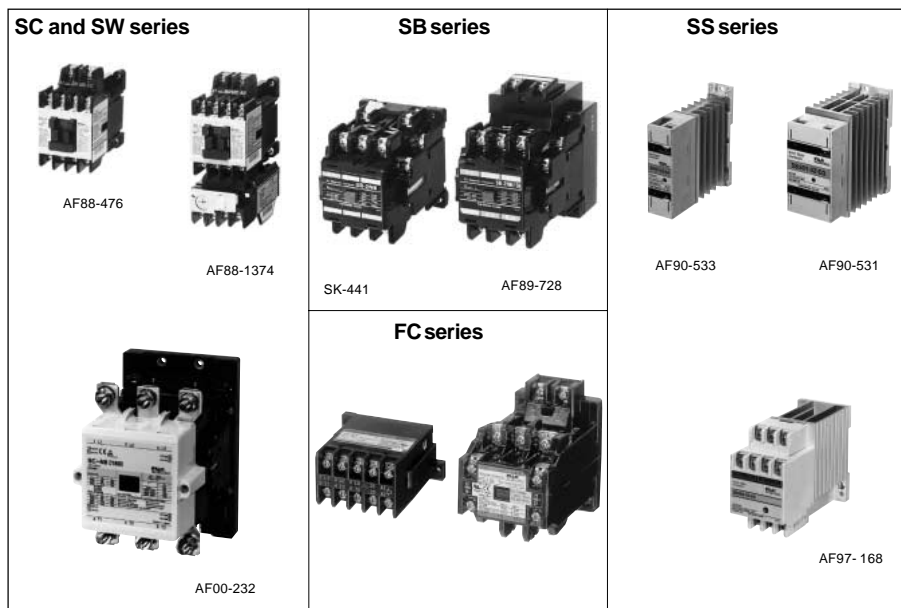


FUJI low-voltage contactors and starters are available in a broad choice of types, from high-performance to economy, for all consumer and industrial needs. For standard applications, we offer the high-performance SC series. We offer the economical F series for light industrial use, the SB series dedicated to DC circuits, the SJ series for direct driving by transistors, and the SS series with long service-life noise-free solid-state contactors.



SC and SW series
Standard type magnetic contactors and starters

The SC series is a range of long service-life and high-performance contactors. SC-03 to SC-N3 small-frame contactors provide snap-on fitting of numerous optional units, such as auxiliary contact blocks, coil surge suppressors, and operation counters. Field modifications are quick and easy to make.

Type SC-N5 and above contactors come with an IC-controlled SUPER MAGNET coil, which operates from both AC and DC sources, to eliminate burnt coils and contact chattering caused by voltage fluctuation.

SB series
DC magnetic contactors

We developed the SB series DC contactors from our SC series AC contactors. Applications include opening and closing DC circuits and controlling DC motors. They permit switching of DC loads up to 550V DC, 360A. There are two main contact arrangements available: the 2NO type and the 2NO + 1NC type, which has one NC contact for dynamic brake circuits. Type SB-5N and above contactors come with an IC-controlled SUPER MAGNET coil for improved operational stability.

SS series
Solid-state contactors

The SS series contactors employ a semiconductor that can withstand both high voltage and large overcurrent when making and breaking load circuits. The completely contactless design gives high performance, including long service life and noise-free operation. Applications include frequent making and breaking for motors, heaters, and similar circuits. A built-in surge absorbing varistor and CR circuit to protect the SSC from surges when switching inductive loads, and surges from external circuits.

FC and FW series
Definite purpose contactors and starters

The FC series contactors are compact and economical contactors designed for use in consumer appliances with relatively low switching frequencies. Typical applications include air conditioners, industrial washing machines, heaters, compressors, driers, and fans. Contactor pickup voltage is 75% of the rated voltage. FC-0 is available with tab and printed board terminals, as well as with self-lifting screw terminals.

Magnetic Contactors and Starters

SC and SW series

Design features

SC-03, 0, 05, 4-0, 4-1, 5-1
 SC-N1, N2, N2S, N3

■ Description

Small frame contactors with new functions join the SC series.

The SC line up, which is based on high level technology, now extends from the SC-03 to the SC-N16.

The new SC series contactors have such options as additional auxiliary contact blocks and operation counter unit with snap-on fittings, and coil surge suppressors. Modification can be made quickly and easily on site.

Improved contact materials and structure double the electrical life compared with existing contactors —2 million operations. Bifurcated type auxiliary contacts have a high degree of contact reliability. Therefore, they can be used in low-level circuits of 5V, 3mA and directly input to electronic equipment.

Long electrical life
 2 million operations (AC-3 duty)

Easy-to-read front display
 Type, ratings and terminal numbers

Manual operator for easy circuit checking
 ON-OFF status indicator

Direct-fitted overload relay assures time-saving assembly

Manual reset button

Dial cover for protection against unauthorized current setting

Single-side-mounted coil terminal
 The coil surge suppressor or coil drive unit can be easily added

Terminal numbers meet IEC standards

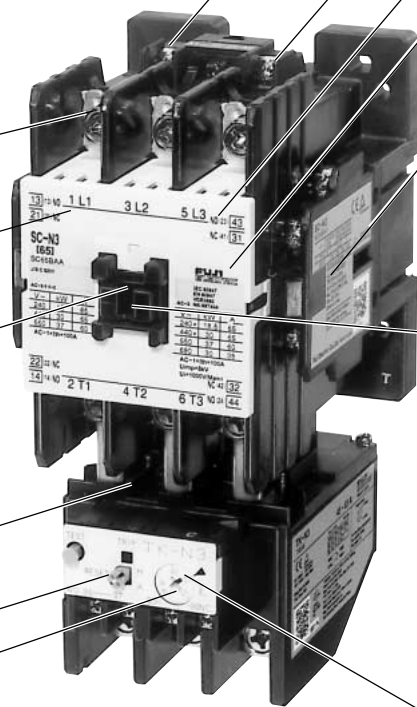
Meets international standards
 IEC, NEMA, BS, JIS, VDE
 UL, CSA, NK, BV and LR approved

Bifurcated auxiliary contact with high contact reliability

Optional function unit can be easily added to modify contactor immediately on site.

- Auxiliary contact block fits all size contactors(03 to N3)
- Snap-on mechanical interlock unit can be fixed to equal or unequal size contactors without tools.
- Front-mounted operation counter

Exact current setting possible



Easy modular system

■ **Side mounting**
 Auxiliary contact block
 Single pole (1NO + 1NC)

Mechanical interlock unit
 The mechanical interlock unit is used to interlock two contactors for reversing. One size fits all contactors.

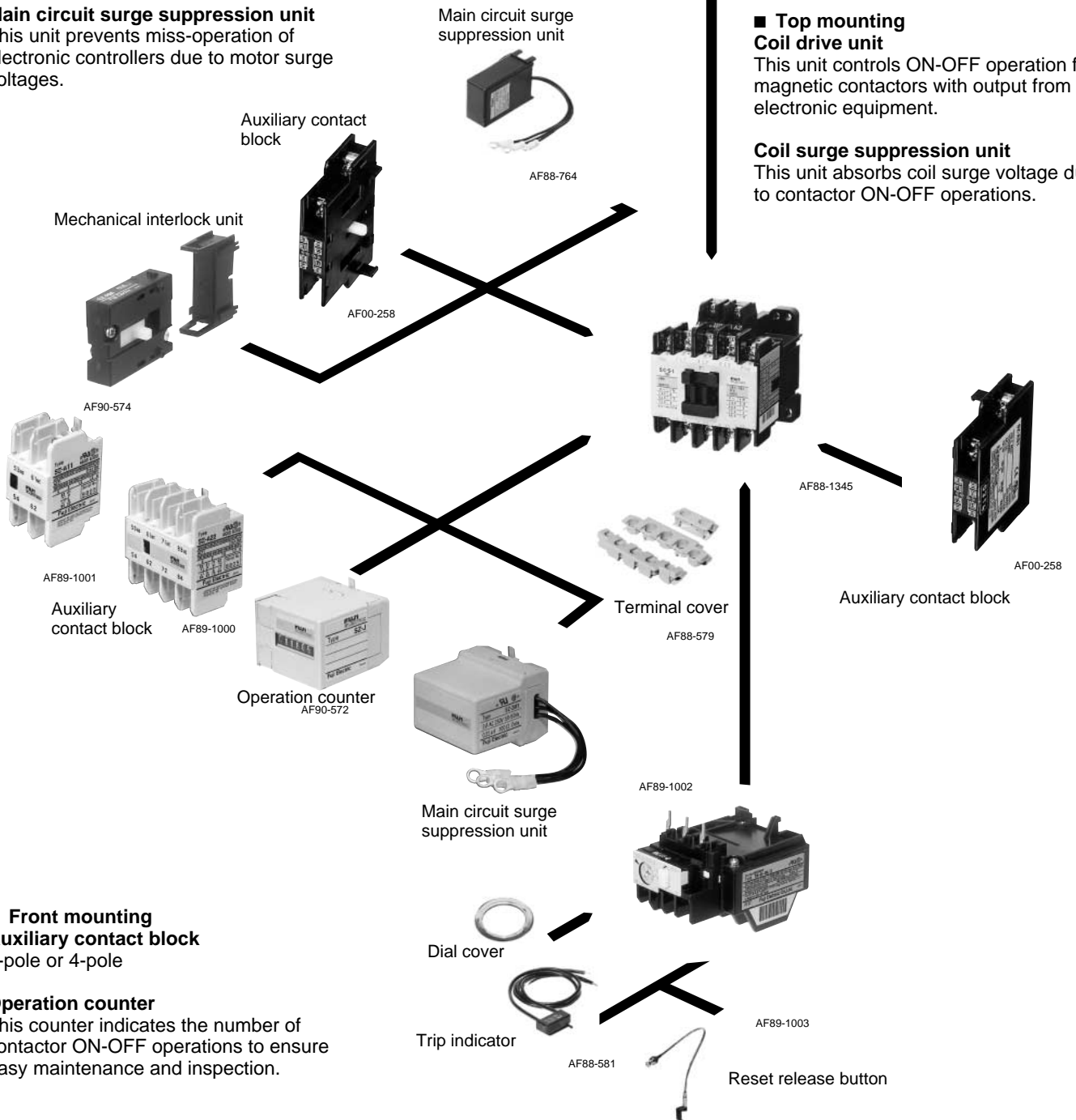
Main circuit surge suppression unit
 This unit prevents miss-operation of electronic controllers due to motor surge voltages.

Coil drive unit
 AF88-768

Coil surge suppression unit
 AF89-996

■ **Top mounting**
Coil drive unit
 This unit controls ON-OFF operation for magnetic contactors with output from electronic equipment.

Coil surge suppression unit
 This unit absorbs coil surge voltage due to contactor ON-OFF operations.



■ **Front mounting**
Auxiliary contact block
 2-pole or 4-pole

Operation counter
 This counter indicates the number of contactor ON-OFF operations to ensure easy maintenance and inspection.

