
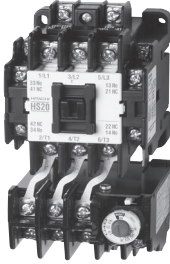

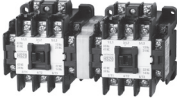
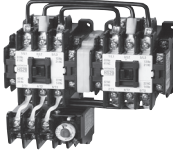




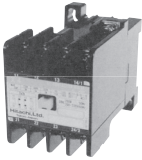
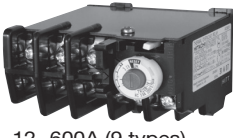
ELECTROMAGNETIC CONTACTORS AND SWITCHES

▼ TYPES AND MODEL ARRANGEMENTS OF ELECTROMAGNETIC CONTACTORS AND SWITCHES

	Electromagnetic Contactors	Electromagnetic Switches				
		Without Enclosure		With Enclosure		
Non-reversible Type		HS □ 8-50 frame		HS □-T 8-50 frame		SHS □-T 10-50 frame
		H □ 65C-800C frame		H □-T 65C-600C frame		SH □-T 65C-600C frame
Reversible Type 20-800C frame (:provided mechanical interlock)		HS □-R 10-50 frame		HS □-RT 10-50 frame		SHS □-RT 10-50 frame
		H □-R 65C-800C frame		H □-RT 65C-600C frame		SH □-RT 65C-600C frame

Contactor Relays

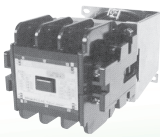
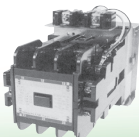
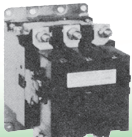
Thermal Overload Relays

XS4 	X □  3-8 contacts (5 types)	 12-600A (9 types)	TR □-□ (Electromagnetic Switches with Thermal Overload Relay) H □-T H □-TK with 2E Thermal Overload Relay
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DC Operated Electromagnetic Contactors

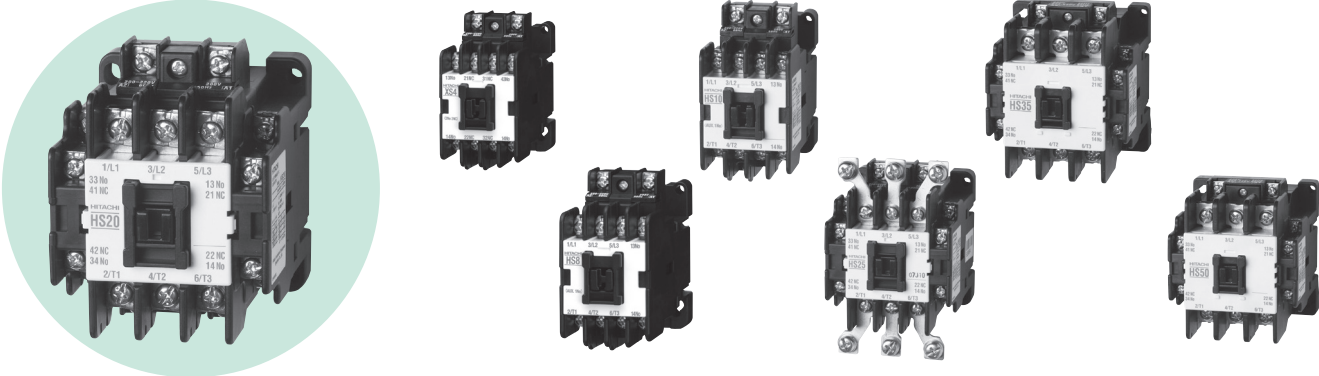
Latched Electromagnetic Contactors

Heavy Load Electromagnetic Contactors

 10-800C frame	H □-G	 10-600C frame	H □-L	 10-200N frame	H □-H
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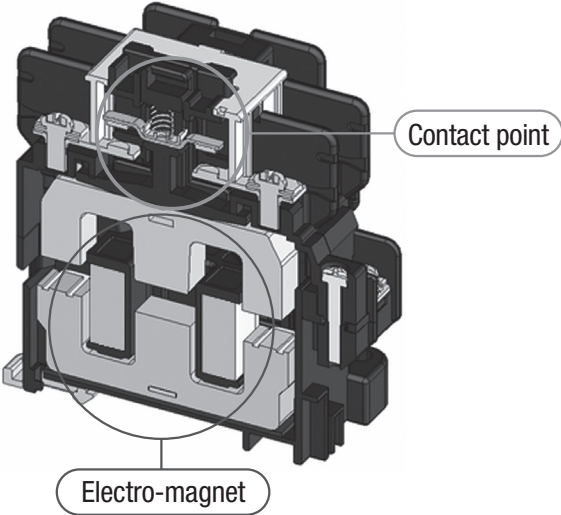
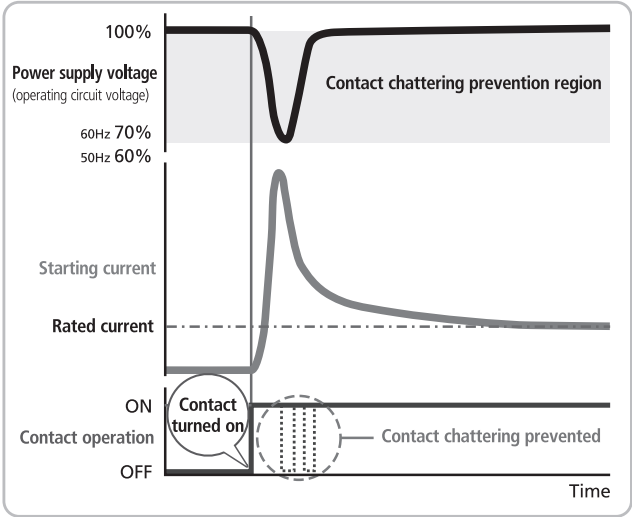
HS series – New ELECTROMAGNETIC CONTACTORS AND SWITCHES

