-
		300-450	-
		400-600	-
Price		**15,000.-**	-
Dimensions (Contactors)		290x332x327	290x332x327
(Starter Open Type)		290x463x327	-

Optional Unit

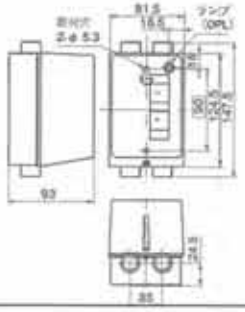
Optional Unit (for SC-03 to SC-N3)		Type	Contact Arrangement	Price
Auxiliary Contact Block	Front Mounting	**SZ-A11**	1NO+1NC	290.-
		SZ-A22	2NO+2NC	470.-
		SZ-A40	4NO	470.-
	Side Mounting	**SZ-AS1**	1NO+1NC (SC-03-SC-N3)	Call
	Side Mounting	**SZ-AS2**	1NO+1NC (SC-N4-SC-N12)	Call
Mechanical Interlock		**SZ-RM**		470.-

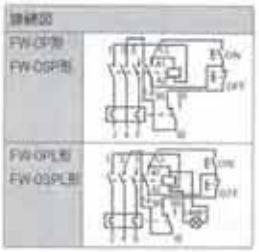
FUJI ELECTRIC

Magnetic Motor Starter (FW-Series)

3-Element Overload Relay in Enclosure with ON-OFF Pushbutton

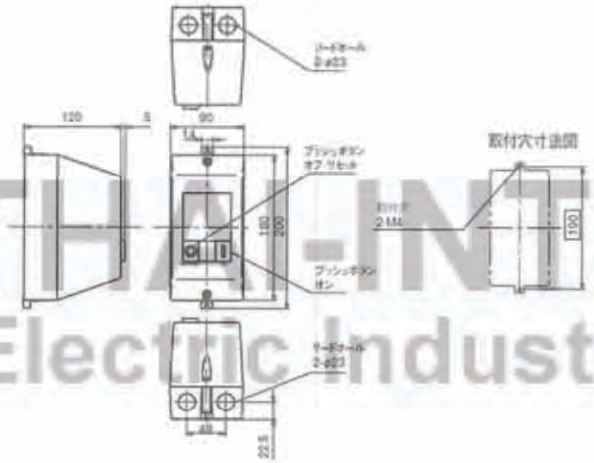
FW-0P形
FW-0SP形
FW-0PL形
FW-0SPL形

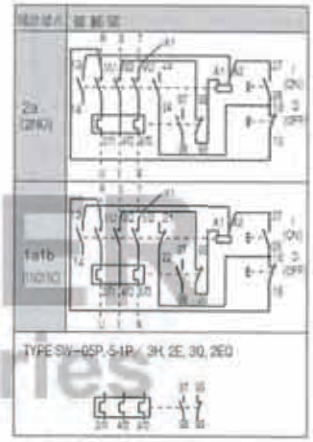




質量：0.45kg

FW-1P形





質量：1.5kg

Model	Rated Voltage	Motor (kW)	Operational Current	Thermal Overload Setting (A)	Price
FW-0P/3H	220 VAC	0.37	2.1	1.7-2.6	**1,970.-**
		0.75	3.3	2.8-4.2	
		1.5	5.9	5-8	
		2.2	8.4	6-9	
		2.2	8.4	7-11	
FW-1P/3H	220 VAC	1.1	4.4	4-6	**2,610.-**
		1.5	5.9	5-8	
		1.5	5.9	6-9	
		2.2	9.2	7-11	
		3	12	9-13	
		4	16	12-18	
FW-0P/3H	380 VAC	0.37	1.2	0.95-1.45	**1,970.-**
		0.75	1.9	1.7-2.6	
		1.5	3.4	2.8-4.2	
		2.2	3.4	2.8-4.2	
		2.2	4.8	4-6	
FW-1P/3H	380 VAC	2.2	4.8	4-6	**2,610.-**
		3	6.5	5-8	
		3	6.5	6-9	
		4	9	7-11	
		5.5	12	9-13	

* ถ้าท่านต้องการโอเวอร์โหลดรีเรย์แอมป์อื่น กรุณาติดต่อพนักงานขาย

FW-0P/3H
FW-1P/3H

Magnetic Contactor for FW-Series	Coil Voltage	Use for	Contact Arrangement	Price
FC-0	220,380 VAC	FW-0P/3H	4NO	**660.-**
FC-1	220,380 VAC	FW-1P/3H	4NO+1NC	**1,050.-**

FUJI ELECTRIC

Contactors Coil 24 VDC

"MICRO LINE" AC Contactors & Starters, DC Operated

■ *FEATURES*

CAN BE DIRECTLY DRIVEN BY TRANSISTOR OUTPUT OF PROGRAMMABLE LOGIC CONTROLLER (PLC)

Direct driving by DC output of programmable logic controller (PLC) or other electronic equipment.

- The power consumption of the SJ-0G contactor (U.S. Cat. No.1JC0A0#) is 1.4W, thanks to the highly efficient polarized electromagnet.
- This contactor can be driven by a transistor output of a PLC or electronic equipment such as photoelectric switch, or a proximity limit switch. Therefore, no interface relay is needed before this contactor for driving a 3-phase induction motor.

Highly reliable auxiliary contacts permitting direct input to an electronic circuit.

- Highly reliable bifurcated auxiliary contacts can be used in a low-level (5VDC, 3mA) circuit. Therefore, the contact output signal can be directly input to other electronic equipment.

Built-in surge suppression circuit.

- The surge suppression circuit, connected in parallel with the the coil, prevents malfunction or damage of devices by surge voltage generated when the contactor operates.

Compact design.

- Installation space is reduced to 72% of conventional FUJI DC operated contactors achieving high performance.

Application to 440V AC circuits.

- Contactors can be applied to 440V AC circuits since the rated isolation voltage is 500V AC.

Snap-on mounting on an IEC or DIN rail.

- Besides screw mounting, snap-on mounting on an IEC or DIN Standard 35mm rail is possible, reducing working costs.

Finger protection cover (standard accessory).

- The SJ-0G (U.S. Cat. No.1JC0A0) has a standard finger protection cover to prevent the live parts from being exposed and ensuring safety during maintenance and inspection. Because terminal numbers conform to IEC standards displayed on the front of the body, the contact arrangement can be confirmed visually.

"ORANGE LINE" AC Contactors, DC Operated

■ *NON-REVERSING CONTACTORS* **UL File No. E42419, E44592 CSA File No. LR20479**

1 Phase Ratings		3 Phase Ratings				AC1	Qty. of Auxiliary Contacts	Part Number	Fuji Type	Frame Size
120	240	200 208	220 240	440 480	550 600					
1/3	1	2	2	5	5	11	1	4GC0A0#10	SC-03/G	0A
1/3	1	3	3	5	5	13	1	4GC0F0#10	SC-0/G	0F
1/3	1	3	3	5	5	13	2	4GC0G0#11	SC-05/G	0G
1	2	5	5	71/2	71/2	20	1	4GC0Q0#10	SC-4-0/G	0Q
1	2	5	5	10	10	20	1	4GC0R0#10	SC-4-1/G	0R
1	2	5	5	10	10	20	2	4GC0H0#11	SC-5-1/G	0H

FUJI ELECTRIC

Spare Part for Contactors

Spare Part	Price			
	Coil	Fixed Contact	Moving Contact	Contact kits
SC-03	490.-	60.-	70.-	570.-
SC-0	490.-	60.-	70.-	570.-
SC-05	490.-	60.-	70.-	570.-
SC-5-1	490.-	120.-	130.-	1,110.-
SC-N1	690.-	190.-	330.-	2,130.-
SC-N2	690.-	190.-	520.-	2,700.-
SC-N2S	770.-	280.-	610.-	3,510.-
SC-N3	770.-	300.-	630.-	3,690.-
SC-N4	5,160.-	370.-	820.-	4,680.-
SC-N5	5,460.-	400.-	1,120.-	5,760.-
SC-N6	5,880.-	450.-	1,330.-	6,690.-
SC-N7	5,880.-	930.-	2,010.-	11,610.-
SC-N8	6,780.-	1,540.-	3,080.-	18,480.-
SC-N10	6,780.-	1,540.-	3,080.-	18,480.-
SC-N11	7,930.-	2,160.-	5,320.-	28,920.-
SC-N12	7,930.-	2,160.-	5,460.-	29,340.-
SC-N14	15,820.-	3,620.-	7,400.-	43,920.-

Motor Starters

Motor Starters	Max Motor Capacity (kW)		Auxiliary Contact	Coil Voltage	Price
	220V	380V			
SW-03	2.5	4	1NO	24,120,240,400 VAC	1,140.-
SW-0	3.5	5.5	1NO	24,120,240,400 VAC	1,330.-
SW-05	3.5	5.5	1NO+1NC	24,120,240,400 VAC	1,520.-
SW-5-1	5.5	11	1NO+1NC	24,120,240,400 VAC	1,900.-
SW-N1	7.5	15	2NO+2NC	24,120,240,400 VAC	2,710.-
SW-N2	11	18.5	2NO+2NC	24,120,240,400 VAC	3,130.-
SW-N2S	15	22	2NO+2NC	24,120,240,400 VAC	4,300.-
SW-N3	18.5	30	2NO+2NC	24,120,240,400 VAC	4,950.-
SW-N4	22	40	2NO+2NC	24,120,240,400 VAC	6,930.-
SW-N5	30	55	2NO+2NC	24,120,240 VAC/DC, 380 VAC	8,700.-
SW-N6	37	60	2NO+2NC	24,120,240 VAC/DC, 380 VAC	11,200.-
SW-N7	45	75	2NO+2NC	24,120,240 VAC/DC, 380 VAC	16,000.-
SW-N8	55	90	2NO+2NC	24,120,240 VAC/DC, 380 VAC	18,100.-
SW-N10	65	110	2NO+2NC	24,120,240 VAC/DC, 380 VAC	26,600.-
SW-N11	90	160	2NO+2NC	24,120,240 VAC/DC, 380 VAC	33,200.-
SW-N12	120	220	2NO+2NC	24,120,240 VAC/DC, 380 VAC	46,200.-
SW-N14	180	315	2NO+2NC	24,120,240 VAC/DC, 380 VAC	88,200.-

FUJI ELECTRIC

Contactors Coil 24 VDC

Contactors		SJ-0G	SJ-1SG
Max Motor Capacity (kW) AC-3	220 VAC	2.2	3.7
	380 VAC	2.2	3.7
Thermal Current (A) AC-1		15	25
Auxiliary Contact		1NO	1NO+1NC
Coil Voltage		24 VDC	
Price		โปรดสอบถาม	โปรดสอบถาม

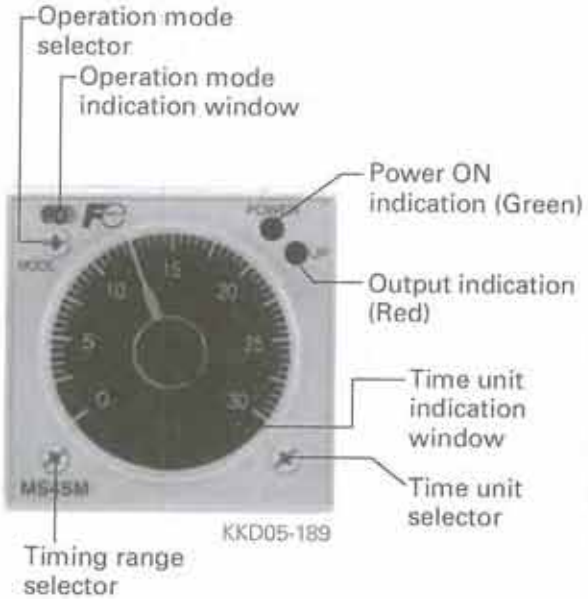
Contactors		SC-03/G	SC-0/G	SC-05/G	SC-4-0/G	SC-4-1/G	SC-5-1/G
Max Motor Capacity (kW) AC-3	220 VAC	2.5	3.5	3.5	4.5	5.5	5.5
	380 VAC	4	5.5	5.5	7.5	11	11
Thermal Current (A) AC-1		20	20	20	25	32	32
Auxiliary Contact		1NO	1NO	1NO+1NC	1NO	1NO	1NO+1NC
Coil Voltage		24 VDC					
Price		โปรดสอบถาม	โปรดสอบถาม	โปรดสอบถาม	โปรดสอบถาม	โปรดสอบถาม	โปรดสอบถาม

Contactors		SC-N1/G	SC-N2/G	SC-N2S/G	SC-N3/G	SC-N4/SE
Max Motor Capacity (kW) AC-3	220 VAC	7.5	11	15	18.5	22
	380 VAC	15	18.5	22	30	40
Thermal Current (A) AC-1		50	60	80	100	135
Auxiliary Contact		2NO+2NC	2NO+2NC	2NO+2NC	2NO+2NC	2NO+2NC
Coil Voltage		24 VDC				
Price		โปรดสอบถาม	โปรดสอบถาม	โปรดสอบถาม	โปรดสอบถาม	โปรดสอบถาม

FUJI ELECTRIC

Time Delay Relay

Super Timers	Contact		Operation	Voltage	Price
Type	Timed	Instant.			
MS4SA-AP	2PDT	-	On-Delay	100-240 VAC	โปรดสอบถาม
MS4SA-CE	2PDT	-	On-Delay	24 VAC/DC	โปรดสอบถาม
MS4SC-AP	SPDT	SPDT	On-Delay	100-240 VAC	โปรดสอบถาม
MS4SF-AP	2PDT	-	Off-Delay	100-240 VAC	โปรดสอบถาม
MS4SY-AP	2 NO	1 NO	Star-Delta	100-240 VAC	โปรดสอบถาม
MS4SM-AP	2PDT	-	Multi-Mode - On-Delay - Flicker - One-Shot - Signal Off Delay	100-240 VAC	โปรดสอบถาม



Timer MS4S Series

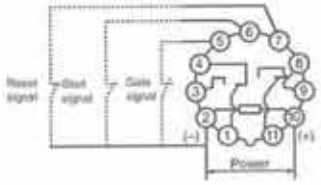
■ Timing range/16 ranges

Time-scale	Time unit indication window			
	0.1s	sec	min	hrs
0 1 2 3 4 5 6	0.05 – 0.6s	0.05 – 6s	0.5 – 6min	0.5 – 6h
0 2 4 6 8 10 12	0.1 – 1.2s	1 – 12s	1 – 12min	1 – 12h
0 5 10 15 20 25 30	0.25 – 3s	2.5 – 30s	2.5 – 30min	2.5 – 30h
0 10 20 30 40 50 60	0.5 – 6s	5 – 60s	5 – 60min	5 – 60h

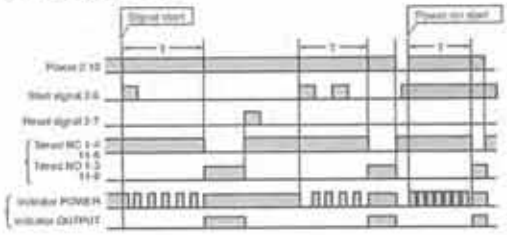
- UL, c UL us and TÜV approved

■ Timing and wiring diagrams

MS4SM

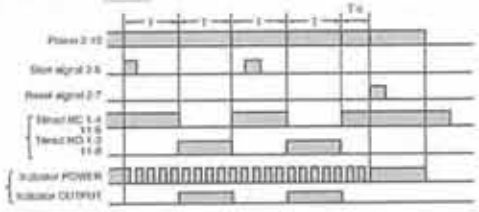


1. On-delay PO



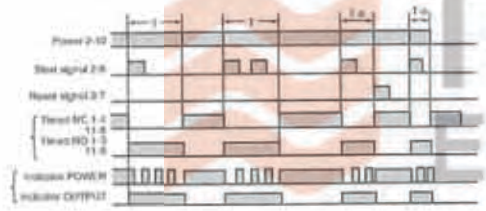
- Turn the mode selector until PO is displayed.
- When power is on, applying the start signal turns the timed NO (Normally open) contact on after the set time has elapsed.
- For the power-on start, the start signal pins (2 and 6) must be connected in advance.

2. Flicker FL



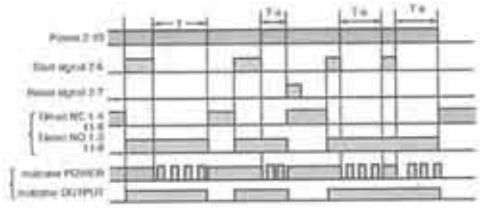
- Turn the mode selector until FL is displayed.
- When power is on, applying the start signal turns the timed contact on and off repeatedly at the set time intervals.

3. One-shot OS



- Turn the mode selector until OS is displayed.
- When power is on, applying the start signal instantly turns the timed NO contact on and turns it off after the set time has elapsed.

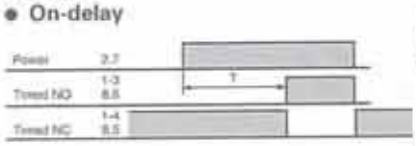
4. Signal off-delay SF

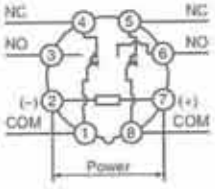


- Turn the mode selector until SF is displayed.
- When power is on, applying the start signal instantly turns the timed NO contact on. Removing the start signal turns the contact off after the set time has elapsed.

MS4SA

● **On-delay**

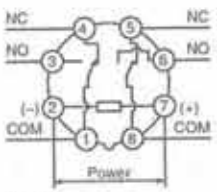




- When power is applied, the timed NO contacts make after the set time has elapsed.
- When power is removed, the contacts reset.

MS4SC

● **On-delay**

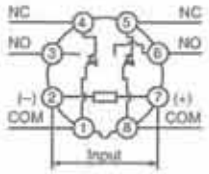


- Timed contact
  When power is applied, the NO contact makes after the set time has elapsed. When power is removed, the contacts reset.
- Instantaneous contact
  When power is applied, the NO contact makes instantly. When power is removed, the contacts reset.

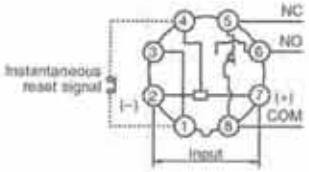
Notes: • T=Set time. T-a=Time period within the set time
• The gate signal is used to interrupt the elapsing of timing operation.

■ Timing and wiring diagrams

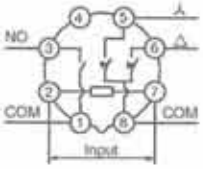
● MS4SF type off-delay timer



MS4SF-R type off-delay timer

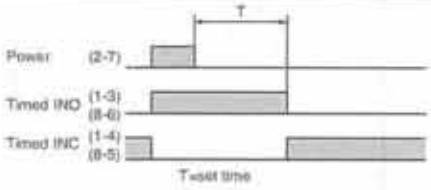


MS4SY type star-delta timer

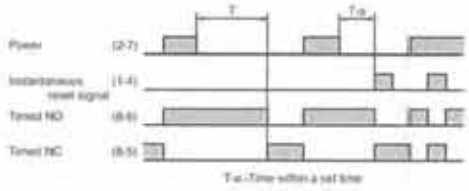


Note: Do not use terminal ② of the MS4SF-R as a relay terminal because it is connected to terminals ① and ② in the timer.

● MS4SF type

Operation	Operation pattern	Remarks
Off-delay (Timed 2PDT contacts)		• When power is on, timed NO contact on. • When power is off, timed NO contact off after the set time has elapsed.

● MS4FSF-R type

Operation	Operation pattern	Remarks
Off-delay (Timed SPDT contact)		• When power is on, timed NO contact on. • When power is off, timed NO contact off after the set time has elapsed. • When the instantaneous reset signal is on, timed NO contact immediately off.

Notes: • T-a indicates some time within a set time.
• Each signal can be input by shorting the terminals.
• For the MS4SF-R, apply the instantaneous reset signal for 100 ms or longer.

● MS4SY type

Operation	Operation pattern	Remarks
λ-Δ (with instantaneous contact 1NO)		• Timed contact Timed contact λ on when the power is on, and off after a set time. Timed contact Δ on after a changeover time has elapsed and opens when the power turns off. • Instantaneous contact When the power is turned on, instantaneous NO contact on. It opens when the power turns off.

FUJI ELECTRIC

Fuse

Fuse-Link	Rated Current (A)	Interrupting Capacity (kA)	Price
BLA-003	3	100	**100.-**
BLA-005	5	100	**100.-**
BLA-010	10	100	**100.-**
BLA-015	15	100	**100.-**
BLA-020	20	100	**100.-**
BLA-030	30	100	**100.-**
BLA-040	40	100	**190.-**
BLA-060	60	100	**190.-**
BLA-075	75	100	**300.-**
BLA-100	100	100	**300.-**
BLA-125	125	50	**390.-**
BLA-150	150	50	**400.-**
BLA-200	200	50	**440.-**

BLC, CR and CS types
Super Rapid Fuses
150–1500 Volts AC
10–4700 Amps

■ Description
The FUJI BLC, CR and CS types are extremely reliable fuses which have been specially developed to provide protection for silicon diodes and thyristors and are suitable for inverters using semiconductors or transformers-rectifiers. FUJI Super Rapid Fuses are designed with a very small total I^2t value which gives them a high speed interrupting action in the face of abnormal currents.
In addition the arc voltage generated at the time of interruption has a low value so that faults will not influence related electric machinery and equipment.
These fuses can carry out the protection of many types of circuits rating from the semiconductor overcurrents to destructive short-circuiting faults-i.e. when the semiconductors short or circuits fail the sound elements will be quickly isolated from the fault circuits.

■ Features
- The total clearing I^2t is small and the semiconductor circuit is completely protected.
- Since the peak arc voltage at the time of interruption is low damage to other equipment does not occur.
- High interrupting capacity of 200kA at 1000V AC
- The CS type is provided with a blown fuse indicator. An alarm contact block (1NO or 1NC) can also be attached.