Main circuit surge suppression unit

■ **Further information**
 See page 01/75

Magnetic Contactors and Starters

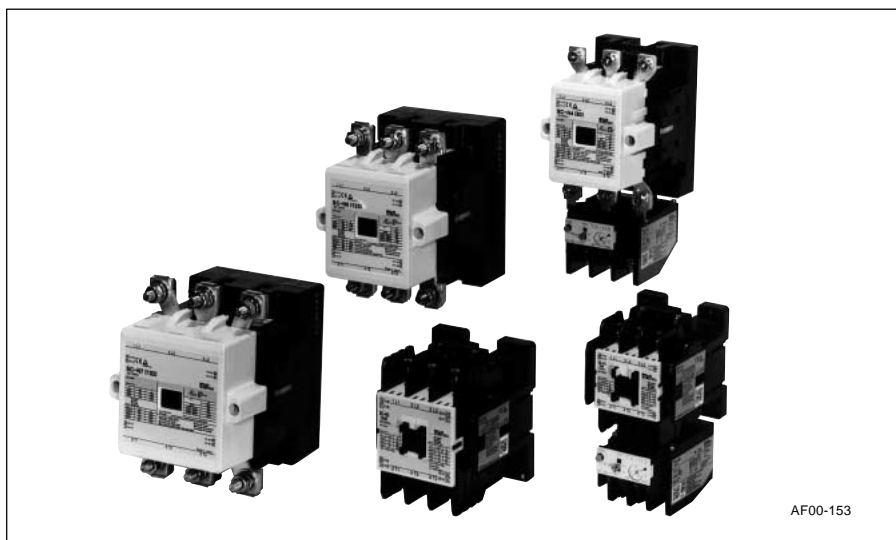
SC and SW series

Design features

SC-N1 to N16

■ Description

FUJI NEW SC series (SC-N5 to N16) contactors have been developed and manufactured using FUJI's most advanced electronic technologies. They employ an electronically-controlled SUPER MAGNET which is provided with a built-in IC, thus enhancing their performance and reliability. The SUPER MAGNET is based on an "AC-input, DC-operated concept", thus allowing the coil to be energized by both AC and DC input. Moreover, once closed, sealed current is controlled by switching circuit. This permits a great reduction in power consumption – a cost-effective feature. The SC-N1 to SC-N4 are without SUPER MAGNET. These contactors feature compact size, arc extinguishing mechanisms having a high interrupting efficiency, low power consumption, operational ease and ratings up to 660 volts.



■ Features of the SUPER MAGNET

- Operates on both AC and DC power supply
 - Has a wide operational voltage range
 - No tendency to "chatter"
 - Eliminates contact welding or coil burning
 - Reduces power consumption
- In addition the FUJI SC-N series contactors employ bifurcated auxiliary

contacts which improve contact performance and permit them to be used in conjunction with programmable controllers. FUJI SC-N series contactors are the most suitable for new FA age applications which require the most advanced electronic technologies and maximum dependability.

■ The FUJI NEW SC series conforms to and has been approved by various international standards.

Specifications			Contactors		Starters(open)	
			Non-reversing	reversing	Non-reversing	reversing
No.of heater elements			-	-	3	3
Type			SC-□	SC-□RM	SW-□/3H	SW-□RM/3H
Conformed	New JIS IEC BS EN	Japan International UK Europe	○ ○ ○ ○	○ ○ ○ ○	○ ○ ○ ○	○ ○ ○ ○
Approved	UL CSA	USA Canada	UL US ○ ○	○ ○	○ ○	○ ○
EC Directives	CE Marking	Europe	CE ○	○	○	○
Inspection Institute	TÜV	Germany	TÜV Rheinland ○	○	○	○

Notes ○ : Conforming to Standard

UL US : A new certification mark that indicates compliance with both Canadian and U.S.requirements.

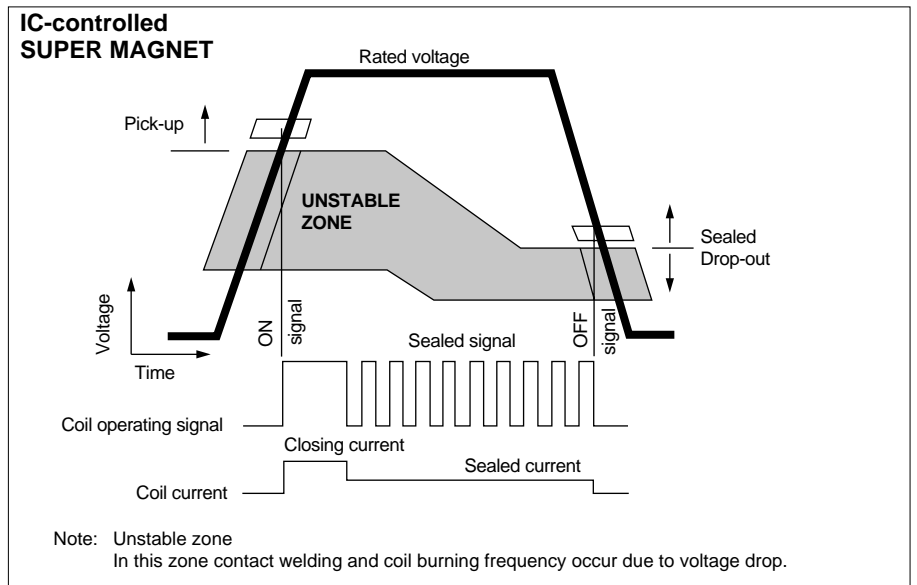
□ : Frame size N1 to N14 and N16(Contactor only)

■ **Advantages of SUPER MAGNET**

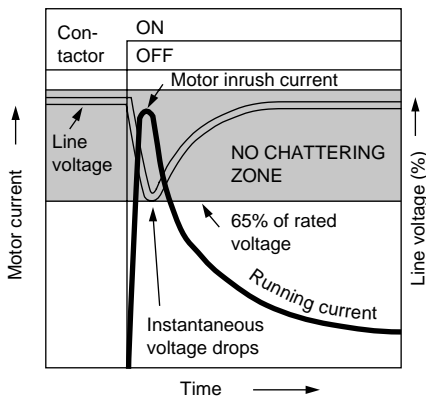
● **Positive pick-up and drop-out**

The SUPER MAGNET operation is electronically controlled. There is no unstable zone as will be seen in the diagram—an outstanding feature that other contactors can not provide. Chattering is a phenomenon which occurs when the gravitational force of the starter magnet decreases through the line voltage drop at the time of motor starting. This may cause damage such as contact welding or coil burning.

The SUPER MAGNET holds without chattering even if the line voltage drops to 65% of its rated value, so preventing this type of trouble.



Motor starting



Note: No chattering occurs even if instantaneous voltage drops to 65% of rated voltage.

● **Operation on both AC and DC inputs**

The rated operational voltage range of the SC-N series contactors has been greatly expanded. They operate on both AC (50/60Hz) and DC inputs.

Coils (SC-N5 to SC-N16)

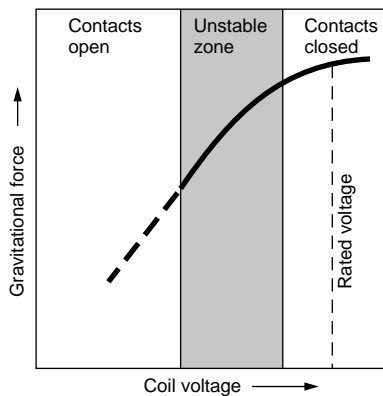
Rated voltage	Rated coil voltage, frequency	
	AC	DC
24V	24-25V 50/60 Hz	24V
48V	48-50V 50/60 Hz	48V
100V	100-127V 50/60 Hz	100-120V *1
200V	200-250V 50/60 Hz	200-240V *2
300V	265-347V 50/60 Hz	-
400V	380-450V 50/60 Hz	-
500V	460-575V 50/60 Hz	-

Notes: SC-N5 to N12: 24V-575V
 SC-N14 to N16: 100V-575V

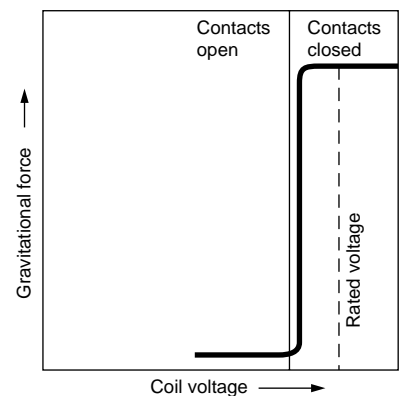
*1: The coil voltage from a DC power supply with single phase full-wave rectification will be 100 to 110 V.

*2: The coil voltage from a DC power supply with single phase full-wave rectification will be 200 to 220 V.

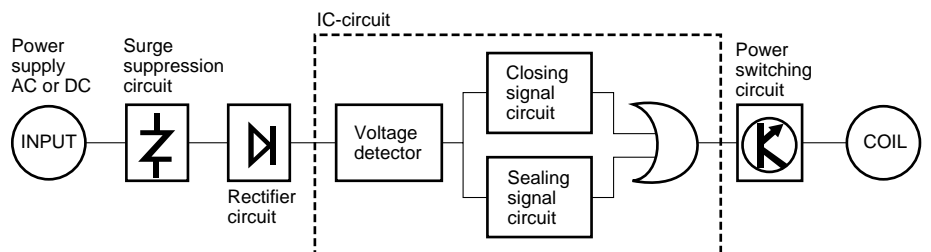
Existing series



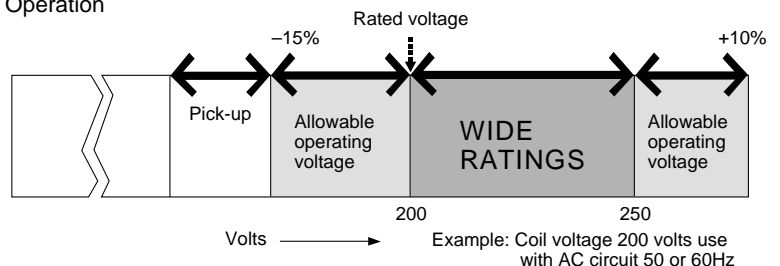
SC-N series



Note: Since SC series contactors are electronically controlled there is no unstable zone.



Operation



For further information, see page 01/30.

Fuji Electric Co., Ltd./D & C Catalog

Information subject to change without notice

Magnetic Contactors and Starters

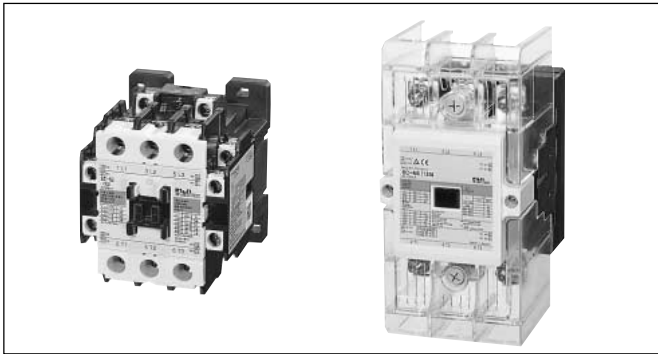
SC and SW series

Design features

■ Other advantages

● Terminal cover for finger protection

These optional terminal covers comply with VBG4 (German Rules of Accident Prevention), IEC60529, DIN57106, VDE0106 Teil100, which are recommendations for preventing exposure to live parts. The terminal cover satisfies the requirements of Mechanical Direction EN60204-1 "Direct Contact Prevention" concerning mechanical safety.