▼ FEATURES OF NEW ELECTROMAGNETIC CONTACTORS AND SWITCHES (HS series)

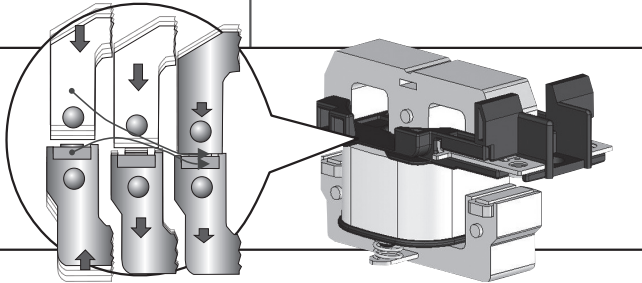


ELECTROMAGNET RESISTANT TO VOLTAGE FLUCTUATIONS

The contactor maintains stable conducting performance even when the power supply voltage drops when started under load.

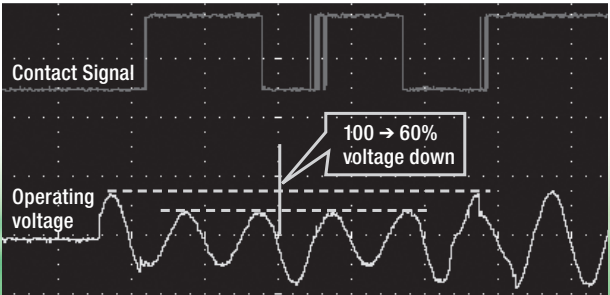
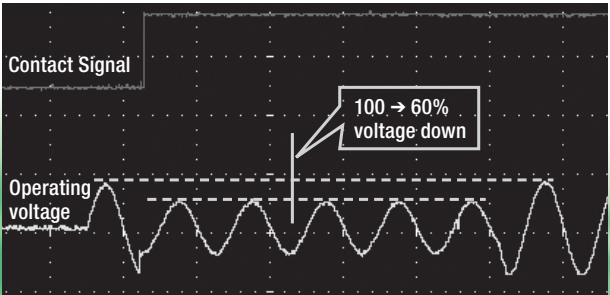


New shock-absorbing structure
 Immediately before collision, the movable core and the fixed core move in the same direction to absorb the shock.



Stable operation

During contact chattering



IMPROVED ENVIRONMENTAL PERFORMANCE

Reduced power consumption

The HS series reduces power consumption by operating coils with 20A to 50A frames.

Frame	20A	25A	35A	50A
Power consumption	86%	86%	95%	95%

(compared with conventional Hitachi IES products)

Amount of materials used reduced, recyclable materials increased

The HS series improves environmental performance through miniaturization to reduce product weight and with indications of material names for easier recycling.



Example of indication for resin used

IMPROVED USABILITY by Miniaturization and an Enhanced Auxiliary Contact Unit

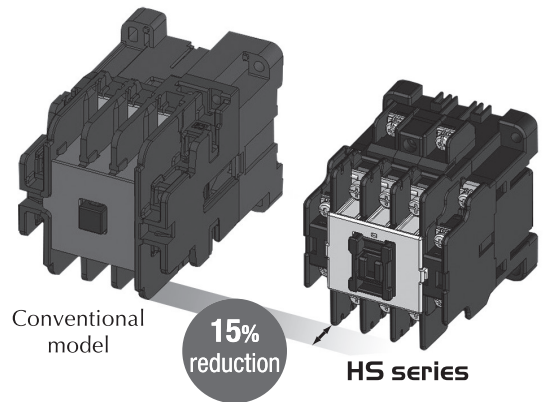
15% height reduction

Improved magnet and contact efficiency greatly decreases the height from the mounting surface for 20A to 50A frames.

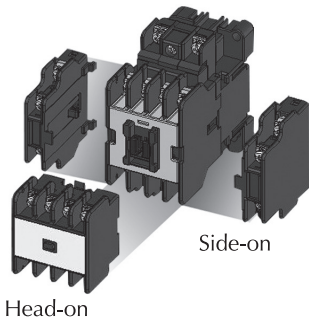
Improved inching performance

The capability of the 10A frame has been upgraded to 2.2 kW and that of the 20A frame to 3.7 kW.