■ **UL recognized**: CR2L/UL,CR2LS/UL, CR6L/UL
(File No. E92312)
CSA certificated: CR2LS/UL
(File No. LO4000-4090)
TÜV: CR2LS/UL (10-100A),
CR2L/UL (150-350A)
(Rep. No. E9450643E02)
CR6L/UL (50-300A)
(Rep. No. E9560543E02)

■ Specifications

Rated current (A)	Rated voltage	Peak arc voltage (V)	Max. interrupting I^2t (Amp²×sec.) ×10²	Watt loss (W)	Fuse-link Type
12	550V AC	1550	0.09	5.1	**BLC012-1**
20		1550	0.27	8.5	**BLC020-1**
23		1550	0.39	10	**BLC023-1**
45		1380	1.8	19	**BLC045-1**
75		1250	5	32	**BLC075-1**
90		1250	11.5	38	**BLC090-1**
120		1200	33	51	**BLC120-1**
140		1200	100	59	**BLC140-1**
30	250V AC	Max. 500	0.35	4.0	**CR2L-30**
50			0.85	6.0	**CR2L-50**
75			2.3	9.0	**CR2L-75**
100			4.0	12.0	**CR2L-100**
125			6.5	14.0	**CR2L-125**
140			7.0	16.0	**CR2L-140**
150			9.5	18.0	**CR2L-150**
175			13	21.0	**CR2L-175**
200			17	23.0	**CR2L-200**
225			22	26.0	**CR2L-225**
260			27	30.0	**CR2L-260**
300			38	35.0	**CR2L-300**
325			49	37.0	**CR2L-325**
350			60	37.0	**CR2L-350**
400			103	39.0	**CR2L-400**
450			140	46.0	**CR2L-450**
500			160	48.0	**CR2L-500**
550			200	51.0	**CR2L-550**
600			215	56.0	**CR2L-600**

Interrupting capacity
BLC ..... 100kA at 550V AC
CR2L .... 100kA at 250V AC

Rated current (A)	Rated voltage	Peak arc voltage (V)	Max. interrupting I^2t (Amp²×sec.) ×10²	Watt loss (W)	Fuse-link Type
10	250V AC	Max. 500	0.04	1.2	**CR2LS-10**
20			0.17	3.0	**CR2LS-20**
30			0.35	4.0	**CR2LS-30**
50			0.85	6.0	**CR2LS-50**
75			2.3	9.0	**CR2LS-75**
100			4.0	12.0	**CR2LS-100**
20	600V AC	Max. 1200	0.14	4.0	**CR6L-20**
30			0.35	7.0	**CR6L-30**
50			1.8	9.0	**CR6L-50**
75			3.0	12.5	**CR6L-75**
100			7.0	15	**CR6L-100**
150			18	22.0	**CR6L-150**
200			30	34.0	**CR6L-200**
250			70	37.0	**CR6L-250**
300			95	40.0	**CR6L-300**
350			150	45.0	**CR6L-350**
400			200	55	**CR6L-400**
500			390	60	**CR6L-500**
600			700	70	**CR6L-600**

Interrupting capacity
CR2LS ... 100kA at 250V AC
CR6L ..... 100kA at 600V AC

08

■ Specifications

Rated current (A)	Interrupting capacity (kA)	Max. interrupting I^2t (Amp²×sec.) ×10³	Watt loss (W)	Fuse-link Type
4700	150 at 125V AC	14000	310	**CS1F-4700**
2000	150 at 250V AC	1950	124	**CS2F-2000**
3000		5500	216	**CS2F-3000**
40	200 at 500V AC	1	6.4	**CS5F-40**
75		3.5	12	**CS5F-75**
100		5	17	**CS5F-100**
150		10	25	**CS5F-150**
200		18.5	34	**CS5F-200**
250		33	42	**CS5F-250**
300		64	45	**CS5F-300**
350		85	56	**CS5F-350**
400		122	57	**CS5F-400**
450		131	62	**CS5F-450**
500		159	73	**CS5F-500**
600		257	80	**CS5F-600**
800		600	114	**CS5F-800**
1000		1200	110	**CS5F-1000**
1000		843	167	**CS5F-1000-P**
1200		1800	114	**CS5F-1200**
1200		1311	200	**CS5F-1200-P**
1500		3600	209	**CS5F-1500**
1000	200 at 800V AC	1800	125	**CS8F-1000**
1200		2500	176	**CS8F-1200**
1500		4400	220	**CS8F-1500**
80	200 at 1000V AC	10	17	**CS10F-80**
100		16	21	**CS10F-100**
150		37	27	**CS10F-150**
200		63	37	**CS10F-200**
250		110	44	**CS10F-250**
300		148	53	**CS10F-300**
350		211	70	**CS10F-350**
400		307	74	**CS10F-400**
500		420	90	**CS10F-500**
560		410	102	**CS10F-560**
630		450	135	**CS10F-630**
750		640	156	**CS10F-750**
800		1259	211	**CS10F-800-P**
1000		1722	245	**CS10F-1000-P**
1250		2250	330	**CS10F-1250-P**
1500		3200	334	**CS10F-1500-C**
450	100 at 1500V AC	350	134	**CS15F-450**
630		760	170	**CS15F-630**
900		1400	280	**CS15F-900-P**
1250		3050	350	**CS15F-1250-P**

Note:
- Peak arc voltage
  CS1F .....Max. 450V
  CS2F .....Max. 750V
  CS5F .....Max. 1000V
  CS8F .....Max. 2000V
  CS10F ....Max. 2000V
  CS15F ....Less than 3000V
- An alarm contact block AHX2905 (1NO) or AHX2915 (1NC) can be attached to CS type. (Sold separately) *See page 06/44.*

Note: UL recognized fuse
In the UL recognized fuses, a fuse with a blown inidcation fuse, or a fuse both with a blown indication fuse and a precision switch is also UL recognized.
Examples: CR2L-200G/UL
CR2LS-30S/UL
CR6L-100G/UL

■ Specifications (UL-recognized, CSA certified, TÜV)

Rated current (A)	Rated voltage	Interrupting capacity (kA)	Max. interrupting I^2t (Amp²×sec.) ×10³	Watt loss (W)	Fuse-link Type
10	250V AC 400V DC	10 at AC (pf: 0.8) 10 at DC (L/R: 2ms)	0.04	1.2	**CR2LS-10/UL**
20			0.17	3.0	**CR2LS-20/UL**
30			0.35	4.0	**CR2LS-30/UL**
50			0.85	6.0	**CR2LS-50/UL**
75			2.3	9.0	**CR2LS-75/UL**
100			4.0	12.0	**CR2LS-100/UL**
150			9.5	18.0	**CR2L-150/UL**
200			17	23.0	**CR2L-200/UL**
260			27	30.0	**CR2L-260/UL**
350			60	37.0	**CR2L-350/UL**
400			103	39.0	**CR2L-400/UL**
450			140	46.0	**CR2L-450/UL**
500			160	48.0	**CR2L-500/UL**
550			200	51.0	**CR2L-550/UL**
600			215	56.0	**CR2L-600/UL**
20	600V AC 690V DC	100 at AC (pf: 0.8) 10 at DC (L/R: 2ms)	0.14	4.0	**CR6L-20/UL**
30			0.35	7.0	**CR6L-30/UL**
50			1.8	9.0	**CR6L-50/UL**
75			3.0	12.5	**CR6L-75/UL**
100			7.0	15.0	**CR6L-100/UL**
150		100 at AC (pf: 0.8) 50 at DC (L/R: 2ms)	18	22.0	**CR6L-150/UL**
200			30	34.0	**CR6L-200/UL**
300			95	40.0	**CR6L-300/UL**

Note:
- Peak arc voltage
  CR2LS, CR2L .... Max. 500V
  CR6L ..... Max. 1200V
- The peak arc voltage is obtained by interruption caused by the listed interrupting current at rated voltage.
- This indcates the values when the conductors specified in UL Standards are connected and rated current apply.
- TÜV: CR2LS, 2L: Up to 350A
  CR6L: 50 to 300A

■ CR type fuse with optional accessory

Fuse with blown indication fuse
CR2L (S)-□G

Fuse with blown indication fuse and precision switch
CR2L (S)-□S

Precision switch (SPDT)
CRX-1

FUJI ELECTRIC

Industrial Relay

Industrial Relay	Rated Thermal Current (A)	Contact Arrangement		Coil Voltage	Price
		NO	NC		
SRC 50-2F	8	3	3	220,380 VAC	870.-
SRC 50-2U	8	4	2	220,380 VAC	930.-
SRC 50-2U	8	3	3	220,380 VAC	930.-
SH-4/4	10	2	2	24,110,220,380 VAC	1,050.-
SH-4/8	10	4	4	24,110,220,380 VAC	1,460.-
SH-5/5	10	3	2	24,110,220,380 VAC	1,390.-

Control Relay	Rated Thermal Current (A)	Contact Arrangement	Coil Voltage	Price
HH22PN	6	2 PDT	12,24,48 VDC 110,220 VAC	850.-
HH23PN	6	3 PDT		980.-
HH24PN	4	SPDT+2NO+1NC		980.-
HH52P	5	2 PDT		500.-
HH53P	5	3 SPDT		500.-
HH54P	3	4 PDT		580.-

Type	Use with Control Relay	Price
TP38S	HH22PN	330.-
TP311S	HH23PN , HH24PN	480.-
TP58X1	HH52P	330.-
TP511X2	HH53P	280.-
TP514X1	HH54P	400.-

Optional Unit (for SH-4,SH-5)		Type	Contact Arrangement	Price
Auxiliary Contact Block	Front Mounting	SZ-A11	1NO+1NC	290.-
		SZ-A22	2NO+2NC	470.-
		SZ-A40	4NO	470.-
	Side Mounting	SZ-AS1	1NO+1NC	Call

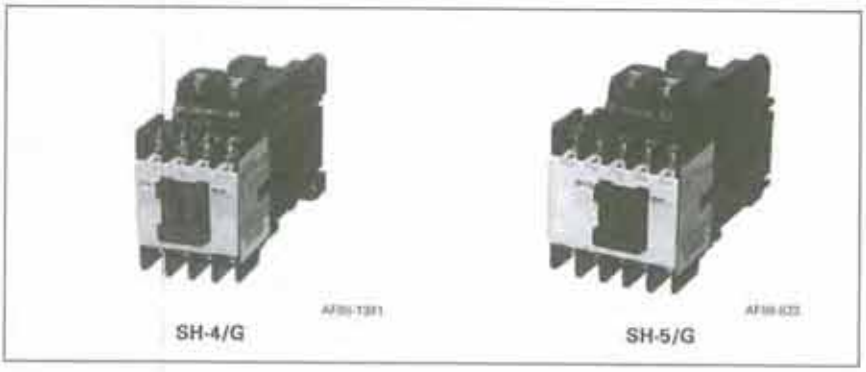
DC-operated industrial relays

■ Description

The operating coil is a DC type instead of AC and is energized by a DC power source.
The coil ratings from 24V DC to 220V DC. The maximum contact ratings are 550V AC or 220V DC.
These relays are typically used where DC is used as a power source on switchboards. Where AC is used as a power source, sequence control is frequently lost due to the troubles such as power failure or momentary voltage drop.
In the case of DC-control, a battery power supply is frequently used because it is not susceptible to external influences. DC-operated relays are highly suitable for important control applications.

■ Features

- Employing of bifurcated contact to increase high contact reliability in low-level circuit use (5V, 3mA)
- Variety of optional function units available



SH-4/G SH-5/G

Auxiliary contact block (1, 2 or 4-pole)
Coil surge suppression unit
Operation counter
- Snap-on 35mm IEC and DIN rail mountings available
- Meets JIS, IEC, BS, NEMA and VDE Standards
  UL, CSA, TÜV, CCC and BV approved
- Terminal numbers meet IEC

■ Performance data

Mechanical durability: 10 million operations
Electrical durability: 500,000 operations (at AC-15 rated operational current)
Operating cycles per hour:1800
Allowable ambient temp.:
-5° to +50°C

■ Contact ratings

Type	Ordering code *2	Pole	Rated thermal current (A)	Make and break capacity AC (A)	Rated operational current (A) AC Voltage (V)	Ind. AC-15	Res. AC-12	DC Voltage (V)	Ind. *1 DC-13	Res. DC-14
SH-4/G	SH04AG-■□	4	10	60	110	6	10	24	3	5
				30	220	3	8	48	1.5	3
				15	440	1.5	5	110	0.55	2.5
				12	550	1.2	5	220	0.27	1
		8	10	60	110	6	10	24	3	5
				30	220	3	8	48	1.5	3
				15	440	1.5	5	110	0.55	2.5
				12	550	1.2	5	220	0.27	1
SH-5/G	SH05AG-■□	5	10	60	110	6	10	24	3	5
				30	220	3	8	48	1.5	3
				15	440	1.5	5	110	0.55	2.5
				12	550	1.2	5	220	0.27	1

Notes: *1 Time constant is less than 70ms.
*2 Enter the coil voltage code in the ■ mark.
Enter the contact arrangement code in the □ mark.

■ Coil ratings

Type	Pole	Contact arrangement	Operating coil voltage (V DC)	Code	Power consumption(W)
SH-4/G	4	4NO, 3NO+1NC, 2NO+2NC	24	E	7
	8	8NO, 7NO+1NC, 6NO+2NC 5NO+3NC, 4NO+4NC	48	F	
			100	1	
			110	H	
SH-5/G	5	5NO, 4NO+1NC, 3NO+2NC 2NO+3NC, 1NO+4NC, 5NC	200	2	
			220	M	

■ Ordering information

Specify the following:
1. Ordering code

■ Combination with auxiliary contact blocks

Same as standard type.
See page 03/4.

■ Operating characteristics

Type	Pole	Contact arrangement	Voltage	Pick-up time (ms.) NO contact ON	NC contact OFF	Drop-out time (ms.) NO contact OFF	NC contact ON
SH-4/G	4	2NO+2NC	100V DC	45–50	35–40	20–25	25–30
	8	4NO+4NC	100V DC	45–50	35–40	20–25	25–30
SH-5/G	5	3NO+2NC	100V DC	45–50	35–40	20–25	25–30

Note: Coil rating 100V DC

FUJI ELECTRIC

Limit Switch

Limit Switch	Description	Contact Type	Contact Arrangement	Rated Current (A)	Price
K244xP-2	Top push rod plunger with transparent plastic cover	Normal Stroke	1NO+1NC	10	**960.-**
K244xP-2S		Snap Action	1NO+1NC	10	**960.-**
K244xP-2U		Make Before Brake	1NO+1NC	10	**920.-**
K244xP-2V		Extended Stroke	1NO+1NC	10	**920.-**
K244g-2	Top push rod plunger cast metal clad	Normal Stroke	1NO+1NC	10	**1,050.-**
K244g-2S		Snap Action	1NO+1NC	10	**1,400.-**
K244g-2U		Make Before Brake	1NO+1NC	10	**1,150.-**
K244g-2V		Extended Stroke	1NO+1NC	10	**1,350.-**
K244gR-2	Top roller lever plunger cast metal clad	Normal Stroke	1NO+1NC	10	**1,350.-**
K244gR-2S		Snap Action	1NO+1NC	10	**1,650.-**
K244gR-2U		Make Before Brake	1NO+1NC	10	**1,450.-**
K244gR-2V		Extended Stroke	1NO+1NC	10	**1,600.-**

Manual Motor Starter Without Overload Relay				
Model	Max Motor Capacity (kW)		Rated Thermal Current (A)	Price
	220 VAC	440 VAC		
AS480 / Surface Mounting	3.7	3.7	20	880.-
AS480 / Flush Mounting	3.7	3.7	20	1,050.-

Pushbutton Station For Motor Control				
Model	Legend	Operation Current (A)	Auxiliary Contact	Price
NH8-2PE	2 (ON-OFF)	3	1NO+1NC	610.-
AHL-32PE-1	2 (ON-OFF)	10	2NO+2NC	1,220.-
AHL-33PH-1	3 (Forward-Reverse-Off)	10	3NO+3NC	1,450.-

CP-F slim type circuit protectors

250V AC/65V DC (1-pole)	0.1A to 30A
250V AC/125V DC (2-pole)	0.1A to 30A
250V AC (3-pole)	0.1A to 30A

■ Description

FUJI's compact and high-performance CP-F series circuit protectors incorporate FUJI's advanced technology.
Their thin sizes make them ideal for use as AC/DC line switches in office and industrial equipment.

■ Features

- Only 17.5mm wide — mounting space is reduced by 30% compared with conventional types.
- AC/DC common use
- Available with auxiliary switch and alarm switch
- Also available in types having inertia delay characteristics
- Trip-free mechanism
- IEC rail mounting

■ Standards

cULus (File No.E96846)
TÜV (IEC)(R9650230)
CCC (China GB)(2003010309067080)

■ Accessories

• Auxiliary switch (Type W)
This switch is used for ON-OFF lamp indicator or control circuit.

• Alarm switch (Type K)
This switch can be connected to a warning lamp or buzzer to indicate when the circuit protector has been tripped.
Auxiliary and alarm switches for low level circuit are also available on request. (Type W1, K1)

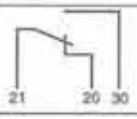
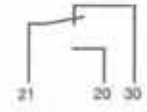
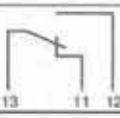
Ratings of auxiliary and alarm switches

Standard type (Type W, K)		
250V AC	Resistive load:	1A
	Inductive load:	0.5A
125V AC	Resistive load:	3A
	Inductive load:	1A
60V DC	Resistive load:	1A
	Inductive load:	0.5A
30V DC	Resistive load:	2A
	Inductive load:	1A

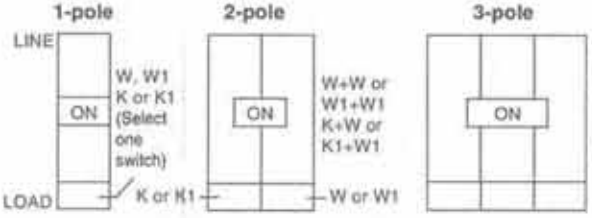
Minimum permissible load	
For low level circuit (Type W1, K1)	
24V DC	1mA
12V DC	2mA
6V DC	5mA

■ Specifications

Type	CP31F	CP32F	CP33F
Pole	1-pole	2-pole	3-pole
Rated insulation voltage (Ui)	250V AC 65V DC	250V AC 125V DC	250V AC –
Rated operatonal voltage (Ue)	240V AC 60V DC	240V AC 120V DC	240V AC –
Rated current	0.1, 0.3, 0.5, 1, 2, 3, 5, 7, 10, 15, 20, 25, 30A		
Rated breaking capacity	2500A at 240V AC 2500A at 60V DC (1-pole) 2500A at 120V DC (2-pole)		
Operating characteristic	Long time delay (AC circuit only) Medium time delay, Instantaneous tripping		
Tripping mechanism	Hydraulic-magnetic		
Ambient temperature	–10 to +60°C		
Dielectric strength	2000V AC 1min		
Electrical durability	10000 operations or more		
Terminals (Self-lifting) Main circuit	M5 (25A or over), M4 (20A or less)		
Terminals (Self-lifting) Auxiliary circuit	M3.5		
Mass (Approx.)	80g	160g	240g

Main contact	Auxiliary switch/W	Alarm switch/K
ON		
OFF		
TRIP		

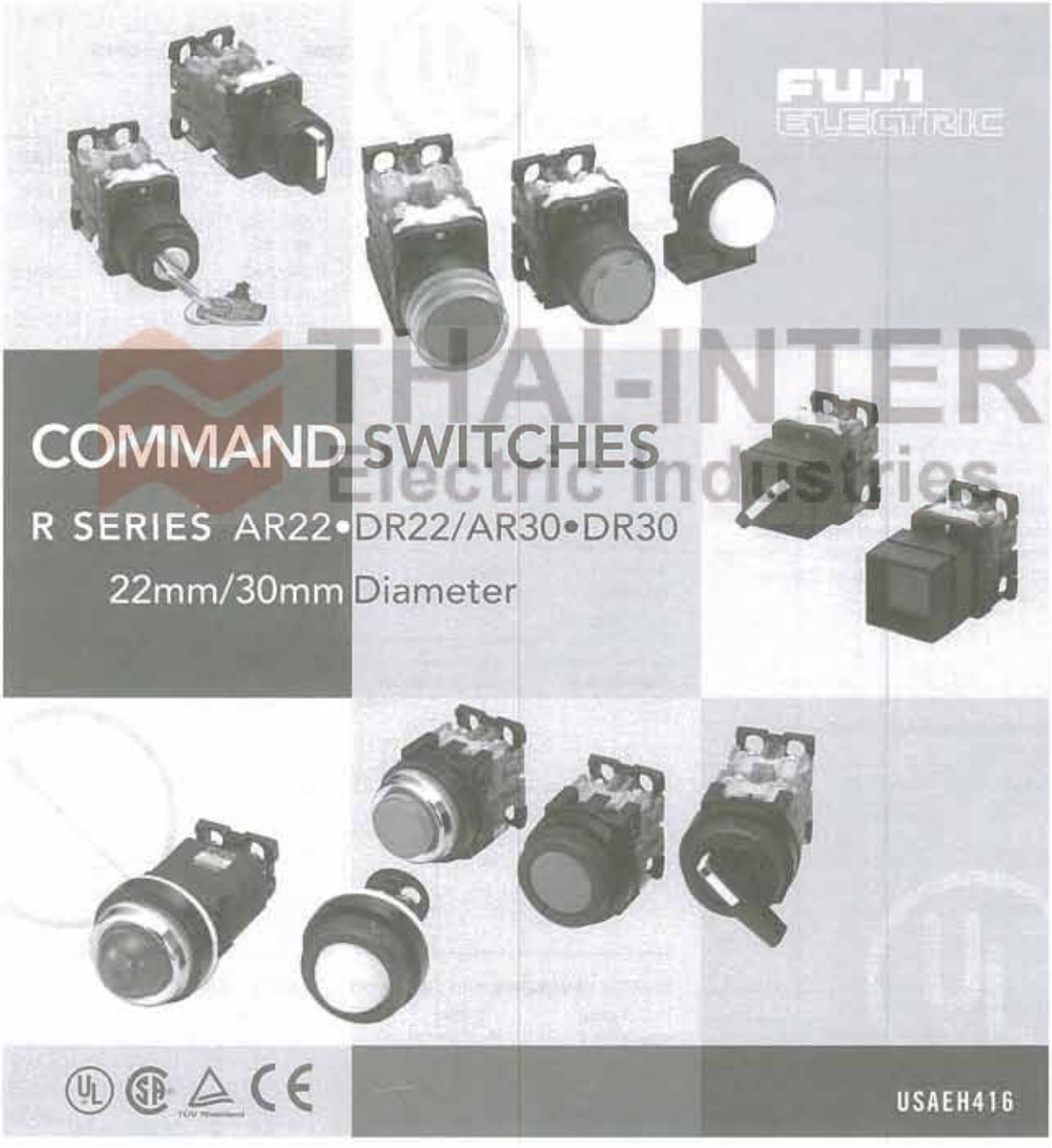
Number of auxiliary and alarm switches mountable



