

Single-Phase Transformers

Safety, Isolating, Control and Mains Transformers

General data

Overview

4AM../4AT.. transformers

With the right transformer, the right voltage will be available at any conditions.

Our transformers are the right choice for each application: They work reliably, safely and worldwide under a wide range of different conditions.

Transformers are summarized in a user-friendly manner as:

- Isolating, control and mains transformers according to EN 61558-2-4, -2-2, -2-1 or
- Safety, control and mains transformers according to EN 61558-2-6, -2-2, -2-1

Note:

Mains transformers with ≤ 50 V on the output side are, in the case of SIRIUS transformers, always designed as safety transformers.

Our transformers provide optimal protection through high permissible ambient temperatures up to 40 °C or 55 °C, a high short-time rating in the case of control transformers, fuseless construction and due to their safety standard "Safety inside" EN 61558.

Connection methods

4AM../4AT.. transformers are available with screw terminals/flat connectors.



Screw terminals



Flat connectors

The terminals are indicated in the corresponding tables by the symbols shown on orange backgrounds.

Order No. scheme

Digit of the Order No.	1st	2nd	3rd	4th	5th	6th	7th	8th	9th	10th	11th	12th	13th	14th	15th	16th
Transformer product type	□	□	□	□	□	□	□	□	□	□	□	□	□	□	□	□
Product group	4	A														
Rated power				□	□											
Power level						□										
Development status							□									
Rated input voltage								□	□							
Rated output voltage										□	□					
Version, e.g. coil form												□				
Application													□	□		
Degree of protection															□	
Connection type																□
Example	4	A	M	4	0	4	2	-	5	A	T	1	0	-	0	F A 0

Note:

The Order No. scheme is presented here merely for information purposes and for better understanding of the logic behind the order numbers.

For your orders, please use the order numbers quote in the catalog in the Selection and ordering data.

Benefits

- High short-time rating of the SIRIUS transformers: lower transformer rated power for a large number of contactors
- Suitable for "fuseless construction": The small inrush current means that "circuit breakers for motor protection" can also be used on the primary side
- **cULus** approvals for the USA and Canada: can be used worldwide without any problems
- Comprehensive type spectrum supplied from stock: rapid availability

Application

Transformers are used in industrial machines, process engineering, heating and air-conditioning equipment, etc., for supplying control and signaling circuits, when:

- Several electromagnetic loads (e.g. contactors) have to be controlled
- Control and signaling devices are used outside the control cabinet
- The operational voltage for the loads differs from the available voltage level
- Voltage matching for machines and installations with electrical isolation or as an autotransformer

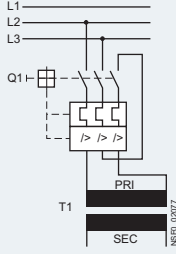
Generally our transformers are used for voltage matching of electrical devices, e.g. in communications, medical engineering and domestic appliances.

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Technical specifications

General data		
Transformers	Type	4AM
• Version		EI core
• Performance range (with IP00)	kVA	0.025 ... 2.5
• Approvals		cTus
Voltage range	V	≤ 690
• Approvals for USA, Canada	V	≤ 600
Rated frequency	Hz	50 ... 60
Thermal class		B
• Acc. to UL/CSA		CLASS 130
Ambient conditions		H
		CLASS 180
Protection against harmful ambient conditions: Complete impregnation in polyester resin Climate-proof for installation in rooms with an external climate to DIN 50010		
Rated ambient temperature		
• At rated power	°C	40
• Maximum value (after power reduction in accordance with load characteristic ¹⁾)	°C	80
• Minimum value	°C	-25
Relative air humidity		
• Mean value up to	%	80
• Maximum value for 30 days/year	%	95
• At 40 °C occasionally	%	100
Protection class		I
Degree of protection		
• Without enclosure		IP00
• With protective enclosure (see "Selection and ordering data")		IP23 or IP54 Version: sheet-steel enclosure coated with epoxy resin, color gray RAL 7032
Installation altitude		Up to 1000 m above sea level (above this, power reduction is necessary)
Protective devices		
• External		The transformers can be protected against short-circuits and overload on the primary and secondary side with circuit breakers, see the following diagram.  For reliable protection against short-circuits, overload and touch, the cables between the output terminals of the transformer and the load must have a negligible line impedance. For more details see DIN VDE 0100 (Erection of low-voltage systems) Part 410, Part 520 (particularly section 525) and Part 610. Assigned protective devices (see "Primary-side short-circuit and overload protection with motor starter protectors")
Connection methods		
• Terminal arrangement ²⁾		The permissible conductor cross-sections are assigned to the specified terminal types. Refer to DIN VDE 0298-4 and EN 60204 for the permissible conductor cross-sections for the specified current according to the installation type. The terminals used are finger-safe according to EN 50274.
• Terminal versions and connectable cross-sections ³⁾		Other terminal sizes than standard versions on request.
Mounting position		The permissible mounting position for each version is shown in the "Project Planning Aids" ³⁾ .

¹⁾ See note on Technical Information on page 11/1 --> "Design".

²⁾ See note on Technical Information on page 11/1 --> "Circuit diagrams".

³⁾ See note on Technical Information on page 11/1 --> "Project Planning Aids".

For more specifications see
www.siemens.de/sirius-versorgen --> "Technical Information"
 or

www.siemens.com/industrial-controls/support -->
 "Transformers and Power Supplies" -->
 "Manuals/Operating Instructions".