220VAC, 50% inching rate 50%, 100,000-operation service life (AC-4)



15% reduction



Head-on

Side-on

Enhanced auxiliary contact unit

In addition to the side-on type, a head-on type is available, further improving usability.

You can easily mount the side-on type with one hand (patent pending).

IMPROVED RELIABILITY AND SAFETY

Minimum load to 20V 5mA on the auxiliary contact

The HS series uses a highly reliable twin contact to open or close the contact of a micro load circuit.

Mechanical durability of 8 million operations

The HS series uses a new shock absorbing structure to improve durability.

Safe contact opening

(the auxiliary b-contact is turned off during welding of the main contact)

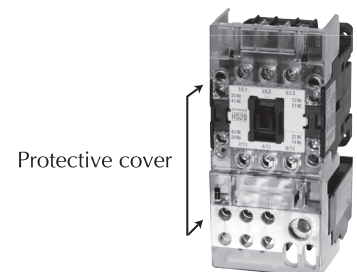
The HS series complies with the requirements for control functions for failures specified in EN60204 for electrical equipment of industrial machinery.

Fireproof materials used

Resin-molded parts use UL-approved fireproof materials to help improve system reliability.

Protective cover (option)

You can opt for a protective cover applicable to the IP20.



Protective cover

COMPLIES WITH VARIOUS INTERNATIONAL STANDARDS

The HS series either complies with or expects to comply with various domestic and international standards.





▼ Ratings and Specification *New HS Series*

Item			Frame	8	10	20	25	35	50		
Type	Electromagnetic contactors	without enclosure	Non-reversible	HS8	HS10	HS20	HS25	HS35	HS50		
			Reversible	-	HS10-R	HS20-R	HS25-R	HS35-R	HS50-R		
	Electromagnetic switch with 1E Thermal Overload Relay	without enclosure	Non-reversible	HS8-T	HS10-T	HS20-T	HS25-T	HS35-T	HS50-T		
			Reversible	-	HS10-RT	HS20-RT	HS25-RT	HS35-RT	HS50-RT		
		with enclosure	Non-reversible	-	SHS10-T	SHS20-T	SHS25-T	SHS35-T	SHS50-T		
		Reversible	-	SHS10-RT	SHS20-RT	SHS25-RT	SHS35-RT	SHS50-RT			
		Thermal overload relay		TR12B-1E	TR20B-1E	TR25B-1E		TR50B-1E			
Rated insulation voltage (Ui)			AC690V								
Max. Rated Capacity of motor	JIS C 8201-4-1 JEM 1038	Rate operational current [A] (AC3)	200-220V	11	13	20(18)	26	35	50(48)		
			380-440V	7	9	17	36	32	47		
			500-550V	6	9	17	20	26	37		
		Three-phase motor [kW] AC3 & AC2	200-220V	2.2	2.7	4(3.7)	5.5	7.5	11		
			380-440V	2.7	4	7.5	11	15	22		
			500-550V	2.7	5.5	7.5	11	15	22		
	IEC 60947-4-1	Rate operational current [A] (AC3)	200-220V	11	13	22	27	40	50		
			380-440V	9	12	22	26	40	50		
			500-550V	-	-	-	-	-	-		
		Three-phase motor [kW] AC3 & AC2	200-220V	2.5	3.5	5.5	7.5	11	15		
			380-440V	4	5.5	11	11	18.5	22		
			500-550V	-	-	-	-	-	-		
Single-Phase Motor [kW] AC3 JIS, JEM and IEC		100-110V	0.4	0.5	0.9	1.2	1.7	-			
		380-440V	0.8	1	1.8	-	-	-			
Inching [kW] AC4 (Inching Ratio 50%), Electrical life 0.1 million times) JIS, JEM and IEC		200-240V	1.5	2.2	3.7	3.7	5.5	7.5			
		380-440V	2.2	3.7	5.5	5.5	7.5	11			
Rated Capacity for Resistance Load [A] AC1 (Electrical Life 0.5 million times) JIS, JEM and IEC		200-240V	20	20	32	35	50	70			
		380-440V	20	20	32	35	50	70			
Rated Thermal Current (Ith) [A]		without enclosure	20	20	32	35	50	70			
		with enclosure	15	15	26	35	44	60			
Characteristics of operation coil	Coil burden (max.) 50/60Hz [VA]		At power-on	100/90	100/90	100/90	100/90	135/125	135/125		
			After power-on	12/11	12/11	12/11	12/11	15/14	15/14		
	Coil consumption (mean) [W]			3				4.3			
	Pick-up voltage (% of rate voltage)(mean)			70%	70%	70%	70%	70%	70%		
	Drop-out voltage (% of rate voltage)(mean)			55%	55%	60%	60%	60%	60%		
Operating time [ms] (reference value)		At power-on	10-20								
		At release	10-35								
Auxiliary contact specification	Type of constant			Twin contact							
	Numbers	Standard	1NO or 1NC		1NO1NC or 2NO2NC		2NO2NC				
		Maximum	Four contacts can be added to the standard specification. Head-on2P: 2NO, 1NO1NC, 2NC(Not applicable for the machine mounted with the side-on unit) Head-on4P:4NO,3NO1NC,2NO2NC(Not applicable for the machine mounted with the side-on unit) Side-on2P:1NO1NC(Not applicable for the machine mounted with the head-on unit)								
	Rated operational current [A]	200-240V	AC-12		AC-15		DC-12		DC-13	minimum rating	
380-440V		110V 10A	220V 8A	110V 6A	220V 3A	440V 1.5A	110V 2.5A	220V 1A	1.5A		0.55A
Rated Thermal current [A]			-								
Durability (million times)		Mechanical	8								
		Electrical	2		1.5		1				
Application	With mechanical Interlock (Reversible Type)		-	○	○	○	○	○	○		
	With 2E Thermal Overload Relay		○	○	○	○	○	○	○		
	With Three-Element Thermal Overload Relay		○	○	○	○	○	○	○		
	With Latch		-	○	○	○	○	○	○		
	DC Operation		-	○	○	○	○	○	○		
	IEC 35mm Rail Mounting		◎	◎	◎	◎	◎	◎	◎		

