

## Specification List Table

### ● Magnetic Starters/Magnetic Contactors (AC operated)

Frame			T10	T12	T20	T21	
Applicable standard			JIS C8201-4-1, IEC60947-4-1, EN60947-4-1, GB14048.4				
Model name	Magnetic Contactors (Without Thermal Overload Relays, Open type)		Non-Reversing	S-T10	S-T12	S-T20	S-T21
			Reversing	S-2×T10	S-2×T12	S-2×T20	S-2×T21
	Magnetic Starters (With standard 2-element, With Thermal Overload Relays)	Enclosed	Non-Reversing	MS-T10	MS-T12	—	MS-T21
			Reversing	—	—	—	MS-2×T21
		Open type	Non-Reversing	MSO-T10	MSO-T12	MSO-T20	MSO-T21
	Reversing		MSO-2×T10	MSO-2×T12	MSO-2×T20	MSO-2×T21	
	Combined Thermal Overload Relays		TH-T18				TH-T25
Magnetic Starters (With 3-element type Thermal Overload Relays)	Open type	Non-Reversing	MSO-T10KP	MSO-T12KP	MSO-T20KP	MSO-T21KP	
		Reversing	MSO-2×T10KP	MSO-2×T12KP	MSO-2×T20KP	MSO-2×T21KP	
	Combined Thermal Overload Relays		TH-T18KP				TH-T25KP
Main contact rating	Rated insulation voltage [V]		690				
	Rated impulse withstand voltage [kV]		6				
	Rated frequency [Hz]		50/60				
	Pollution degree		3				
	Rated operational current / power Category AC-3 (Note 1) (Three-phase squirrel-cage motor load standard responsibility) (Note 2) [kW/A]	220 to 240VAC		2.5/11 [2.2/11]	3.5/13 [2.7/13]	4.5/18 [3.7/18]	5.5/25 [4/20]
		380 to 440VAC		4/9 [2.7/7]	5.5/12 [4/9]	7.5/18 [7.5/18]	11/23 [7.5/20]
		500VAC		4/7 [2.7/6]	5.5/9 [5.5/9]	7.5/17 [7.5/17]	11/17 [7.5/17]
		690VAC		4/5	5.5/7	7.5/9	7.5/9
	Rated operational current / power Category AC-4 (Three-phase squirrel-cage motor load inching responsibility) [kW/A]	220 to 240VAC		1.5/8	2.2/11	3.7/18	
		380 to 440VAC		2.2/6	4/9	5.5/13	
500VAC		2.7/6	5.5/9	5.5/10			
Rated operational current / power Category AC-1 (Resistance, heater load)	100 to 240VAC		20			32	
	380 to 440VAC		11	13		32	
Conventional free air thermal current Ith [A]		20				32	
Minimum applicable load level		48V 200mA					
Auxiliary contact rating	Contact arrangement	Standard accessory	Non-Reversing	1a	1a1b	2a2b	
			Reversing (Note 4, Note 6)	1a×2+2b	1a1b×2+2b	2a2b×2	
		Special accessory	Non-Reversing	1b	2a	—	
			Reversing (Note 4, Note 6)	1b×2+2b	2a×2+2b	—	
		Max. number of additional options (Note 5)	Front clip-on	Non-Reversing	1		
				Reversing	2		
	Side clip-on	Non-Reversing	2				
		Reversing	2				
	Rated operational current (Category AC-15 : Alternating current coil load)		120VAC	6			
			240VAC	3			
Rated operational current (Category DC-13 : Direct current coil load)		24VDC	3				
		110VDC	0.6				
Conventional free air thermal current Ith [A]		10					
Minimum applicable load level		20V 3mA					
Performance	Mechanical durability [ten thousand times]		1000				
	Electrical durability [ten thousand times]	Category AC-3	200 (Note 9)				
		Category AC-4	3 (Note 9)				
		Category AC-1	50				
	Switching frequency [time/hour]	Category AC-3	1800				
Category AC-4		300					
Category AC-1		1200					
Characteristic	Coil consumption (Note 7)		Inrush [VA]	45		75	
			Sealed [VA]	7		7	
	Power consumption (Note 7) [W]		2.2				2.4
Outside dimensions	Magnetic Contactors (without Thermal Overload Relays) (Width x Height x Depth) [mm]		Non-Reversing	36×75×78	43×75×78	63×81×81	
			Reversing	82×85×78	97×85×78	136×81×81	
	Open type Magnetic Starters (Width x Height x Depth) [mm]		Non-Reversing	45×115×79			
			Reversing	90×125×79	97×125×79	136×138×82	
	Enclosed Magnetic Starters (Width x Height x Depth) [mm]		Non-Reversing	76×165×97.5		—	104×176×110
Reversing			—		—	220×192×115	
IEC 35mm rail mounting			Possible (excluding Enclosed Magnetic Starters)				

Note 1: The figure in the square brackets indicates the rated current shown on the rating plate of the product at which the category AC-3 opening/closing durability is 2,000,000 times (1,000,000 times for the T20 380V). Refer to the electric durability curve for the life performance.