● Insulation barrier

These optional insulation barriers, prevent accidental short-circuits caused by metallic objects falling onto the terminals.



● Live-section cover

An optional live-section cover that completely encloses the front of a contactor or starter for increased worker safety during maintenance and inspection.



● Insulation

Improved tracking resistance

Tracking resistance of the molded parts comprising of the conductive block has been improved.

Comparative Tracking Index (CTI) : 175V or higher

Tracking : It means the route of the leak electric current caused on the surface of the isolation body.

● Standard heat-proof material

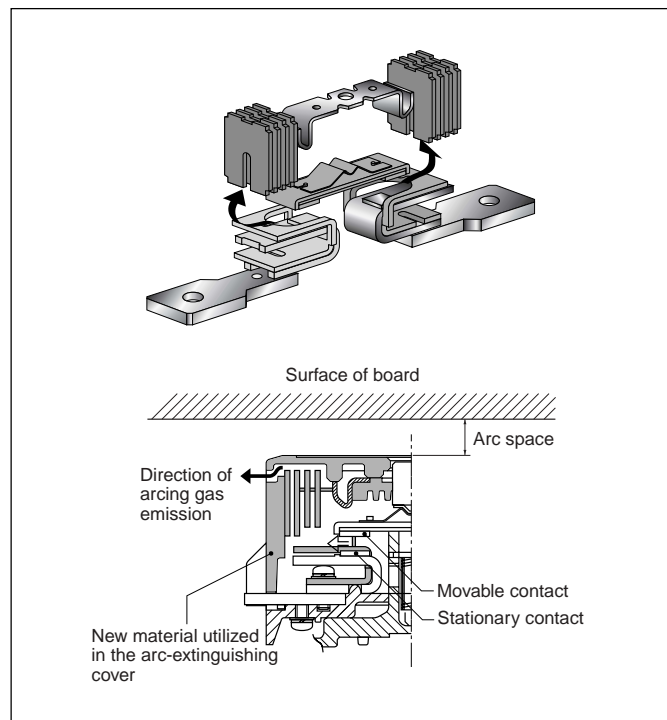
The molded parts used are made of heat-proof materials specified in UL94

(UL94 : STANDARD FOR SAFETY FOR TESTS FOR FLAMMABILITY OF PLASTIC MATERIALS FOR PARTS IN DEVICES AND APPLIANCES).

● Free arc space

A new arc-extinguishing method, which makes full use of magnetic field analysis technology, and a new material (UL94V-0) that has been incorporated into the design of this new type of arc-extinguishing chamber to provide a free arc space. This new method and design reduces the depth size, not only of the main body, but also that of the board (Types SC-N1 to N12).

Free Arc Space means arc space is not needed on making and breaking condition according to IEC 60947-4-1. (Refer to chart Arcing gas cooling block.)



● Mirror contacts (Positively safety contacts)

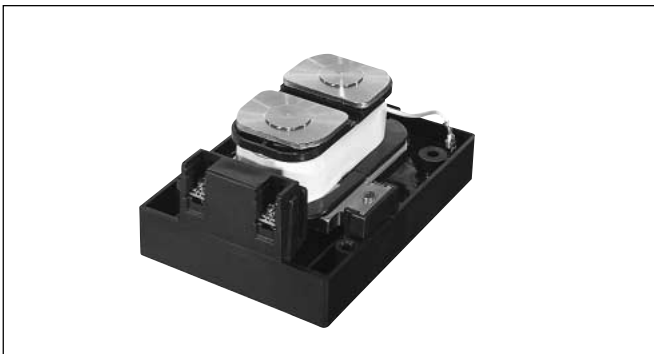
The contactor with mirror contacts has been certified by TÜV.

Mirror contact conforms to the requirement for auxiliary contact that is intended to be included in the future amendment to IEC 60947-4-1.

Mirror contact : Normally closed auxiliary contact, which cannot be in closed position simultaneously with the normally open main contact.

● **New SUPER MAGNET with higher service reliability**

Employing a new electronically controlled SUPER MAGNET(AC input DC operation method) with an IC on its operating circuit, allows the FUJI NEW SC series contactor to achieve higher service reliability.



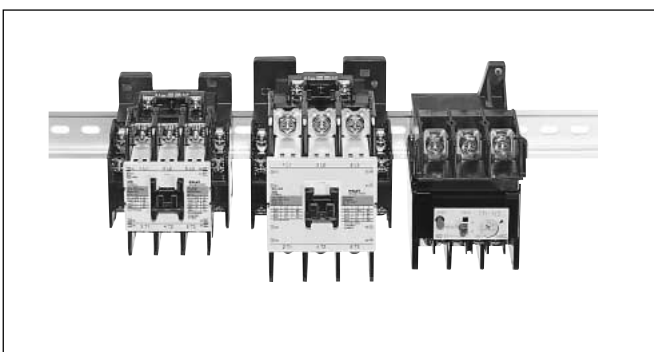
- There is no unstable zone as seen in the diagram on page 01/5. The New SUPER MAGNET holds without chattering which may cause damage such as contact welding or coil burning.
- Since normal rated voltage is applied when power is on, the contactor may be used without failure, even if the voltage drops to 65% of the rated value when the main contacts are closed.
- The motor is prevented from starting if there is insufficient voltage.
- The power consumption and operating VA for the operating coil have been largely reduced.
- The rating range of the coil has been widened, and it may even be used as an AC/DC coil.
- A surge suppression function has been incorporated.
- Comforming to EMC.

● **Ambient operating temperature improved to 55°C**

The ambient operating temperature was raised up to 55°C, considering the use on more compact control board and the higher mounting density.

● **Rail mounting**

Types SC-N1 to N3, TR-N2H and -N3H incorporate snap-on mounting on 35mm-wide rails (conforming to IEC and DIN Standards).



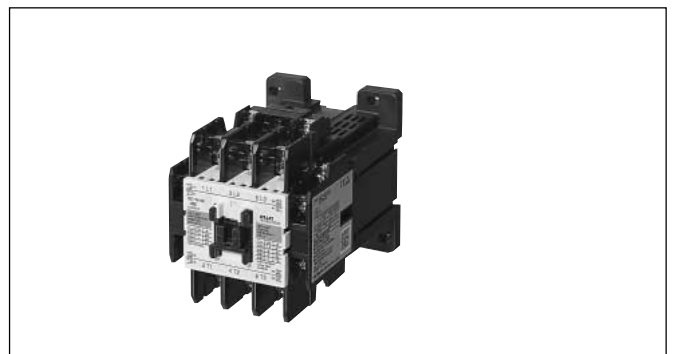
● **Bifurcated auxiliary contact system**

By introducing a bifurcated contact system, higher contact reliability is achieved for service at 5V DC, 3mA (Types SC-N1 to N12).

● **Special type "/G" for DC operation added to SC-N1 to N3 series**

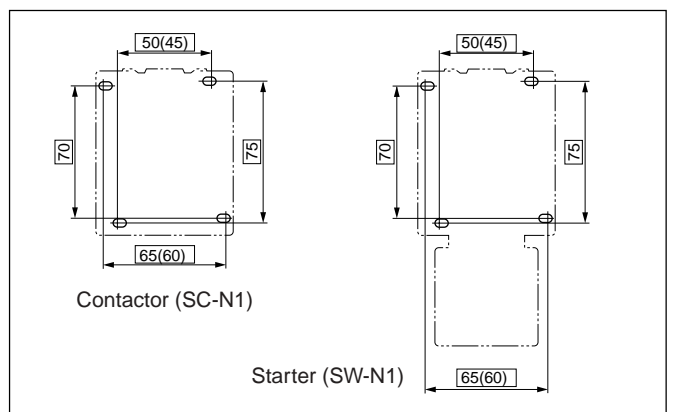
A new type of "/G" has been added to SC-N1 to N3 types for DC operation.

Power input and consumption have been considerably reduced by introducing a full voltage-applying coil.



● **Unified mounting hole pitch of contactors and motor starters**

The mounting hole pitches of contactors and motor starters have been standardized. This enables the contactor and the motor starter to be fixed to the same mounting holes. (The holes for SC-N1 to N7 are as same as those for SW-N1/3H to N7/3H respectively.)



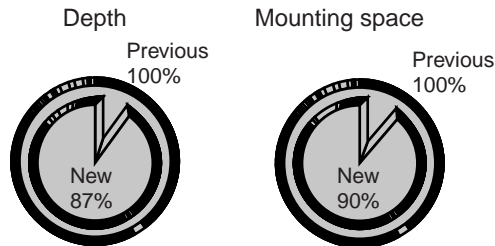
Magnetic Contactors and Starters

SC and SW series

Design features

● Reduced size and space of contactor

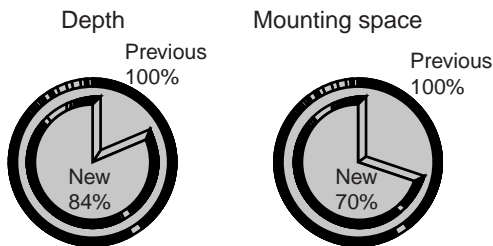
By introducing a highly efficient electromagnet (Using 3D magnetic field analysis technology), the depth and mounting space of the contactor has been reduced.



Average value for types SC-N4 to N7

● Reduced size and space of motor starter

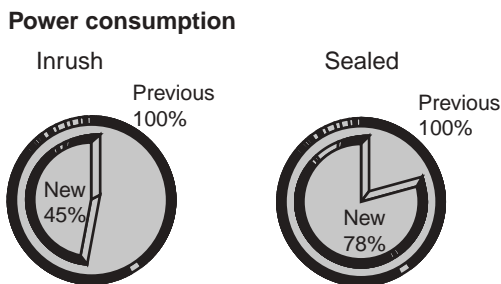
The depth and mounting spaces of the contactors and thermal overload relays have been reduced by combining them into one unit without a mounting plate.



Average value for types SW-N4/3H to N7/3H

● Reduced power consumption

By introducing a new type of SUPER MAGNET (Using 3D magnetic field analysis technology), power consumption have been greatly reduced.



Average value for types SC-N4 to N7

● Material designation indication

To facilitate use in recycling, recyclable materials are indicated as so on parts such as the terminal covers.