Note:

- The ratings of the 200V class in the parenthesis when frames 20 and 50 are provided with an enclosure.
- The rated thermal current applies to electromagnetic contactors.
- The pick-up and drop-out voltages apply to 200V 60Hz power source. In case of 50Hz, the figures for frame H65C-125C are about 10% smaller and for frame H150C-800C are about the same.
- Application of category AC3 and AC2 to the reversible electromagnetic contactors and switches shall be limited to regura reversible operation in which motor starts reverse rotation after it has once stopped. Category AC4 is applicable when the motor starts reverse rotation before it has completely stopped.

▼ Ratings and Specification **Magnetic Starter and Contactors**

65C	80C	100C	125C	150C	200C	250C	300C	400C	600C	800C
H65C	H80C	H100C	H125C	H150C	H200C	H250C	H300C	H400C	H600C	H800C-R
H65C-R	H80C-R	H100C-R	H125C-R	H150C-R	H200C-R	H250C-R	H300C-R	H400C-R	H600C-R	-
H65C-T	H80C-T	H100C-T	H125C-T	H150C-T	H200C-T	H250C-T	H300C-T	H400C-T	H600C-T	-
H65C-RT	H80C-RT	H100C-RT	H125C-RT	H150C-RT	H200C-RT	H250C-RT	H300C-RT	H400C-RT	H600C-RT	-
SH65C-T	SH80C-T	SH100C-T	SH125C-T	SH150C-T	SH200C-T	SH250C-T	SH300C-T	SH400C-T	SH600C-T	-
SH65C-RT	SH80C-RT	SH100C-RT	SH125C-RT	SH150C-RT	SH200C-RT	SH250C-RT	SH300C-RT	SH400C-RT	SH600C-RT	-
TR80B-1E		TR150B-1E	TR150B-1E		TR250B-1E		TR400B-1E		TR600B-1E	-
AC690V										
65	80	100	125	150	180	240	300	400	600	800(AC2)
65	80	100	125	150	180	240	300	400	600	800(AC2)
52	72	72	72	80	145	145	250	350	500	-
15	19	25	30	37	45	60	75	110	150	200(AC2)
30	37	50	60	75	90	120	150	200	300	400(AC2)
30	45	45	45	55	90	90	160	200	300	-
65	80	105	126	150	182	240	300	400	600	800(AC2)
65	80	100	125	150	180	240	300	400	600	800(AC2)
52	72	72	72	80	145	145	250	350	500	-
18.5	22	30	37	45	55	75	90	115	160	200(AC2)
30	37	50	60	75	90	120	150	200	300	400(AC2)
30	45	45	45	55	90	90	160	200	300	-
-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-
9	13	13	15	22	30	37	45	45	55	-
15	19	19	22	30	37	45	55	55	75	-
80	120	135	150	200	260	300	350	420	600	800 0.1Million times
80	120	135	150	200	260	300	350	420	600	800 0.1Million times
80	120	135	150	200	260	300	350	420	600	800
65	80	100	125	150	180	240	300	400	600	-
220/190	490/420		490/420	400/400	480/480		1600/1600		1800/1800	
18/14	50/40		50/40	8/8	9/9		10/10		14/14	
6	9.5		9.5	7	8		8		13	
75%	75%		75%	70	70%		70%		70%	
58%	58%		58%	45	45%		35%		35%	
10-20	10-25		10-25	35-50	35-50		35-60		40-70	
10-30	10-30		10-30	20-45	20-45		20-45		25-50	
Twin contact										
2NO2NC										4NO4NC
4NO4NC [in case of reversible type: 3NO3NC (max.)]										
2 (Twin contact)										
1 (Twin contact)										
10 (Twin contact)										
5						5				
1						0.5				
⊙	⊙	⊙	⊙	⊙	⊙	⊙	⊙	⊙	⊙	⊙
○	○	○	○	○	○	○	○	○	○	-
○	○	○	○	○	○	○	○	○	○	-
○	○	○	○	○	○	○	○	○	○	-
○	○	○	○	○	○	○	○	○	○	○
-	-	-	-	-	-	-	-	-	-	-

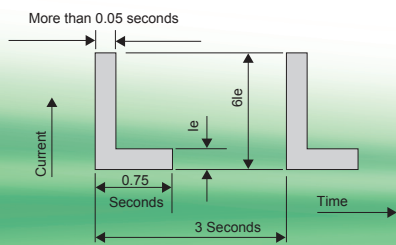
5. The mark ⊙ in the application indicates that they standard.

