

Molded Transformer

TMF2 series

Emphasis on safety

- This is a molded transformer with an emphasis on safety, upgraded to have more environment-resistant and incombustibility.
- The cable connection part is equipped with a terminal block with a protective cover as standard.

Flexible for a variety of situations

- Flexibly respond to customer needs by the castress method.
- We provide the most suitable product for rating and specifications at low cost.

Earth-friendly transformer in pursuit of energy savings

- All models feature an iron core structure that excels in energy conservation. Reduce standby power (no-load loss) by up to 30% (compared to our company)



■ Specification

Insulation class	F			
Installation location	Indoor installation without case, cubicle storage			
Applicable standard	JEC-2200-2014 Transformer			
Temperature rise limit	95K (Winding temperature rise)			
Insulation strength	AC test voltage : 2kV or 4kV			
Number of phases	Single-phase	Three-phase		3/2-phase Scott
Primary voltage (V)	F440-R420-F400(50Hz) ※ F460-R440-F420(60Hz)			210(100kVA以下) more than 100kVA 420(50Hz), 440(60Hz)
Secondary voltage(V)	210-105	210	210/121	210-105×2 circuit
Connection	Single-phase three-wire system	△-△	△-△ ²	↓-↓
Capacity (kVA)	5			
	10	10	10	10
	15			
	20	20	20	20
	30	30	30	30
	50	50	50	50
	75	75	75	75
	100	100	100	100
	150	150	150	150
	200	200	200	200
300	300	300	300	
		500	500	

※ By making it without a power switching tap, it becomes more affordable.

■ Model Description

TMF2-□□□□□-□□□□□B□

Series name

- Number of phases (Pri./Sec.)
 - 1 Single-phase two-wire / Single-phase two-wire
 - 2 Single-phase two-wire / Single-phase three-wire
 - 3 Three-phase (A-C)
 - 4 Three-phase (A-B)
 - 5 Three-phase (A-A)
 - 6 Three-phase (A-A)
 - 7 Three-phase (A-B)
 - Q Scott connection (Three-phase / Single-phase x 2)
 - V V Reverse-V (Three-phase/Single-phase x 1)
 - N Other
- Frequency
 - 5 50Hz
 - 6 60Hz
- Capacity
 - Displayed in kVA units (Decimal points are rounded off and displayed in three-digit units.) (Ex.) 5kVA → 005
- Primary Volt. Secondary Volt.
 - Rated voltage [V] 100ths place
 - If either the primary or secondary voltage is non-standard, please indicate the primary and secondary voltage with N at the end.
- Anti-vibration rubber
- Options
 - B Standard equipment
 - C Case
 - D Dial thermometer
 - E Contact prevention plate
 - P Wheels
 - T Tap terminal cover

■ Standard parts

- ① Suspension hole
- ② Earth terminal
- ③ Tap switching terminal (only single and three-phase)
- ④ Name plate
- ⑤ Anti-vibration rubber

■ Optional items

- ① Dial thermometer*1
- ② Wheels*2
- ③ Contact prevention plate*3
- ④ Case*4 ケース*4
- ⑤ Tap terminal cover

*1 The length of the vine is 2.5 m. The display part of the dial thermometer should be mounted on the board side.

*2 Please indicate direction of movement.

*3 Contact prevention plates are standard with dedicated terminals.

*4 Please consult us separately for case type, material, and coating color. Standard color : Munsell 5Y7/1(semi gloss coating).

※ Stackable cases "Multi-set transformers" can be manufactured. (100kVA or less)