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General data

Rated power at different ambient temperatures

- With electrically separated windings
- Degree of protection IP00
- According to EN 61558, **CLASS**

Transformer	Rated power P_n	Permissible transformer load depending on the ambient temperature							
Type	kVA	$t_a = 60\text{ }^{\circ}\text{C}$ kVA	$t_a = 55\text{ }^{\circ}\text{C}$ kVA	$t_a = 50\text{ }^{\circ}\text{C}$ kVA	$t_a = 45\text{ }^{\circ}\text{C}$ kVA	$t_a = 40\text{ }^{\circ}\text{C}$ kVA	$t_a = 35\text{ }^{\circ}\text{C}$ kVA	$t_a = 30\text{ }^{\circ}\text{C}$ kVA	$t_a = 25\text{ }^{\circ}\text{C}$ kVA
4AM transformers									
4AM23 4	0.025	0.021	0.022	0.023	0.024	0.025	0.026	0.027	0.0278
4AM26 4	0.04	0.0336	0.0352	0.0368	0.0384	0.04	0.0416	0.0432	0.0444
4AM32 4	0.063	0.0529	0.0554	0.058	0.0605	0.063	0.0655 ¹⁾	0.068 ¹⁾	0.0699 ¹⁾
4AM34 4	0.1	0.084	0.088	0.092	0.096	0.1	0.104 ¹⁾	0.108 ¹⁾	0.111 ¹⁾
4AM38 4	0.16	0.134	0.141	0.147	0.154	0.16	0.166 ¹⁾	0.173 ¹⁾	0.178 ¹⁾
4AM40 4	0.25	0.21	0.22	0.23	0.24	0.25	0.26	0.27	0.278
4AM43 4	0.315	0.265	0.277	0.29	0.302	0.315	0.328	0.34	0.35
4AM46 4	0.4	0.336	0.352	0.368	0.384	0.4	0.416	0.432	0.444
4AM48 4	0.5	0.42	0.44	0.46	0.48	0.5	0.52	0.54	0.555
4AM52 4	0.63	0.529	0.554	0.58	0.605	0.63	0.655	0.68	0.699
4AM55 4	0.8	0.672	0.704	0.736	0.768	0.8	0.832	0.864	0.888
4AM57 4	1	0.84	0.88	0.92	0.96	1	1.04	1.08	1.11
4AM61 4	1.6	1.34	1.41	1.47	1.54	1.6	1.66	1.73	1.78
4AM64 4	2	1.68	1.76	1.84	1.92	2	2.08	2.16	2.22
4AM65 4	2.5	2.1	2.2	2.3	2.4	2.5	2.6	2.7	2.78
4AT transformers									
4AT30 3	4	3.88	4	4.12	4.24	4.4	4.52	4.64	4.76
4AT36 1	5	4.85	5	5.15	5.3	5.5	5.65	5.8	5.95
4AT36 3	6.3	6.11	6.3	6.49	6.68	6.93	7.12	7.31	7.5
4AT39 1	8	7.76	8	8.24	8.48	8.8	9.04	9.28	9.52
4AT39 3	10	9.7	10	10.3	10.6	11	11.3	11.6	11.9
4AT43 0	11.2	10.9	11.2	11.5	11.9	12.3	12.7	13	13.3
4AT43 1	12.5	12.1	12.5	12.9	13.3	13.8	14.1	14.5	14.9
4AT43 2	14	13.6	14	14.4	14.8	15.4	15.8	16.2	16.7
4AT45 0	16	15.5	16	16.5	17	17.6	18.1	18.6	19

¹⁾ For control transformers, the values $t_a = 40\text{ °C}$ apply.

Operation characteristics

- According to EN 61558-2-6, EN 61558-2-4, EN 61558-2-2, EN 61558-2-1

Transformer Type	Rated power P_n 50 Hz ... 60 Hz 1000 m above sea level degree of protection IP00 kVA	Core size	Voltage rise in no-load operation (operating temperature) u_A approx. %	Voltage drop on rated load ¹⁾ u_R approx. %	Short-circuit voltage ¹⁾ u_Z approx. %	Degree of efficiency η approx. %
4AM transformers: $t_a = 40\text{ °C/B}$						
4AM23 4	0.025	EI 60/20	26	17.6	17.6	74
4AM26 4	0.04	EI 66/22	23	15.3	15.3	76
4AM32 4	0.063	EI 84/28	10	8.4	8.4	85
4AM34 4	0.1	EI 84/42	10	7.7	7.7	86
4AM38 4	0.16	EI 96/44	10.4	7.6	7.7	86
4AM40 4	0.25	EI 96/58	7.2	5.4	5.4	89
4AM43 4	0.315	EI 105/60	6.6	4.9	5	90
4AM46 4	0.4	EI 120/52	5.7	4.3	4.4	91
4AM48 4	0.5	EI 120/72	5	3.8	3.8	91
4AM52 4	0.63	EI 150/48	4.7	3.6	3.7	92
4AM55 4	0.8	EI 150/65	4	3	3.1	92
4AM57 4	1	EI 150/90	3.2	2.5	2.5	93
4AM61 4	1.6	EI 174/82	2.4	1.9	2.1	96
4AM64 4	2	EI 174/102	2.1	1.7	1.9	96
4AM65 4	2.5	EI 192/110	1.6	1.3	1.6	96
4AT transformers: $t_a = 55\text{ °C/H}$						
4AT30 3	4	UI 150/75	3.8	2.7	2.9	95
4AT36 1	5	UI 180/75	5.5	3.8	3.9	94
4AT36 3	6.3	UI 180/75	4.3	3.1	3.3	95
4AT39 1	8	UI 210/70	4.3	3.1	3.3	95
4AT39 3	10	UI 210/70	3.5	2.5	3.3	96
4AT43 0	11.2	UI 240/80	3.9	2.8	2.8	95
4AT43 1	12.5	UI 240/80	3.5	2.5	2.6	96
4AT43 2	14	UI 240/80	3.1	2.2	2.4	96
4AT45 0	16	UI 240/107	2.9	2.1	2.1	96