6. Operating time is a reference value where 200V 50Hz is applied to AC 200V coil. Operating time varies with coil voltage, frequency and phase so it is unsuitable for timing use.

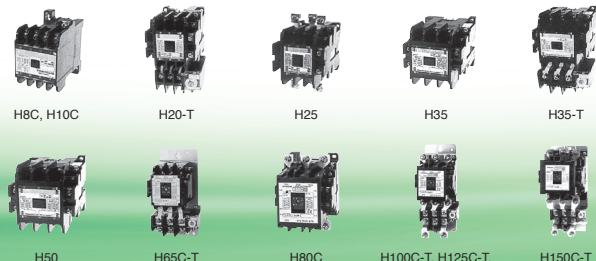
7. Testing condition of electrical durability (Category AC3); The marking and breaking currents and operating frequency of the electrical durability are tested as show in page 8 drawing according to test conditions of JIS C8201-4-1, JEM 1038 and IEC 60947-4-1

▼ Ratings and Specifications OLD PRODUCT (BACKLOG)

Item			Frame	8C	10C	10B	11	12	20	25	35	50		
Type	Electromagnetic contactors	without enclosure	Non-reversible	H8C	H10C	-	H11	H12	H20	H25	H35	H50		
			Reversible	-	-	H10B-R	H11-R	H12-R	H20-R	H25-R	H35-R	H50-R		
	Electromagnetic switch with 1E Thermal Overload Relay	without enclosure	Non-reversible	H8C-T	H10C-T	-	H11-T	H12-T	H20-T	H25-T	H35-T	H50-T		
		with enclosure	Non-reversible	SH8C-T	SH10C-T	-	SH11-T	-	SH20-T	SH25-T	SH35-T	SH50-T		
		enclosure	Reversible	-	-	SH10B-RT	SH11-RT	-	SH20-RT	SH25-RT	SH35-RT	SH50-RT		
Thermal overload relay			TR12B-1E					TR20B-1E		TR25B-1E		TR50B-1E		
Rated insulation voltage (Ui)				AC690V										
Max. Rated Capacity of motor	JIS C 8201-4-1 JEM 1038	Rate operational current [A] (AC3)	200-220V	11	12	12	12	20(18)	26	35	50(48)			
			380-440V	6	9	9	9	17	24	32	47			
			500-550V	5	8	6	8	12	12	26	37			
		Three-phase motor [kW] AC3 & AC2	200-220V	2.2	2.5	2.5	2.5	4(3.7)	5.5	7.5	11			
			380-440V	2.2	4	4	4	7.5	11	15	22			
			500-550V	2.2	4	3.7	4	7.5	7.5	15	22			
	IEC 60947-4-1	Rate operational current [A] (AC3)	200-220V	11	12	12	12	22(20)	27	39	52(48)			
			380-440V	7	9	9	9	22(20)	24	37	47			
			500-550V	5	8	6	8	12	12	26	37			
		Three-phase motor [kW] AC3 & AC2	200-220V	2.5	3	3	3	5.5	*7.5	11	15(11)			
			380-440V	3	4	4	1	11	11	18.5	22			
			500-550V	3	4	3.7	1	7.5	7.5	15	22			
	Single-Phase Motor [kW] AC3 JIS, JEM and IEC		100-110V	0.4	0.4	-	0.4	0.75	-	-	-	-		
			380-440V	0.75	0.75	-	0.75	-	-	-	-	-		
Inching [kW] AC4 (Inching Ratio 50%), Electrical life 0.1 million times) JIS, JEM and IEC		200-240V	0.75	1.5	1.5	1.5	2.2	3.7	5.5	7.5				
		380-440V	1.5	2.2	2.2	2.2	3.7	5.5	7.5	11				
Rated Capacity for Resistance Load [A] AC1 (Electrical Life 0.5 million times) JIS, JEM and IEC			200-240V	20	20	18	20	32	35	50	70			
			380-440V	20	20	18	20	32	35	50	70			
Rated Thermal Current (Ith) [A]			without enclosure	20	20	18	20	32	35	50	70			
			with enclosure	15	15	15	15	26	35	44	60			
Characteristics of operation coil	Coil burden (max.) 50/60Hz [VA]		At power-on	45/40		45/40		45/40		90/80		165/150		
			After power-on	9/7		9/7		9/7		14/11		16/12		
	Coil consumption (mean) [W]			2.4		2.4		2.4		3.5		4.5		
	Pick-up voltage (% of rate voltage)(mean)			65%		75%		68%	75%	68%		73%		
	Drop-out voltage (% of rate voltage)(mean)			50%		50%		50%	50%	53%		53%		
	Operating time (reference value)		At power-on	10-15		10-15		10-15		10-20		10-20		
			At release	10-30		10-30		10-30		10-35		10-25		
Auxiliary contact specification	Type of constant		Standard		Twin contact									
	Numbers	Maximum	1NO or 1NC		2NO1NCx2		1NO1NC or 2NO, 2NC		2NO1NC or 1NO2NC		1NO1NC		2NO2NC	
		4NO4NC [in case of reversible type: 3NO3NC (max.)]												
	Rated operational current [A]		200-240V	2 (Twin contact)										
			380-440V	1 (Twin contact)										
Rated Thermal current [A]		10 (Twin contact)												
Durability (million times)			Mechanical	10		5		10		5		5		
			Electrical	2		1		2		2		1		
Application	With mechanical Interlock (Reversible Type)			-	-	⊙	-	-	⊙	⊙	⊙	⊙		
	With 2E Thermal Overload Relay			○	○	○	○	-	○	○	○	○		
	With Three-Element Thermal Overload Relay			○	○	○	○	○	○	○	○	○		
	With Latch			-	○ (H10-L)	-	○	-	○	○	○	○		
	DC Operation			-	○ (H10-G)	-	○	-	○	○	○	○		
	IEC 35mm Rail Mounting			⊙	⊙	⊙	⊙	⊙	⊙	⊙	⊙	⊙		