Terminal cover

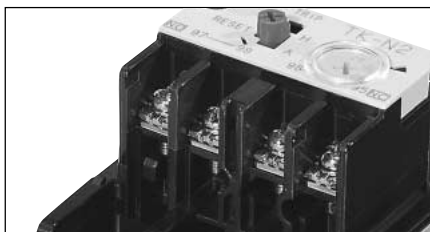
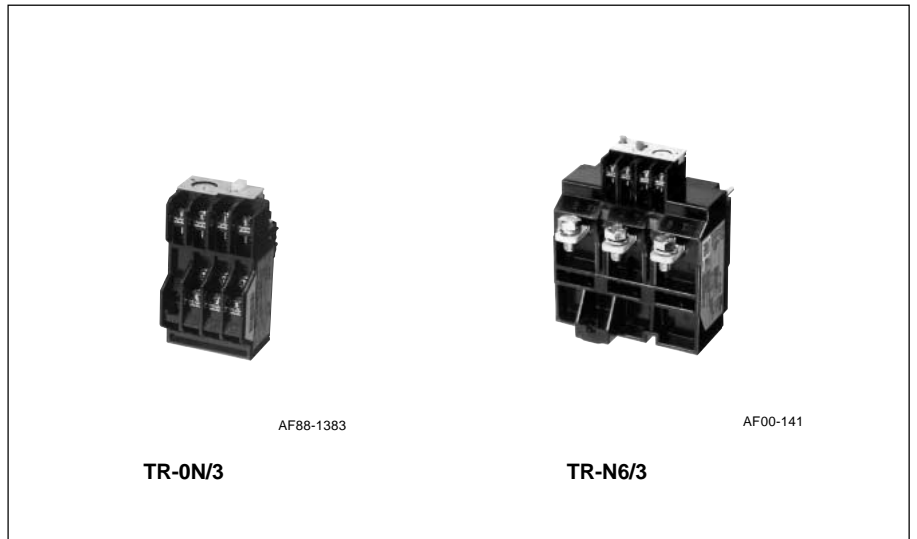
● Motor starter manufactured at ISO9001 and ISO14001-certified factory

Fuji Electric has been certified for both ISO9000 Series and ISO14000 Series compliance. Both standards are established by the International Organization for Standardization (ISO). The former is for quality control and quality assurance, while the latter is for environmental management systems. Certified for ISO9001 and ISO14001, our Fukiage Factory, which manufactures motor starters, puts great effort into establishing a highly reliable quality assurance system and a development and production structure which takes environmental protection into account.

Highly reliable thermal overload relays

■ **Description**

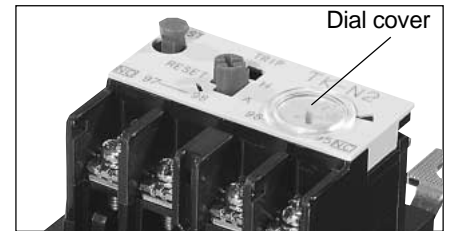
- FUJI thermal overload relays are designed to provide overload protection to meet the thermal characteristics of low voltage induction motors. Adjustable thermal overload relays give motors positive overcurrent protection. The starter contacts are so arranged that they cannot be held closing under overload conditions. However, once the bimetal element has cooled, the reset button can be depressed and the motor can be restarted in the normal manner. Ordinary this reset is carried out manually but the starter can be changed over to "automatic reset" by means of a screw-driver.
- FUJI relays are extremely accurate. Each thermal overload relay is subjected to stringent testing in the factory to check performance and actual values are calibrated with the marking on the adjustable dial. Consequently, they are extremely accurate and provide a positive protection.
- Relays are also provided with ambient temperature compensators, so that their performance will be maintained in spite of temperature changes. The ambient temperature is regulated for 20°C.



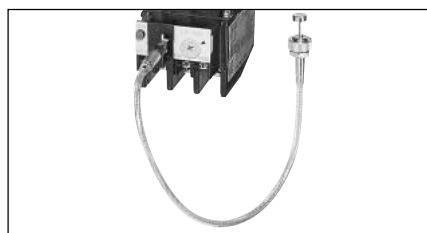
Isolated NO and NC contacts can be used with different potential.



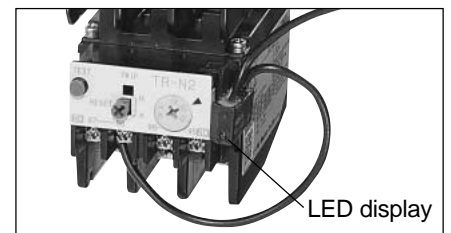
Type number printed on front side for easy looking.



Dial cover
 Protects the setting current value of a thermal overload relay from being changed unintentionally.



Reset release button
 Reset a thermal overload relay from the rear side of the board or a distant location.

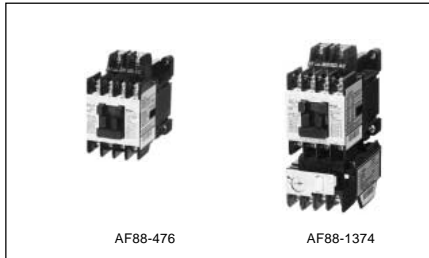


Trip indicator
 Indicates any trip operation through its LED display.

Magnetic Contactors and Starters

SC and SW series

Versions



Standard type contactors and starters

Standard type is usually used to start and stop motors, and to open and close resistance loads like heaters or electric furnaces.
See page 01/33.



Contactors and starters with SUPER MAGNET

IC operated SUPER MAGNET prevents coil burning and contact welding due to voltage fluctuations
See page 01/33.



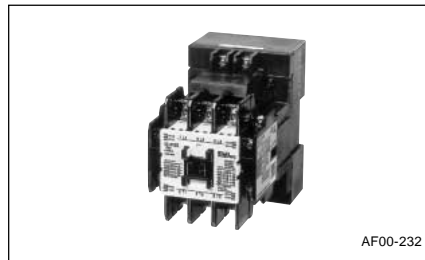
Enclosed type contactors and starters

Standard type contactor and starter are housed in a protective enclosure.
See page 01/41.



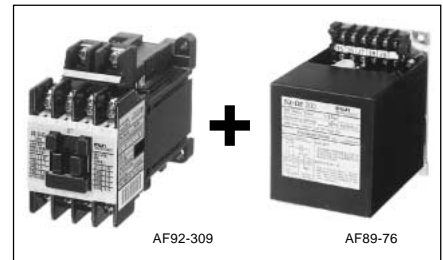
Reversing contactors and starters

This type is most suitable for reversing operation of 3-phase motors or plugging or braking.
See page 01/42.



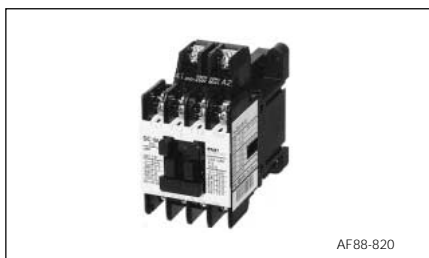
DC-operated contactors and starters

Main circuit is AC, and operation is carried out by DC operating coil. This type is useful for applications in which control power source is independent.
See page 01/49.



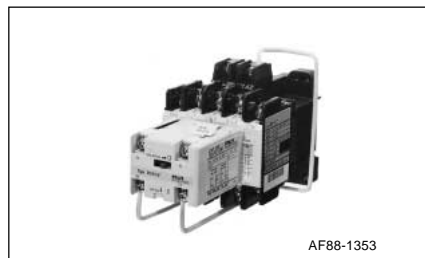
OFF-delay release contactors and starters

This is a combination of DC-operated magnetic contactor and off-delay release unit. This prevents circuit opening due to instantaneous voltage drops.
See page 01/54.



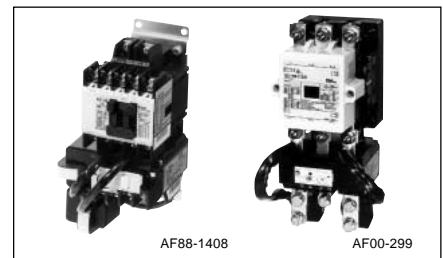
With extra pickup operating coil

These contactors are suitable for use in places with poor power supply conditions. These contactors operate normally even if the coil input voltage falls to 75% of the coil rated voltage.
See page 01/55.



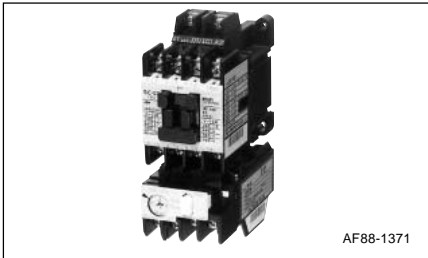
Mechanical latch contactors

Latch mechanism prevents the circuit from opening due to power failure, instantaneous power failure, or voltage drop of power source. This is suitable for change-over circuit and stand-by power supply equipment.
See page 01/56.



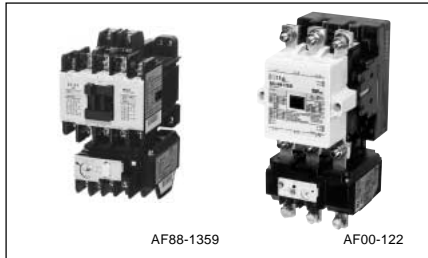
Heavy starting duty starters

This is suitable for overload protection or stall prevention of motors with longer starting times such as those for blowers and fans having a large inertia.
See page 01/61.



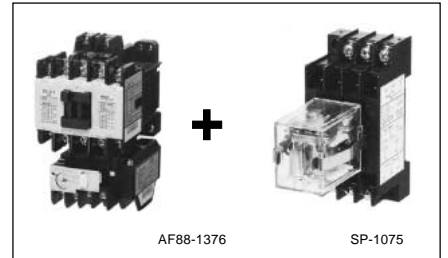
Starters with quick-operating overload relay

With the attached quick operating type O/L relay, this is suitable for protecting submersible pumps or compressor motors with a small heat capacity.
 See page 01/63.



Starters with open-phase protective device

The attached 2E thermal O/L relay protects against motor overload and as well as open-phase.
 See page 01/64.



Starters with open-phase and phase-sequence protective device

By combining 2E thermal O/L relay and phase-sequence relay, motor overload, open-phase and phase-sequence protection is obtained.
 See page 01/66.



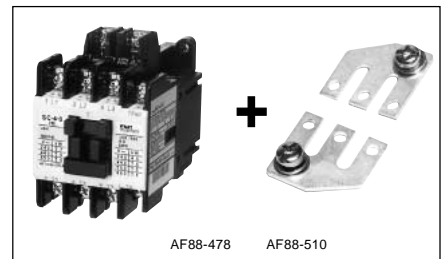
Starters with ON-OFF and RESET pushbuttons

Pushbuttons for close and open are built in the enclosure. Suitable for simple operations.
 See page 01/68.



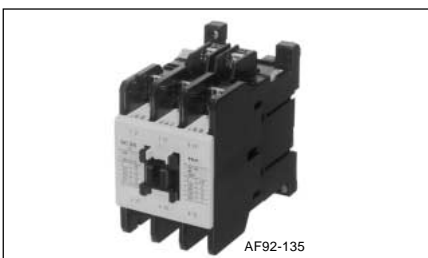
Dust-tight/light-corrosion resistant type starters

The enclosure is dust-tight and corrosion-proof, and so is suitable for locations with dusty or corrosive atmospheres.
 See page 01/70.



Contactors for single-phase resistance load

This is a standard type magnetic contactor with a 3-phase parallel plate terminal. This is most suitable for on-off operation of electric heaters, water heaters and electric lights.
 See page 01/71.