Calculation of power loss P_V

$$P_V = \frac{P_n (100 - \eta)}{\eta} \text{ [kW]}$$

¹⁾ Winding reference temperature: 20 °C.

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Primary-side short-circuit and overload protection with motor starter protectors

Version with one input voltage

Trans- former Type	Rated power P_n kVA	Motor starter protector version: Motor protection ¹⁾ Type	Rated input voltage U_{1N} in V																						
			690	660	600	575	550	525	500	480	460	440	415	400	380	240	230	220	208	200	190				
4AM transformers																									
4AM23 4	0.025	3RV20 11-□□□10 Set value in A	OAA	OAA	OAA	OAA	OAA	OAA	OAA	OAA	OAA	OAA	OAA	OAA	OAA	OAA	OAA	OAA	OAA	OAA	OAA				
4AM26 4	0.04	3RV20 11-□□□10 Set value in A	OAA	OAA	OAA	OAA	OAA	OAA	OAA	OAA	OAA	OBA	OBA	OBA	OBA	OCA	OCA	OEA	OEA	OEA	OFA				
4AM32 4	0.063	3RV20 11-□□□10 Set value in A	OBA	OBA	OBA	OBA	OCA	OCA	OCA	OCA	OCA	OCA	OCA	ODA	ODA	ODA	ODA	OFA	OGA	OGA	OGA				
4AM34 4	0.1	3RV20 11-□□□10 Set value in A	ODA	ODA	OEA	OEA	OEA	OEA	OEA	OEA	OFA	OFA	OFA	OFA	OFA	OFA	OGA	OJA	OJA	OJA	OKA				
4AM38 4	0.16	3RV20 11-□□□10 Set value in A	OFA	OFA	OFA	OFA	OFA	OGA	OGA	OGA	OGA	OHA	OHA	OHA	OHA	OHA	OHA	OKA	OKA	1AA	1AA				
4AM40 4	0.25	3RV20 11-□□□10 Set value in A	OHA	OHA	OHA	OHA	OJA	OJA	OJA	OJA	OJA	OJA	OJA	OKA	OKA	OKA	OKA	1BA	1BA	1CA	1CA				
4AM43 4	0.315	3RV20 11-□□□10 Set value in A	OJA	OJA	OJA	OJA	OKA	OKA	OKA	OKA	1AA	1AA	1AA	1AA	1AA	1AA	1CA	1DA	1DA	1DA	1DA				
4AM46 4	0.4	3RV20 11-□□□10 Set value in A	OKA	OKA	OKA	OKA	1AA	1AA	1AA	1AA	1AA	1BA	1BA	1BA	1BA	1BA	1BA	1DA	1EA	1EA	1EA				
4AM48 4	0.5	3RV20 11-□□□10 Set value in A	1AA	1AA	1AA	1BA	1BA	1BA	1BA	1BA	1BA	1CA	1CA	1CA	1CA	1CA	1CA	1FA	1FA	1FA	1FA				
4AM52 4	0.63	3RV20 11-□□□10 Set value in A	1AA	1BA	1BA	1BA	1BA	1BA	1CA	1CA	1CA	1CA	1DA	1DA	1DA	1FA	1FA	1FA	1GA	1GA	1GA				
4AM55 4	0.8	3RV20 11-□□□10 Set value in A	1CA	1CA	1CA	1DA	1DA	1DA	1DA	1DA	1DA	1EA	1EA	1EA	1EA	1EA	1GA	1GA	1HA	1HA	1HA				
4AM57 4	1	3RV20 11-□□□10 Set value in A	1DA	1DA	1DA	1DA	1EA	1EA	1EA	1EA	1EA	1EA	1FA	1FA	1FA	1FA	1HA	1HA	1JA	1JA	1JA				
4AM61 4	1.6	3RV20 11-□□□10 3RV20 21-□□□10 Set value in A	1FA	1FA	1FA	1FA	1FA	1GA	1GA	1GA	1GA	1HA	1HA	1HA	1HA	1KA	--	4AA	4AA	4AA	4AA				
4AM64 4	2	3RV20 11-□□□10 3RV20 21-□□□10 Set value in A	1GA	1GA	1GA	1GA	1HA	1HA	1HA	1HA	1HA	1JA	1JA	1JA	1JA	--	4AA	4AA	4BA	4BA	4BA				
4AM65 4	2.5	3RV20 11-□□□10 3RV20 21-□□□10 Set value in A	1GA	1GA	1HA	1HA	1HA	1JA	1JA	1JA	1JA	1KA	1KA	1KA	1KA	--	4BA	4BA	4CA	4CA	4CA				
4AT transformers																									
4AT30 3	4	3RV20 11-□□□10 3RV20 21-□□□10 3RV10 31-□□□10 Set value in A	1JA	1JA	1KA	1KA	1KA	1KA	--	--	--	--	--	--	--	--	--	--	--	--	--				
4AT36 1	5	3RV20 11-□□□10 3RV20 21-□□□10 3RV10 31-□□□10 Set value in A	1KA	1KA	1KA	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--				
4AT36 3	6.3	3RV20 21-□□□10 3RV10 31-□□□10 Set value in A	4AA	4AA	4BA	4BA	4BA	4BA	4CA	4CA	4CA	4CA	4DA	4DA	4DA	--	4GA	4GA	4GA	4GA	4GA				
4AT39 1	8	3RV20 21-□□□10 3RV10 31-□□□10 3RV10 41-□□□10 Set value in A	4BA	4BA	4CA	4CA	4CA	4DA	4DA	4DA	4DA	--	4EA	4EA	4EA	4FA	4HA	4HA	4HA	--	--				
4AT39 3	10	3RV20 21-□□□10 3RV10 31-□□□10 3RV10 41-□□□10 Set value in A	4CA	4CA	4DA	4DA	4DA	--	--	--	--	--	4EA	4EA	4FA	4FA	--	--	--	--	--				
4AT43 0	11.2	3RV10 31-□□□10 3RV10 41-□□□10 Set value in A	4EA	4EA	4EA	4EA	4EA	4FA	4FA	4FA	4FA	4GA	4GA	4GA	4HA	--	4KA	4KA	--	4LA	4LA				
4AT43 1	12.5	3RV10 31-□□□10 3RV10 41-□□□10 Set value in A	4EA	4EA	4FA	4FA	4FA	4FA	4FA	4GA	4GA	4GA	4HA	4HA	--	4JA	4LA	4LA	--	4LA	4LA				
4AT43 2	14	3RV10 31-□□□10 3RV10 41-□□□10 Set value in A	4EA	4FA	4FA	4FA	4FA	4GA	4GA	4HA	4HA	4HA	--	--	--	4JA	4JA	4JA	--	4MA	4MA				
4AT45 0	16	3RV10 31-□□□10 3RV10 41-□□□10 Set value in A	4FA	4FA	4GA	4GA	4HA	4HA	--	4JA	4JA	4JA	4JA	4JA	4KA	4KA	4MA	4MA	--	4MA	4MA				