le: Rated Operational Current



▼ Ratings and Specification 1E Thermal Overload Relays Overload and Lock Protections

Frame		12B	20B	25B	50B	80B	150B	250B	400B	600B									
Type		TR12B	TR20B	TR25B	TR50B	TR80B	TR150B	*TR250B	*TR400B	*TR600B									
		-1E	-1E	-1E	-1E	-1E	-1E	-1E	-1E	-1E									
Heater Specifications	Type of Heater (Center RC Value) [A]	Center value	Adj. range	Center value	Adj. range	Center value	Adj. range	Center value	Adj. range	Center value	Adj. range								
		0.2	0.16-0.24	0.2	0.16-0.24	20	16-24	9	7-11	20	16-24	80	65-95	(140)	(110-180)	(140)	(110-180)	(140)	(110-180)
		0.3	0.22-0.38	0.3	0.22-0.38	22	18-26	11	9-13	28	22-34	105	90-120	(240)	(170-290)	(240)	(170-290)	(240)	(170-290)
		0.5	0.38-0.62	0.5	0.38-0.62			15	12-18	40	32-48	130	110-150			(380)	(280-440)	(380)	(280-440)
		0.8	0.6-1.0	0.8	0.6-1.0			20	16-24	55	45-65							(500)	(400-600)
		1.2	0.9-1.5	1.2	0.9-1.5			28	22-34	67	55-80								
		1.4	1.1-1.8	1.4	1.1-1.8			40	32-48										
		2.4	1.7-2.9	2.4	1.7-2.9			55	45-65										
		3.8	2.8-4.4	3.8	2.8-4.4														
		5	4-6	5	4-6														
		6.8	5-8	6.8	5-8														
		9	7-11	9	7-11														
11	9-13	11	9-13																
*Number of Heat Elements		2		2		2		2		2		2		2		2			
Heat Element Consumption [VA] (/1 pole)		1.9		1.9		1.9		4.1		7.6		7.6		1.9		1.9			
External Dimensions [mm]	A	45	63	63	85	102.5	102.5	148	164	230									
	B	71	45	54	45	55	87	120	135	179									
	C Height to Reset Button	78.5	72.5	72.5	73.5	73.5	73.5	167	167	170									
Net Weight [kg]		0.1	0.15	0.17	0.25	0.36	0.37	2.0	2.0	5.0									
Terminal Screw Diameter	Main Circuit	M3.5	M4	M4(Line) M5(Lead)	M5	M6	M6(Line) M8(Lead)	M10	M12	M12									
	Operating Circuit	M3.5	M3.5	M3.5	M3.5	M3.5	M3.5	M3.5	M3.5	M3.5									
Contact Specification	Type of Contact		1NO1NC																
	Arrangement																		
	Rated Insulation Voltage [V]		660																
	Rated Thermal Current [A]		NC Contact: , NO Contact: 2																
	Rate Operational Current [A] Values in parenthesis for Automatic reset	AC (AC15)	110V	NC Contact: , NO Contact: 2 (0.5)															
			220V	NC Contact: , NO Contact: 1 (0.5)															
			440V	NC Contact: , NO Contact: 0.5 (0.2)															
		DC L/R ≤ 40ms	550V	NC Contact: , NO Contact: 0.5 (0.2)															
			24V	NC Contact: , NO Contact: 0.5 (0.2)															
			48V	NC Contact: , NO Contact: 0.2 (0.1)															
Minimum Rating		NC Contact: , NO Contact: 24V 10mA																	
Reset Method		**Both as Manual and Automatic Reset																	
Separate Mounting		○	◎	○	◎	◎	○	Refer Remarks 4											
Option	Reset Release	○	○	○	○	○	○	○	○	○									
	Lamp Unit	○	○	○	○	○	○	○	○	○									
	Safety Cover	-	○	-	○	○	-	-	-	-									
	Separate (DIN rial) Mounting Unit	○	-	-	-	-	-	-	-	-									
Applicable Electromagnetic Contactor		H8C	H20	H25	H35	H65C	H100C	H200C	H300C	H600C									
		H10C			H50	H80C	H125C	H250C	H400C										
		H11					H150C												
		H12																	
		H10B-R																	
Conforming standard		JIS, JEM, IEC, BS, VDE (3 Heat Element Only)																	