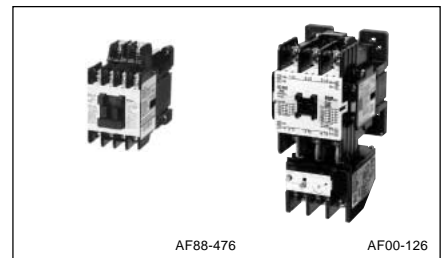
Space-saving contactors

These are contactors with three main circuit contacts only, with their auxiliary contact removed. These contactors occupy very little panel space.
 See page 01/72.



With single-button auxiliary contacts

An auxiliary contact of a standard contactor is bifurcated. All SC-03H to SC-N12H contactor, however, feature single-button auxiliary contacts with a higher current rating than the contacts used by the standard contactor.
 See page 01/73.



UL, CSA and TÜV approved motor starters and contactors

Many models of SC series conform to UL, CSA and TÜV requirements.
 See page 01/148.

Magnetic Contactors and Starters

SC and SW series

Quick selection guide/Open type

■ Types and ratings/Non-reversing, Open

Frame size		03	0	05	4-0	Further information
Max. motor capacity (kW)	200–240V	2.5	3.5	3.5	4.5	
	380–440V	4	5.5	5.5	7.5	
AC-3, IEC 60947-4-1	500–550V	4	5.5	5.5	7.5	
	600–660V	4	5.5	5.5	7.5	
Operational current (A)	200–240V	11	13	13	18	
	380–440V	9	12	12	16	
	500–550V	7	9	9	13	
	600–660V	5	7	7	9	
Operational current (A)	AC-1	20	20	20	25	
Thermal current (A)		20	20	20	25	
Auxiliary contact arrangement		1NO 1NC	1NO 1NC	1NO+1NC 2NO, 2NC	1NO 1NC	
Standard	Contact Starter	SC-03 SW-03/3H	SC-0 SW-0/3H	SC-05 SW-05/3H	SC-4-0 SW-4-0/3H	Page 01/33
DC operated	Contact Starter	SC-03/G SW-03/G3H	SC-0/G SW-0/G3H	SC-05/G SW-05/G3H	SC-4-0/G SW-4-0/G3H	Page 01/49
OFF-delay release *	Contact Starter	SC-03/G+SZ-DE□ SW-03/G3H+ SZ-DE□	SC-0/G+SZ-DE□ SW-0/G3H+ SZ-DE□	SC-05/G+SZ-DE□ SW-05/G3H+ SZ-DE□	SC-4-0/G+SZ-DE□ SW-4-0/G3H+ SZ-DE□	Page 01/54
With extra pick-up operating coil	Contact Starter	SC-03/U SW-03/U3H	SC-0/U SW-0/U3H	SC-05/U SW-05/U3H	SC-4-0/U SW-4-0/U3H	Page 01/55
Mechanical latch AC operated	Contact Starter	SC-03/V –	SC-0/V –	SC-05/V –	SC-4-0/V –	Page 01/56
Mechanical latch DC operated	Contact Starter	SC-03/VG –	SC-0/VG –	SC-05/VG –	SC-4-0/VG –	Page 01/56
Heavy starting duty	Contact Starter	– SW-03/3L	– SW-0/3L	– SW-05/3L	– SW-4-0/3L	Page 01/61
With quick operating overload relay	Contact Starter	– SW-03/3Q	– SW-0/3Q	– SW-05/3Q	– SW-4-0/3Q	Page 01/63
With open-phase protective device	Contact Starter	– SW-03/2E	– SW-0/2E	– SW-05/2E	– SW-4-0/2E	Page 01/64
With open-phase and phase sequence protective device	Contact Starter	– SW-03/2E+QE-20N	– SW-0/2E+QE-20N	– SW-05/2E+QE-20N	– SW-4-0/2E+QE-20N	Page 01/66
For single-phase resistance load	Contact Starter	SC-03+SZ-SP1 –	SC-0+SZ-SP1 –	SC-05+SZ-SP1 –	SC-4-0+SZ-SP2 –	Page 01/71
With quick terminals	Contact starter	SC-03Y SW-03Y	SC-0Y SW-0Y	SC-05Y SW-05Y	– –	Page 01/74
Thermal overload relay On-contactor mounting						Page 01/98
Standard		TR-0N/3	TR-0N/3	TR-0N/3	TR-5-1N/3	
Long time operation		TR-0NL/3	TR-0NL/3	TR-0NL/3	TR-5-1NL/3	
Quick operation		TR-0NQ	TR-0NQ	TR-0NQ	TR-5-1NQ	
Open-phase protection		TK-0N	TK-0N	TK-0N	TK-5-1N	

Note: * Replace the □ mark in the type number by the operating voltage code.
100V AC: 100, 110V AC: 110, 200V AC: 200, 220V AC: 220

■ **Types and ratings/Non-reversing, Open**

Frame size		4-1	5-1	N1	N2	Further information
Max. motor capacity (kW)	200–240V	5.5	5.5	7.5	11	
	380–440V	11	11	15	18.5	
AC-3, IEC 60947-4-1	500–550V	11	11	15	18.5	
	600–660V	7.5	7.5	11	15	
Operational current (A)	200–240V	22	22	32	40	
	380–440V	22	22	32	40	
	500–550V	17	17	24	29	
	600–660V	9	9	15	19	
Operational current (A)	AC-1	32	32	50	60	
Thermal current (A)		32	32	50	60	
Auxiliary contact arrangement		1NO 1NC	1NO+1NC, 2NO 2NO+2NC, 2NC	2NO+2NC 4NO+4NC	2NO+2NC 4NO+4NC	
Standard	Contact Starter	SC-4-1 SW-4-1/3H	SC-5-1 SW-5-1/3H	SC-N1 SW-N1/3H	SC-N2 SW-N2/3H	Page 01/33
DC operated	Contact Starter	SC-4-1/G SW-4-1/G3H	SC-5-1/G SW-5-1/G3H	SC-N1/G SW-N1/G3H	SC-N2/G SW-N2/G3H	Page 01/49
OFF-delay release *	Contact Starter	SC-4-1/G+SZ-DE□ SW-4-1/G3H+ SZ-DE□	SC-5-1/G+SZ-DE□ SW-5-1/G3H+ SZ-DE□	SC-N1/G+ SZ-N1/GDE SW-N1/G3H+ SZ-N1/GDE	SC-N2/G+ SZ-N1/GDE SW-N2/G3H+ SZ-N1/GDE	Page 01/54
With extra pick-up operating coil	Contact Starter	SC-4-1/U SW-4-1/U3H	SC-5-1/U SW-5-1/U3H	SC-N1/U SW-N1/U3H	SC-N2/U SW-N2/U3H	Page 01/55
Mechanical latch AC operated	Contact Starter	SC-4-1/V –	SC-5-1/V –	SC-N1/VS –	SC-N2/VS –	Page 01/56
Mechanical latch DC operated	Contact Starter	SC-4-1/VG –	SC-5-1/VG –	SC-N1/VS –	SC-N2/VS –	Page 01/56
Heavy starting duty	Contact Starter	– SW-4-1/3L	– SW-5-1/3L	– SW-N1/3L	– SW-N2/3L	Page 01/61
With quick operating overload relay	Contact Starter	– SW-4-1/3Q	– SW-5-1/3Q	– SW-N1/3Q	– SW-N2/3Q	Page 01/63
With open-phase protective device	Contact Starter	– SW-4-1/2E	– SW-5-1/2E	– SW-N1/2E	– SW-N2/2E	Page 01/64
With open-phase and phase sequence protective device	Contact Starter	– SW-4-1/2E+QE-20N	– SW-5-1/2E+QE-20N	– SW-N1/2E+QE-20N	– SW-N2/2E+QE-20N	Page 01/66
For single-phase resistance load	Contact Starter	SC-4-1+SZ-SP2 –	SC-5-1+SZ-SP2 –	SC-N1+SZ-SP3 –	SC-N2+SZ-SP3 –	Page 01/71
With quick terminals	Contact starter	– –	SC-5-1Y SW-5-1Y	– –	– –	Page 01/74
Thermal overload relay On-contactor mounting						Page 01/98
Standard		TR-5-1N/3	TR-5-1N/3	TR-N2/3	TR-N2/3	
Long time operation		TR-5-1NL/3	TR-5-1NL/3	TR-N2L/3	TR-N2L/3	
Quick operation		TR-5-1NQ	TR-5-1NQ	TR-N2Q	TR-N2Q	
Open-phase protection		TK-5-1N	TK-5-1N	TK-N2	TK-N2	

Note: *Replace the □ mark in the type number by the operating voltage code.
100V AC: 100, 110V AC: 110, 200V AC: 200, 220V AC: 220

Magnetic Contactors and Starters

SC and SW series

Quick selection guide/Open type

■ Types and ratings/Non-reversing, Open

Frame size		N2S	N3	N4	N5	Further information
Max. motor capacity (kW)	200–240V	15	18.5	22	30	
	380–440V	22	30	40	55	
AC-3, IEC 60947-4-1	500–550V	25	37	37	55	
	600–660V	22	30	37	55	
Operational current (A)	200–240V	50	65	80	105	
	380–440V	50	65	80	105	
	500–550V	38	60	60	85	
	600–660V	26	38	44	64	
Operational current (A)	AC-1	80	100	135	150	
Thermal current (A)		80	100	135	150	
Auxiliary contact arrangement		2NO+2NC 4NO+4NC	2NO+2NC 4NO+4NC	2NO+2NC 4NO+4NC	2NO+2NC 4NO+4NC	
Standard	Contactors Starter	SC-N2S SW-N2S/3H	SC-N3 SW-N3/3H	SC-N4 SW-N4/3H	SC-N5 SW-N5/3H	Page 01/33
DC operated	Contactors Starter	SC-N2S/G SW-N2S/G3H	SC-N3/G SW-N3/G3H	SC-N4/SE SW-N4/SE3H	SC-N5 SW-N5/3H	Page 01/49
OFF-delay release	Contactors Starter	SC-N2S/G+ SZ-N2S/GDE SW-N2S/G3H+ SZ-N2S/GDE	SC-N3/G+ SZ-N2S/GDE SW-N3/G3H+ SZ-N2S/GDE	SC-N4/SE+ SZ-N5/DE SW-N4/SE3H+ SZ-N5/SEDE	SC-N5+ SZ-5N/DE SW-N5/3H+ SZ-N5/DE	Page 01/54
With extra pick-up * operating coil	Contactors Starter	SC-N2S/U SW-N2S/U3H	SC-N3/U SW-N3/U3H	SC-N4/U SW-N4/U3H	– –	Page 01/55
Mechanical latch AC operated	Contactors Starter	SC-N2S/VS –	SC-N3/VS –	SC-N4/VS –	SC-N5/VS –	Page 01/56
Mechanical latch DC operated	Contactors Starter	SC-N2S/VS –	SC-N3/VS –	SC-N4/VS –	SC-N5/VS –	Page 01/56
Heavy starting duty	Contactors Starter	– SW-N2S/3L	– SW-N3/3L	– SW-N4/3L	– SW-N5/3L	Page 01/61
With quick operating overload relay	Contactors Starter	– SW-N2S/3Q	– SW-N3/3Q	– SW-N4/3Q	– SW-N5/3Q	Page 01/63
With open-phase protective device	Contactors Starter	– SW-N2S/2E	– SW-N3/2E	– SW-N4/2E	– SW-N5/2E	Page 01/64
With open-phase and phase sequence protective device	Contactors Starter	– SW-N2S/2E+QE-20N	– SW-N3/2E+QE-20N	– SW-N4/2E+QE-20N	– SW-N5/2E+QE-20N	Page 01/66
For single-phase resistance load	Contactors Starter	SC-N2S+SZ-SP4 –	SC-N3+SZ-SP4 –	SC-N4+SZ-SP5 –	SC-N5+SZ-SP5 –	Page 01/71
Thermal overload relay On-contactor mounting						Page 01/98
Standard		TR-N3/3	TR-N3/3	TR-N5/3	TR-N5/3	
Long time operation		TR-N3L/3	TR-N3L/3	TR-N5L/3	TR-N5L/3	
Quick operation		TR-N3Q	TR-N3Q	TR-N5Q	TR-N5Q	
Open-phase protection		TK-N3	TK-N3	TK-N5	TK-N5	

Note: * The standard types for frame sizes N5 and above (with SUPER MAGNET) hold without chattering even if the line voltage drops to 65% of its rated value.