FUJI ELECTRIC

COMMAND SWITCHES

e-Front runners



■ Illuminated pushbutton switches

Operator	Type	Operator	Type	Operator	Type
Flush round head	**AR22F0L, F5L**  AF94-318	Extended with full guard (24mm dia. with openings)	**AR22G2L, G7L**  AF99-319	Flush round head with square bezel	**AR22F0P, F5P**  AF94-315
Extended round head	**AR22E0L, E5L**  AF94-317	Extended with full guard (24mm dia.)	**AR22G1L, G6L**  AF02-70	Extended round head with square bezel	**AR22E0P, E5P**  AF94-314
Mushroom head (40mm dia.)	**AR22M0L, M5L**  AF94-367	Push-lock, turn-reset (40mm dia. with white arrow)	**AR22V5L**  AF97-72	Mushroom head with square bezel (29mm dia.)	**AR22M4P**  AF94-440
Mushroom head (29mm dia.)	**AR22M4L, M9L**  AF94-368	Flush square head	**AR22F0M, F5M**  AF97-68		
Extended with transparent full guard (24mm dia.)	**AR22G4L, G9L**  AF94-204	Extended square head	**AR22E0M, E5M**  AF94-357		

■ Pushbutton switches

Operator	Type	Operator	Type	Operator	Type
Flush round head	**AR22F0R, F5R**  AF94-320	Flush round head Symbol mark type	**AR22FAR, FBR**  AF98-193	Mushroom head (40mm dia.)	**AR22M0R, M5R**  AF94-293
Extended round head	**AR22E0R, E5R**  AF94-319	Extended round head Symbol mark type	**AR22EAR, EBR**  AF99-192	Mushroom head (29mm dia.)	**AR22M4R, M9R**  AF94-321

Note (cc):

AR22 and DR22
Quick reference guide

■ Pushbutton switches

Operator	Type	Operator	Type	Operator	Type
Extended with full guard (24mm dia.)	**AR22G3R, G8R**  AF94-292	Pushbutton with selector ring (2-position)	**AR22S1R, S2R, S3R, S6R**  AF97-507	Flush round head with square bezel	**AR22F0Y, F5Y**  AF94-295
Flush with full guard (24mm dia.)	**AR22G2R, G7R**  AF02-69	Push-lock, turn-reset (40mm dia. with white arrow)	**AR22V5R**  AF97-70	Extended round head with square bezel	**AR22E0Y, E5Y**  AF94-297
Extended with half guard	**AR22G0R, G5R**  AF06-236	Flush square head	**AR22F0S, F5S**  AF94-316	Mushroom head with square bezel (29mm dia.)	**AR22M4Y**  AF94-298
Mushroom head with full guard (40mm dia.)	**AR22M3R, M8R**  AF94-372	Extended square head	**AR22E0S, E5S**  AF94-296		

Note: AR22M8R: Not approved standard

■ Emergency stop pushbutton switches (conform to EN418)

Operator	Type	Operator	Type	Operator	Type
Push-lock, turn-reset (Soft-touch 40mm dia. with white arrow)	**AR22V0R**  AF97-70	Push-lock, turn-reset (29mm dia.)	**AR22V4R**  AF95-53	Unibody push-lock, turn-reset (Soft-touch 40mm dia. with white arrow)	**AR22VGE**  KH03-037
Push-lock, turn-reset (40mm dia.)	**AR22V2R**  AF94-432	Key release push-lock, turn-reset (40mm dia.)	**AR22V7R**  AF98-57		
Push-lock, turn-reset (Soft-touch 29mm dia. with white arrow)	**AR22VSR**  AF96-317	Push-lock, pull-reset (35mm dia.)	**AR22Q2R**  AF95-52		

Notes: Provided with the ⊖ (Direct opening action) ㏌ :

■ Emergency stop illuminated pushbutton switches (conform to EN418)

Operator	Type	Operator	Type	Operator	Type
Push-lock, turn-reset (Soft-touch 40mm dia. with white arrow)	**AR22V0L**  AF97-72	Push-lock, turn-reset (Soft-touch 40mm dia. transparent in all colors with white arrow)	**AR22VDL**  AF97-77	Push-lock, turn-reset (Soft touch 29mm dia. with white arrow)	**AR22VSL**  AF99-316
Push-lock, turn-reset (40mm dia.)	**AR22V2L**  AF94-307	Push-lock, turn-reset (40mm dia. transparent in all colors)	**AR22VAL**  AF94-305	Unibody push-lock, turn-reset (Soft-touch 40mm dia. with white arrow)	**AR22VGF**  KK03-036

Note: Provided with the ⊖ (Direct opening action)

■ Selector switches

Operator	Type	Operator	Type	Operator	Type
Knob	**AR22PR, PCR**  AF94-310	Key	**AR22JR, JCR**  AF94-311	Lever with square bezel	**AR22WY, WCY**  AF94-323
Lever	**AR22WR, WCR**  AF94-324	Key (Long durability)	**AR22JAR**  AF94-311	Cylindrical knob with square bezel	**AR22RY, RCY**  AF94-302
Cylindrical knob	**AR22RR, RCR**  AF94-306	Knob with square bezel	**AR22PY, PCY**  AF94-309	Key with square bezel	**AR22JY, JCY**  AF94-322

■ Illuminated selector switches

Operator	Type	Operator	Type
Knob	**AR22PL**  AF94-300	Knob with square bezel	**AR22PP**  AF94-318

Note Ⓒ:

■ Pilot lights

Lens	Type	Lens	Type	Lens	Type
Dome	**DR22D0L**  AF94-333	Flush square	**DR22F3M**  AF94-330	Extended square	**DR22E3M**  AF94-388
Extended round	**DR22E3L**  AF94-332	Flush square (Transparent lens)	**DR22F4M**  AF94-443	Flush rectangular	**DR22E3N**  AF96-237
Faceted	**DR22K0L**  AF96-189	Flush square (12mm high frame)	**DR22F5M**  AF96-658	Extended round with square bezel	**DR22E3P**  AF94-331

Note: With resistor unit type: Not approved standard

■ Joy stick selector switches

Handle	Type	Handle	Type	Handle	Type
Ball type	**AR22A0, A5**  AF97-49	Ball type with lock	**AR22A1, A6**  AF97-45	Rubber cap type	**AR22A2, A7**  AF97-55

■ Buzzers

Sound	Type	Sound	Type	Sound	Type
Electronic sound	**DR22B5** *  AF96-377	Magnetic sound	**DR22B3**  AF96-376	Electronic sound (IP54)	**DR22B8** *  AF96-244

Note: * 6V AC, 110V DC types: Not approved standard

■ Illuminated pushbutton switches

Operator	Type	Operator	Type	Operator	Type
Extended round head	**AR30E0L, E5L**  AF95-4	Extended with full guard (24mm dia. with openings)	**AR30G2L, G7L**  AF96-328	Push-lock, turn-reset (40mm dia. with white arrow)	**AR30V5L**  AF97-75
Extended with transparent full guard (24mm dia.)	**AR30G4L, G9L**  KKD05-164	Extended with full guard (24mm dia.)	**AR30G3L, G8L**  AF95-6	Push-pull	**AR30Q7L**  AF96-165

■ Pushbutton switches

Operator	Type	Operator	Type	Operator	Type
Flush round head	**AR30F0R, F5R**  AF95-11	Mushroom head (29mm dia.)	**AR30M4R**  AF95-8	Mushroom head with full guard (35mm dia. metal nut)	**AR30GSR**  AF96-239
Extended round head	**AR30E0R, E5R**  AF95-10	Extended with full guard (24mm dia.)	**AR30G1R, G6R**  AF95-16	Giant head	**AR30B0R**  AF95-679
Flush round head Symbol mark type	**AR30FAR, FBR**  AF98-195	Extended with half guard	**AR30G0R, G5R**  AF95-9	Giant head with guard	**AR30B1R**  AF95-592
Extended round head Symbol mark type	**AR30EAR, EBR**  AF98-194	Pin lock	**AR30GPR**  AF96-240	Giant head with full guard	**AR30B2R**  AF95-590
Mushroom head (40mm dia.)	**AR30M0R, M5R**  AF95-12	Mushroom head with full guard (40mm dia.)	**AR30M3R, M8R**  AF95-17	Giant head with full guard	**AR30B3R**  AF95-581

Note: AR30M8R: Not approved standard (cULus)

■ Pushbutton switches

Operator	Type	Operator	Type	Operator	Type
Pushbutton with selector ring (2-position)	**AR30S1R, S2R, S3R, S6R**  AF97-506	Push-lock, turn-reset (40mm dia. with white arrow)	**AR30V5R**  AF97-69	Pushbutton with emergency operating cap	**AR30FVR**  AF96-187
Push, turn-lock	**AR30N0R**  AF95-583				

■ Emergency stop pushbutton switches (conform to EN418)

Operator	Type	Operator	Type	Operator	Type
Push-lock, turn-reset (Soft-touch 40mm dia. with white arrow)	**AR30V0R**  AF97-69	Push-lock, turn-reset (65mm dia.with white arrow)	**AR30V1R**  AF97-68	Push-lock, pull-reset (35mm dia.)	**AR30Q2R**  AF95-3
Push-lock, turn-reset (40mm dia.)	**AR30V2R**  AF95-176				

Notes: Provided with the ⊖ (Direct opening action)

■ Emergency stop illuminated pushbutton switches (conform to EN418)

Operator	Type	Operator	Type
Push-lock, turn-reset (Soft-touch 40mm dia. with white arrow)	**AR30V0L**  AF97-75	Push-lock, turn-reset (40mm dia.)	**AR30V2L**  AF95-2

Note: Provided with the ⊖ (Direct opening action)
Ⓒ :

■ Selector switches

Operator	Type	Operator	Type	Operator	Type
Knob	**AR30PR, PCR**  AF95-13	Key	**AR30JR, JCR**  AF95-15	Key (Long durability)	**AR30JAR**  AF95-15
Lever	**AR30WR, WCR**  AF95-14				

■ Illuminated selector switches

Operator	Type
Knob	**AR30PL**  AF95-5

■ Pilot lights

Lens	Type	Lens	Type	Lens	Type
Dome	**DR30D0L**  AF95-18	Dome with dimmer control	**DR30D1L**  AF02-63	Flush square (40mm sq. transparent lens)	**DR30M4M ***  AF97-63
Extended round	**DR30E3L**  AF95-20	Flush square (34mm sq. transparent lens)	**DR30F4M ***  AF97-65		
Faceted	**DR30K0L**  AF95-19	Flush rectangular (Transparent lens)	**DR30F4N ***  AF97-64		

Note: With resistor unit and resistor types: Not approved standard
* LED 12V AC type: Not approved standard
(cc) :

■ Joy stick selector switches

Handle	Type	Handle	Type	Handle	Type
Ball type	**AR30A0, A5**	Ball type with lock	**AR30A1, A6**	Rubber cap type	**AR30A2, A7**
	 AF97-48		 AF97-44		 AF97-57

■ Buzzers

Sound	Type	Sound	Type	Sound	Type
Electronic sound	**DR30B5***	Magnetic sound	**DR30B0**	Electronic sound (IP54)	**DR30B8 ***
	 AF96-381		 AF96-379		 AF96-245
Electronic sound (economy)	**DR30B6**				
	 KK02-17				

Note: * 6V AC, 110V DC types: Not approved standard

AH164 (standard) / AH165 (oil-tight)

■ Illuminated pushbutton switches

Operator	Type	Operator	Type	Operator	Type
Extended round head	**AH164-L, L5** **AH165-L, L5** 	Flush square head	**AH164-SL, SL5** **AH165-SL, SL5** 	Flush rectangular head	**AH164-TL, TL5** **AH165-TL, TL5** 
Flush rectangular head with guard	**AH164-TGL, TGL5** **AH165-TGL, TGL5** 	Flush square head with guard	**AH164-SGL, SGL5** **AH165-SGL, SGL5** 		

Note: Spot LED and red/green LED types: Not approved standard

■ Pushbutton switches

Operator	Type	Operator	Type	Operator	Type
Extended round head	**AH164-E, E5** **AH165-E, E5** 	Mushroom head	**AH164-M, M5** **AH165-M, M5** 	Flush square head	**AH164-SF, SF5** **AH165-SF, SF5** 
Flush rectangular head	**AH164-TF, TF5** **AH165-TF, TF5** 	Flush rectangular head with guard	**AH164-TGF, TGF5** **AH165-TGF, TGF5** 	Flush square head with guard	**AH164-SGF, SGF5** **AH165-SGF, SGF5** 
Convex square head	**AH164-SM, SM5** **AH165-SM, SM5** 	Convex rectangular head	**AH164-TM, TM5** **AH165-TM, TM5** 	Push-lock, turn-reset (32mm dia.) ⊖ (Direct opening action)	**AH165-VR** 
Push-lock, turn-reset (40mm dia.) ⊖ (Direct opening action)	**AH165-V1R** 				

■ Emergency stop pushbutton switches ⊖ (Direct opening action), conform to EN418

Operator	Type	Operator	Type
Push-lock, turn-reset (32mm dia.)	**AH165-V5R** 	Push-lock, turn-reset (40mm dia.)	**AH165-V6R** 

Note: ㏄:

■ Selector switches

Operator	Type	Operator	Type	Operator	Type
Knob with rectangular bezel	**AH164-P** **AH165-P**	Knob with square bezel	**AH164-SP** **AH165-SP**	Key with rectangular bezel	**AH164-J** **AH165-J**
Key with square bezel	**AH164-SJ** **AH165-SJ**	Key with rectangular bezel ⊖ (Direct opening action)	**AH165-JM**	Key ⊖ (Direct opening action)	**AH165-RJM**

■ Pilot lights

Lens	Type	Lens	Type	Lens	Type
Extended round	**AH164-Z** **AH165-Z**	Flush square	**AH164-ZS** **AH165-ZS**	Flush rectangular	**AH164-ZT** **AH165-ZT**
Dome	**AH165-ZM**				

■ Buzzers

Sound	Type	Sound	Type	Sound	Type
Standard	**AH164-TX**	Loud sound	**AH164-TX1**	Loud sound with volume control	**AH164-TX2B**
Standard sound with volume control (IP54)	**AH165-X**				

Note: ㏄:

FUJI ELECTRIC

สวิทกด 22 มิล (AR22)

สวิทกดคุณภาพสูง ผลิตที่ประเทศญี่ปุ่น (Made in Japan)
- กันน้ำ , กันน้ำมัน , กันฝุ่นที่ IP65 และ IP20 ที่คอนแทคบล็อค
- ผ่านมาตรฐานสากล CSA C22.2No.14 , EN60947-5-1
- Mechanical Durability 5,000,000 Operations
- Electrical Durability 1,000,000 Operations at 220VAC 3A

รายละเอียด	คอนแทค	สี	รหัสสินค้า	ราคา	สามารถใช้แทน
สวิตช์กดหัวเรียบ-กดเด้งกลับ					Telemecanique รุ่น
	1 NO	ขาว	AR22F0R-10W	300.-	XB4-BA11
		ดำ	AR22F0R-10B		XB4-BA21
		เขียว	AR22F0R-10G		XB4-BA31
		เหลือง	AR22F0R-10Y		XB4-BA51
		น้ำเงิน	AR22F0R-10S		XB4-BA61
		ส้ม	AR22F0R-10A		-
	1 NC	แดง	AR22F0R-01R		XB4-BA42
รายละเอียด	คอนแทค	สี	รหัสสินค้า	ราคา	สามารถใช้แทน
สวิตช์กดหัวยื่น-กดเด้งกลับ					Telemecanique รุ่น
	1 NO	ขาว	AR22E0R-10W	300.-	XB4-BL11
		ดำ	AR22E0R-10B		XB4-BL21
		เขียว	AR22E0R-10G		XB4-BL31
		เหลือง	AR22E0R-10Y		XB4-BL51
		น้ำเงิน	AR22E0R-10S		XB4-BL61
		ส้ม	AR22E0R-10A		-
	1 NC	แดง	AR22E0R-01R		XB4-BL42
รายละเอียด	คอนแทค	สี	รหัสสินค้า	ราคา	สามารถใช้แทน
สวิตช์กดหัวเห็ด-กดเด้งกลับ (40mm.)					Telemecanique รุ่น
	1 NO	ขาว	AR22M0R-10W	330.-	XB4-BC11
		ดำ	AR22M0R-10B		XB4-BC21
		เขียว	AR22M0R-10G		XB4-BC31
		เหลือง	AR22M0R-10Y		XB4-BC51
		น้ำเงิน	AR22M0R-10S		XB4-BC61
		ส้ม	AR22M0R-10A		-
	1 NC	แดง	AR22M0R-01R		XB4-BC42
รายละเอียด	คอนแทค	สี	รหัสสินค้า	ราคา	สามารถใช้แทน
สวิตช์กดหัวเห็ด-กดล็อคหมุนคลาย (40mm.)					Telemecanique รุ่น
	1 NC	แดง	AR22V0R-01R (มีลูกศรสีขาว)	1,040.-	XB4-BS542
			AR22V2R-01R (ไม่มีลูกศรสีขาว)		

FUJI ELECTRIC

สวิทกดแบบมีไฟ 22 มิล (AR22)

สวิทกดคุณภาพสูง ผลิตที่ประเทศญี่ปุ่น (Made in Japan)
- กันน้ำ , กันน้ำมัน , กันฝุ่นที่ IP65 และ IP20 ที่คอนแทคบล็อค
- ผ่านมาตรฐานสากล CSA C22.2No.14 , EN60947-5-1
- Mechanical Durability 5,000,000 Operations
- Electrical Durability 1,000,000 Operations at 220VAC 3A

รายละเอียด สวิตช์กดหัวยื่นมีไฟล็อคแล้มป์	Voltage	คอนแทค	สี	รหัสสินค้า	ราคา	สามารถใช้แทน Telemecanique รุ่น
 * รุ่น 110,220VAC จะมีหม้อแปลง	24VAC/DC	1 NO	ขาว	AR22E0L-10E4W	510.-	-
		1 NO	เขียว	AR22E0L-10E4G		-
		1 NC	แดง	AR22E0L-01E4R		-
		1 NO	เหลือง	AR22E0L-10E4Y		-
		1 NO	น้ำเงิน	AR22E0L-10E4S		-
		1 NO	ส้ม	AR22E0L-10E4A		-
	110VAC	1 NO	ขาว	AR22E0L-10H4W	770.-	-
		1 NO	เขียว	AR22E0L-10H4G		-
		1 NC	แดง	AR22E0L-01H4R		-
		1 NO	เหลือง	AR22E0L-10H4Y		-
		1 NO	น้ำเงิน	AR22E0L-10H4S		-
		1 NO	ส้ม	AR22E0L-10H4A		-
	220VAC	1 NO	ขาว	AR22E0L-10M4W	770.-	-
		1 NO	เขียว	AR22E0L-10M4G		-
		1 NC	แดง	AR22E0L-01M4R		-
		1 NO	เหลือง	AR22E0L-10M4Y		-
		1 NO	น้ำเงิน	AR22E0L-10M4S		-
		1 NO	ส้ม	AR22E0L-10M4A		-

รายละเอียด สวิตช์กดพร้อมที่ป้องกันมีไฟล็อคแล้มป์	Voltage	คอนแทค	สี	รหัสสินค้า	ราคา	สามารถใช้แทน Telemecanique รุ่น
 * รุ่น 110,220VAC จะมีหม้อแปลง	24VAC/DC	1 NO	ขาว	AR22G4L-10E4W	570.-	XB4-BW31B1
		1 NO	เขียว	AR22G4L-10E4G		XB4-BW33B1
		1 NC	แดง	AR22G4L-01E4R		XB4-BW34B2
		1 NO	เหลือง	AR22G4L-10E4Y		XB4-BW35B1
		1 NO	น้ำเงิน	AR22G4L-10E4S		XB4-BW36B1
		1 NO	ส้ม	AR22G4L-10E4A		-
	110VAC	1 NO	ขาว	AR22G4L-10H4W	910.-	XB4-BW31G1
		1 NO	เขียว	AR22G4L-10H4G		XB4-BW33G1
		1 NC	แดง	AR22G4L-01H4R		XB4-BW34G2
		1 NO	เหลือง	AR22G4L-10H4Y		XB4-BW35G1
		1 NO	น้ำเงิน	AR22G4L-10H4S		XB4-BW36G1
		1 NO	ส้ม	AR22G4L-10H4A		-
	220VAC	1 NO	ขาว	AR22G4L-10M4W	910.-	XB4-BW31M1
		1 NO	เขียว	AR22G4L-10M4G		XB4-BW33M1
		1 NC	แดง	AR22G4L-01M4R		XB4-BW34M2
		1 NO	เหลือง	AR22G4L-10M4Y		XB4-BW35M1
		1 NO	น้ำเงิน	AR22G4L-10M4S		XB4-BW36M1
		1 NO	ส้ม	AR22G4L-10M4A		-

* หากท่านต้องการหลอดเป็นแบบ LED กรุณาสอบถามกับทางบริษัท

FUJI ELECTRIC

สวิทลูกศร 22 มิล (AR22)

สวิทกดคุณภาพสูง ผลิตที่ประเทศญี่ปุ่น (Made in Japan)
- กันน้ำ , กันน้ำมัน , กันฝุ่นที่ IP65 และ IP20 ที่คอนแทคบล็อค
- ผ่านมาตรฐานสากล CSA C22.2No.14 , EN60947-5-1
- Mechanical Durability 5,000,000 Operations
- Electrical Durability 1,000,000 Operations at 220VAC 3A