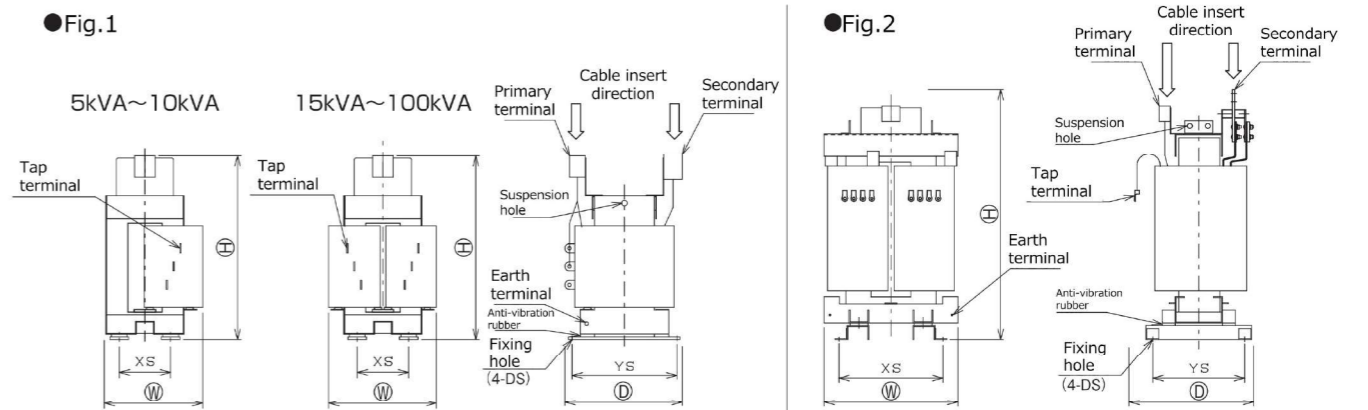
※ For items not included in the basic specifications, please contact us.

Select List/Outline drawing

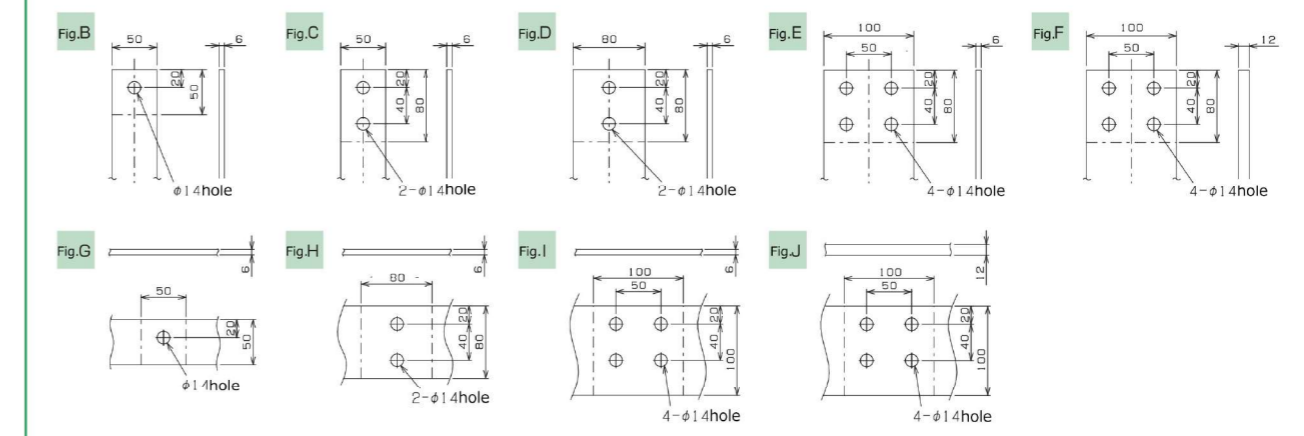
Single-phase (Single-phase three-wire) ● Primary: F440-R420-F400V(50Hz) F460-R440-F420V(60Hz) ● Secondary: 210-105V