¹⁾ Two-pole or single-pole motor starter protectors can be connected (3 conducting paths in series), see circuit diagram on page 11/7.

Single-Phase Transformers

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General data

European voltage and multi-voltage version

Trans- former Type	Rated power P_n kVA	Motor starter protector ¹⁾ Type	Rated input voltage U_{1N} in V																					
			690	660	600	575	550	525	500	480	460	440	415	400	380	240	230	220	208	200	190			
Motor starter protector version for 4AM transformers: Transformer protection																								
4AM23 4	0.025	3RV24 11-□□□10 Set value in A	0AA 0.11	0AA 0.11	0AA 0.11	0AA 0.11	0AA 0.11	0AA 0.11	0AA 0.11	0AA 0.11	0AA 0.11	0AA 0.11	0AA 0.11	0AA 0.11	0AA 0.12	0CA 0.19	0CA 0.2	0CA 0.2	0CA 0.23	0CA 0.24	0CA 0.25			
4AM26 4	0.04	3RV24 11-□□□10 Set value in A	0AA 0.11	0AA 0.11	0AA 0.12	0AA 0.12	0AA 0.13	0BA 0.14	0BA 0.15	0BA 0.16	0BA 0.16	0BA 0.17	0CA 0.18	0CA 0.19	0CA 0.3	0DA 0.32	0DA 0.32	0DA 0.35	0EA 0.35	0EA 0.38				
4AM32 4	0.063	3RV24 11-□□□10 Set value in A	0BA 0.15	0BA 0.15	0BA 0.17	0CA 0.18	0CA 0.19	0CA 0.2	0CA 0.2	0CA 0.21	0DA 0.22	0DA 0.23	0DA 0.25	0DA 0.26	0DA 0.27	0FA 0.43	0FA 0.45	0FA 0.47	0GA 0.49	0GA 0.5	0GA 0.55			
4AM34 4	0.1	3RV24 11-□□□10 Set value in A	0DA 0.25	0DA 0.26	0EA 0.29	0EA 0.3	0EA 0.31	0EA 0.33	0EA 0.34	0FA 0.35	0FA 0.35	0FA 0.39	0FA 0.41	0FA 0.43	0FA 0.45	0HA 0.72	0HA 0.75	0HA 0.75	0JA 0.83	0JA 0.85	0JA 0.9			
4AM38 4	0.16	3RV24 11-□□□10 Set value in A	0FA 0.39	0FA 0.4	0GA 0.45	0GA 0.45	0GA 0.49	0GA 0.51	0GA 0.54	0HA 0.55	0HA 0.56	0HA 0.6	0HA 0.65	0HA 0.67	0HA 0.71	0KA 1.1	0KA 1.1	0KA 1.2	1AA 1.3	1AA 1.35	1AA 1.4			
4AM40 4	0.25	3RV24 11-□□□10 Set value in A	0HA 0.55	0HA 0.6	0HA 0.66	0HA 0.69	0JA 0.7	0JA 0.75	0JA 0.8	0JA 0.82	0JA 0.85	0KA 0.9	0KA 0.95	0KA 0.99	0KA 1	1BA 1.65	1BA 1.7	1BA 1.8	1BA 1.9	1BA 1.9	1BA 2			
4AM43 4	0.315	3RV24 11-□□□10 Set value in A	0JA 0.7	0JA 0.75	0JA 0.8	0JA 0.85	0KA 0.9	0KA 0.9	0KA 1	0KA 1	0KA 1.1	0KA 1.1	0KA 1.2	1AA 1.3	1AA 1.3	1CA 2	1CA 2.1	1CA 2.2	1CA 2.3	1CA 2.4	1CA 2.5			
4AM46 4	0.4	3RV24 11-□□□10 Set value in A	0KA 0.9	0KA 0.9	0KA 1	0KA 1	1AA 1.1	1AA 1.1	1AA 1.2	1AA 1.3	1AA 1.35	1AA 1.4	1AA 1.48	1BA 1.55	1BA 1.63	1DA 2.6	1DA 2.7	1DA 2.8	1DA 3	1DA 3.1	1DA 3.2			
4AM48 4	0.5	3RV24 11-□□□10 Set value in A	1AA 1.1	1AA 1.1	1AA 1.3	1AA 1.35	1BA 1.4	1BA 1.4	1BA 1.5	1BA 1.6	1BA 1.65	1BA 1.75	1BA 1.85	1CA 1.9	1CA 2	1EA 3.2	1EA 3.3	1EA 3.5	1EA 3.7	1EA 3.8	1EA 4			
4AM52 4	0.63	3RV24 11-□□□10 Set value in A	1AA 1.35	1BA 1.4	1BA 1.5	1BA 1.6	1BA 1.7	1CA 1.8	1CA 1.9	1CA 1.9	1CA 2	1CA 2.1	1CA 2.2	1DA 2.3	1DA 2.5	1FA 3.9	1FA 4	1FA 4	1FA 4.5	1FA 4.7	1FA 5			