รายละเอียด ซีเล็คเตอร์สวิตช์ที่จับแบบมาตรฐาน	การทำงาน	คอนแทค	รหัสสินค้า	ราคา	สามารถใช้แทน Telemecanique รุ่น
	2 ตำแหน่งค้าง (On-Off)	1 NO	AR22PR-210B	410.-	XB4-BD21
	2 ตำแหน่งค้าง (On-Off)	1NO+1NC	AR22PR-211B	460.-	XB4-BD25
	2 ตำแหน่ง เด้งกลับ จากขวา มา ซ้าย (On-Off)	1 NO	AR22PR-010B	950.-	XB4-BD41
	3 ตำแหน่งค้าง (On-Off-On)	1NO+1NC	AR22PR-311B	460.-	XB4-BD33
	3 ตำแหน่ง เด้งกลับ จากซ้ายและขวามากลาง (On-Off-On)	1NO+1NC	AR22PR-111B	1,000.-	XB4-BD53
	3 ตำแหน่ง เด้งกลับ จากซ้ายและขวามากลาง (On-Off-On)	2NO+2NC	AR22PR-122B	1,100.-	-
	3 ตำแหน่ง เด้งกลับ จากซ้าย มา กลาง (On-Off-On)	1NO+1NC	AR22PR-611B	1,000.-	-
	3 ตำแหน่ง เด้งกลับ จากขวามากลาง (On-Off-On)	1NO+1NC	AR22PR-711B	1,000.-	XB4-BD83
รายละเอียด ซีเล็คเตอร์สวิตช์ที่จับแบบยาว	การทำงาน	คอนแทค	รหัสสินค้า	ราคา	สามารถใช้แทน Telemecanique รุ่น
	2 ตำแหน่งค้าง (On-Off)	1 NO	AR22WR-210B	480.-	XB4-BJ21
	2 ตำแหน่งค้าง (On-Off)	1NO+1NC	AR22WR-211B	530.-	XB4-BJ25
	3 ตำแหน่งค้าง (On-Off-On)	1NO+1NC	AR22WR-311B	530.-	XB4-BJ33

FUJI ELECTRIC

สวิทลูกศร 22 มิล (AR22)

สวิทกดคุณภาพสูง ผลิตที่ประเทศญี่ปุ่น (Made in Japan)
- กันน้ำ , กันน้ำมัน , กันฝุ่นที่ IP65 และ IP20 ที่คอนแทคล็อค
- ผ่านมาตรฐานสากล CSA C22.2No.14 , EN60947-5-1
- Mechanical Durability 5,000,000 Operations
- Electrical Durability 1,000,000 Operations at 220VAC 3A

รายละเอียด	การทำงาน	คอนแทค	รหัสสินค้า	ราคา	สามารถใช้แทน
ชิเล็คเตอร์สวิตช์แบบกุญแจ					Telemecanique รุ่น
	2 ตำแหน่งค้าง (เอากุญแจออก ได้ทางด้านซ้าย)	1 NO	AR22JR-2A10A	790.-	XB4-BG21
	2 ตำแหน่งค้าง (เอากุญแจออก ได้ทางด้านซ้าย)	1NO+1NC	AR22JR-2A11A	840.-	XB4-BG25
	3 ตำแหน่งค้าง (เอากุญแจออก ได้ทางด้านซ้าย)	1NO+1NC	AR22JR-3A11A	840.-	-
	3 ตำแหน่งค้าง (เอากุญแจออก ได้ตรงกลาง)	1NO+1NC	AR22JR-3E11A	Call	XB4-BG33

รายละเอียด	การทำงาน	Voltage	คอนแทค	สี	รหัสสินค้า	ราคา	สามารถใช้แทน
ชิเล็คเตอร์สวิตช์มีไพล็อตแล้มป์							Telemecanique รุ่น
 * รุ่น 110,220VAC จะมีหม้อแปลง	2 ตำแหน่งค้าง	24VAC/DC	1NO+1NC	ขาว	AR22PL-211E4W	Call	XB4-BK121B5
				เขียว	AR22PL-211E4G		XB4-BK123B5
				แดง	AR22PL-211E4R		XB4-BK124B5
				เหลือง	AR22PL-211E4Y		XB4-BK125B5
				น้ำเงิน	AR22PL-211E4S		XB4-BK126B5
		110VAC	1NO+1NC	ขาว	AR22PL-211H4W	1,320.-	XB4-BK121G5
				เขียว	AR22PL-211H4G		XB4-BK123G5
				แดง	AR22PL-211H4R		XB4-BK124G5
				เหลือง	AR22PL-211H4Y		XB4-BK125G5
				น้ำเงิน	AR22PL-211H4S		XB4-BK126G5
		220VAC	1NO+1NC	ขาว	AR22PL-211M4W	1,320.-	XB4-BK121M5
				เขียว	AR22PL-211M4G		XB4-BK123M5
				แดง	AR22PL-211M4R		XB4-BK124M5
				เหลือง	AR22PL-211M4Y		XB4-BK125M5
				น้ำเงิน	AR22PL-211M4S		XB4-BK126M5
 * รุ่น 110,220VAC จะมีหม้อแปลง	3 ตำแหน่งค้าง	24VAC/DC	1NO+1NC	ขาว	AR22PL-311E4W	Call	XB4-BK131B5
				เขียว	AR22PL-311E4G		XB4-BK133B5
				แดง	AR22PL-311E4R		XB4-BK134B5
				เหลือง	AR22PL-311E4Y		XB4-BK135B5
				น้ำเงิน	AR22PL-311E4S		XB4-BK136B5
		110VAC	1NO+1NC	ขาว	AR22PL-311H4W	1,320.-	XB4-BK131G5
				เขียว	AR22PL-311H4G		XB4-BK133G5
				แดง	AR22PL-311H4R		XB4-BK134G5
				เหลือง	AR22PL-311H4Y		XB4-BK135G5
				น้ำเงิน	AR22PL-311H4S		XB4-BK136G5
		220VAC	1NO+1NC	ขาว	AR22PL-311M4W	1,320.-	XB4-BK131M5
				เขียว	AR22PL-311M4G		XB4-BK133M5
				แดง	AR22PL-311M4R		XB4-BK134M5
				เหลือง	AR22PL-311M4Y		XB4-BK135M5
				น้ำเงิน	AR22PL-311M4S		XB4-BK136M5

* หากท่านต้องการหลอดเป็นแบบ LED กรุณาสอบถามกับทางบริษัท

FUJI ELECTRIC

ไพล็อทแลมป์ 22 มิล (DR22)

สวิทกดคุณภาพสูง ผลิตที่ประเทศญี่ปุ่น (Made in Japan)
- กันน้ำ , กันน้ำมัน , กันฝุ่นที่ IP65 และ IP20 ที่คอนแทคบล็อค
- ผ่านมาตรฐานสากล CSA C22.2No.14 , EN60947-5-1
- รุ่นหลอดไส้อายุการใช้งานเฉลี่ย 5,000 ชั่วโมง
- รุ่นหลอด LED อายุการใช้งานเฉลี่ย 30,000 ชั่วโมง

รายละเอียด	Voltage	สี	รหัสสินค้า	ราคา	สามารถใช้แทน
ไพล็อทแลมป์ (หลอดไส้)					Telemecanique รุ่น
 * รุ่น 110,220VAC จะมีหม้อแปลง	24VAC/DC	ขาว	DR22D0L-E4W	260.-	XB4-BVB1
		เขียว	DR22D0L-E4G		XB4-BVB3
		แดง	DR22D0L-E4R		XB4-BVB4
		เหลือง	DR22D0L-E4Y		XB4-BVB5
		น้ำเงิน	DR22D0L-E4S		XB4-BVB6
		ส้ม	DR22D0L-E4A		-
	110VAC	ขาว	DR22D0L-H4W	550.-	XB4-BVG1
		เขียว	DR22D0L-H4G		XB4-BVG3
		แดง	DR22D0L-H4R		XB4-BVG4
		เหลือง	DR22D0L-H4Y		XB4-BVG5
		น้ำเงิน	DR22D0L-H4S		XB4-BVG6
		ส้ม	DR22D0L-H4A		-
	220VAC	ขาว	DR22D0L-M4W	550.-	XB4-BVM1
		เขียว	DR22D0L-M4G		XB4-BVM3
		แดง	DR22D0L-M4R		XB4-BVM4
		เหลือง	DR22D0L-M4Y		XB4-BVM5
		น้ำเงิน	DR22D0L-M4S		XB4-BVM6
		ส้ม	DR22D0L-M4A		-

* หากท่านต้องการหลอดเป็นแบบ LED กรุณาสอบถามกับทางบริษัท

คอนแทคบล็อค (AR9)

รายละเอียด	คอนแทค	รหัสสินค้า	ราคา
คอนแทคบล็อค			
	1 NO	AR9B290	110.-
	1 NC	AR9B291	110.-

FUJI ELECTRIC

Command Switch 22mm.

Model	Description	Contact Arrangement	Price
AR22-F0R	Pushbutton / Flush Head	1NO or 1NC	**300.-**
AR22-E0R	Pushbutton / Extened Head	1NO or 1NC	**300.-**
AR22-M0R	Pushbutton / Mushroom Head 40mm. Diameter	1NO or 1NC	**330.-**
AR22-V2R	Pushbutton / Mushroom Head Push-Lock , Turn-Reset 40mm. Diameter	1NO or 1NC	**1,040.-**
AR22-E0L..E4	Illuminated Pushbutton / Extened Head 24V	1NO or 1NC	**510.-**
AR22-E0L..M4	Illuminated Pushbutton / Extened Head with Transformer 220VAC	1NO or 1NC	**770.-**
AR22-G4L..E4	Illuminated Pushbutton / Full Guard Ring 24V	1NO or 1NC	**570.-**
AR22-G4L..M4	Illuminated Pushbutton / Full Guard Ring with Transformer 220VAC	1NO or 1NC	**910.-**
AR22PR-211B	Selector Switch 2 Position / Knob Type	1NO+1NC	**460.-**
AR22WR-211B	Selector Switch 2 Position / Lever Type	1NO+1NC	**530.-**
AR22JR-2A11A	Selector Switch 2 Position / Key Operated	1NO+1NC	**840.-**
AR22PL-211M4	Illuminated Selector Switch 2 Position / Knob Type with Transformer 220VAC	1NO+1NC	**1,320.-**
AR22PR-311B	Selector Switch 3 Position / Knob Type	1NO+1NC	**460.-**
AR22WR-311B	Selector Switch 3 Position / Lever Type	1NO+1NC	**530.-**
AR22JR-3A11A	Selector Switch 3 Position / Key Operated	1NO+1NC	**840.-**
AR22PR-122B	Selector Switch 3 Position / Center Spring Return	2NO+2NC	**1,100.-**
AR22PL-311M4	Illuminated Selector Switch 3 Position / Knob Type with Transformer 220VAC	1NO+1NC	**1,320.-**
AR9B290	Auxiliary Contact Block 1NO		**110.-**
AR9B291	Auxiliary Contact Block 1NC		**110.-**
DR22D0L-M4	Pilot Light / Dome Len with Transformer 220VAC		**550.-**
DR22D0L-E4	Pilot Light / Dome Len 24V		**260.-**
DR22E3M-M4	Pilot Light / Extened Square len with Square Bezel with Transformer 220VAC		**560.-**
DR22F4M-M4	Pilot light / Flush Square with Legend Plate Color with Transformer 220VAC		**580.-**

FUJI ELECTRIC

Command Switch 30mm.

Model	Description	Contact Arrangement	Price
AR30-F0R	Pushbutton / Flush Head	1NO or 1NC	**350.-**
AR30-E0R	Pushbutton / Extened Head	1NO or 1NC	**350.-**
AR30-M0R	Pushbutton / Mushroom Head 40mm. Diameter	1NO or 1NC	**370.-**
AR30-B0R	Pushbutton / Giant Head	1NO or 1NC	**370.-**
AR30-V2R	Pushbutton / Mushroom Head Push-Lock , Turn-Reset 40mm. Diameter	1NO or 1NC	**1,100.-**
AR30-E0L..E4	Illuminated Pushbutton / Extened Head 24V	1NO or 1NC	**680.-**
AR30-E0L..M4	Illuminated Pushbutton / Extened Head with Transformer 220VAC	1NO or 1NC	**940.-**
AR30-G3L..E4	Illuminated Pushbutton / Full Guard Ring 24V	1NO or 1NC	**800.-**
AR30-G3L..M4	Illuminated Pushbutton / Full Guard Ring with Transformer 220VAC	1NO or 1NC	**1,160.-**
AR30PR-211B	Selector Switch 2 Position / Knob Type	1NO+1NC	**500.-**
AR30WR-211B	Selector Switch 2 Position / Lever Type	1NO+1NC	**660.-**
AR30JR-2A11A	Selector Switch 2 Position / Key Operated	1NO+1NC	**880.-**
AR30PL-211M4	Illuminated Selector Switch 2 Position / Knob Type with Transformer 220VAC	1NO+1NC	**1,490.-**
AR30PR-311B	Selector Switch 3 Position / Knob Type	1NO+1NC	**500.-**
AR30WR-311B	Selector Switch 3 Position / Lever Type	1NO+1NC	**660.-**
AR30JR-3A11A	Selector Switch 3 Position / Key Operated	1NO+1NC	**880.-**
AR30PR-122B	Selector Switch 3 Position / Center Spring Return	2NO+2NC	**1,120.-**
AR30PL-311M4	Illuminated Selector Switch 3 Position / Knob Type with Transformer 220VAC	1NO+1NC	**1,490.-**
AR9B290	Auxiliary Contact Block 1NO		**110.-**
AR9B291	Auxiliary Contact Block 1NC		**110.-**
DR30D0L-M4	Pilot Light / Dome Lens with Transformer 220VAC		**580.-**
DR30D0L-E4	Pilot Light / Dome Lens 24V		**300.-**
DR30K0L-M4	Pilot Light / Facet Lens with Transformer 220VAC		**610.-**

Inductive proximity switches–Square type, PE-B

Supply voltage:
10-30V DC
80-250V AC, 50/60Hz
Operating distance: 4 to 50mm

■ **Features**

- Operating distance from 4mm to 50mm permits a variety of applications.
- LED's for operating indication lamp are provided for all types thus facilitating operation checks.
- Ones with an operating distance of over 20mm meet the requirements of the CENELEC Standards.
- Wide operating voltage range
  Operating range of supply voltage is from 80 to 250V AC or from 10 to 30V DC.
- Provided with built-in reverse polarity and surge voltage protection circuits.
- PNP output types are also available thus permitting application to machine tools in Europe.

PE-B

■ **Type number nomenclature**

PE – B 4 D 3 B

Basic type

Series
B: Square shaped

Operating distance
4: 4mm 20: 20mm
7: 7mm 30: 30mm
10:10mm 50: 50mm
15:15mm

Contact
Blank: 1NO
B: 1NC

Sensing head direction
Blank: Standard
3: Upper side (PE-B4 only)

Operating system
D: DC, 3-wire, NPN output
Q: DC, 3-wire, PNP output
A: AC, 2-wire
S: DC, 2-wire

■ **Ordering code**

PE1 B 10 – D B 3

Basic type

Series
B: Square shaped

Operating distance
04: 4mm 20: 20mm
07: 7mm 30: 30mm
10: 10mm 50: 50mm
15: 15mm

Sensing head direction
Blank: Standard
3: Upper side (PE-B4 only)

Contact
Blank: 1NO
B: 1NC

Operating system
D: DC, 3-wire, NPN output
Q: DC, 3-wire, PNP output
A: AC, 2-wire
S: DC, 3-wire

■ **Versions**

Operating system	Target size (mm)	Operating distance (mm)	Output * 1NO Type	Ordering code	1NC Type	Ordering code	Output * 1NO Type	Ordering code	1NC Type	Ordering code
DC supply 3-wire	20 × 20 × 1	4	**PE-B4D**	PE1B04-D	**PE-B4DB**	PE1B04-DB	**PE-B4Q**	PE1B04-Q	**PE-B4QB**	PE1B04-QB
	20 × 20 × 1	4	**PE-B4D3**	PE1B04-D3	**PE-B4D3B**	PE1B04-DB3	**PE-B4Q3**	PE1B04-Q3	**PE-B4Q3B**	PE1B04-QB3
	30 × 30 × 1	7	**PE-B7D**	PE1B07-D	**PE-B7DB**	PE1B07-DB	**PE-B7Q**	PE1B07-Q	**PE-B7QB**	PE1B07-QB
	40 × 40 × 1	10	**PE-B10D**	PE1B10-D	**PE-B10DB**	PE1B10-DB	**PE-B10Q**	PE1B10-Q	**PE-B10QB**	PE1B10-QB
	50 × 50 × 1	15	**PE-B15D**	PE1B15-D	**PE-B15DB**	PE1B15-DB	–	–	–	–
	50 × 50 × 1	20	**PE-B20D**	PE1B20-D	**PE-B20DB**	PE1B20-DB	**PE-B20Q**	PE1B20-Q	**PE-B20QB**	PE1B20-QB
	90 × 90 × 1	30	**PE-B30D**	PE1B30-D	**PE-B30DB**	PE1B30-DB	**PE-B30Q**	PE1B30-Q	**PE-B30QB**	PE1B30-QB
	150 × 150 × 1	50	**PE-B50D**	PE1B50-D	**PE-B50DB**	PE1B50-DB	**PE-B50Q**	PE1B50-Q	**PE-B50QB**	PE1B50-QB
AC supply 2-wire	30 × 30 × 1	7	**PE-B7A**	PE1B07-A	–	–	–	–	–	–
	40 × 40 × 1	10	**PE-B10A**	PE1B10-A	–	–	–	–	–	–
	50 × 50 × 1	20	**PE-B20A**	PE1B20-A	–	–	–	–	–	–
	90 × 90 × 1	30	**PE-B30A**	PE1B30-A	**PE-B30AB**	PE1B30-AB	–	–	–	–
	150 × 150 × 1	50	**PE-B50A**	PE1B50-A	**PE-B50AB**	PE1B50-AB	–	–	–	–
DC supply 2-wire	20 × 20 × 1	4	**PE-B4S**	PE1B04-S	**PE-B4SB**	PE1B04-SB	–	–	–	–
	30 × 30 × 1	7	**PE-B7S**	PE1B07-S	**PE-B7SB**	PE1B07-SB	–	–	–	–
	40 × 40 × 1	10	**PE-B10S**	PE1B10-S	**PE-B10SB**	PE1B10-SB	–	–	–	–
	50 × 50 × 1	20	**PE-B20S**	PE1B20-S	**PE-B20SB**	PE1B20-SB	–	–	–	–
	90 × 90 × 1	30	**PE-B30S**	PE1B30-S	**PE-B30SB**	PE1B30-SB	–	–	–	–
	150 × 150 × 1	50	**PE-B50S**	PE1B50-S	**PE-B50SB**	PE1B50-SB	–	–	–	–

Notes: *PE-B□D: NPN transistor, open collector output
PE-B□O: PNP transistor, open collector output
PE-B□A: Thyristor output
PE-B□S: Transistor output

■ **Ordering information**

Specify the following:
1. Type number or ordering code

■ Specifications

Type	PE-B□D, PE-B□DB	PE-B□Q, PE-B□QB	PE-B□S, PE-B□SB	PE-B□A, PE-B□AB
Output	NPN transistor, open collector output	PNP transistor, open collector output	Transistor, output	Thyristor, output
Supply voltage	12/24V DC *1		12/24V DC *1	120/240V AC *2
Output capacity	Max. 200mA at 12/24V DC (PE-B4D□, PE-B4Q□: Max. 50mA at 12/24V DC)		Max. 100mA	10 to 200mA
Current consumption	Max. 15mA at 24V DC		0.8mA or less (Leakage current)	2mA at 200V AC (Leakage current)
Ambient temperature	–25 to +75°C		–25 to +75°C	–25 to +75°C
Dielectric strength	2000V AC, 1 min.		2000V AC, 1 min.	2000V AC, 1 min.
Insulation resistance	Over 50MΩ (500V DC megger)			
Degree of protection	IP67 (IEC)			
Response frequency	See table below			
Vibration	10 to 55Hz, 1.5mm double amplitude (in X, Y and Z direction, respectively for two hours)			
Shock	500m/s²			
Circuit protection	Short-circuit (except PE-B□A and PE-B□AB), reverse polarity, surge voltage			

Notes: *1 Operational voltage range: 10 to 30V DC *2 Operational voltage range: 80 to 250V AC.