Capacity (kVA)	Model	Frequency (Hz)	External dimension (mm)			Panel dimension (mm)			Terminal size		Total mass (kg)	Outline drawing
			W	D	H	XS	YS	DS	Primary	Secondary		
5	TMF2-25005-42B	50	240	385	420	100	320	φ15	M5	M8	54	Figure 1
	TMF2-26005-42B	60	225	370	420	100	320	φ15	M5	M8	50	
10	TMF2-25010-42B	50	260	410	515	110	340	φ15	M8	M10	72	
	TMF2-26010-42B	60	260	390	515	110	320	φ15	M8	M10	64	
15	TMF2-25015-42B	50	290	385	550	120	340	φ15	M8	M10	82	
	TMF2-26015-42B	60	290	365	550	120	320	φ15	M8	M10	74	
20	TMF2-25020-42B	50	330	395	580	140	340	φ15	M8	M10	90	
	TMF2-26020-42B	60	330	375	580	140	320	φ15	M8	M10	82	
30	TMF2-25030-42B	50	350	415	595	150	360	φ15	M8	M10	120	
	TMF2-26030-42B	60	345	390	595	150	340	φ15	M8	M10	110	
50	TMF2-25050-42B	50	395	455	645	180	380	φ15	M10	M12	170	
	TMF2-26050-42B	60	395	435	645	180	360	φ15	M10	M12	155	
75	TMF2-25075-42B	50	435	460	780	190	380	φ15	M10	M12	230	
	TMF2-26075-42B	60	435	440	780	190	360	φ15	M10	M12	210	
100	TMF2-25100-42B	50	465	565	875	210	420	φ15	M10	Fig.B, Fig.G	300	
	TMF2-26100-42B	60	460	545	875	210	400	φ15	M10	Fig.B, Fig.G	280	
150	TMF2-25150-42B	50	560	590	1010	440	340	φ15	M12	Fig.D, Fig.H	420	Figure 2
	TMF2-26150-42B	60	560	585	1010	440	340	φ15	M12	Fig.D, Fig.H	410	
200	TMF2-25200-42B	50	620	605	1115	510	360	φ20	M12	Fig.E, Fig.I	500	
	TMF2-26200-42B	60	620	595	1115	510	360	φ20	M12	Fig.E, Fig.I	490	
300	TMF2-25300-42B	50	660	670	1255	530	380	φ20	Fig.C	Fig.F, Fig.J	680	
	TMF2-26300-42B	60	660	660	1255	530	380	φ20	Fig.C	Fig.F, Fig.J	660	