4AM55 4	0.8	3RV24 11-□□□10 Set value in A	1BA 1.5	1CA 1.8	1CA 2	1CA 2.1	1CA 2.2	1DA 2.3	1DA 2.4	1DA 2.5	1DA 2.6	1DA 2.7	1DA 2.9	1EA 3	1EA 3.1	1GA 5	1GA 5	1GA 5.5	1GA 5.8	1GA 6	1GA 6.3			
4AM57 4	1	3RV24 11-□□□10 Set value in A	1DA 2.2	1DA 2.3	1DA 2.5	1DA 2.6	1DA 2.7	1EA 2.9	1EA 3	1EA 3.1	1EA 3.3	1EA 3.4	1EA 3.6	1FA 3.8	1FA 4	1HA 6.3	1HA 6.5	1HA 6.5	1HA 7	1HA 7.6	1HA 8			
4AM61 4	1.6	3RV24 11-□□□10 Set value in A	1FA 3.6	1FA 3.7	1FA 4.1	1FA 4.3	1GA 4.5	1GA 4.7	1GA 5	1GA 5	1GA 5.4	1GA 5.6	1GA 5.9	1GA 6.2	1GA 6.3	1KA 10	1KA 10.5	1KA 11	1KA 12	1KA 12.3	1KA 12.5			
4AM64 4	2	3RV24 11-□□□10 Set value in A	1FA 4.4	1GA 4.6	1GA 5	1GA 5.3	1HA 5.5	1HA 5.8	1HA 6.1	1HA 6.3	1HA 6.6	1HA 6.9	1HA 7.3	1HA 7.6	1HA 8	4AA 12.5	4AA 13	4AA 13.5	4AA 14.5	4AA 15	4AA 16			
4AM65 4	2.5	3RV24 11-□□□10 3RV24 21-□□□10 Set value in A	1HA 5.5	1HA 5.8	1HA 6.4	1HA 6.6	1JA 7	1JA 7.3	1JA 7.5	1JA 8	1JA 8.3	1JA 8.7	1JA 9.2	1KA 9.5	1KA 10	1KA 16	1KA 16.5	1KA 17	1KA 18.5	1KA 19	1KA 20			
Motor starter protector version for 4AT transformers: Motor protection																								
4AT30 3	4	3RV20 11-□□□10 3RV20 21-□□□10 3RV10 31-□□□10 Set value in A	1JA 8	1JA 8	1KA 9	1KA 9	1KA 9	1KA 10	-- 11	-- 11	-- 11	-- 12	-- 12	-- 13	-- 14	-- 22	-- 22	-- 23	-- 24	-- 28	-- 28			
4AT36 1	5	3RV20 11-□□□10 3RV20 21-□□□10 3RV10 31-□□□10 Set value in A	1KA 10	1KA 10	1KA 11	-- 11	-- 12	-- 12	-- 14	-- 14	-- 14	-- 15	-- 16	-- 16	-- 17	-- 28	-- 28	-- 29	-- 31	-- 32	-- 36			
4AT36 3	6.3	3RV20 21-□□□10 3RV10 31-□□□10 Set value in A	4AA 12	4AA 12	4BA 14	4BA 14	4BA 15	4BA 15	4CA 17	4CA 17	4CA 17	4CA 18	4CA 20	4DA 20	4DA 21	-- 36	-- 36	-- 36	-- 8	-- 39	-- 41			
4AT39 1	8	3RV20 21-□□□10 3RV10 31-□□□10 3RV10 41-□□□10 Set value in A	4BA 15	4BA 15	4CA 17	4CA 18	4CA 18	4DA 20	4DA 20	4DA 21	4DA 22	4DA 23	4DA 24	4DA 25	4DA 28	4DA 42	4DA 43	4DA 45	-- 48	-- 50	-- 52			
4AT39 3	10	3RV20 21-□□□10 3RV10 31-□□□10 3RV10 41-□□□10 Set value in A	4CA 18	4CA 19	4DA 21	4DA 22	4DA 23	4DA 24	-- 25	4EA 26	4EA 28	4FA 28	4FA 30	4FA 31	4FA 32	-- 51	-- 57	-- 57	-- 59	-- 69	-- 64			
4AT43 0	11.2	3RV10 31-□□□10 3RV10 41-□□□10 Set value in A	4EA 22	4EA 22	4EA 23	4EA 24	4EA 25	4FA 28	4FA 28	4FA 29	4FA 30	4GA 36	4GA 36	4GA 36	4HA 40	-- 58	-- 60	-- 70	-- 70	-- 70	-- 80			
4AT43 1	12.5	3RV10 31-□□□10 3RV10 41-□□□10 Set value in A	4EA 22	4EA 23	4FA 28	4FA 28	4FA 28	4FA 29	4FA 31	4FA 36	4GA 36	4GA 36	4HA 40	4HA 40	-- 45	-- 70	-- 70	-- 70	-- 73	-- 80	-- 80			
4AT43 2	14	3RV10 31-□□□10 3RV10 41-□□□10 Set value in A	4EA 25	4FA 28	4FA 29	4FA 30	4FA 31	4GA 36	4GA 36	4HA 40	4HA 40	4HA 40	-- 45	4JA 45	4JA 45	-- 80	-- 80	-- 80	-- 82	-- 85	-- 90			
4AT45 0	16	3RV10 31-□□□10 3RV10 41-□□□10 Set value in A	4FA 29	4FA 30	4GA 33	4GA 36	4HA 40	-- 40	-- 40	-- 45	-- 45	-- 45	-- 47	4KA 57	4KA 57	-- 81	-- 85	-- 89	-- 94	-- 97	-- 100			