■ Response frequency

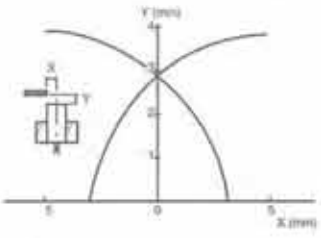
DC supply

PE-B7D, PE-B7Q, PE-B7S	300Hz	PE-B15D, PE-B20D, PE-B20Q, PE-B20S	100Hz	PE-B7A, PE-B10A, PE-B20A	20Hz
PE-B4D, PE-B4Q, PE-B4S	200Hz	PE-B30D, PE-B30Q, PE-B30S	50Hz	PE-B30A, PE-B50A	5Hz
RE-B10D, PE-B10Q, PE-B10S		PE-B50D, PE-B50Q, PE-B50S	10Hz		

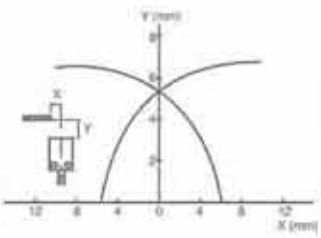
AC supply

■ Response curve for iron (Typical)

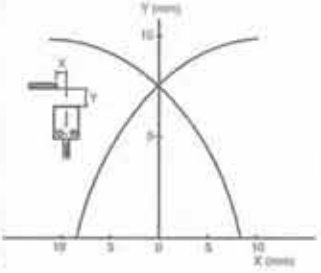
PE-B4□
Material: Iron
20 × 20 × 1mm



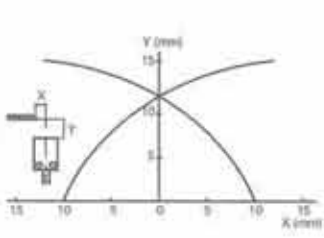
PE-B7□
Material: Iron
30 × 30 × 1mm



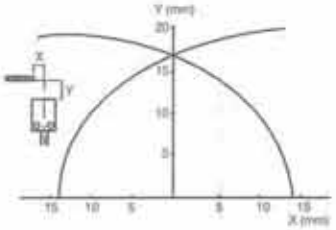
PE-B10□
Material: Iron
40 × 40 × 1mm



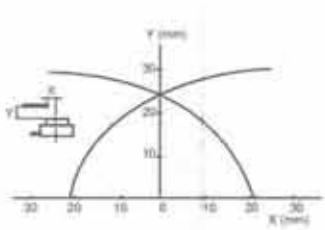
PE-B15□
Material: Iron
50 × 50 × 1mm



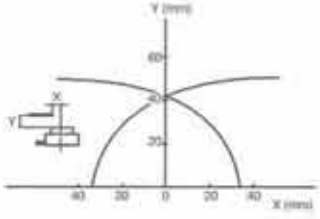
PE-B20□
Material: Iron
50 × 50 × 1mm



PE-B30□
Material: Iron
90 × 90 × 1mm



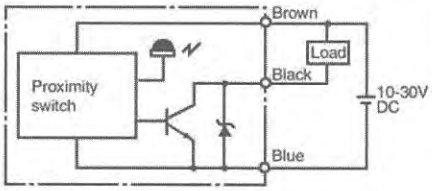
PE-B50□
Material: Iron
150 × 150 × 1mm



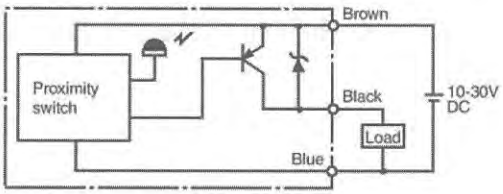
■ Wiring diagrams

• DC supply/3-wire system

PE-B□D

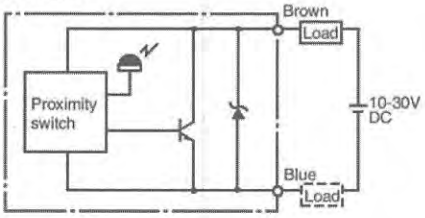


PE-B□Q



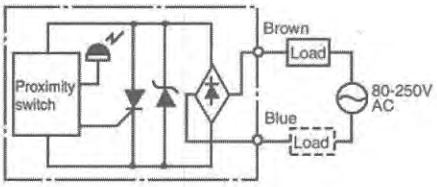
• DC supply/2-wire system

PE-B□S



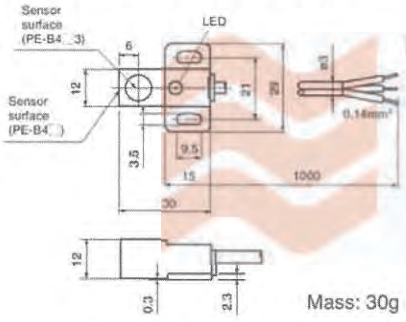
• AC supply/2-wire system

PE-B□A



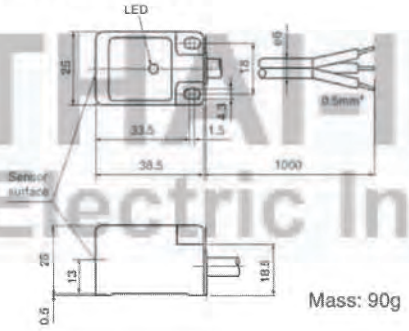
■ Dimensions, mm

PE-B4□, B4□3 PE-B4□B, B4□3B



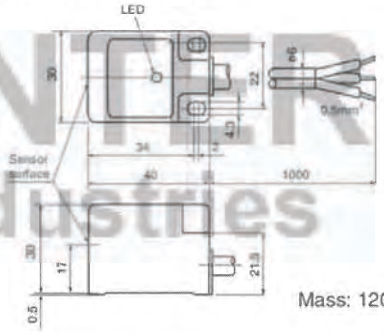
Mass: 30g

PE-B7□, PE-B7□B



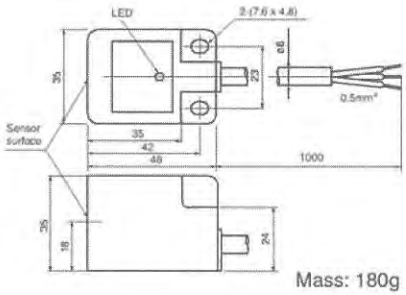
Mass: 90g

PE-B10□, PE-B10□B



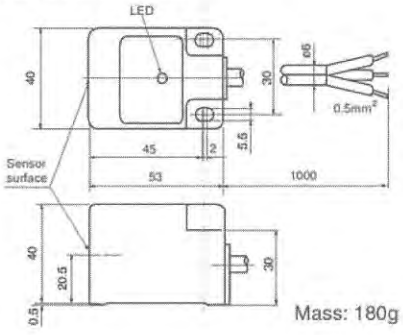
Mass: 120g

PE-B15D, PE-B15DB



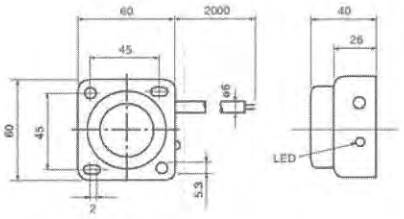
Mass: 180g

PE-B20□, PE-B20□B



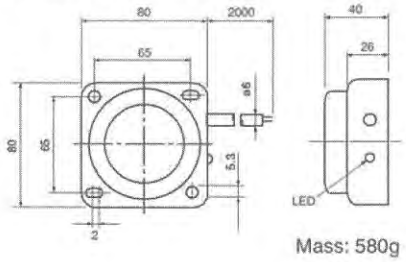
Mass: 180g

PE-B30□, PE-B30□B



Mass: 330g

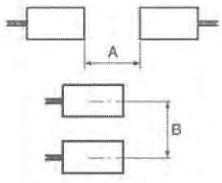
PE-B50□, PE-B50□B



Mass: 580g

■ Mutual interference:

Be sure to space two switches at a distance greater than that shown in the table at right to prevent mutual interference.



Type	A (mm)	B (mm)
PE-B4□	60 (30)	60 (30)
BE-B7□	80 (40)	80 (40)
PE-B10□	120 (60)	120 (60)
PE-B15□	200 (100)	120 (60)
PE-B20□	200 (100)	200 (100)
PE-B30□	300 (150)	300 (150)
PE-B50□	500 (250)	500 (250)

Note: The values in parentheses are applicable when using two switches with oscillation frequencies different from each other.

Magnetically operated reed switches
PM

Magnetically operated reed switches, PM
Standard type
Operating distance: Maximum 35, 70, 120mm
Reed switch: 1NO, 2 Amps


PM-4M PM-10M PM-2S

■ Features
- Power source not required
- Comprises sensing magnetic element and reed switch
- Resin molded construction
- Water- and dust-tight, shock-resistant
- Breaking capacity: 0.5Amps at 220V AC
- Operating distance is longer than oscillating type.
- Economically priced
- 1 meter color-coded lead wires

■ Ordering information
Specify the following:
1. Type number or ordering code (Specify reed switch and magnet separately.)

■ Specifications
Magnet (standard type)

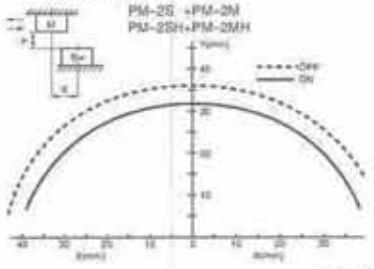
Type	PM-2M	PM-4M	PM-10M
Operating distance	25 – 40mm	50 – 70mm	80 – 120mm
Differential	5 – 15mm	5 – 20mm	15 – 40mm
Ambient temperature	–10° to +65°C	–10° to +65°C	–10° to +65°C

Magnet (High temperature using type)

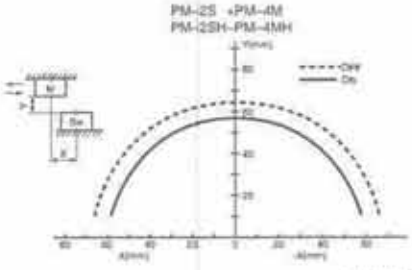
Type	PM-2MH	PM-4MH	PM-10MH
Operating distance	25 – 40mm	40 – 70mm	100 – 140mm
Differential	5 – 15mm	5 – 20mm	15 – 40mm
Ambient temperature	–20° to +130°C	–20° to +130°C	–20° to +130°C

PM2S, PM-2SH read switches
Rated operating voltage: 220V AC, DC (Max.)
Rated operating current: 0.5A (Max.)
Make and break capacity: 50W DC, 50VA AC (Max.)
Mechanical: durability 100 million operations
Electrical: 2 million operations at 200V AC 0.125A
1.4 million operations at 100V AC 0.25A
Insulation resistance: Over 100MΩ at 500V DC
Dielectric strength: 700V AC rms, 1 minute (Contact to contact)
Ambient temperature: –10 to +65°C (For 130°C use is also available)
1 meter lead wires are normally provided.

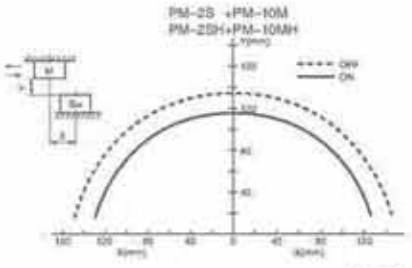
■ Response curves, typical
Short axis
M: Magnet
Sw: Reed switch



PM-2S

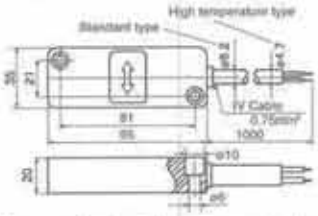


PM-2S

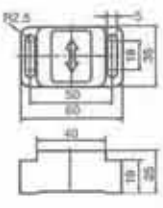


PM-2S

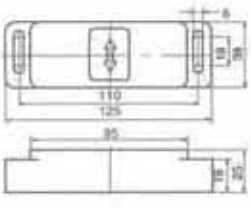
■ Dimensions, mm
PM-2S Mass: 210g
PM-2SH



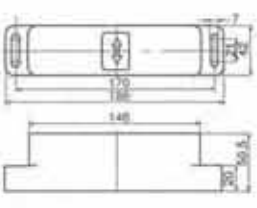
PM-2M Mass: 170g
PM-2MH



PM-4M Mass: 440g
PM-4MH



PM-10M Mass: 1300g
PM-10MH



Notes: • Reed switch and magnetic element are mounted on anti-magnetic material. The operating distance will be decreased when mounted on magnetized materials.
• Both reed switch and magnetic element cannot be used in over 5-gauss magnetic fields.

e-Front runners

FRENIC-Mini Series

FRENIC

MINI

FUJI INVERTERS

GREAT PERFORMANCE IN A COMPACT PACKAGE
WELCOME TO THE NEW GENERATION
OF MICRO INVERTERS

c UL us LISTED CE

MEH441c

FUJI ELECTRIC

Inverter

FRENIC-Mini

FRENIC-Mini Series		
Input 1 Phase 220V 50/60Hz , Output 3 Phase 0-220V		
Capacity	Model	Price
0.2 kW / 0.25 HP	**FRN0.2C1S-7A**	โปรดสอบถาม
0.4 kW / 0.5 HP	**FRN0.4C1S-7A**	โปรดสอบถาม
0.75 kW / 1 HP	**FRN0.75C1S-7A**	โปรดสอบถาม
1.5 kW / 2HP	**FRN1.5C1S-7A**	โปรดสอบถาม
2.2 kW / 3 HP	**FRN2.2C1S-7A**	โปรดสอบถาม
Input 3 Phase 220V 50/60Hz , Output 3 Phase 0-220V		
Capacity	Model	Price
0.75 kW / 1 HP	**FRN0.75C1S-2A**	โปรดสอบถาม
1.5 kW / 2HP	**FRN1.5C1S-2A**	โปรดสอบถาม
2.2 kW / 3 HP	**FRN2.2C1S-2A**	โปรดสอบถาม
3.7 kW / 5 HP	**FRN3.7C1S-2A**	โปรดสอบถาม
Input 3 Phase 380V 50/60Hz , Output 3 Phase 0-380V		
Capacity	Model	Price
0.75 kW / 1 HP	**FRN0.75C1S-4A**	โปรดสอบถาม
1.5 kW / 2HP	**FRN1.5C1S-4A**	โปรดสอบถาม
2.2 kW / 3 HP	**FRN2.2C1S-4A**	โปรดสอบถาม
3.7 kW / 5 HP	**FRN3.7C1S-4A**	โปรดสอบถาม

Variation

Caution The contents of this catalog are provided to help you select the product model that is best for you. Before actual use, be sure to read the User's Manual thoroughly to assure correct operation.

In addition to the three-phase 200V and single-phase 200V, three-phase 400V series has been newly introduced, broadening the model selection range. Model variations include EMC filter built-in type and braking resistor built-in type on order.

Applicable motor rating	Three-phase 200V series	Three-phase 400V series	Single-phase 200V series
Standard specifications			
0.1	FRN0.1C1S-2A		FRN0.1C1S-7A
0.2	FRN0.2C1S-2A		FRN0.2C1S-7A
0.4	FRN0.4C1S-2A	FRN0.4C1S-4A	FRN0.4C1S-7A
0.75	FRN0.75C1S-2A	FRN0.75C1S-4A	FRN0.75C1S-7A
1.5	FRN1.5C1S-2A	FRN1.5C1S-4A	FRN1.5C1S-7A
2.2	FRN2.2C1S-2A	FRN2.2C1S-4A	FRN2.2C1S-7A
3.7	FRN3.7C1S-2A	FRN3.7C1S-4A	
Semi-standard specifications			
EMC filter built-in type (On order)			
0.1	FRN0.1C1E-2A		FRN0.1C1E-7A
0.2	FRN0.2C1E-2A		FRN0.2C1E-7A
0.4	FRN0.4C1E-2A	FRN0.4C1E-4A	FRN0.4C1E-7A
0.75	FRN0.75C1E-2A	FRN0.75C1E-4A	FRN0.75C1E-7A
1.5	FRN1.5C1E-2A	FRN1.5C1E-4A	FRN1.5C1E-7A
2.2	FRN2.2C1E-2A	FRN2.2C1E-4A	FRN2.2C1E-7A
3.7	FRN3.7C1E-2A	FRN3.7C1E-4A	
Braking resistor built-in type (On order)			
1.5	FRN1.5C1S-2A21	FRN1.5C1S-4A21	
2.2	FRN2.2C1S-2A21	FRN2.2C1S-4A21	
3.7	FRN3.7C1S-2A21	FRN3.7C1S-4A21	
IP40 enclosure type			
0.1	FRN0.1C1J-2A		
0.2	FRN0.2C1J-2A		
0.4	FRN0.4C1J-2A	FRN0.4C1J-4A	
0.75	FRN0.75C1J-2A	FRN0.75C1J-4A	
1.5	FRN1.5C1J-2A	FRN1.5C1J-4A	
2.2	FRN2.2C1J-2A	FRN2.2C1J-4A	
3.7	FRN3.7C1J-2A	FRN3.7C1J-4A	

Type1 (NEMA1) conformed model is available by attaching optional parts.

How to read the model number

The Compact Inverter FRENIC-Mini

FRN 1.5 C 1 S - 2 A 2 1

Code	Series name
FRN	FRENIC series

Code	Applicable motor rating [kW]
0.1	0.1
0.2	0.2
0.4	0.4
0.75	0.75
1.5	1.5
2.2	2.2
3.7	3.7

Code	Application range
C	Compact

Code	Developed inverter series
1	1

Code	Built-in option
Blank,1	None

Code	Brake
Blank,1	Standard
2	Braking resistor built-in type

Code	Version/Manual
A	Asia/English

Code	Input power source
2	Three-phase 200V
4	Three-phase 400V
7	Single-phase 200V

Code	Enclosure
S	Standard (IP20)
E	EMC filter built-in type (IP20)
J	IP40 enclosure type

Note) If "Built-in option" is "None" and "Brake" is "Standard", the model numbers are indicated in the same format as those of the above standard specifications.

Standard specifications

Three-phase series

Item			Specifications											
Input power source			Three-phase 200V							Three-phase 400V				
Type (FRN□□□C1S-□A)			FRN0.1 C1S-2A	FRN0.2 C1S-2A	FRN0.4 C1S-2A	FRN0.75 C1S-2A	FRN1.5 C1S-2A	FRN2.2 C1S-2A	FRN3.7 C1S-2A	FRN0.4 C1S-4A	FRN0.75 C1S-4A	FRN1.5 C1S-4A	FRN2.2 C1S-4A	FRN3.7 C1S-4A
Applicable motor rating *1)		kW	0.1	0.2	0.4	0.75	1.5	2.2	3.7	0.4	0.75	1.5	2.2	3.7
Output ratings	Rated capacity *2)	kVA	0.3	0.57	1.1	1.9	3.0	4.2	6.5	1.1	1.9	2.8	4.1	6.8
	Rated voltage *3)	V	Three-phase, 200V/50Hz, 200, 220, 230V/60Hz							Three-phase, 380, 400, 415V/50Hz, 380, 400, 440, 460V/60Hz				
	Rated current *4)	A	0.8 (0.7)	1.5 (1.4)	3.0 (2.5)	5.0 (4.2)	8.0 (7.0)	11.0 (10.0)	17.0 (16.5)	1.5	2.5	3.7	5.5	9.0
	Overload capability		150% of rated current for 1min, 200% of rated current for 0.5s											
	Rated frequency		50, 60Hz											
Input ratings	Phases, voltage, frequency		Three-phase, 200 to 240V, 50/60Hz							Three-phase, 380 to 480V, 50/60Hz				
	Voltage/frequency variations		Voltage: +10 to -15% (Voltage unbalance *10) : 2% or less) Frequency: +5 to -5%											
	Momentary voltage dip capability *5)		When the input voltage is 165V or more, the inverter continues operation. If it drops below 165V, the inverter operates for 15ms.							When the input voltage is 300V or more, the inverter continues operation. If it drops below 300V, the inverter operates for 15ms.				
	Rated current *6)	A (with DCR)	0.57	0.93	1.6	3.0	5.7	8.3	14.0	0.85	1.6	3.0	4.4	7.3
		A (without DCR)	1.1	1.8	3.1	5.3	9.5	13.2	22.2	1.7	3.1	5.9	8.2	13.0
	Required power supply capacity *7)	kVA	0.2	0.3	0.6	1.1	2.0	2.9	4.9	0.6	1.1	2.0	2.9	4.9
Braking	Torque *8)	%	150		100		50	30		100		50	30	
	Torque *9)	%	—		150					150				
	DC injection braking		Starting frequency: 0.0 to 60.0Hz Braking time: 0.0 to 30.0s Braking level: 0 to 100% of rated current											
Enclosure (IEC 60529)			IP20, UL open type *11)											
Cooling method			Natural cooling				Fan cooling			Natural cooling		Fan cooling		
Weight / Mass		kg	0.6	0.6	0.6	0.7	1.7	1.7	2.3	1.1	1.2	1.7	1.7	2.3

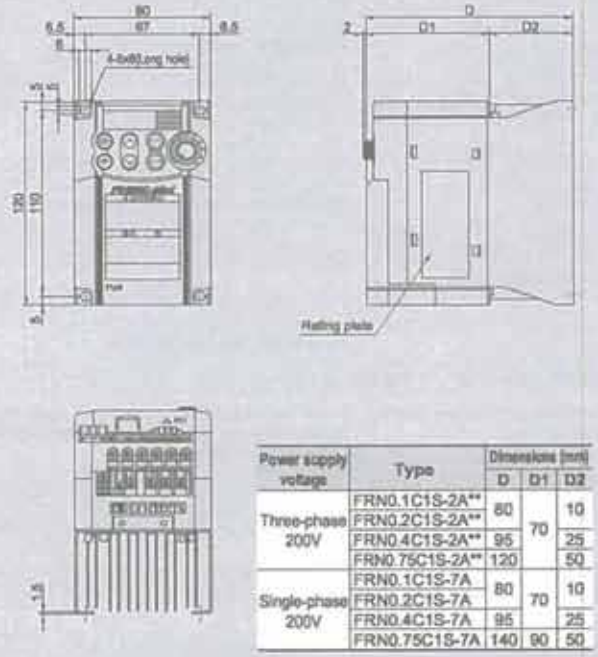
Single-phase series

Item			Specifications					
Input power source			Single-phase 200V					
Type (FRN□□□C1S-7A)			FRN0.1 C1S-7A	FRN0.2 C1S-7A	FRN0.4 C1S-7A	FRN0.75 C1S-7A	FRN1.5 C1S-7A	FRN2.2 C1S-7A
Applicable motor rating *1)		kW	0.1	0.2	0.4	0.75	1.5	2.2
Output ratings	Rated capacity *2)	kVA	0.3	0.57	1.1	1.9	3.0	4.1
	Rated voltage *3)	V	Three-phase, 200V/50Hz, 200, 220, 230V/60Hz					
	Rated current *4)	A	0.8 (0.7)	1.5 (1.4)	3.0 (2.5)	5.0 (4.2)	8.0 (7.0)	11.0 (10.0)
	Overload capability		150% of rated current for 1 min, 200% of rated current for 0.5s					
	Rated frequency		50, 60Hz					
Input ratings	Phases, voltage, frequency		Single-phase, 200 to 240V, 50/60Hz					
	Voltage/frequency variations		Voltage: +10 to -10% Frequency: +5 to -5%					
	Momentary voltage dip capability *5)		When the input voltage is 165V or more, the inverter continues operation. If it drops below 165V, the inverter operates for 15ms.					
	Rated current *6)	A (with DCR)	1.1	2.0	3.5	6.4	11.6	17.5
		A (without DCR)	1.8	3.3	5.4	9.7	16.4	24.8
	Required power supply capacity *7)	kVA	0.3	0.4	0.7	1.3	2.4	3.5
Braking	Torque *8)	%	150		100		50	30
	Torque *9)	%	—		150			
	DC injection braking		Starting frequency: 0.0 to 60.0Hz Braking time: 0.0 to 30.0s Braking level: 0 to 100% of rated current					
Enclosure (IEC 60529)			IP20, UL open type *11)					
Cooling method			Natural cooling				Fan cooling	
Weight / Mass		kg	0.6	0.6	0.6	0.8	1.7	2.3

*1) Fuji's 4-pole standard motor
*2) Rated capacity is calculated by regarding the output rated voltage as 220V for three-phase 200V and single-phase 200V series, and as 440V for three-phase 400V series.
*3) Output voltage cannot exceed the power supply voltage.
*4) Use the inverter at the current given in ( ) or below when the carrier frequency setting is higher than 4kHz (FRN0.1C1S-□A to 0.4C1S-□A) or the ambient temperature is 40°C or higher.
*5) Tested under the standard load condition (85% load for nominal applied motor).
*6) Calculated under Fuji-specified conditions.
*7) Obtained when a DC REACTOR (option) is used.
*8) Average braking torque obtained with AVR control OFF (Varies with the efficiency of the motor.)
*9) Average braking torque obtained by use of external braking resistor (standard type available as option)
*10) Voltage unbalance [%] = $\frac{\text{Max voltage [V]} - \text{Min voltage [V]}}{\text{Three-phase average voltage [V]}} \times 67$ (IEC 61800-3 (6.2.3))
If this value is 2 to 3%, use AC REACTOR (ACR).
*11) NEMA1 kit (option) is required for the enclosure conforming to the UL standard TYPE1 (NEMA1).
Use the inverter in the ambient temperature range from -10 to +40°C.