■ Outline drawing



● Terminal size

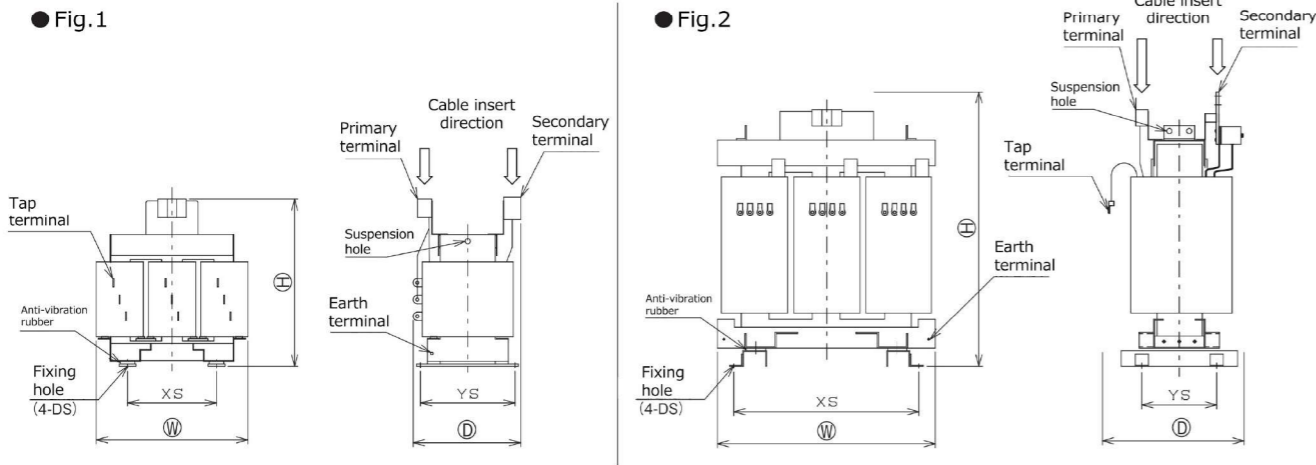


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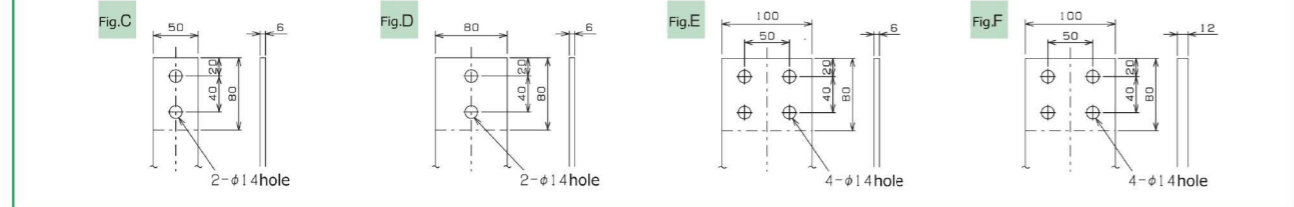
Three-phase (△-△) ● Primary: F440-R420-F400V(50Hz)F460-R440-F420V(60Hz) ● Secondary: 210V

Capacity (kVA)	Model	Frequency (Hz)	External dimension (mm)			Panel dimension (mm)			Terminal size		Total mass (kg)	Outline drawing
			W	D	H	XS	YS	DS	Primary	Secondary		
10	TMF2-55010-42B	50	420	360	440	250	320	φ15	M5	M8	90	Figure 1
	TMF2-56010-42B	60	420	360	440	250	320	φ15	M5	M8	89	
20	TMF2-55020-42B	50	420	380	480	250	340	φ15	M8	M8	115	
	TMF2-56020-42B	60	420	360	480	250	320	φ15	M8	M8	105	
30	TMF2-55030-42B	50	450	400	580	270	360	φ15	M8	M10	150	
	TMF2-56030-42B	60	450	380	580	270	340	φ15	M8	M10	135	
50	TMF2-55050-42B	50	530	440	595	310	390	φ15	M8	M10	210	
	TMF2-56050-42B	60	525	420	595	310	370	φ15	M8	M10	190	
75	TMF2-55075-42B	50	540	450	750	320	390	φ15	M10	M10	290	
	TMF2-56075-42B	60	535	430	750	320	370	φ15	M10	M10	270	
100	TMF2-55100-42B	50	610	455	805	360	390	φ15	M10	M12	370	
	TMF2-56100-42B	60	605	435	805	360	370	φ15	M10	M12	330	
150	TMF2-55150-42B	50	690	535	960	600	340	φ20	M10	M12	490	
	TMF2-56150-42B	60	690	535	960	600	340	φ20	M10	M12	470	
200	TMF2-55200-42B	50	870	605	1050	720	360	φ20	M10	Fig.D	680	
	TMF2-56200-42B	60	870	600	1050	720	360	φ20	M10	Fig.D	670	
300	TMF2-55300-42B	50	900	635	1115	740	380	φ20	M12	Fig.E	820	
	TMF2-56300-42B	60	900	630	1115	740	380	φ20	M12	Fig.E	780	
500	TMF2-55500-42B	50	1050	735	1235	840	410	φ20	Fig.C	Fig.F	1150	
	TMF2-56500-42B	60	1050	715	1235	840	410	φ20	Fig.C	Fig.F	1100	