■ **Types and ratings/Non-reversing, Open**

Frame size		N6	N7	N8	N10	Further information
Max. motor capacity (kW)	200–240V	37	45	55	65	
	380–440V	60	75	90	110	
AC-3, CEC 60947-4-1	500–550V	60	75	130	132	
	600–660V	60	90	132	132	
Operational current (A)	200–240V	125	150	180	220	
	380–440V	125	150	180	220	
	500–550V	90	120	180	200	
	600–660V	72	103	150	150	
Operational current (A)	AC-1	150	200	260	260	
Thermal current (A)		150	200	260	260	
Auxiliary contact arrangement		2NO+2NC 4NO+4NC	2NO+2NC 4NO+4NC	2NO+2NC 4NO+4NC	2NO+2NC 4NO+4NC	
Standard	Contact Starter	SC-N6 SW-N6/3H	SC-N7 SW-N7/3H	SC-N8 SW-N8/3H	SC-N10 SW-N10/3H	Page 01/33
DC operated	Contact Starter	SC-N6 SW-N6/3H	SC-N7 SW-N7/3H	SC-N8 SW-N8/3H	SC-N10 SW-N10/3H	Page 01/49
OFF-delay release	Contact Starter	SC-N6+SZ-N6/DE SW-N6/3H+ SZ-N6/DE	SC-N7+SZ-N6/DE SW-N7/3H+ SZ-N6/DE	SC-N8+SZ-N8/DE SW-N8/3H+ SZ-N8/DE	SC-N10+SZ-N8/DE SW-N10/3H+ SZ-N8/DE	Page 01/54
With extra pick-up operating coil *	Contact Starter	– –	– –	– –	– –	– –
Mechanical latch/ AC operated	Contact Starter	SC-N6/VS –	SC-N7/VS –	SC-N8/VS –	SC-N10/VS –	Page 01/56
Mechanical latch/ DC operated	Contact Starter	SC-N6/VS –	SC-N7/VS –	SC-N8/VS –	SC-N10/VS –	Page 01/56
Heavy starting duty	Contact Starter	– SW-N6/3L	– SW-N7/3L	– SW-N8/3L	– SW-N10/3L	Page 01/61
With quick operating overload relay	Contact Starter	– –	– –	– –	– –	Page 01/63
With open-phase protective device	Contact Starter	– SW-N6/2E	– SW-N7/2E	– SW-N8/2E	– SW-N10/2E	Page 01/64
With open-phase and phase sequence protective device	Contact Starter	– SW-N6/2E+QE-20N	– SW-N7/2E+QE-20N	– SW-N8/2E+QE-20N	– SW-N10/2E+QE-20N	Page 01/66
For single-phase resistance load	Contact Starter	SC-N6+SZ-SP7 –	SC-N7+SZ-SP7 –	SC-N8+SZ-SP8 –	SC-N10+SZ-SP8 –	Page 01/71
Thermal overload relay On-contactor mounting						Page 01/98
Standard		TR-N6/3	TR-N7/3	TR-N8/3	TR-N10/3	
Long time operation		TR-N6L/3	TR-N7L/3	TR-N10L/3	TR-N10L/3	
Quick operation		–	–	–	–	
Open-phase protection		TK-N6	TK-N7	TK-N8	TK-N10	

Note: * The standard types for frame sizes N5 and above (with SUPER MAGNET) hold without chattering even if the line voltage drops to 65% of its rated value.

Magnetic Contactors and Starters

SC and SW series

Quick selection guide/Open type

■ Types and ratings/Non-reversing, Open

Frame size		N11	N12	N14	N16	Further information
Max. motor capacity (kW)	200–240V	90	120	180	220	
	380–440V	160	220	315	440	
AC-3, IEC 60947-4-1	500–550V	160	250	400	500	
	600–660V	200	300	480	500	
Operational current (A)	200–240V	300	400	600	800	
	380–440V	300	400	600	800	
	500–550V	230	360	600	720	
	600–660V	230	360	600	630	
Operational current (A)	AC-1	350	450	660	800	
Thermal current (A)		350	450	660	800	
Auxiliary contact arrangement		2NO+2NC 4NO+4NC	2NO+2NC 4NO+4NC	2NO+2NC 4NO+4NC	2NO+2NC 4NO+4NC	
Standard	Contactors Starter	SC-N11 SW-N11/3H	SC-N12 SW-N12/3H	SC-N14 SW-N14/3H	SC-N16 –	Page 01/33
DC operated	Contactors Starter	SC-N11 SW-N11/3H	SC-N12 SW-N12/3H	SC-N14 SW-N14/3H	SC-N16 –	Page 01/49
OFF-delay release	Contactors Starter	SC-N11+SZ-N11/DE SW-N11/3H+ SZ-N11/DE	SC-N12+SZ-N11/DE SW-N12/3H+ SZ-N11/DE	SC-N14+SZ-N14/DE SW-N14/3H+ SZ-N14/DE	– – –	Page 01/54
With extra pick-up operating coil *	Contactors Starter	– –	– –	– –	– –	– –
Mechanical latch AC operated	Contactors Starter	SC-N11/VS –	SC-N12/VS –	SC-N14/VS –	– –	Page 01/56
Mechanical latch DC operated	Contactors Starter	SC-N11/VS –	SC-N12/VS –	SC-N14/VS –	– –	Page 01/56
Heavy starting duty	Contactors Starter	– SW-N11/3L	– SW-N12/3L	– SW-N14/3L	– –	Page 01/61
With quick operating overload relay	Contactors Starter	– –	– –	– –	– –	– –
With open-phase protective device	Contactors Starter	– SW-N11/2E	– SW-N12/2E	– SW-N14/2E	– –	Page 01/64
With open-phase and phase sequence protective device	Contactors Starter	– SW-N11/2E+QE-20N	– SW-N12/2E+QE-20N	– SW-N14/2E+QE-20N	– –	Page 01/66
For single-phase resistance load	Contactors Starter	SC-N11+SZ-SP9 –	SC-N12+SZ-SP9 –	SC-N14+SZ-SP10 –	SC-N16+SZ-SP10 –	Page 01/71
Thermal overload relay On-contactor mounting						Page 01/98
Standard		TR-N11/3	TR-N12/3	TR-N14/3	–	
Long time operation		TR-N11L/3	TR-N12L/3	TR-N14L/3	–	
Quick operation		–	–	–	–	
Open-phase protection		TK-N11	TK-N12	TK-N14	–	

Note: * The standard types for frame sizes N5 and above (with SUPER MAGNET) hold without chattering even if the line voltage drops to 65% of its rated value.

■ Types and ratings/Non-reversing, Enclosed

Frame size		03	0	05	4-0	Further information
Max. motor capacity (kW)	200–240V	2.5	3.5	3.5	4.5	
	380–440V	4	5.5	5.5	7.5	
AC-3, IEC 60947-4-1	500–550V	4	5.5	5.5	7.5	
	600–660V	4	5.5	5.5	7.5	
Operational current (A)	200–240V	11	13	13	18	
	380–440V	9	12	12	16	
	500–550V	7	9	9	13	
	600–660V	5	7	7	9	
Operational current (A)	AC-1	20	20	20	25	
Thermal current (A)		20	20	20	25	
Auxiliary contact arrangement		1NO 1NC	1NO 1NC	1NO+1NC 2NO, 2NC	1NO 1NC	
Standard	Contact Starter	SC-03C SW-03C/3H	SC-0C SW-0C/3H	SC-05C SW-05C/3H	SC-4-0C SW-4-0C/3H	Page 01/33
With extra pick-up operating coil	Contact Starter	– SW-03C/U3H	– SW-0C/U3H	– SW-05C/U3H	– SW-4-0C/U3H	Page 01/55
With open-phase protective device	Contact Starter	– SW-03C/2E	– SW-0C/2E	– SW-05C/2E	– SW-4-0C/2E	Page 01/64
With ON-OFF/reset pushbuttons	Contact Starter	– SW-03P/3H	– SW-0P/3H	– SW-05P/3H	– SW-4-0P/3H	Page 01/68
Dust tight/light corrosion resistant	Contact Starter	– SW-03LG/3H	– SW-0LG/3H	– SW-05LG/3H	– SW-4-0LG/3H	Page 01/70
Thermal overload relay		See page 01/12. Same as the open types				Page 01/98

Frame size		4-1	5-1	N1	N2	Further information
Max. motor capacity (kW)	200–240V	5.5	5.5	7.5	11	
	380–440V	11	11	15	18.5	
AC-3, IEC 60947-4-1	500–550V	11	11	15	18.5	
	600–660V	7.5	7.5	11	15	
Operational current (A)	200–240V	22	22	32	40	
	380–440V	22	22	32	40	
	500–550V	17	17	24	29	
	600–660V	9	9	15	19	
Operational current (A)	AC-1	32	32	50	60	
Thermal current (A)		32	32	50	60	
Auxiliary contact arrangement		1NO 1NC	1NO+1NC 2NO, 2NC	2NO+2NC 4NO+4NC	2NO+2NC 4NO+4NC	
Standard	Contact Starter	SC-4-1C SW-4-1C/3H	SC-5-1C SW-5-1C/3H	SC-N1C SW-N1C/3H	SC-N2C SW-N2C/3H	Page 01/33
With extra pick-up operating coil	Contact Starter	– SW-4-1C/U3H	– SW-5-1C/U3H	– SW-N1C/U3H	– SW-N2C/U3H	Page 01/55
With open-phase protective device	Contact Starter	– SW-4-1C/2E	– SW-5-1C/2E	– SW-N1C/2E	– SW-N2C/2E	Page 01/64
With ON-OFF pushbuttons	Contact Starter	– –	– –	– SW-N1P/3H	– SW-N2P/3H	Page 01/68
With ON-OFF/reset pushbuttons	Contact Starter	– SW-4-1P/3H	– SW-5-1P/3H	– SW-N1PB/3H	– SW-N2PB/3H	Page 01/68
Dust tight/light corrosion resistant	Contact Starter	– SW-4-1LG/3H	– SW-5-1LG/3H	– SW-N1LG/3H	– SW-N2LG/3H	Page 01/70
Thermal overload relay		See page 01/13. Same as the open types				Page 01/98