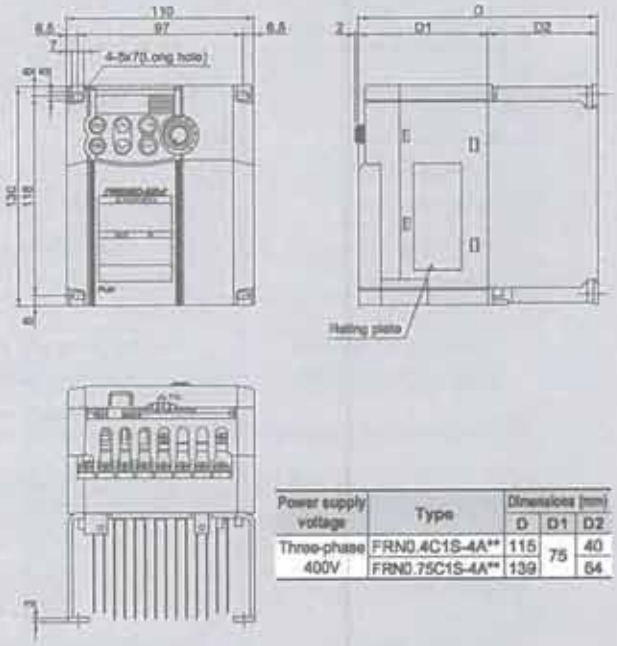
Without EMC filter type

Fig. 1



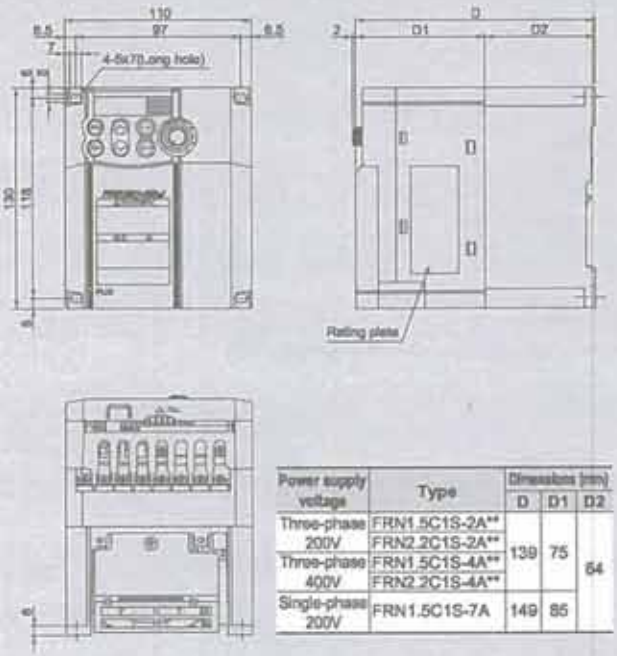
Power supply voltage	Type	Dimensions (mm)		
		D	D1	D2
Three-phase 200V	FRN0.1C1S-2A**	80	70	10
	FRN0.2C1S-2A**			
	FRN0.4C1S-2A**	95		25
	FRN0.75C1S-2A**	120		50
Single-phase 200V	FRN0.1C1S-7A	80	70	10
	FRN0.2C1S-7A			
	FRN0.4C1S-7A	95		25
	FRN0.75C1S-7A	140	90	50

Fig. 2



Power supply voltage	Type	Dimensions (mm)		
		D	D1	D2
Three-phase 400V	FRN0.4C1S-4A**	115	75	40
	FRN0.75C1S-4A**	139		64

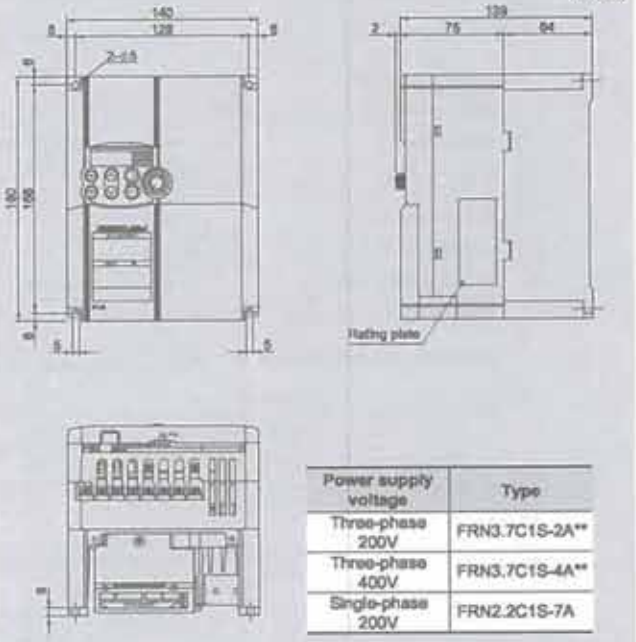
Fig. 3



Power supply voltage	Type	Dimensions (mm)		
		D	D1	D2
Three-phase 200V	FRN1.5C1S-2A**	139	75	64
	FRN2.2C1S-2A**			
Three-phase 400V	FRN1.5C1S-4A**			
	FRN2.2C1S-4A**			
Single-phase 200V	FRN1.5C1S-7A	149	85	

Fig. 4

Unit (mm)



Power supply voltage	Type
Three-phase 200V	FRN3.7C1S-2A**
Three-phase 400V	FRN3.7C1S-4A**
Single-phase 200V	FRN2.2C1S-7A

Note) • The symbols ** followed by the inverter type FRN□□□C1S-2A represent the following numeral codes:
21 (Braking resistor built-in type), None (Standard)

e-Front runners

High Performance Compact Inverters

FRENIC-Multi Series

FRENIC Multi

FUJI INVERTERS

HIGH PERFORMANCE THROUGH COMPACT DEDICATED DESIGNS

WELCOME TO A NEW GENERATION OF MULTI-USE INVERTERS

c UL us LISTED CE

MEH652a

FUJI ELECTRIC

Inverter

<0.1 to 0.75kW> <1.5 to 2.2kW> <3.7kW> <5.5, 7.5kW> <11, 15kW>

FRENIC Multi

FRENIC-Multi Series		
Input 3 Phase 220V 50/60Hz , Output 3 Phase 0-220V		
Capacity	Model	Price
0.75 kW / 1 HP	**FRN0.75E1S-2A**	โปรดสอบถาม
1.5 kW / 2 HP	**FRN1.5E1S-2A**	โปรดสอบถาม
2.2 kW / 3 HP	**FRN2.2E1S-2A**	โปรดสอบถาม
3.7 kW / 5 HP	**FRN3.7E1S-2A**	โปรดสอบถาม
5.5 kW / 7.5 HP	**FRN5.5E1S-2A**	โปรดสอบถาม
7.5 kW / 10 HP	**FRN7.5E1S-2A**	โปรดสอบถาม
11 kW / 15 HP	**FRN11E1S-2A**	โปรดสอบถาม
15 kW / 20 HP	**FRN15E1S-2A**	โปรดสอบถาม
Input 3 Phase 380V 50/60Hz , Output 3 Phase 0-380V		
Capacity	Model	Price
0.75 kW / 1 HP	**FRN0.75E1S-4A**	โปรดสอบถาม
1.5 kW / 2HP	**FRN1.5E1S-4A**	โปรดสอบถาม
2.2 kW / 3 HP	**FRN2.2E1S-4A**	โปรดสอบถาม
3.7 kW / 5 HP	**FRN3.7E1S-4A**	โปรดสอบถาม
5.5 kW / 7.5 HP	**FRN5.5E1S-4A**	โปรดสอบถาม
7.5 kW / 10 HP	**FRN7.5E1S-4A**	โปรดสอบถาม
11 kW / 15 HP	**FRN11E1S-4A**	โปรดสอบถาม
15 kW / 20 HP	**FRN15E1S-4A**	โปรดสอบถาม
Input 1 Phase 220V 50/60Hz , Output 3 Phase 0-220V		
Capacity	Model	Price
0.75 kW / 1 HP	**FRN0.75E1S-7A**	โปรดสอบถาม
1.5 kW / 2HP	**FRN1.5E1S-7A**	โปรดสอบถาม
2.2 kW / 3 HP	**FRN2.2E1S-7A**	โปรดสอบถาม

Variation

Model List

Applicable motor rating (kW)	Standard type: Three-phase 200V series	Standard type: Three-phase 400V series	Standard type: Single-phase 200V series	Semi-standard type EMC filter built-in type: Three-phase 200V series	Semi-standard type EMC filter built-in type: Three-phase 400V series	Semi-standard type EMC filter built-in type: Single-phase 200V series
0.1	FRN0.1E1S-2□		FRN0.1E1S-7□	FRN0.1E1E-2□		FRN0.1E1E-7□
0.2	FRN0.2E1S-2□		FRN0.2E1S-7□	FRN0.2E1E-2□		FRN0.2E1E-7□
0.4	FRN0.4E1S-2□	FRN0.4E1S-4□	FRN0.4E1S-7□	FRN0.4E1E-2□	FRN0.4E1E-4□	FRN0.4E1E-7□
0.75	FRN0.75E1S-2□	FRN0.75E1S-4□	FRN0.75E1S-7□	FRN0.75E1E-2□	FRN0.75E1E-4□	FRN0.75E1E-7□
1.5	FRN1.5E1S-2□	FRN1.5E1S-4□	FRN1.5E1S-7□	FRN1.5E1E-2□	FRN1.5E1E-4□	FRN1.5E1E-7□
2.2	FRN2.2E1S-2□	FRN2.2E1S-4□	FRN2.2E1S-7□	FRN2.2E1E-2□	FRN2.2E1E-4□	FRN2.2E1E-7□
3.7	FRN3.7E1S-2□	FRN3.7E1S-4□		FRN3.7E1E-2□	FRN3.7E1E-4□	
5.5	FRN5.5E1S-2□	FRN5.5E1S-4□		FRN5.5E1E-2□	FRN5.5E1E-4□	
7.5	FRN7.5E1S-2□	FRN7.5E1S-4□		FRN7.5E1E-2□	FRN7.5E1E-4□	
11	FRN11E1S-2□	FRN11E1S-4□		FRN11E1E-2□	FRN11E1E-4□	
15	FRN15E1S-2□	FRN15E1S-4□		FRN15E1E-2□	FRN15E1E-4□	

* The code in □ represents followings; A(Asia), K(Korea, Taiwan) , C(China)

How to read the inverter model

FRN 0.75 E 1 S - 2 A

Code	Series name
FRN	FRENIC series

Code	Applicable motor rating
0.1	0.1kW
0.2	0.2kW
0.4	0.4kW
0.75	0.75kW
↓	↓
7.5	7.5kW
11	11kW
15	15kW

Code	Application range
E	High performance/Compact

Code	Developed inverter series
1	Series

Code	Destination, Instruction manuals
A	Asia, English
K	Korea, Taiwan
C	China

Code	Input power source
2	Three-phase 200V
4	Three-phase 400V
7	Single-phase 200V

Code	Enclosure
S	Standard type (IP20)
E	EMC filter built-in type

Caution The contents of this catalog are provided to help you select the product model that is best for you. Before actual use, be sure to read the User's Manual thoroughly to assure correct operation.

Specifications

●Standard type

■Three-phase 200V series

Item			Specifications									
Type (FRN□□□E1S-2A/K/C)			0.1	0.2	0.4	0.75	1.5	2.2	3.7	5.5	7.5	11	15
Applicable motor rating [kW] (*1)			0.1	0.2	0.4	0.75	1.5	2.2	3.7	5.5	7.5	11	15
Output ratings	Rated capacity [kVA] (*2)		0.30	0.57	1.1	1.9	3.0	4.1	6.4	9.5	12	17	22
	Rated voltage [V] (*3)		Three-phase 200V to 240V (with AVR function)										
	Rated current [A] (*4)		0.8 (0.7)	1.5 (1.4)	3.0 (2.5)	5.0 (4.2)	8.0 (7.0)	11 (10)	17 (16.5)	25 (23.5)	33 (31)	47 (44)	60 (57)
	Overload capability		150% of rated current for 1min, 200% - 0.5s										
	Rated frequency [Hz]		50, 60Hz										
Input power	Phases, voltage, frequency		Three-phase, 200 to 240V, 50/60Hz										
	Voltage/frequency variations		Voltage: +10 to -15% (Voltage unbalance (*8): 2% or less) Frequency: +5 to -5%										
	Rated current [A] (*9)	(with DCR)	0.57	0.93	1.6	3.0	5.7	8.3	14.0	21.1	28.8	42.2	57.6
		(without DCR)	1.1	1.8	3.1	5.3	9.5	13.2	22.2	31.5	42.7	60.7	80.1
	Required power supply capacity [kVA] (*5)		0.2	0.3	0.6	1.1	2.0	2.9	4.9	7.4	10	15	20
Braking	Torque [%] (*6)		150		100		70	40		20			
	Torque [%] (*7)		—		150								
	DC injection braking		Starting frequency: 0.1 to 60.0Hz, Braking time: 0.0 to 30.0s, Braking level: 0 to 100% of rated current										
	Braking transistor		Built-in										
Applicable safety standards			UL508C, C22.2No.14, EN50178:1997										
Enclosure (IEC60529)			IP20, UL open type										
Cooling method			Natural cooling				Fan cooling						
Weight / Mass [kg]			0.6	0.6	0.7	0.8	1.7	1.7	2.3	3.4	3.6	6.1	7.1

■Three-phase 400V series

Item			Specifications								
Type (FRN□□□E1S-4A/K/C)			0.4	0.75	1.5	2.2	3.7	5.5	7.5	11	15
Applicable motor rating [kW] (*1)			0.4	0.75	1.5	2.2	3.7	5.5	7.5	11	15
Output ratings	Rated capacity [kVA] (*2)		1.1	1.9	2.8	4.1	6.8	9.9	13	18	22
	Rated voltage [V] (*3)		Three-phase 380V to 480V (with AVR function)								
	Rated current [A] (*4)		1.5	2.5	3.7	5.5	9.0	13	18	24	30
	Overload capability		150% of rated current for 1min, 200% - 0.5s								
	Rated frequency [Hz]		50, 60Hz								
Input power	Phases, voltage, frequency		Three-phase, 380 to 480V, 50/60Hz								
	Voltage/frequency variations		Voltage: +10 to -15% (Voltage unbalance (*8): 2% or less) Frequency: +5 to -5%								
	Rated current [A] (*9)	(with DCR)	0.85	1.6	3.0	4.4	7.3	10.6	14.4	21.1	28.8
		(without DCR)	1.7	3.1	5.9	8.2	13.0	17.3	23.2	33.0	43.8
	Required power supply capacity [kVA] (*5)		0.6	1.1	2.0	2.9	4.9	7.4	10	15	20
Braking	Torque [%] (*6)		100		70	40		20			
	Torque [%] (*7)		—				150				
	DC injection braking		Starting frequency: 0.1 to 60.0Hz, Braking time: 0.0 to 30.0s, Braking level: 0 to 100% of rated current								
	Braking transistor		Built-in								
Applicable safety standards			UL508C, C22.2No.14, EN50178:1997								
Enclosure (IEC60529)			IP20, UL open type								
Cooling method			Natural cooling		Fan cooling						
Weight / Mass [kg]			1.1	1.2	1.7	1.7	2.3	3.4	3.6	6.1	7.1

■Single-phase 200V series

Item			Specifications					
Type (FRN□□□E1S-7A/K/C)			0.1	0.2	0.4	0.75	1.5	2.2
Applicable motor rating [kW] (*1)			0.1	0.2	0.4	0.75	1.5	2.2
Output ratings	Rated capacity [kVA] (*2)		0.3	0.57	1.1	1.9	3.0	4.1
	Rated voltage [V] (*3)		Three-phase 200V to 240V (with AVR function)					
	Rated current [A] (*4)		0.8 (0.7)	1.5 (1.4)	3.0 (2.5)	5.0 (4.2)	8.0 (7.0)	11 (10)
	Overload capability		150% of rated current for 1min, 200% - 0.5s					
	Rated frequency [Hz]		50, 60Hz					
Input power	Phases, voltage, frequency		Single-phase, 200 to 240V, 50/60Hz					
	Voltage/frequency variations		Voltage: +10 to -10%, Frequency: +5 to -5%					
	Rated current [A] (*9)	(with DCR)	1.1	2.0	3.5	6.4	11.6	17.5
		(without DCR)	1.8	3.3	5.4	9.7	16.4	24.8
	Required power supply capacity [kVA] (*5)		0.3	0.4	0.7	1.3	2.4	3.5
Braking	Torque [%] (*6)		150		100		70	40
	Torque [%] (*7)		—		150			
	DC injection braking		Starting frequency: 0.1 to 60.0Hz, Braking level: 0 to 100% of rated current, Braking time: 0.0 to 30.0s					
	Braking transistor		Built-in					
Applicable safety standards			UL508C, C22.2No.14, EN50178:1997					
Enclosure (IEC60529)			IP20, UL open type					
Cooling method			Natural cooling				Fan cooling	
Weight / Mass [kg]			0.6	0.8	0.7	0.9	1.8	2.4

(*1) Fuji's 4-pole standard motor
(*2) Rated capacity is calculated by assuming the output rated voltage as 220V for three-phase 200V series and 440V for three-phase 400V series.
(*3) Output voltage cannot exceed the power supply voltage.
(*4) When setting the carrier frequency (F26) to 3 kHz or less. Use the current ( ) or below when the carrier frequency setting is higher than 4kHz and continuously operating at 100%.
(*5) Obtained when a DC REACTOR is used.
(*6) Average braking torque obtained when reducing the speed from 60Hz with AVR control OFF (Varies with the efficiency of the motor.)
(*7) Average braking torque obtained by use of external braking resistor (standard type available as option)
(*8) Voltage unbalance [%] = $\frac{\text{Max voltage [V]} - \text{Min voltage [V]}}{\text{Three-phase average voltage [V]}} \times 67$ (IEC 61800-3)
If this value is 2 to 3%, use AC REACTOR (ACR: option).
(*9) The value is calculated on assumption that the inverter is connected with a power supply capacity of 500kVA (or 10 times the inverter capacity if the inverter capacity exceeds 50kVA) and %X is 5%.