Outline drawing



Terminal size

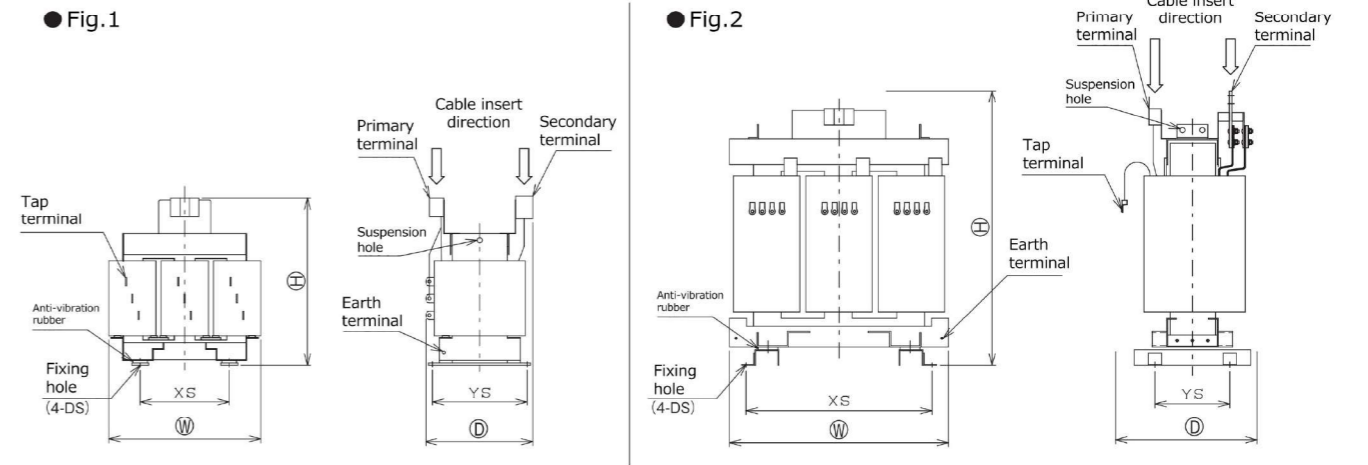


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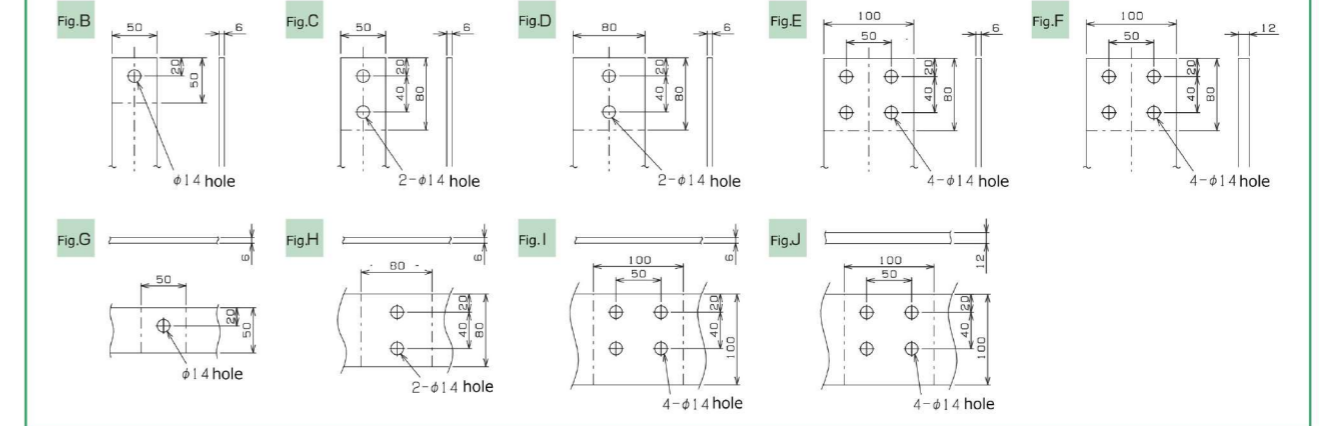
Three-phase (△-△) ● Primary: F440-R420-F400V(50Hz)F460-R440-F420V(60Hz) ● Secondary: 210/121V