REMARKS:

- In case of mounting for Electromagnetic Contactor H25 and required 15A or less RC value, applies 20B frame with extension terminal.
- In case of mounting for Electromagnetic Contactor H100C-H150C and required 67A or less RC value, applied 80B frame with extension terminal
- If 25B or 150B frame is mounted separately, ordering from shall be "Type"+RC Value"+Separate mounting". And 25B or 150B frame with extension terminal for both load and Line terminal is supplied.
- For separate mounting of 150B frame and above rating, Tr400B- □ separate mounting type is supplied.

- * 3 Heat Element type is available for standard type with 2 Heat Elements.
- Marked ★ TR250B-TR600B-□ are Type names for TR20B-□ with CT (ratio 100:1) On the Relay mounted to Electromagnetic Contactor at factory, marked ★ name is not indicated.
- ** Relay is set in manual reset when shipped from factory.
- ◎ mean provided as standard. ○ mean available as option.

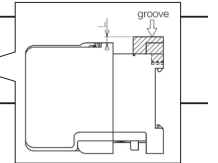
2E Thermal Overload Relays Overload, Lock Protections and Phase - Failure Protections

Frame		12B		20B		25B		50B		80B		150B		250B		400B		600B		
Type		TR12B -2E		TR20B -2E		TR25B -2E		TR50B -2E		TR80B -2E		TR150B -2E		*TR250B -2E		*TR400B -2E		*TR600B -2E		
		Center value	Adj. range	Center value	Adj. range	Center value	Adj. range	Center value	Adj. range	Center value	Adj. range	Center value	Adj. range	Center value	Adj. range	Center value	Adj. range	Center value	Adj. range	
Heater Specifications	Type of Heater (Center RC Value) [A]	0.2	0.16-0.24	0.2	0.16-0.24	20	16-24	9	7.0-11	20	16-24	80	65-95	(140)	(110-170)	(140)	(110-170)	(140)	(110-170)	
		0.3	0.24-0.36	0.3	0.24-0.36	22	18-26	11	9-13	28	22-34	105	90-120	(180)	(140-220)	(180)	(140-220)	(180)	(140-220)	
		0.4	0.32-0.48	0.4	0.32-0.48			15	12-18	40	32-48	130	110-150	(240)	(200-280)	(240)	(200-280)	(240)	(200-280)	
		0.5	0.4-0.6	0.5	0.4-0.6			20	16-24	55	45-65					(300)	(240-360)	(300)	(240-360)	
		0.6	0.5-0.7	0.6	0.5-0.7			28	22-34	67	55-80					(380)	(300-450)	(380)	(300-450)	
		0.8	0.7-0.9	0.8	0.7-0.9			40	32-48									(500)	(400-600)	
		1.0	0.8-1.2	1.0	0.8-1.2			55	45-65											
		1.2	1.0-1.4	1.2	1.0-1.4															
		1.4	1.1-1.7	1.4	1.1-1.7															
		1.8	1.4-2.2	1.8	1.4-2.2															
		2.4	2.0-2.8	2.4	2.0-2.8															
		3.0	2.4-3.6	3.0	2.4-3.6															
		3.8	3.0-4.5	3.8	3.0-4.5															
		5.0	4.0-6.0	5.0	4.0-6.0															
		6.8	5.5-8.0	6.8	5.5-8.0															
		9.0	7.0-11	9.0	7.0-11															
		11	9-13	11	9-13															
		*Number of Heat Elements		3		3		3		3		3		3		3		3		3
Heat Element Consumption [VA] (/1 pole)		1.9		1.9		1.9		4.1		7.6		7.6		1.9		1.9		1.9		
External Dimensions [mm]	A	45		63		63		85		102.5		102.5		148		164		230		
	B	71		45		54		45		55		87		120		135		179		
	C Height to Reset Button	78.5		72.5		72.5		73.5		73.5		73.5		167		167		170		
Net Weight [kg]		0.1		0.15		0.17		0.25		0.36		0.37		2.0		2.0		5.0		
Terminal Screw Diameter	Main Circuit	M3.5		M4		M4(Line) M5(Load)		M5		M6		M6(Line) M8(Load)		M10		M12		M12		
	Operating Circuit	M3.5		M3.5		M3.5		M3.5		M3.5		M3.5		M3.5		M3.5		M3.5		
Contact Specification	Type of Contact	1NO1NC																		
	Arrangement																			
	Rated Insulation Voltage [V]	660																		
	Rated Thermal Current [A]	NC Contact: , NO Contact: 2																		
	Rate Operational Current [A] Values in parenthesis for Automatic reset	AC (AC15)	110V		NC Contact: , NO Contact: 2 (0.5)															
			220V		NC Contact: , NO Contact: 1 (0.5)															
			440V		NC Contact: , NO Contact: 0.5 (0.2)															
		DC L/R ≤ 40ms	550V		NC Contact: , NO Contact: 0.5 (0.2)															
			24V		NC Contact: , NO Contact: 0.5 (0.2)															
			48V		NC Contact: , NO Contact: 0.2 (0.1)															
110V		NC Contact: , NO Contact: 0.1 (0.05)																		
220V		NC Contact: , NO Contact: 0.1 (0.05)																		
Minimum Rating	NC Contact: , NO Contact: 24V 10mA																			
Reset Method	**Both as Manual and Automatic Reset																			
Separate Mounting	○		⊙		○		⊙		⊙		○		○		○		○		Refer Remarks 4	
Option	Reset Release	○		○		○		○		○		○		○		○		○		
	Lamp Unit	○		○		○		○		○		○		○		○		○		
	Safety Cover	-		○		-		○		○		-		-		-		-		
	Separate (DIN rail) Mounting Unit	○		-		-		-		-		-		-		-		-		
Applicable Electromagnetic Contactor	H8C		H20		H25		H35		H65C		H100C		H200C		H300C		H600C			
	H10C						H50		H80C		H125C		H250C		H400C					
	H11										H150C									
	H12																			
	H10B-R																			
Conforming standard		JIS, JEM, IEC, BS, VDE, NEMA																		