External Dimensions

●Inverter main body (standard type)

Fig. a

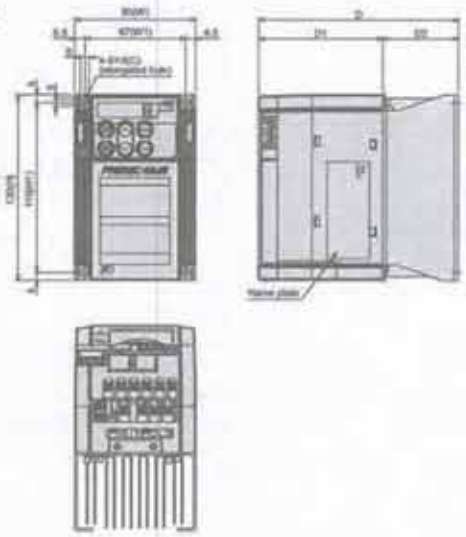


Fig.b

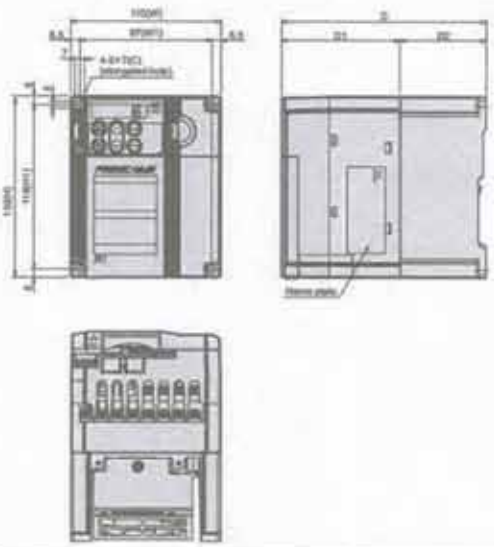


Fig. c

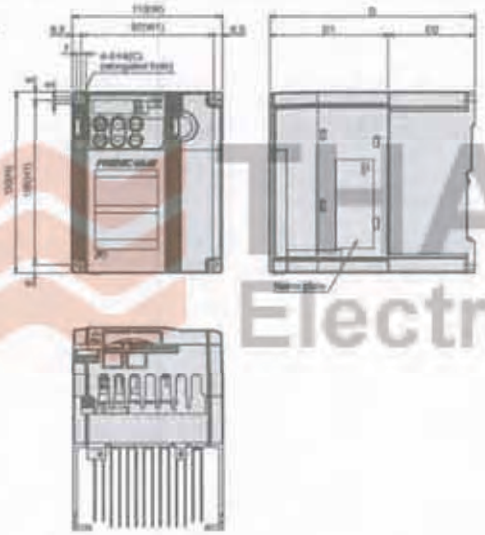


Fig. d

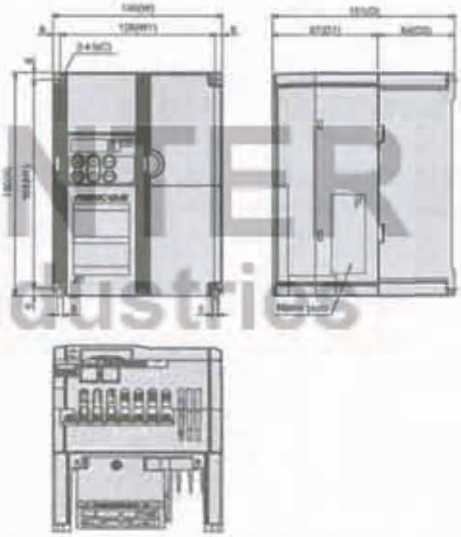


Fig. e

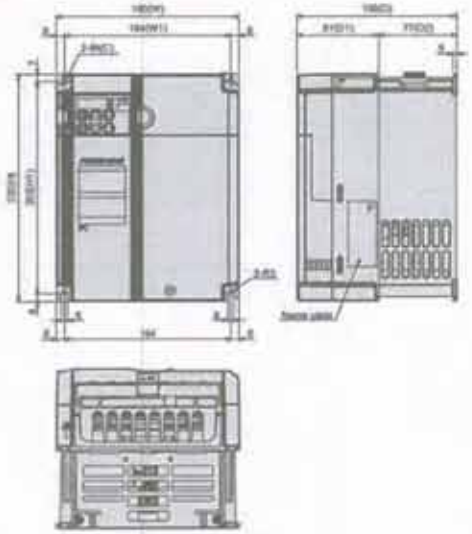
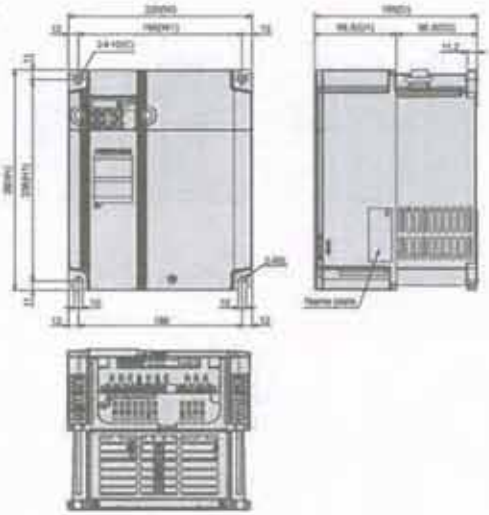


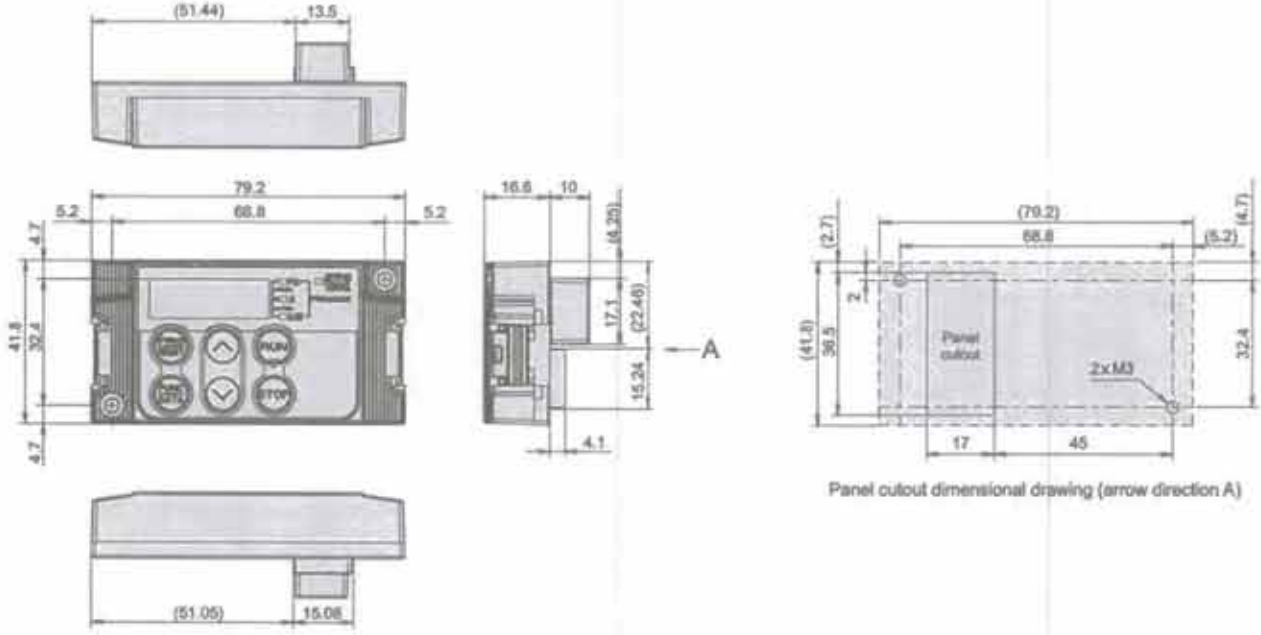
Fig. f



Power supply voltage	Inverter type	Fig.	Dimension (mm)							
			W	W1	H	H1	D	D1	D2	C
Three-phase 200V	FRN0.1E1S-2■	a	80	67	120	110	92	82	10	5x6(elongated hole)
	FRN0.2E1S-2■									
	FRN0.4E1S-2■						107		25	
	FRN0.75E1S-2■						132		50	
	FRN1.5E1S-2■	b	110	97	130	118	150	86	64	5x7(elongated hole)
	FRN2.2E1S-2■									
	FRN3.7E1S-2■	d	140	128	180	168	151	87	64	ϕ5
	FRN5.5E1S-2■	e	180	164	220	205	158	81	77	ϕ6
	FRN7.5E1S-2■									
	FRN11E1S-2■	f	220	196	260	238	195	98.5	96.5	ϕ10
	FRN15E1S-2■									
Three-phase 400V	FRN0.4E1S-4■	c	110	97	130	118	126	86	40	5x6(elongated hole)
	FRN0.75E1S-4■						150		64	
	FRN1.5E1S-4■	b	110	97	130	118	150	86	64	5x7(elongated hole)
	FRN2.2E1S-4■									
	FRN3.7E1S-4■	d	140	128	180	168	151	87	64	ϕ5
	FRN5.5E1S-4■	e	180	164	220	205	158	81	77	ϕ6
	FRN7.5E1S-4■									
	FRN11E1S-4■	f	220	196	260	238	195	98.5	96.5	ϕ10
	FRN15E1S-4■									
Single-phase 200V	FRN0.1E1S-7■	a	80	67	120	110	92	102	10	5x6(elongated hole)
	FRN0.2E1S-7■									
	FRN0.4E1S-7■						107		25	
	FRN0.75E1S-7■						152		50	
	FRN1.5E1S-7■	b	110	97	130	118	150	86	64	5x7(elongated hole)
	FRN2.2E1S-7■	d	140	128	180	168	151	87	64	ϕ5

Note: For the inverter type FRN0.1E1S-2■, the symbol ■ is replaced with either of the following alphabets.
■ A(Asia), K(Korea, Taiwan), C(China)

●Keypad



* Dimensions when installing the supplied rear cover

Panel cutout dimensional drawing (arrow direction A)

Variable Torque Load Inverters for Fans and Pumps

FRENIC-ECO Series

FRENIC ECO

FUJI HVAC INVERTERS

GREAT PERFORMANCE THROUGH DEDICATED DESIGNS

WELCOME TO NEW GENERATION OF INVERTER

FOR HEATING, VENTILATING & AIR CONDITIONING

c UL US LISTED CE

MEH442c

FUJI ELECTRIC

Inverter

FRENIC-Eco

FRENIC-Eco Series		
Input 3 Phase 220V 50/60Hz , Output 3 Phase 0-220V		
Capacity	Model	Price
0.75 kW / 1 HP	**FRN0.75F1S-2A**	โปรดสอบถาม
1.5 kW / 2HP	**FRN1.5F1S-2A**	โปรดสอบถาม
2.2 kW / 3 HP	**FRN2.2F1S-2A**	โปรดสอบถาม
3.7 kW / 5 HP	**FRN3.7F1S-2A**	โปรดสอบถาม
5.5 kW / 7.5 HP	**FRN5.5F1S-2A**	โปรดสอบถาม
7.5 kW / 10 HP	**FRN7.5F1S-2A**	โปรดสอบถาม
11 kW / 15 HP	**FRN11F1S-2A**	โปรดสอบถาม
15 kW / 20 HP	**FRN15F1S-2A**	โปรดสอบถาม
18 kW / 25 HP	**FRN18F1S-2A**	โปรดสอบถาม
22 kW / 30 HP	**FRN22F1S-2A**	โปรดสอบถาม
30 kW / 40 HP	**FRN30F1S-2A**	โปรดสอบถาม
37 kW / 50 HP	**FRN37F1S-2A**	โปรดสอบถาม
Input 3 Phase 380V 50/60Hz , Output 3 Phase 0-380V		
Capacity	Model	Price
0.75 kW / 1 HP	**FRN0.75F1S-4A**	โปรดสอบถาม
1.5 kW / 2HP	**FRN1.5F1S-4A**	โปรดสอบถาม
2.2 kW / 3 HP	**FRN2.2F1S-4A**	โปรดสอบถาม
3.7 kW / 5 HP	**FRN3.7F1S-4A**	โปรดสอบถาม
5.5 kW / 7.5 HP	**FRN5.5F1S-4A**	โปรดสอบถาม
7.5 kW / 10 HP	**FRN7.5F1S-4A**	โปรดสอบถาม
11 kW / 15 HP	**FRN11F1S-4A**	โปรดสอบถาม
15 kW / 20 HP	**FRN15F1S-4A**	โปรดสอบถาม
18 kW / 25 HP	**FRN18F1S-4A**	โปรดสอบถาม
22 kW / 30 HP	**FRN22F1S-4A**	โปรดสอบถาม
30 kW / 40 HP	**FRN30F1S-4A**	โปรดสอบถาม
37 kW / 50 HP	**FRN37F1S-4A**	โปรดสอบถาม

Standard specifications

■ Three-phase 200V series

Item				Specifications																
Type (FRN□□□F1S-2A)				0.75	1.5	2.2	3.7	5.5	7.5	11	15	18.5	22	30	37	45	55	75	90	110
Nominal applied motor (kW)			*1	0.75	1.5	2.2	3.7	5.5	7.5	11	15	18.5	22	30	37	45	55	75	90	110
Output ratings	Rated capacity (kVA)		*2	1.6	2.6	4.0	6.3	9.0	12	17	22	27	32	43	53	64	80	100	122	148
	Rated voltage (V)		*3	Three-phase, 200 to 240V (With AVR function)																
	Rated current (A)		*4, *10	4.2	7.0	10.6	16.7	23.8 (22.5)	31.8 (29)	45 (42)	58 (55)	73 (68)	85 (80)	114 (107)	140 (130)	170 (156)	211 (186)	276 (270)	322 (320)	360 (384)
	Overload capability			120% of rated current for 1min																
	Rated frequency			50, 60 Hz																
Input ratings	Phases, voltage, frequency	Main power supply		Three-phase, 200 to 240V, 50/60Hz												Three-phase, 200 to 220V/50Hz Three-phase, 200 to 230V/60Hz				
		Auxiliary control power input		Single-phase, 200 to 240V, 50/60Hz for the terminals												Single-phase, 200 to 220V/50Hz Single-phase, 200 to 230V/60Hz				
		Auxiliary fan power input	*9	—													Single-phase, 200 to 220V/50Hz Single-phase, 200 to 230V/60Hz			
	Voltage/frequency variations			Voltage: +10 to -15% (Voltage unbalance: 2% or less) *7, Frequency: +5 to -5%																
	Rated current (A)	(with DCR)	*5	3.2	6.1	8.9	15.0	21.1	28.8	42.2	57.6	71.0	84.4	114	138	167	203	262	334	410
		(without DCR)		5.3	9.5	13.2	22.2	31.5	42.7	60.7	80.1	97.0	112	151	185	225	270	—	—	—
	Required power supply capacity (kVA)		*5	1.2	2.2	3.1	5.3	7.4	10	15	20	25	30	40	48	58	71	98	116	142
Braking	Torque (%)		*6	20										10 to 15						
	DC injection braking			Starting frequency: 0.0 to 60.0Hz, Braking time: 0.0 to 30.0s, Braking level: 0 to 60%																
DC reactor (DCR)				Option														Standard		
Applicable safety standards				UL508C, C22.2 No.14, EN50178:1997 (Applying)																
Enclosure (IEC60529)				IP20, UL open type										IP00, UL open type						
Cooling method				Natural cooling		Fan cooling														
Mass (kg)				3.1	3.2	3.3	3.4	3.4	5.8	6.0	6.9	9.5	9.7	11.5	23	33	34	41	75	120

*1 Fuji 4-pole standard motor.
*2 Rated capacity is calculated by assuming the output rated voltage as 220V for three-phase 200V series.
*3 Output voltage cannot exceed the power supply voltage.
*4 An excessively low setting of the carrier frequency may result in the higher motor temperature or tripping of the inverter by its overcurrent limiter setting. Lower the continuous load or maximum load instead. (When setting the carrier frequency (F26) to 1kHz, reduce the load to 80% of its rating.)
*5 Obtained when a DC reactor (DCR) is used.
*6 Average braking torque (Varies with the efficiency of the motor.)
*7 Voltage unbalance (%) = $\frac{\text{Max. voltage (V)} - \text{Min. voltage (V)}}{\text{Three-phase average voltage (V)}} \times 67$ (IEC61800-3 (5.2.3))
If this value is 2 to 3%, use an AC reactor (ACR option).
*8 Trial calculation done on assumption that the power capacity is 500kVA (or 10 times the inverter capacity if the inverter capacity is larger than 50kVA) and the inverter is connected to the power supply of %X=5%.
*9 Use [R1, T1] terminals for driving AC cooling fans of an inverter powered by the DC link bus, such as by a high power factor PWM converter. (In ordinary operation, the terminals are not used.)
*10 When using the inverter at an ambient temperature higher than 40°C and at a carrier frequency of 3kHz or over, select the inverter so that the current does not exceed the rated current specified in ( ) during continuous operation.

Three-phase 400V series

●0.75 to 55kW

Item				Specifications													
Type (FRN□□□F1S-4A)				0.75	1.5	2.2	3.7	5.5	7.5	11	15	18.5	22	30	37	45	55
Nominal applied motor (kW)			*1	0.75	1.5	2.2	3.7	5.5	7.5	11	15	18.5	22	30	37	45	55
Output ratings	Rated capacity (kVA)		*2	1.9	2.8	4.1	6.8	9.5	12	17	22	28	33	44	54	64	77
	Rated voltage (V)		*3	Three-phase, 380 to 480V (with AVR function)													
	Rated current (A)		*4	2.5	3.7	5.5	9.0	12.5	16.5	23	30	37	44	59	72	85	105
	Overload capability			120% of rated current for 1min													
	Rated frequency			50, 60 Hz													
Input ratings	Phases, voltage, frequency	Main power supply		Three-phase, 380 to 480V, 50/60Hz											Three-phase, 380 to 440V/50Hz Three-phase, 380 to 480V/60Hz		
		Auxiliary control power input		Single-phase, 380 to 480V, 50/60Hz											Single-phase, 380 to 440V/50Hz Single-phase, 380 to 480V/60Hz		
		Auxiliary fan power input	*9	—													*10
	Voltage/frequency allowance			Voltage: +10 to -15% (Voltage unbalance: 2% or less) *7, Frequency: +5 to -5%													
	Rated current (A)	(with DCR)	*8	1.6	3.0	4.5	7.5	10.6	14.4	21.1	28.8	35.5	42.2	57.0	68.5	83.2	102
		(without DCR)	*8	3.1	5.9	8.2	13.0	17.3	23.2	33.0	43.8	52.3	60.6	77.9	94.3	114	140
	Required power supply capacity (kVA)		*5	1.2	2.2	3.1	5.3	7.4	10	15	20	25	30	40	48	56	71
Braking	Torque (%)		*6	20										10 to 15			
	DC injection braking			Starting frequency: 0.0 to 60.0Hz, Braking time: 0.0 to 30.0s, Braking level: 0 to 60%													
DC reactor (DCR)				Option													
Applicable safety standards				UL508C, C22.2 No.14, EN50178:1997 (Applying)													
Enclosure (IEC60529)				IP20, UL open type										IP00, UL open type			
Cooling method				Natural cooling	Fan cooling												
Mass (kg)				3.1	3.2	3.3	3.4	3.4	5.6	6.0	6.9	9.4	9.9	11.5	23	24	33

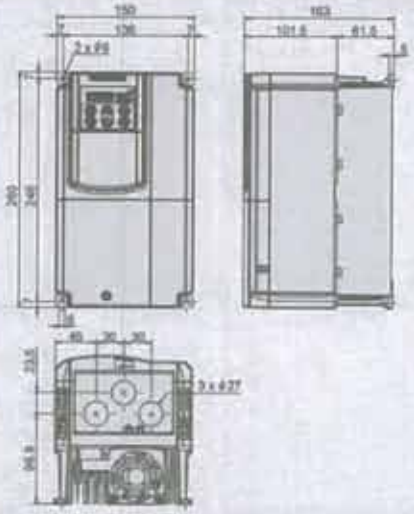
●75 to 560kW

Item				Specifications													
Type (FRN□□□F1S-4A)				75	90	110	132	160	200	220	280	315	355	400	450	500	560
Nominal applied motor (kW)			*1	75	90	110	132	160	200	220	280	315	355	400	450	500	560
Output ratings	Rated capacity (kVA)		*2	105	128	154	182	221	274	316	396	445	495	563	640	731	792
	Rated voltage (V)		*3	Three-phase, 380 to 480V (with AVR function)													
	Rated current (A)		*4	139	168	203	240	290	360	415	520	585	650	740	840	960	1040
	Overload capability			120% of rated current for 1min													
	Rated frequency			50, 60 Hz													
Input ratings	Phases, voltage, frequency	Main power supply		Three-phase, 380 to 440V, 50Hz or Three-phase, 380 to 480V, 60Hz													
		Auxiliary control power input		Single-phase, 380 to 480V, 50/60Hz													
		Auxiliary fan power input	*9	Single-phase, 380 to 440V/50Hz Single-phase, 380 to 480V/60Hz													
	Voltage/frequency variations			Voltage: +10 to -15% (Voltage unbalance 2% or less) *7, Frequency: +5 to -5%													
	Rated current (A)	(with DCR)	*8	138	164	201	238	286	357	390	500	559	628	705	789	881	990
		(without DCR)		—	—	—	—	—	—	—	—	—	—	—	—	—	—
	Required power supply capacity (kVA)		*5	96	114	140	165	199	248	271	347	388	435	489	547	611	686
Braking	Torque (%)		*6	10 to 15													
	DC injection braking			Starting frequency: 0.0 to 60.0Hz, Braking time: 0.0 to 30.0s, Braking level: 0 to 60%													
DC reactor (DCR)				Option													
Applicable safety standards				UL508C, C22.2 No.14, EN50178:1997 (Applying)													
Enclosure (IEC60529)				IP20, UL open type													
Cooling method				Fan cooling													
Mass (kg)				34	42	45	63	67	96	98	162	165	282	286	355	360	360

*1 Fuji 4-pole standard motor
*2 Rated capacity is calculated by assuming the output rated voltage as 440V for three-phase 400 V series.
*3 Output voltage cannot exceed the power supply voltage.
*4 An excessively low setting of the carrier frequency may result in the higher motor temperature or tripping of the inverter by its overcurrent limiter setting. Lower the continuous load or maximum load instead. (When setting the carrier frequency (F26) to 1kHz, reduce the load to 80% of its rating.)
*5 Obtained when a DC reactor (DCR) is used.
*6 Average braking torque (Varies with the efficiency of the motor.)
*7 Voltage unbalance (%) = $\frac{\text{Max. voltage (V) - Min. voltage (V)}}{\text{Three-phase average voltage (V)}} \times 67$ (IEC61800-3)
If this value is 2 to 3%, use an AC reactor (ACR option).
*8 Trial calculation done on assumption that the power capacity is 500kVA (or 10 times the inverter capacity if the inverter capacity is larger than 50kVA) and the inverter is connected to the power supply of %X=5%.
*9 Use [R1, T1] terminals for driving AC cooling fans of an inverter powered by the DC link bus, such as by a high power factor PWM converter. (In ordinary operation, the terminals are not used.)
*10 Single-phase, 380 to 440V/50Hz or Single-phase, 380 to 480V/60Hz

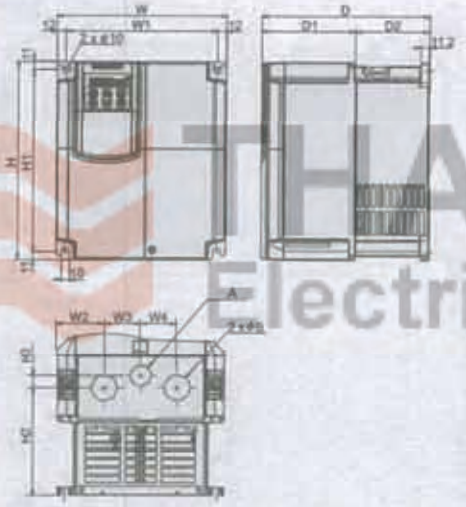
External Dimensions

Main body of standard inverter (5.5kW or smaller)