Capacity (kVA)	Model	Frequency (Hz)	External dimension (mm)			Panel dimension (mm)			Terminal size		Total mass (kg)	Outline drawing
			W	D	H	XS	YS	DS	Primary	Secondary		
10	TMF2-45010-42B	50	420	360	440	250	320	φ15	M5	M8	90	Figure 1
	TMF2-46010-42B	60	420	360	440	250	320	φ15	M5	M8	89	
20	TMF2-45020-42B	50	420	395	480	250	340	φ15	M8	M8	115	
	TMF2-46020-42B	60	420	375	480	250	320	φ15	M8	M8	105	
30	TMF2-45030-42B	50	450	425	580	270	360	φ15	M8	M10	150	
	TMF2-46030-42B	60	450	405	580	270	340	φ15	M8	M10	135	
50	TMF2-45050-42B	50	530	515	595	310	390	φ15	M8	M10	210	
	TMF2-46050-42B	60	525	495	595	310	370	φ15	M8	M10	190	
75	TMF2-45075-42B	50	545	540	750	320	390	φ15	M10	M10	290	
	TMF2-46075-42B	60	540	520	750	320	370	φ15	M10	M10	270	
100	TMF2-45100-42B	50	615	570	805	360	390	φ15	M10	M12	370	
	TMF2-46100-42B	60	605	550	805	360	370	φ15	M10	M12	330	
150	TMF2-45150-42B	50	690	565	950	600	340	φ20	M10	Fig.B, Fig.G	490	
	TMF2-46150-42B	60	690	555	950	600	340	φ20	M10	Fig.B, Fig.G	470	
200	TMF2-45200-42B	50	870	585	1050	720	360	φ20	M12	Fig.D, Fig.H	680	
	TMF2-46200-42B	60	870	575	1050	720	360	φ20	M12	Fig.D, Fig.H	670	
300	TMF2-45300-42B	50	900	645	1115	740	380	φ20	M12	Fig.E, Fig.I	820	
	TMF2-46300-42B	60	900	640	1115	740	380	φ20	M12	Fig.E, Fig.I	780	
500	TMF2-45500-42B	50	1050	720	1235	840	410	φ20	Fig.C	Fig.F, Fig.J	1150	
	TMF2-46500-42B	60	1050	705	1235	840	410	φ20	Fig.C	Fig.F, Fig.J	1100	

Outline drawing



Terminal size



Select List

Single-phase (Single-phase three-wire)

Capacity (kVA)	Freq. (Hz)	Total loss (W)	Short-circuit impedance (%)	Inrush currents (Times)	Breaker recommended for primary side
5	50	168	4.0	22	50AT-10AF
	60	164	2.7	30	50AT-40AF
10	50	325	4.7	23	50AT-50AF
	60	304	4.8	23	50AT-50AF
15	50	422	2.6	34	225AT-125AF
	60	387	2.3	36	225AT-125AF
20	50	790	4.5	24	225AT-125AF
	60	690	4.2	25	225AT-125AF
30	50	835	3.3	32	225AF-225AT
	60	840	3.3	30	225AF-200AT
50	50	1225	3.2	30	400AF-350AT
	60	1131	3.1	30	400AF-350AT
75	50	1736	3.1	27	600AF-500AT
	60	1584	3.1	26	600AF-500AT
100	50	2086	2.8	27	600AF-600AT
	60	1886	2.6	28	600AF-600AT
150	50	2577	3.3	24	800AF-800AT
	60	2258	2.7	29	1000AF-900AT
200	50	3443	4.1	20	800AF-800AT
	60	3015	3.2	25	1000AF-1000AT
300	50	4560	3.9	20	1250AF-1250AT
	60	4303	3.6	21	1250AF-1250AT

Three-phase (Δ-Δ)

Capacity (kVA)	Freq. (Hz)	Total loss (W)	Short-circuit impedance (%)	Inrush currents (Times)	Breaker recommended for primary side
10	50	397	2.9	23	50AF-30AT
	60	372	2.5	27	50AF-30AT
20	50	635	2.6	24	100AF-75AT
	60	588	2.4	25	100AF-75AT
30	50	840	2.3	25	100AF-100AT
	60	780	2.0	28	100AF-100AT
50	50	1487	3.2	18	225AF-125AT
	60	1343	2.9	19	225AF-125AT
75	50	1807	2.4	21	225AF-200AT
	60	1876	2.4	22	225AF-200AT
100	50	2241	2.5	20	400AF-300AT
	60	2144	2.3	21	400AF-300AT
150	50	2754	2.4	19	400AF-400AT
	60	2640	2.3	21	400AF-400AT
200	50	3440	2.2	20	600AF-500AT
	60	3096	1.8	23	600AF-600AT
300	50	4943	2.8	16	600AF-600AT
	60	4547	2.3	18	800AF-700AT
500	50	7945	4.2	11	800AF-700AT
	60	6685	2.8	14	800AF-800AT