Magnetic Contactors and Starters

SC and SW series

Quick selection guide/Enclosed type

■ Types and ratings/Non-reversing, Enclosed

Frame size		N2S	N3	N4	N5	Further information
Max. motor capacity (kW)	200–240V	15	18.5	22	30	
	380–440V	22	30	40	55	
AC-3, IEC 60947-4-1	500–550V	25	37	37	55	
	600–660V	22	30	37	55	
Operational current (A)	200–240V	50	65	80	105	
	380–440V	50	65	80	105	
	500–550V	38	60	60	85	
	600–660V	26	38	44	64	
Operational current (A)	AC-1	80	100	135	150	
Thermal current (A)		80	100	135	150	
Auxiliary contact arrangement		2NO+2NC 4NO+4NC	2NO+2NC 4NO+4NC	2NO+2NC 4NO+4NC	2NO+2NC 4NO+4NC	
Standard	Contact Starter	SC-N2SC SW-N2SC/3H	SC-N3C SW-N3C/3H	SC-N4C SW-N4C/3H	SC-N5C SW-N5C/3H	Page 01/33
With extra pick-up operating coil *	Contact Starter	– SW-N2SC/U3H	– SW-N3C/U3H	– SW-N4C/SE3H	– –	Page 01/55
With open-phase protective device	Contact Starter	– SW-N2SC/2E	– SW-N3C/2E	– SW-N4C/2E	– SW-N5C/2E	Page 01/64
With ON-OFF pushbuttons	Contact Starter	– SW-N2SP/3H	– SW-N3P/3H	– –	– –	Page 01/68
With ON-OFF and reset pushbuttons	Contact Starter	– SW-N2SPB/3H	– SW-N3PB/3H	– SW-N4PB/3H	– SW-N5PB/3H	Page 01/68
Dust tight/light corrosion resistant	Contact Starter	– SW-N2SLG/3H	– SW-N3LG/3H	– SW-N4LG/3H	– SW-N5LG/3H	Page 01/70
Thermal overload relay	See page 01/14. Same as the open types					Page 01/98

Frame size		N6	N7	N8	N10	Further information
Max. motor capacity (kW)	200–240V	37	45	55	65	
	380–440V	60	75	90	110	
AC-3, IEC 60947-4-1	500–550V	60	75	130	132	
	600–660V	60	90	132	132	
Operational current (A)	200–240V	125	150	180	220	
	380–440V	125	150	180	220	
	500–550V	90	120	180	200	
	600–660V	72	103	150	150	
Operational current (A)	AC-1	150	200	260	260	
Thermal current (A)		150	200	260	260	
Auxiliary contact arrangement		2NO+2NC 4NO+4NC	2NO+2NC 4NO+4NC	2NO+2NC 4NO+4NC	2NO+2NC 4NO+4NC	
Standard	Contact Starter	SC-N6C SW-N6C/3H	SC-N7C SW-N7C/3H	SC-N8C SW-N8C/3H	SC-N10C SW-N10C/3H	Page 01/33
With extra pick-up operating coil *	Contact Starter	– –	– –	– –	– –	– –
With open-phase protective device	Contact Starter	– SW-N6C/2E	– SW-N7C/2E	– SW-N8C/2E	– SW-N10C/2E	Page 01/64
With ON-OFF pushbuttons	Contact Starter	– –	– –	– –	– –	– –
With ON-OFF and reset pushbuttons	Contact Starter	– SW-N6PB/3H	– –	– SW-N8PB/3H	– SW-N10PB/3H	Page 01/68
Dust tight/light corrosion resistant	Contact Starter	– SW-N6LG/3H	– SW-N7LG/3H	– SW-N8LG/3H	– SW-N10LG/3H	Page 01/70
Thermal overload relay	See page 01/15. Same as the open types					Page 01/98

Note: * The standard types for frame sizes N5 and above (with SUPER MAGNET) hold without chattering even if the line voltage drops to 65% of its rated value.

■ **Types and ratings/Non-reversing, Enclosed**

Frame size		N11	N12	N14	N16	Further information
Max. motor capacity (kW)	200–240V	90	120	180	–	
	380–440V	160	220	315	–	
AC-3, IEC 60947-4-1	500–550V	160	250	400	–	
	600–660V	200	300	480	–	
Operational current (A)	200–240V	300	400	600	–	
	380–440V	300	400	600	–	
	500–550V	230	360	600	–	
	600–660V	230	360	600	–	
Operational current (A)	AC-1	350	450	660	–	
Thermal current (A)		350	450	660	–	
Auxiliary contact arrangement		2NO+2NC 4NO+4NC	2NO+2NC 4NO+4NC	2NO+2NC 4NO+4NC	– –	
Standard	Contactors Starter	SC-N11C SW-N11C/3H	SC-N12C SW-N12C/3H	SC-N14C SW-N14C/3H	– –	Page 01/33
With extra pick-up operating coil *	Contactors Starter	– –	– –	– –	– –	– –
With open-phase protective device	Contactors Starter	– SW-N11C/2E	– SW-N12C/2E	– SW-N14C/2E	– –	Page 01/64
With ON-OFF pushbuttons	Contactors Starter	– –	– –	– –	– –	– –
With ON-OFF and reset pushbuttons	Contactors Starter	– –	– –	– –	– –	– –
Dust tight/light corrosion resistant	Contactors Starter	– –	– –	– –	– –	– –
Thermal overload relay		See page 01/16. Same as the open types				Page 01/98

Note: * The standard types for frame sizes N5 and above (with SUPER MAGNET) hold without chattering even if the line voltage drops to 65% of its rated value.

Magnetic Contactors and Starters

SC and SW series

Quick selection guide/Reversing, Open type

■ Types and ratings/Reversing, Open

Frame size		03	0	05	4-0	Further information
Max. motor capacity (kW)	200–240V	2.5	3.5	3.5	4.5	
	380–440V	4	5.5	5.5	7.5	
AC-3, IEC 60947-4-1	500–550V	4	5.5	5.5	7.5	
	600–660V	4	5.5	5.5	7.5	
Operational current (A)	200–240V	11	13	13	18	
	380–440V	9	12	12	16	
	500–550V	7	9	9	13	
	600–660V	5	7	7	9	
Thermal current (A)		20	20	20	25	
Auxiliary contact arrangement		1NC×2 1NO×2	1NC×2 1NO×2	(1NO+1NC)×2 2NC×2	1NC×2 1NO×2	
Standard	Contactor Starter	SC-03RM SW-03RM/3H	SC-0RM SW-0RM/3H	SC-05RM SW-05RM/3H	SC-4-0RM SW-4-0RM/3H	Page 01/42
DC operated	Contactor Starter	SC-03RM/G SW-03RM/G3H	SC-0RM/G SW-0RM/G3H	SC-05RM/G SW-05RM/G3H	SC-4-0RM/G SW-4-0RM/G3H	Contact FUJI
Mechanical latch AC operated	Contactor Starter	SC-03RM/V –	SC-0RM/V –	SC-05RM/V –	SC-4-0RM/V –	Page 01/56
Mechanical latch DC operated	Contactor Starter	SC-03RM/VG –	SC-0RM/VG –	SC-05RM/VG –	SC-4-0RM/VG –	Page 01/56
With open-phase protective device	Contactor Starter	– SW-03RM/2E	– SW-0RM/2E	– SW-05RM/2E	– SW-4-0RM/2E	Page 01/65
Thermal overload relay On-contactor mounting						Page 01/98
Standard Open-phase protection		TR-0N/3 TK-0N	TR-0N/3 TK-0N	TR-0N/3 TK-0N	TR-5-1N/3 TK-5-1N	

Frame size		4-1	5-1	N1	N2	Further information
Max. motor capacity (kW)	200–240V	5.5	5.5	7.5	11	
	380–440V	11	11	15	18.5	
AC-3, IEC 60947-4-1	500–550V	11	11	15	18.5	
	600–660V	7.5	7.5	11	15	
Operational current (A)	200–240V	22	22	32	40	
	380–440V	22	22	32	40	
	500–550V	17	17	24	29	
	600–660V	9	9	15	19	
Thermal current (A)		32	32	50	60	
Auxiliary contact arrangement		1NC×2 1NO×2	(1NO+1NC)×2,2NC×2 (2NO+2NC)×2	(2NO+2NC)×2 (3NO+3NC)×2	(2NO+2NC)×2 (3NO+3NC)×2	
Standard	Contactor Starter	SC-4-1RM SW-4-1RM/3H	SC-5-1RM SW-5-1RM/3H	SC-N1RM SW-N1RM/3H	SC-N2RM SW-N2RM/3H	Page 01/42
DC operated	Contactor Starter	SC-4-1RM/G SW-4-1RM/G3H	SC-5-1RM/G SW-5-1RM/G3H	SC-N1RM/G SW-N1RM/G3H	SC-N2RM/G SW-N2RM/G3H	Contact FUJI
Mechanical latch AC operated	Contactor Starter	SC-4-1RM/V –	SC-5-1RM/V –	SC-N1RM/VS –	SC-N2RM/VS –	Page 01/56
Mechanical latch DC operated	Contactor Starter	SC-4-1RM/VG –	SC-5-1RM/VG –	SC-N1RM/VS –	SC-N2RM/VS –	Page 01/56
With open-phase protective device	Contactor Starter	– SW-4-1RM/2E	– SW-5-1RM/2E	– SW-N1RM/2E	– SW-N2RM/2E	Page 01/65
Thermal overload relay On-contactor mounting						Page 01/98
Standard Open-phase protection		TR-5-1N/3 TK-5-1N	TR-5-1N/3 TK-5-1N	TR-N2/3 TK-N2	TR-N2/3 TK-N2	

Note: Auxiliary contact arrangements indicate the ones for types except mechanical latch types.