▼ **OPTIONS** Aux. Contact Block, Safety Cover and Mechanical Interlock Unit

HS series					
Item	Model	Configuration	Rating	Applicable model	Mounting
Auxiliary contact block	SXS-2	Contact configuration 1a1b	Rated operational current (AC15) 220V 3A 440V 1.5A Open thermoelectric current (lth) 10A	XS4 HS8-50	Assemble the unit referring to the instruction manual that comes with the unit.
	SXH-2	Contact configuration 2a 1a1b 2b			
	SXH-4	Contact configuration 4a 3a1b 2a2b			
Coil surge absorber	CS-50	—	AC 250V Suppressed surge voltage: 600 V (peak) or less	XS4 HS8-50	Snap it into the groove of the case. L=0mm
Safety cover	TCS-10, TCS-10T	TC type	—	XS4, 8,10 frame	Refer to the instruction manual.
	TCS-20, TCS-20T		—	20 frame	
	TCS-25, TCS-25T		—	25 frame	
	TCS-50, TCS-50T		—	35, 50 frame	
	CVS-10	CV type	—	XS4, 8,10 frame (non-reversible)	
	CVS-25		—	20, 25 frame	
	CVS-50		—	35, 50 frame	
	CVS-10R	FP type	—	10 frame (reversible)	
	FPS-S2		—	SXS-2	
	FPS-H2		—	SXH-2	
FPS-H4	—	SXH-4			
Mechanical-Interlock unit	RI-50	—	—	10-50 (reversible)	Refer to the instruction manual.



H series						
Item	Model	Configuration	Rating	Applicable model	Mounting	
Auxiliary contact block	AX-20	Contact configuration 1a1b	Rated operational current (AC15) 220V 2A 440V 1A Rated thermal current 10A	20, 25, 35, 50 frame	Notes: Cannot be applied to the DC operated contactor (H □ □ -G)	
	AX-65			65C frame		
	AX-80			80C, 100C, 125C, 150C, 200C, 250C, 300C, 400C frame		
Coil surge absorber	CS-8	—	AC 250V Suppressed surge voltage: 600 V (peak) or less	X3, X4, X5, X6, X8, 8C, 10C, 10B, 11, 12, 20, 25, 35, 50, 65C frame	Snap it into the groove of the case. L=2-6mm	
	CS-80			80C, 100C, 125C frame		
Coil drive unit	CX-20	—	—	20, 25, 35, 50 frame	Install CX-20 in the same way as AX-20. (above)	
Safety cover	CV-8E	—	—	8C, 10C frame	Example of CV-8E Bend the cover and insert it in the direction of the arrows to snap it into the main unit.	
	CV-11E			11 frame		
	CV-20			20, 25 frame		
	CV-35			35, 50 frame		
	CV-65			65C frame		
	CV-80, CV-80T			80C, 100C, 125C frame		
	CV-150, CV-150T			150C frame		
	CV-200, CV-200T			200C, 250C frame		
	CV-300, CV-300T			300C, 400C frame		
	CV-600, CV-600T			600C, 800C frame		
Reset release	RR-350	—	Dimension 350mm	Thermal overload relay 20B, 25B, 50B, 80B, 150B frame	Put the reset-release cap onto the current-adjustment knob of the thermal overload relay.	
	RR-500					Dimension 500mm
	RR-600					Dimension 600mm
Mechanical-Interlock unit	RI-20	—	—	Reversible type of 20, 25, 35, 50 frame	Snap the convex of the interlock unit into the concave of the electromagnetic contactor. Assemble the unit referring to the instruction manual that comes with the unit.	
	RI-65	—	—	Reversible type of 65C frame		
Unit for installing the thermal overload relay solely	ST-12B	—	—	Thermal overload relay 12B frame		