¹⁾ Two-pole or single-pole motor starter protectors can be connected (3 conducting paths in series), see circuit diagram on page 11/7.

Single-Phase Transformers

Safety, Isolating, Control and Mains Transformers

General data

Secondary-side short-circuit and overload protection with motor starter protector

Transformer Type	Rated power <i>P</i> _n kVA	Motor starter protectors		Rated output voltage <i>U</i> _{2N} in V				
		Version: Motor protection ¹⁾ Type		230	115	110	42	24
4AM transformers								
4AM23 4	0.025	3RV20 11-□□□10 Set value in A	0AA 0.14	0DA 0.26	0DA 0.29	0HA 0.75	1AA 1.3	
4AM26 4	0.04	3RV20 11-□□□10 Set value in A	0CA 0.21	0FA 0.41	0FA 0.45	0KA 1.2	1CA 2.1	
4AM32 4	0.063	3RV20 11-□□□10 Set value in A	0EA 0.34	0HA 0.68	0HA 0.72	1BA 1.9	1EA 3.3	
4AM34 4	0.1	3RV20 11-□□□10 Set value in A	0GA 0.55	0KA 1.1	0KA 1.14	1DA 3	1GA 5.2	
4AM38 4	0.16	3RV20 11-□□□10 Set value in A	0JA 0.86	1BA 1.72	1BA 1.82	1FA 4.8	1JA 8.4	
4AM40 4	0.25	3RV20 11-□□□10 3RV20 21-□□□10 Set value in A	1AA -- 1.37	1DA -- 2.7	1DA -- 2.8	1HA -- 7.4	-- 4AA 13	
4AM43 4	0.315	3RV20 11-□□□10 3RV20 21-□□□10 Set value in A	1BA -- 1.72	1EA -- 3.4	1EA -- 3.6	1JA -- 9.4	-- 4BA 16.5	
4AM46 4	0.4	3RV20 11-□□□10 3RV20 21-□□□10 Set value in A	1CA -- 2.2	1FA -- 4.4	1FA -- 4.6	1KA -- 12	-- 4CA 21	
4AM48 4	0.5	3RV20 11-□□□10 3RV20 21-□□□10 3RV10 31-□□□10 Set value in A	1DA -- -- 2.7	1GA -- -- 5.4	1GA -- -- 5.7	-- 4AA -- 15	-- -- 4EA 26	
4AM52 4	0.63	3RV20 11-□□□10 3RV20 21-□□□10 3RV10 31-□□□10 Set value in A	1EA -- -- 3.4	1HA -- -- 6.8	1HA -- -- 7.2	-- 4BA -- 18.8	-- -- 4FA 33	
4AM55 4	0.8	3RV20 11-□□□10 3RV20 21-□□□10 3RV10 31-□□□10 Set value in A	1FA -- -- 4.4	1JA -- -- 8.8	1JA -- -- 9.2	-- 4DA -- 24	-- -- 4GA 42	
4AM57 4	1	3RV20 11-□□□10 3RV10 31-□□□10 3RV10 41-□□□10 Set value in A	1GA -- -- 5.4	1KA -- -- 10.8	1KA -- -- 11.4	-- 4EA -- 30	-- -- 4JA 52	
4AM61 4	1.6	3RV20 11-□□□10 3RV10 31-□□□10 3RV10 41-□□□10 Set value in A	1JA -- -- 8.6	-- 4BA -- 17	-- 4BA -- 18.5	-- 4HA -- 48	-- -- 4LA 81	
4AM64 4	2	3RV20 11-□□□10 3RV10 31-□□□10 3RV10 41-□□□10 Set value in A	1KA -- -- 10.9	-- 4DA -- 22	-- 4DA -- 23	-- -- 4JA 60	-- -- 4MA 101	
4AM65 4	2.5	3RV20 21-□□□10 3RV10 31-□□□10 3RV10 41-□□□10 3VF32 11-□□□□□-0AA0 Set value in A	4AA -- -- -- 13.6	-- 4EA -- -- 27	-- 4EA -- -- 28	-- -- 4KA -- 72	-- -- -- 1BU41 125	
4AT transformers								
4AT30 3	4	3RV20 21-□□□10 3RV10 31-□□□10 Set value in A	4CA -- 21	-- 4GA 41	-- -- --	-- -- --	-- -- --	
4AT36 1	5	3RV10 31-□□□10 3RV10 41-□□□10 Set value in A	4EA -- 26	-- 4JA 51	-- -- --	-- -- --	-- -- --	
4AT36 3	6.3	3RV10 31-□□□10 3RV10 41-□□□10 Set value in A	4FA -- 32	-- 4KA 64	-- -- --	-- -- --	-- -- --	
4AT39 1	8	3RV10 31-□□□10 3RV10 41-□□□10 Set value in A	4GA -- 41	-- 4LA 81	-- -- --	-- -- --	-- -- --	
4AT39 3	10	3RV10 41-□□□10 Set value in A	4JA 51	4MA 100	-- --	-- --	-- --	