■ Types and ratings/Reversing, Open

Frame size		N2S	N3	N4	N5	Further information
Max. motor capacity (kW)	200–240V	15	18.5	22	30	
	380–440V	22	30	40	55	
AC-3, IEC 60947-4-1	500–550V	25	37	37	55	
	600–660V	22	30	37	55	
Operational current (A)	200–240V	50	65	80	105	
	380–440V	50	65	80	105	
	500–550V	38	60	60	85	
	600–660V	26	38	44	64	
Thermal current (A)		80	100	135	150	
Auxiliary contact arrangement		(2NO+2NC)×2 (3NO+3NC)×2	(2NO+2NC)×2 (3NO+3NC)×2	(2NO+2NC)×2 (3NO+3NC)×2	(2NO+2NC)×2 (3NO+3NC)×2	
Standard	Contact Starter	SC-N2SRM SW-N2SRM/3H	SC-N3RM SW-N3RM/3H	SC-N4RM SW-N4RM/3H	SC-N5RM SW-N5RM/3H	Page 01/42
DC operated	Contact Starter	SC-N2SRM/G SW-N2SRM/G3H	SC-N3RM/G SW-N3RM/G3H	SC-N4RMSE SW-N4RM/SE3H	SC-N5RM SW-N5RM/3H	Contact FUJI
Mechanical latch AC operated	Contact Starter	SC-N2SRM/VS –	SC-N3RM/VS –	SC-N4RM/VS –	SC-N5RM/VS –	Page 01/56
Mechanical latch DC operated	Contact Starter	SC-N2SRM/VS –	SC-N3RM/VS –	SC-N4RM/VS –	SC-N5RM/VS –	Page 01/56
With open-phase protective device	Contact Starter	– SW-N2SRM/2E	– SW-N3RM/2E	– SW-N4RM/2E	– SW-N5RM/2E	Page 01/65
Thermal overload relay On-contactor mounting						Page 01/98
Standard Open-phase protection		TR-N3/3 TK-N3	TR-N3/3 TK-N3	TR-N5/3 TK-N5	TR-N5/3 TK-N5	

Frame size		N6	N7	N8	N10	Further information
Max. motor capacity (kW)	200–240V	37	45	55	65	
	380–440V	60	75	90	110	
AC-3, IEC 60947-4-1	500–550V	60	75	130	132	
	600–660V	60	90	132	132	
Operational current (A)	200–240V	125	150	180	220	
	380–440V	125	150	180	220	
	500–550V	90	120	180	200	
	600–660V	72	103	150	150	
Thermal current (A)		150	200	260	260	
Auxiliary contact arrangement		(2NO+2NC)×2 (3NO+3NC)×2	(2NO+2NC)×2 (3NO+3NC)×2	(2NO+2NC)×2 (3NO+3NC)×2	(2NO+2NC)×2 (3NO+3NC)×2	
Standard	Contact Starter	SC-N6RM SW-N6RM/3H	SC-N7RM SW-N7RM/3H	SC-N8RM SW-N8RM/3H	SC-N10RM SW-N10RM/3H	Page 01/42
DC operated	Contact Starter	SC-N6RM SW-N6RM/3H	SC-N7RM SW-N7RM/3H	SC-N8RM SW-N8RM/3H	SC-N10RM SW-N10RM/3H	Contact FUJI
Mechanical latch AC operated	Contact Starter	SC-N6RM/VS –	SC-N7RM/VS –	SC-N8RM/VS –	SC-N10RM/VS –	Page 01/56
Mechanical latch DC operated	Contact Starter	SC-N6RM/VS –	SC-N7RM/VS –	SC-N8RM/VS –	SC-N10RM/VS –	Page 01/56
With open-phase protective device	Contact Starter	– SW-N6RM/2E	– SW-N7RM/2E	– SW-N8RM/2E	– SW-N10RM/2E	Page 01/65
Thermal overload relay On-contactor mounting						Page 01/98
Standard Open-phase protection		TR-N6/3 TK-N6	TR-N7/3 TK-N7	TR-N8/3 TK-N8	TR-N10/3 TK-N10	

Note: Auxiliary contact arrangements indicate the ones for types except mechanical latch types.

Magnetic Contactors and Starters

SC and SW series

Quick selection guide/Reversing, Open type

■ Types and ratings/Reversing, Open

Frame size		N11	N12	N14	N16	Further information
Max. motor capacity (kW)	200–240V	90	120	180	–	
	380–440V	160	220	315	–	
AC-3, IEC 60947-4-1	500–550V	160	250	400	–	
	600–660V	200	300	480	–	
Operational current (A)	200–240V	300	400	600	–	
	380–440V	300	400	600	–	
	500–550V	230	360	600	–	
	600–660V	230	360	600	–	
Thermal current (A)		350	450	660	–	
Auxiliary contact arrangement		(2NO+2NC)×2 (3NO+3NC)×2	(2NO+2NC)×2 (3NO+3NC)×2	(2NO+2NC)×2 (3NO+3NC)×2	– –	
Standard	Contactors Starters	SC-N11RM SW-N11RM/3H	SC-N12RM SW-N12RM/3H	SC-N14RM SW-N14RM/3H	– –	Page 01/42
DC operated	Contactors Starters	SC-N11RM SW-N11RM/3H	SC-N12RM SW-N12RM/3H	SC-N14RM SW-N14RM/3H	– –	Contact FUJI
Mechanical latch AC operated	Contactors Starters	SC-N11RM/VS –	SC-N12RM/VS –	SC-N14RM/VS –	– –	Page 01/56
Mechanical latch DC operated	Contactors Starters	SC-N11RM/VS –	SC-N12RM/VS –	SC-N14RM/VS –	– –	Page 01/56
With open-phase protective device	Contactors Starters	– SW-N11RM/2E	– SW-N12RM/2E	– SW-N14RM/2E	– –	Page 01/65
Thermal overload relay On-contactor mounting						Page 01/98
Standard Open-phase protection		TR-N11/3 TK-N11	TR-N12/3 TK-N12	TR-N14/3 TK-N14	– –	

Note: Auxiliary contact arrangements indicate the ones for types except mechanical latch types.

Magnetic Contactors and Starters
SC and SW series
Quick selection guide/Reversing, Enclosed type

■ Types and ratings/Reversing, Enclosed

Frame size		03	0	05	4-0	Further information
Max. motor capacity (kW)	200–240V	2.5	3.5	3.5	4.5	
	380–440V	4	5.5	5.5	7.5	
AC-3, IEC 60947-4-1	500–550V	4	5.5	5.5	7.5	
	600–660V	4	5.5	5.5	7.5	
Operational current (A)	200–240V	11	13	13	18	
	380–440V	9	12	12	16	
	500–550V	7	9	9	13	
	600–660V	5	7	7	9	
Thermal current (A)		20	20	20	25	
Auxiliary contact arrangement		1NC×2 1NO×2	1NC×2 1NO×2	(1NO+1NC)×2 2NC×2	1NC×2 1NO×2	
Standard	Contactors Starter	SC-03RMC SW-03RMC/3H	SC-0RMC SW-0RMC/3H	SC-05RMC SW-05RMC/3H	SC-4-0RMC SW-4-0RMC/3H	Page 01/42
With open-phase protective device	Contactors Starter	– SW-03RMC/2E	– SW-0RMC/2E	– SW-05RMC/2E	– SW-4-0RMC/2E	Page 01/65
With ON-OFF pushbuttons	Contactors Starter	– –	– –	– –	– –	– –
Thermal overload relay On-contactor mounting						Page 01/98
Standard Open-phase protection		TR-0N/3 TK-0N	TR-0N/3 TK-0N	TR-0N/3 TK-0N	TR-5-1N/3 TK-5-1N	

Frame size		4-1	5-1	N1	N2	Further information
Max. motor capacity (kW)	200–240V	5.5	5.5	7.5	11	
	380–440V	11	11	15	18.5	
AC-3, IEC 60947-4-1	500–550V	11	11	15	18.5	
	600–660V	7.5	7.5	11	15	
Operational current (A)	200–240V	22	22	32	40	
	380–440V	22	22	32	40	
	500–550V	17	17	24	29	
	600–660V	9	9	15	19	
Thermal current (A)		32	32	50	60	
Auxiliary contact arrangement		1NC×2 1NO×2	(1NO+1NC)×2 2NC×2	(2NO+2NC)×2 (3NO+3NC)×2	(2NO+2NC)×2 (3NO+3NC)×2	
Standard	Contactors Starter	SC-4-1RMC SW-4-1RMC/3H	SC-5-1RMC SW-5-1RMC/3H	SC-N1RMC SW-N1RMC/3H	SC-N2RMC SW-N2RMC/3H	Page 01/42
With open-phase protective device	Contactors Starter	– SW-4-1RMC/2E	– SW-5-1RMC/2E	– SW-N1RMC/2E	– SW-N2RMC/2E	Page 01/65
With ON-OFF pushbuttons	Contactors Starter	– –	– –	– –	– –	– –
Thermal overload relay On-contactor mounting						Page 01/98
Standard Open-phase protection		TR-5-1N/3 TK-5-1N	TR-5-1N/3 TK-5-1N	TR-N2/3 TK-N2	TR-N2/3 TK-N2	

Magnetic Contactors and Starters

SC and SW series

Quick selection guide/Reversing, Enclosed type

■ Types and ratings/Reversing, Enclosed

Frame size		N2S	N3	N4	N5	Further information
Max. motor capacity (kW)	200–240V	15	18.5	22	30	
	380–440V	22	30	40	55	
AC-3, IEC 60947-4-1	500–550V	25	37	37	55	
	600–660V	22	30	37	55	
Operational current (A)	200–240V	50	65	80	105	
	380–440V	50	65	80	105	
	500–550V	38	60	60	85	
	600–660V	26	38	44	64	
Thermal current (A)		80	100	135	150	
Auxiliary contact arrangement		(2NO+2NC)×2 (3NO+3NC)×2	(2NO+2NC)×2 (3NO+3NC)×2	(2NO+2NC)×2 (3NO+3NC)×2	(2NO+2NC)×2 (3NO+3NC)×2	
Standard	Contact Starter	SC-N2SRMC SW-N2SRMC/3H	SC-N3RMC SW-N3RMC/3H	SC-N4RMC SW-N4RMC/3H	SC-N5RMC SW-N5RMC/3H	Page 01/42
With open-phase protective device	Contact Starter	– SW-N2SRMC/2E	– SW-N3RMC/2E	– SW-N4RMC/2E	– SW-N5RMC/2E	Page 01/65
With ON-OFF pushbuttons	Contact Starter	– –	– –	– –	– –	– –
Thermal overload relay On-contactor mounting						Page 01/98
Standard Open-phase protection		TR-N3/3 TK-N3	TR-N3/3 TK-N3	TR-N5/3 TK-N5	TR-N5/3 TK-N5	

Frame size		N6	N7	N8	N10	Further information
Max. motor capacity (kW)	200–240V	37	45	55	65	
	380–440V	60	75	90	110	
AC-3, IEC 60947-4-1	500–550V	60	75	130	132	
	600–660V	60	90	132	132	
Operational current (A)	200–240V	125	150	180	220	
	380–440V	125	150	180	220	
	500–550V	90	120	180	200	
	600–660V	72	103	150	150	
Thermal current (A)		150	200	260	260	
Auxiliary contact arrangement		(2NO+2NC)×2 (3NO+3NC)×2	(2NO+2NC)×2 (3NO+3NC)×2	(2NO+2NC)×2 (3NO+3NC)×2	(2NO+2NC)×2 (3NO+3NC)×2	
Standard	Contact Starter	SC-N6RMC SW-N6RMC/3H	SC-N7RMC SW-N7RMC/3H	SC-N8RMC SW-N8RMC/3H	SC-N10RMC SW-N10RMC/3H	Page 01/42
With open-phase protective device	Contact Starter	– SW-N6RMC/2E	– SW-N7RMC/2E	– SW-N8RMC/2E	– SW-N10RMC/2E	Page 01/65
With ON-OFF pushbuttons	Contact Starter	– –	– –	– –	– –	– –
Thermal overload relay On-contactor mounting						Page 01/98
Standard Open-phase protection		TR-N6/3 TK-N6	TR-N7/3 TK-N7	TR-N8/3 TK-N8	TR-N10/3 TK-N10	