Three-phase (Δ-∞)

Capacity (kVA)	Freq. (Hz)	Total loss (W)	Short-circuit impedance (%)	Inrush currents (Times)	Breaker recommended for primary side
10	50	391	2.9	25	50AF-30AT
	60	388	2.6	26	50AF-30AT
20	50	642	2.7	25	100AF-75AT
	60	597	2.4	25	100AF-75AT
30	50	826	2.3	24	100AF-100AT
	60	770	2.0	26	100AF-100AT
50	50	1465	3.2	18	225AF-125AT
	60	1347	2.9	20	225AF-125AT
75	50	1870	2.5	21	225AF-200AT
	60	1885	2.6	20	225AF-200AT
100	50	2208	2.5	20	400AF-300AT
	60	2165	2.4	21	400AF-300AT
150	50	2655	2.5	18	400AF-400AT
	60	2586	2.1	21	400AF-400AT
200	50	3417	2.4	19	600AF-500AT
	60	3309	1.8	26	800AF-600AT
300	50	5040	2.7	16	600AF-600AT
	60	4576	2.2	21	800AF-700AT
500	50	7236	4.3	12	800AF-800AT
	60	6622	3.2	15	1000AF-1000AT

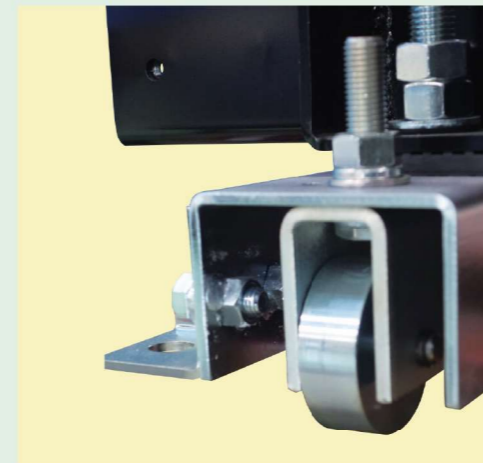
Three-phase / Two-phase (Scott connection)

Capacity (kVA)	Freq. (Hz)	Total loss (W)	Short-circuit impedance (%)		Inrush currents (Times)	Breaker recommended for primary side
			Main side	Teaser side		
10	50	417	3.1	3.6	28	100AF-75AT
	60	404	2.9	3.3	30	100AF-100AT
20	50	848	4.7	5.2	24	225AF-150AT
	60	806	4.8	5.2	23	225AF-150AT
30	50	1092	4.6	4.9	21	225AF-175AT
	60	1071	4.5	4.7	22	225AF-175AT
50	50	1444	3.4	3.8	26	400AF-350AT
	60	1428	3.2	3.6	27	400AF-350AT
75	50	2090	3.1	3.4	27	600AF-500AT
	60	2121	3.1	3.3	27	600AF-500AT
100	50	2487	3.0	3.2	22	600AF-600AT
	60	2414	2.8	3.1	23	600AF-600AT
150	50	3076	3.3	3.3	20	400AF-400AT
	60	2881	2.5	2.7	25	600AF-500AT
200	50	4097	4.3	4.5	17	600AF-500AT
	60	3568	3.0	3.1	22	600AF-600AT
300	50	5429	4.3	4.4	16	600AF-600AT
	60	4868	3.5	3.4	17	600AF-600AT

●About characteristic values
Please note that the above characteristic values are design values and are not guaranteed.
The recommended breakers on the primary side are based on the characteristics of our recommended product (Mitsubishi Electric Corporation's general-purpose NF-S class).
When applying breakers, please check the interrupting characteristics of each manufacturer.

Optional items

Wheels



Dial thermometer



Tap terminal cover



Protective case