Note 2: The content within ( ) of rated capacity and rated operational current is applied to the Magnetic Contactor.

Note 3: The T10 to T50 types can be manufactured with a coil surge absorber-mounted type (□-□SA type). The UT-SA21 type can be mounted.

Note 4: +2b of T10 and T12 auxiliary contact arrangements in Reversing type represents b contact built in the UT-ML11 interlock unit.

Note 5: The main unit and auxiliary contact block must be prepared separately and additionally mounted by the user.

Note 6: For auxiliary contact arrangement in Reversing type, X2 is displayed as combined auxiliary contact arrangement of two Magnetic Contactors. Please specify the contact arrangement for which two main units are combined must be designated. <Designation example> In case of 1b x 2 + 2b: 2B

Note 7: Operational coil input and coil consumption are average values in case of applying 220V60Hz to AC200V coil.

Note 8: Refer to pages 36 for the mountable options.

Note 9: 1,000,000 times for T20 AC-3 Class 380V or higher, and 15,000 times for AC-4 Class. 15,000 times for T35 to T100 AC-4 Class 380V or higher.



	T25	T32	T35	T50	T65	T80	T100
JIS C8201-4-1, IEC60947-4-1, EN60947-4-1, GB14048.4							
	S-T25	S-T32	S-T35	S-T50	S-T65	S-T80	S-T100
	S-2×T25	S-2×T32	S-2×T35	S-2×T50	S-2×T65	S-2×T80	S-2×T100
	MS-2×T25	—	MS-T35	MS-T50	MS-T65	MS-T80	MS-T100
	MS-T25	—	MS-2XT35	MS-2XT50	MS-2XT65	MS-2XT80	MS-2XT100
	MSO-T25	—	MSO-T35	MSO-T50	MSO-T65	MSO-T80	MSO-T100
	MSO-2×T25	—	MSO-2×T35	MSO-2×T50	MSO-2×T65	MSO-2×T80	MSO-2×T100
	TH-T25	—	TH-T25/T50	TH-T25/T50	TH-T65	TH-T65/T100	TH-T65/T100
	MSO-T25KP	—	MSO-T35KP	MSO-T50KP	MSO-T65KP	MSO-T80KP	MSO-T100KP
	MSO-2×T25KP	—	MSO-2×T35KP	MSO-2×T50KP	MSO-2×T65KP	MSO-2×T80KP	MSO-2×T100KP
	TH-T25KP	—	TH-T25/T50KP	TH-T25/T50KP	TH-T65KP	TH-T65/T100KP	TH-T65/T100KP
	690						
	6						
	50/60						
	3						
	7.5/30(26) [5.5/26]	7.5/32 [7.5/32]	11/40 [7.5/35]	15/55 [11/50]	18.5/65 [15/65]	22/85 [19/80]	30/105 [22/100]
	15/30(26) [11/25]	15/32 [15/32]	18.5/40 [15/32]	22/50 [22/50]	30/65 [30/65]	45/85 [37/80]	55/105 [45/93]
	15/24 [11/20]	15/24 [11/20]	18.5/32 [15/26]	25/38 [22/38]	37/60 [30/45]	45/75 [45/75]	55/85 [45/75]
	11/12	11/12	15/17	22/26	30/38	45/52	55/65
	4.5/20	5.5/26	5.5/26	7.5/35	11/50	15/65	19/80
	7.5/17	11/24	11/24	15/32	22/47	30/62	37/75
	7.5/12	7.5/13	11/17	15/24	22/38	30/45	37/55
	32		60	80	100	120	150
	32		60	80	100	120	150
	32		60	80	100	120	150
	48V 200mA						
	2a2b	—	2a2b	2a2b	2a2b	2a2b	2a2b
	2a2b×2	2a2b×2	2a2b×2	2a2b×2	2a2b×2	2a2b×2	2a2b×2
	—		—	—	—	—	—
	—		—	—	—	—	—
	1						
	2	—	2				—
	2						
	2	—	2				—
	6						
	3						
	3						
	0.6						
	10						
	20V 3mA						
	1000				500		
	200					100	
	3 (Note 9)						
	50						
	1800			1200			
	300						
	1200						600
	75	55	110	110	115	115	210
	7	4.5	10	10	20	20	23
	2.4	1.8	3.8	3.8	2.2	2.2	2.8
	63×81×81	43×81×81	75×89×91		88×106×106	88×106×106	100×124×127
	136×81×81	96×81×111	160×114×97		216×115×112	216×115×112	270×140×137
	63×128×82	—	75×157.5×91		90×158×106	90×174.5×106	100×196×127
	136×138×82	—	160×179×97		216×169×112	216×185.5×112	270×213×137
	—	—	135×231×126		160×282×145		190×317×163
	—	—	300×247×130		320×282×140		410×347×154
	Possible (excluding Enclosed Magnetic Starters)						

MS-T Series Introduction

Selection and Application

Application to Thermal Overload Relays

Product Introduction

Overseas Standard

Type Codes

Order Procedure

Outline Drawing

Warranty and Safety