¹⁾ Two-pole or single-pole motor starter protectors can be connected (3 conducting paths in series), see circuit diagram on page 11/7.

Single-Phase Transformers

Safety, Isolating, Control and Mains Transformers

General data

Short-time rating of control transformers $P_{\text{shortt.}}^{1)} = f(p.f.)$ for $U_2 = 0.95 \times U_{2N}$

Trans- former	Rated power P_n	Short-time rating $P_{\text{shortt.}}$ ¹⁾ with p.f. of										Voltage rise in no-load operation (operating temperature) u_A %	Voltage drop on rated load (at 20 °C) u_R %	Short- circuit voltage (at 20 °C) u_Z %
		0.1	0.2	0.3	0.4	0.5	0.6	0.7	0.8	0.9	1			
Type	kVA	kVA	kVA	kVA	kVA	kVA	kVA	kVA	kVA	kVA	kVA			
4AM transformers														
4AM32 4	0.063	0.56	0.37	0.28	0.23	0.19	0.16	0.14	0.12	0.12	0.11	10	8.4	8.5
4AM34 4	0.1	0.96	0.62	0.46	0.37	0.31	0.26	0.23	0.21	0.19	0.17	10	7.7	7.7
4AM38 4	0.16	1.52	0.98	0.73	0.58	0.49	0.42	0.37	0.33	0.3	0.28	10.4	7.6	7.7
4AM40 4	0.25	2.5	1.62	1.24	1	0.85	0.74	0.66	0.59	0.54	0.51	7.2	5.4	5.4
4AM43 4	0.315	3.4	2.15	1.63	1.33	1.12	0.97	0.86	0.77	0.71	0.67	6.6	4.9	5
4AM46 4	0.4	3.51	2.53	2	1.67	1.44	1.26	1.13	1	0.95	0.92	5.7	4.3	4.4
4AM48 4	0.5	5.34	3.75	2.9	2.4	2	1.75	1.55	1.4	1.3	1.25	5	3.8	3.8
4AM52 4	0.63	5.05	3.85	3.15	2.7	2.35	2.1	1.9	1.75	1.65	1.6	4.7	3.6	3.7
4AM55 4	0.8	7.69	5.8	4.65	3.9	3.4	3	2.7	2.5	2.3	2.25	4	3	3.1
4AM57 4	1.0	12.1	8.85	7	5.85	5	4.4	3.95	3.6	3.3	3.2	3.2	2.5	2.5
4AM61 4	1.6	12.1	10.3	9	8.1	7.3	6.8	6.4	6.1	5.9	6.4	2.4	1.9	2.1
4AM64 4	2	15.8	13.5	11.9	10.7	9.7	9	8.5	8.1	7.9	8.6	2.1	1.7	1.9
4AM65 4	2.5	19.6	17.3	15.6	14.3	13.3	12.5	12	11.6	11.5	13.2	1.6	1.3	1.6
4AT transformers														
With one input voltage														
4AT30 3	4	31.2	25	20.9	18	16	14.4	13.2	12.2	11.6	11.7	3.8	2.7	2.9
4AT36 1	5	44.3	32.5	25.8	21.4	18.5	16.1	14.4	13.1	12.1	11.6	5.5	3.8	3.9
4AT36 3	6.3	40.7	33.4	28.4	24.9	22.5	20.3	18.7	17.5	16.7	16.9	4.3	3.1	3.3
4AT39 1	8	52.7	43.1	36.5	31.8	28.5	25.6	23.4	21.9	20.8	21.3	4.3	3.1	3.3
4AT39 3	10	42	37.7	34.4	31.9	30	28.4	27.3	26.7	26.8	29	3.5	2.5	3.3
In European voltage version or multi-voltage version														
4AT30 3	4	45.8	32.6	25.4	20.9	17.8	15.5	13.8	12.5	11.5	11	4.1	2.9	2.9
4AT36 1	5	48	36.7	27.9	22.6	19	16.5	14.6	13.1	12	11.2	5.9	4	4.1
4AT36 3	6.3	54.9	42.1	33.8	28.4	24.5	21.7	19.5	17.8	16.5	16.1	4.7	3.2	3.3
4AT39 1	8	70	53.6	43	36	31.1	27.5	24.8	22.6	21	20.4	4.6	3.2	3.3
4AT39 3	10	64.1	53.3	45.8	40.5	36.4	33.3	30.9	29.1	27.9	29.4	3.7	2.6	2.9
With selectable voltages														
4AT30 3	4	45.8	32.6	25.4	20.9	17.8	15.5	13.8	12.5	11.5	11	4.1	2.9	2.9
4AT36 1	5	48	36.7	27.9	22.6	19	16.5	14.6	13.1	12	11.2	5.9	4	4.1
4AT36 3	6.3	54.9	42.1	33.8	28.4	24.5	21.7	19.5	17.8	16.5	16.1	4.7	3.2	3.3
4AT39 1	8	70	53.6	43	36	31.1	27.5	24.8	22.6	21	20.4	4.6	3.2	3.3
4AT39 3	10	64.1	53.3	45.8	40.5	36.4	33.3	30.9	29.1	27.9	29.4	3.7	2.6	2.9
4AT43 0	11.2	117	85.8	67.8	56.3	48.3	42.4	37.9	34.5	31.9	30.7	4.1	2.9	2.9
4AT43 1	12.5	117	89.5	72.9	61.8	53.8	47.9	43.3	39.8	37.2	36.7	3.7	2.6	2.7
4AT43 2	14	111	90	75.9	66	58.7	53.1	48.8	45.5	43.2	44.2	3.3	2.3	2.5
4AT45 0	16	187	140	112	94	81.2	71.7	64.5	59	54.7	53.4	3.1	2.1	2.2