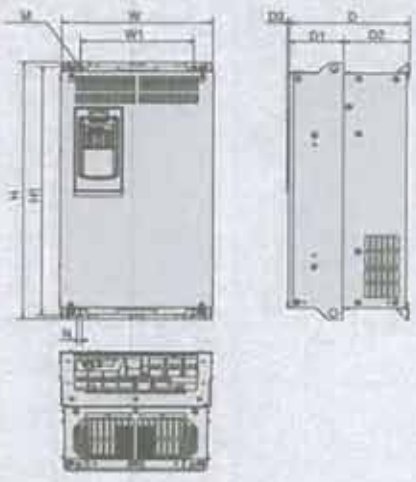
Power supply voltage	Type
Three-phase 200V	FRN0.75F1S-2A FRN1.5F1S-2A FRN2.2F1S-2A FRN3.7F1S-2A FRN5.5F1S-2A
Three-phase 400V	FRN0.75F1S-4A FRN1.5F1S-4A FRN2.2F1S-4A FRN3.7F1S-4A FRN5.5F1S-4A

Main body of standard inverter (7.5 to 30kW)



Power supply voltage	Type	Dimensions (mm) W	W1	W2	W3	W4	H	H1	H2	H3	D	D1	D2	ϕA	ϕB
Three-phase 200V	FRN7.5F1S-2A	220	196	63.5	46.5	46.5	260	238	141.7	16	215	118.5	96.5	27	34
	FRN11F1S-2A								136.7	21				34	42
	FRN15F1S-2A														
	FRN18.5F1S-2A	250	226	67	56	56	400	378	166.2	2		65	130		
	FRN22F1S-2A														
	FRN30F1S-2A			—	—	—			—	—				—	—
Three-phase 400V	FRN7.5F1S-4A	220	196	63.5	46.5	46.5	260	238	141.7	16	215	118.5	96.5	27	34
	FRN11F1S-4A								136.7	21				34	42
	FRN15F1S-4A														
	FRN18.5F1S-4A	250	226	67	56	56	400	378	166.2	2		65	130		
	FRN22F1S-4A														
	FRN30F1S-4A			—	—	—			—	—				—	—

Main body of standard inverter (37 to 560kW)



Power supply voltage	Type	Dimensions (mm) W	W1	H	H1	D	D1	D2	D3	M	N
Three-phase 200V	FRN37F1S-2A	320	240	550	530	255	115	140	4.5	2xϕ10	10
	FRN45F1S-2A	355	275	615	595	270		155			
	FRN55F1S-2A										
	FRN75F1S-2A			740	720						
	FRN90F1S-2A	530	430	750	720	300	240	140	8	2xϕ15	15
	FRN110F1S-2A	660	580	860	850	395	255			3xϕ15	
Three-phase 400V	FRN37F1S-4A	320	240	550	530	255	115	140	4.5	2xϕ10	10
	FRN45F1S-4A										
	FRN55F1S-4A	355	275	615	595	270		155			
	FRN75F1S-4A										
	FRN90F1S-4A			740	720	300	145	155	8	2xϕ10	10
	FRN110F1S-4A										
	FRN132F1S-4A	530	430	740	710	315	135	180			
	FRN160F1S-4A			1000	970	360	180	180			
	FRN200F1S-4A										
	FRN220F1S-4A										
	FRN280F1S-4A	660	580	1000	970	360	200	180	8	3xϕ15	15
	FRN315F1S-4A			1400	1370	440	260				
	FRN355F1S-4A										
	FRN400F1S-4A										
	FRN450F1S-4A	880	780							4xϕ15	
	FRN500F1S-4A										
	FRN560F1S-4A										

e-Front runners

High Performance Multifunctional Inverters

FRENIC-MEGA Series

FUJI ELECTRIC

Inverter

FRENIC-Mega Series		
Input 3 Phase 220V 50/60Hz , Output 3 Phase 0-220V		
Capacity	Model	Price
0.75 kW / 1 HP	**FRN0.75G1S-2A**	โปรดสอบถาม
1.5 kW / 2HP	**FRN1.5G1S-2A**	โปรดสอบถาม
2.2 kW / 3 HP	**FRN2.2G1S-2A**	โปรดสอบถาม
3.7 kW / 5 HP	**FRN3.7G1S-2A**	โปรดสอบถาม
5.5 kW / 7.5 HP	**FRN5.5G1S-2A**	โปรดสอบถาม
7.5 kW / 10 HP	**FRN7.5G1S-2A**	โปรดสอบถาม
11 kW / 15 HP	**FRN11G1S-2A**	โปรดสอบถาม
15 kW / 20 HP	**FRN15G1S-2A**	โปรดสอบถาม
18 kW / 25 HP	**FRN18G1S-2A**	โปรดสอบถาม
22 kW / 30 HP	**FRN22G1S-2A**	โปรดสอบถาม
30 kW / 40 HP	**FRN30G1S-2A**	โปรดสอบถาม
37 kW / 50 HP	**FRN37G1S-2A**	โปรดสอบถาม
Input 3 Phase 380V 50/60Hz , Output 3 Phase 0-380V		
Capacity	Model	Price
0.75 kW / 1 HP	**FRN0.75G1S-4A**	โปรดสอบถาม
1.5 kW / 2HP	**FRN1.5G1S-4A**	โปรดสอบถาม
2.2 kW / 3 HP	**FRN2.2G1S-4A**	โปรดสอบถาม
3.7 kW / 5 HP	**FRN3.7G1S-4A**	โปรดสอบถาม
5.5 kW / 7.5 HP	**FRN5.5G1S-4A**	โปรดสอบถาม
7.5 kW / 10 HP	**FRN7.5G1S-4A**	โปรดสอบถาม
11 kW / 15 HP	**FRN11G1S-4A**	โปรดสอบถาม
15 kW / 20 HP	**FRN15G1S-4A**	โปรดสอบถาม
18 kW / 25 HP	**FRN18G1S-4A**	โปรดสอบถาม
22 kW / 30 HP	**FRN22G1S-4A**	โปรดสอบถาม
30 kW / 40 HP	**FRN30G1S-4A**	โปรดสอบถาม
37 kW / 50 HP	**FRN37G1S-4A**	โปรดสอบถาม

Model Variations

Model list

HD : High Duty spec 200% for 3 sec, 150% for 1min
LD : Low Duty spec 120% for 1 min

Standard applied motor (kW)	Basic type				EMC filter built-in type			
	3-phase 400 V series		3-phase 200 V series		3-phase 400 V series		3-phase 200 V series	
	HD spec (150%)	LD spec (120%)	HD spec (150%)	LD spec (120%)	HD spec (150%)	LD spec (120%)	HD spec (150%)	LD spec (120%)
0.4	FRN0.4G1S-4□		FRN0.4G1S-2□		FRN0.4G1E-4□		FRN0.4G1E-2□	
0.75	FRN0.75G1S-4□		FRN0.75G1S-2□		FRN0.75G1E-4□		FRN0.75G1E-2□	
1.5	FRN1.5G1S-4□		FRN1.5G1S-2□		FRN1.5G1E-4□		FRN1.5G1E-2□	
2.2	FRN2.2G1S-4□		FRN2.2G1S-2□		FRN2.2G1E-4□		FRN2.2G1E-2□	
3.7	FRN3.7G1S-4□		FRN3.7G1S-2□		FRN3.7G1E-4□		FRN3.7G1E-2□	
5.5	FRN5.5G1S-4□		FRN5.5G1S-2□		FRN5.5G1E-4□		FRN5.5G1E-2□	
7.5	FRN7.5G1S-4□	FRN5.5G1S-4□	FRN7.5G1S-2□	FRN5.5G1S-2□	FRN7.5G1E-4□	FRN5.5G1E-4□	FRN7.5G1E-2□	FRN5.5G1E-2□
11	FRN11G1S-4□	FRN7.5G1S-4□	FRN11G1S-2□	FRN7.5G1S-2□	FRN11G1E-4□	FRN7.5G1E-4□	FRN11G1E-2□	FRN7.5G1E-2□
15	FRN15G1S-4□	FRN11G1S-4□	FRN15G1S-2□	FRN11G1S-2□	FRN15G1E-4□	FRN11G1E-4□	FRN15G1E-2□	FRN11G1E-2□
18.5	FRN18.5G1S-4□	FRN15G1S-4□	FRN18.5G1S-2□	FRN15G1S-2□	FRN18.5G1E-4□	FRN15G1E-4□	FRN18.5G1E-2□	FRN15G1E-2□
22	FRN22G1S-4□	FRN18.5G1S-4□	FRN22G1S-2□	FRN18.5G1S-2□	FRN22G1E-4□	FRN18.5G1E-4□	FRN22G1E-2□	FRN18.5G1E-2□
30	FRN30G1S-4□	FRN22G1S-4□	FRN30G1S-2□	FRN22G1S-2□	FRN30G1E-4□	FRN22G1E-4□	FRN30G1E-2□	FRN22G1E-2□
37	FRN37G1S-4□	FRN30G1S-4□	FRN37G1S-2□	FRN30G1S-2□	FRN37G1E-4□	FRN30G1E-4□	FRN37G1E-2□	FRN30G1E-2□
45	FRN45G1S-4□	FRN37G1S-4□	FRN45G1S-2□	FRN37G1S-2□	FRN45G1E-4□	FRN37G1E-4□	FRN45G1E-2□	FRN37G1E-2□
55	FRN55G1S-4□	FRN45G1S-4□	FRN55G1S-2□	FRN45G1S-2□	FRN55G1E-4□	FRN45G1E-4□	FRN55G1E-2□	FRN45G1E-2□
75	FRN75G1S-4□	FRN55G1S-4□	FRN75G1S-2□	FRN55G1S-2□	FRN75G1E-4□	FRN55G1E-4□	FRN75G1E-2□	FRN55G1E-2□
90	FRN90G1S-4□	FRN75G1S-4□	FRN90G1S-2□	FRN75G1S-2□	FRN90G1E-4□	FRN75G1E-4□	FRN90G1E-2□	FRN75G1E-2□
110	FRN110G1S-4□	FRN90G1S-4□		FRN90G1S-2□	FRN110G1E-4□	FRN90G1E-4□		FRN90G1E-2□
132	FRN132G1S-4□	FRN110G1S-4□			FRN132G1E-4□	FRN110G1E-4□		
160	FRN160G1S-4□	FRN132G1S-4□			FRN160G1E-4□	FRN132G1E-4□		
200	FRN200G1S-4□	FRN160G1S-4□			FRN200G1E-4□	FRN160G1E-4□		
220	FRN220G1S-4□	FRN200G1S-4□			FRN220G1E-4□	FRN200G1E-4□		
280	FRN280G1S-4□	FRN220G1S-4□			FRN280G1E-4□	FRN220G1E-4□		
・	・	・			・	・		
・	・	・			・	・		
・	・	・			・	・		
・	・	・			・	・		
630	FRN630G1S-4□	FRN560G1S-4□			FRN630G1E-4□	FRN560G1E-4□		
710		FRN630G1S-4□				FRN630G1E-4□		

(□) in the above table replaces A, E or T depending on the enclosure. A : Asia E : EU T : Taiwan Available soon

*When HD spec of FRN55G1□-2A or FRN55G1□-4A is ordered, no DC reactor is supplied as a standard device. But, when LD spec is ordered, the DC reactor is supplied as a standard device. (□:S:Standard type, E:EMC filter built-in type)

How to read the inverter model

FRN 0.75 G 1 S - 4 A

Code	Series name
FRN	FRENIC series

Code	Applicable motor rating
0.4	0.4kW
0.75	0.75kW
1	1
500	500kW
560	560kW
630	630kW

Code	Applicable range
G	High performance, multifunctional type

Code	Destination / Instruction manual
A	Asia / English
E	EU / English
T	Taiwan / English

Code	Input power source
4	3-phase 400V
2	3-phase 200V

Code	Enclosure
S	Standard (basic type)
E	EMC filter built-in type

Code	Order of development
1	Series

Caution The contents of this catalog are provided to help you select the product model that is best for you. Before the actual use, be sure to read the User's Manual thoroughly for proper operations.

Standard Specifications (Basic type)

Three-phase 400V series

(0.4 to 55kW) HD (High Duty) spec for heavy load

Item			Specifications														
Type (FRN G1S-4)			0.4	0.75	1.5	2.2	3.7	5.5	7.5	11	15	18.5	22	30	37	45	55
Nominal applied motor [kW] (*1)			0.4	0.75	1.5	2.2	3.7	5.5	7.5	11	15	18.5	22	30	37	45	55
Output ratings	Rated capacity [kVA] (*2)		1.1	1.9	2.8	4.1	6.8	10	14	18	24	29	34	46	57	69	85
	Rated voltage [V] (*3)		Three-phase 380 to 480V (with AVR)														
	Rated Current [A]		1.5	2.5	4	5.5	9	13.5	18.5	24.5	32	39	45	60	75	91	112
	Overload capability		150% for 1min, 200% for 3.0s														
	Rated frequency [Hz]		50, 60Hz														
Input ratings	Main circuit power Phases, voltage, frequency		Three-phase 380 to 480V, 50/60Hz														
	Auxiliary control power input Phases, voltage, frequency		-	Single-phase 380 to 480V, 50/60Hz													
	Auxiliary power input for fan Phases, voltage, frequency (*5)		-														
	Voltage, frequency variations		Voltage:(10 to -15% (Voltage unbalance:2% or less (*6)) Frequency:+5 to -5%														
	Rated current [A] (*7)	with DCR	0.85	1.6	3.0	4.5	7.5	10.6	14.4	21.1	28.8	35.5	42.2	57.0	68.5	83.2	102
		without DCR	1.7	3.1	5.9	8.2	13.0	17.3	23.2	33	43.8	52.3	60.6	77.9	94.3	114	140
	Required power supply capacity [kVA] (*8)	with DCR	0.6	1.2	2.1	3.2	5.2	7.4	10	15	20	25	30	40	48	58	71
Braking	Torque [%] (*9)		150%		100%					20%				10 to 15%			
	Braking transistor		Built-in											-			
	Min. ohmic value [Ω] Torque [%]		200 150%		160 150%		96 150%	64 150%	48 150%	32 150%	24 150%	16 150%		-			
	Built-in braking resistance		720Ω	470Ω	160Ω			80Ω		-							
		Braking time[s]	5s							-							
		%ED	5	3	5	3	2	3	2	-							
	DC injection braking		Starting frequency:0.0 to 60.0Hz, Braking time: 0.0 to 30.0s, Braking level:0 to 100%														
DC reactor (DCR) (*10)			Optional														
Applicable safety standards			UL508C, C22.2No.14, EN50178:1997														
Enclosure (IEC60529)			IP20 (IEC60529) closed type, UL open type (UL 50)											IP00 open type, UL open type			
Cooling method			Natural cooling		Fan cooling												
Weight/Mass [kg]			1.7	2	2.6	2.7	3	6.5	6.5	5.8	9.5	9.5	10	25	26	31	53

(75 to 630kW) HD (High Duty) spec for heavy load

Item			Specifications														
Type (FRN G1S-4)			75	90	110	132	160	200	220	280	315	355	400	500	630		
Nominal applied motor [kW] (*1)			75	90	110	132	160	200	220	280	315	355	400	500	630		
Output ratings	Rated capacity [kVA] (*2)		114	134	160	192	231	287	316	396	445	495	563	731	891		
	Rated voltage [V] (*3)		Three-phase 380 to 480V (with AVR)														
	Rated Current [A]		150	176	210	253	304	377	415	520	585	650	740	960	1170		
	Overload capability		150% for 1min, 200% for 3.0s														
	Rated frequency [Hz]		50, 60Hz														
Input ratings	Main circuit power Phases, voltage, frequency		Three-phase 380 to 480V, 50Hz Three-phase 380 to 480V, 60Hz														
	Auxiliary control power input Phases, voltage, frequency		Single-phase 380 to 480V, 50/60Hz														
	Auxiliary power input for fan Phases, voltage, frequency (*5)		Single-phase 380 to 440V, 50Hz Single-phase 380 to 480V, 60Hz														
	Voltage, frequency variations		Voltage:+10 to -15% (Voltage unbalance:2% or less (*6)) Frequency:+5 to -5%														
	Rated current [A] (*7)	with DCR	138	164	210	238	286	357	390	500	559	628	705	861	1115		
		without DCR	-	-	-	-	-	-	-	-	-	-	-	-	-		
	Required power supply capacity [kVA] (*8)	with DCR	96	114	140	165	199	248	271	347	388	436	489	611	773		
Braking	Torque [%] (*9)		10 to 15%														
	Braking transistor		-														
	Min. ohmic value [Ω] Torque [%]		-														
	DC injection braking		Starting frequency:0.0 to 60.0Hz, Braking time: 0.0 to 30.0s, Braking level:0 to 100%														
DC reactor (DCR) (*10)			Standard accessory														
Applicable safety standards			UL508C, C22.2No.14, EN50178:1997														
Enclosure (IEC60529)			IP20(IEC60529) closed type, UL open type (UL 50)														
Cooling method			Fan cooling														
Weight/Mass [kg]			42	62	64	103	103	144	144								

(*1) Fuji's 4-pole standard motor
(*2) Rated capacity is calculated by assuming the output rated voltage as 220V for three-phase 200V series and 440V for three-phase 400V series.
(*3) Output voltage cannot exceed the power supply voltage.
(*5) The auxiliary power input is used as an AC fan power input when combining the unit such as high power factor PWM converter with power regenerative function. (Generally not used.)
(*6) Interphase voltage unbalance ratio[%] = (max. voltage [V] - min. voltage [V])/3-phase average voltage [V]×67(See IEC61800-3.) Use the DC reactor (ACR: optional) when used with 2 to 3 % of unbalance ratio.
(*7) The value is calculated on assumption that the inverter is connected with a power supply capacity of 500kVA (or 10 times the inverter capacity if the inverter capacity exceeds 50kVA) and %X is 5%.
(*8) Obtained when a DC reactor (DCR) is used.
(*9) Average braking torque obtained by use of a motor. (Varies with the efficiency of the motor.)
(*10) The 55kW DC reactor (DCR) is optional with HD spec, and is provided as a standard accessory with LD spec.

●Inverter main body

■Basic type, EMC filter built-in type

Power supply voltage	Nominal applied motor (kW)	Inverter type	Fig	W	W1	W2	W3	W4	H	H1	H2	D	D1	D2	D3	M	N	W'	W'1	W'2	H'	H'1	H'2	M'
				Main body external dimensions (mm)														Panel cutout dimensions (mm)						
3-phase 200V	0.4	FRN0.4G1□-2■	A	110	–	–	–	–	260	–	–	130	113	17	41.5	2×Φ6	6	–	–	–	–	–	–	–
	0.75	FRN0.75G1□-2■	A									145		32	56.5									
	1.5	FRN1.5G1□-2■	B	150											–									
	2.2	FRN2.2G1□-2■	B																					
	3.7	FRN3.7G1□-2■	B																					
	5.5	FRN5.5G1□-2■	C	220								195	105	90	136.7	2×Φ10	10							
	7.5	FRN7.5G1□-2■	C																					
	11	FRN11G1□-2■	C																					
	15	FRN15G1□-2■	D	250					400						136.5									
	18.5	FRN18.5G1□-2■	D																					
	22	FRN22G1□-2■	D																					
	30	FRN30G1□-2■	E	326.2	320	240	310.2	304	550	530	500	261.3	115	140	255	2×Φ10	10	312	288	240	530	512	9	4×M8
	37	FRN37G1□-2■	E	361.2	355	275	345.2	339	615	595	565	276.3		155	270			347	323	275	595	577		
	45	FRN45G1□-2■	E						740	720	690								275	–	720	702		
	55	FRN55G1□-2■	E																					
	75	FRN75G1□-2■	–	Available soon																				
	90	FRN90G1□-2■	–																					
3-phase 400V	0.4	FRN0.4G1□-4■	A	110	–	–	–	–	260	–	–	130	113	17	41.5	2×Φ6	6	–	–	–	–	–	–	–
	0.75	FRN0.75G1□-4■	A									145		32	56.5									
	1.5	FRN1.5G1□-4■	B	150											–									
	2.2	FRN2.2G1□-4■	B																					
	3.7	FRN3.7G1□-4■	B																					
	5.5	FRN5.5G1□-4■	C	220								195	100	90	136.7	2×Φ10	10							
	7.5	FRN7.5G1□-4■	C																					
	11	FRN11G1□-4■	C																					
	15	FRN15G1□-4■	D	250					400						136.5									
	18.5	FRN18.5G1□-4■	D																					
	22	FRN22G1□-4■	D																					
	30	FRN30G1□-4■	E	326.2	320	240	310.2	304	550	530	500	261.3	115	140	255	2×Φ10	10	312	288	240	530	512	9	4×M8
	37	FRN37G1□-4■	E	361.2	355	275	345.2	339	615	595	565	276.3		155	270			347	323	275	595	577		
	45	FRN45G1□-4■	E						675	655	625										655	637		
	55	FRN55G1□-4■	E						740	720	690								275	–	720	702		
	75	FRN75G1□-4■	E																					
	90	FRN90G1□-4■	E	325.8	530	430	505.4	500.6		710	678.7	321.3	135	180	315	2×Φ15	15	510	430	430	710	685	12.5	4×M12
	110	FRN110G1□-4■	E																					
	132	FRN132G1□-4■	E	336.4				500	1000	970	939.5	366.3	180		360						970	945		
	160	FRN160G1□-4■	E																					
	200	FRN200G1□-4■	E	586.4	680	580	606.4	550.8								3×Φ15		690	580	580				3×M12
	220	FRN220G1□-4■	E																					
	280	FRN280G1□-4■	–	Available soon																				
	315	FRN315G1□-4■	–																					
	355	FRN355G1□-4■	–																					
	400	FRN400G1□-4■	–																					
	500	FRN500G1□-4■	–																					
	630	FRN630G1□-4■	–																					

□:S:Standard type, E:EMC filter built-in type

●Touch Panel (with USB connector model, Multi-function model)

[Unit:mm]

Multi-function model　with USB connector model　Rear view　Dimensions of panel cutting (Viewed from "A")