¹⁾ $P_{\text{shortt.}}$ applies to up to 300 contactor operations per hour. The specified rating is the typical maximum short-time rating.

Single-Phase Transformers

Safety, Isolating, Control and Mains Transformers

SIRIUS 4AM
 safety, mains and control transformers

Overview

- According to EN 61558-2-6, -2-1, -2-2
- cULus**
- $t_a = 40\text{ °C/B}$
- AC 50/60 Hz
- Degree of protection IP00, IP23 and IP54
- For more products see Industry Mall and Interactive Catalog CA 01 or www.mdexx.com.



SIRIUS 4AM single-phase transformer with screw terminals/flat connectors



Selection and ordering data

With one input voltage

Rated input voltage $U_{1N} 230\text{ V} \pm 5\%$,
 rated output voltages $U_{2N} 24\text{ V}$ or 42 V



PU (UNIT, SET, M) = 1
 PS* = 1 unit
 PG = 104

Rated power P_N	Short-time rating $P_{short.}^{1)}$	DT ²⁾ $U_{2N} 24\text{ V}$			DT ²⁾ $U_{2N} 42\text{ V}$		
		Screw terminals/ flat connectors		Cu weight per PU approx.	Screw terminals/ flat connectors		Cu weight per PU approx.
kVA	kVA	Order No.	Price per PU	kg	Order No.	Price per PU	kg
Degree of protection IP00, standard version³⁾							
0.063	0.19	▶ 4AM32 42-4TN00-0EA0		0.240	▶ 4AM32 42-4TV00-0EA0		0.240
0.1	0.31	▶ 4AM34 42-4TN00-0EA0		0.260	▶ 4AM34 42-4TV00-0EA0		0.260
0.16	0.49	▶ 4AM38 42-4TN00-0EA0		0.320	▶ 4AM38 42-4TV00-0EA0		0.320
0.25	0.85	▶ 4AM40 42-4TN00-0EA0		0.590	▶ 4AM40 42-4TV00-0EA0		0.590
0.315	1.12	▶ 4AM43 42-4TN00-0EA0		0.670	B 4AM43 42-4TV00-0EA0		0.670
0.4	1.44	▶ 4AM46 42-4TN00-0EA0		1.100	B 4AM46 42-4TV00-0EA0		1.100
0.5	2	▶ 4AM48 42-4TN00-0EA0		1.100	B 4AM48 42-4TV00-0EA0		1.100
0.63	2.35	▶ 4AM52 42-4TN00-0EA0		1.700	B 4AM52 42-4TV00-0EA0		1.700
0.8	3.4	▶ 4AM55 42-4TN00-0EA0		1.900	C 4AM55 42-4TV00-0EA0		1.900
1	5	▶ 4AM57 42-4TN00-0EA0		2.000	B 4AM57 42-4TV00-0EA0		2.000
Degree of protection IP00, standard rail mounting³⁾							
0.063	0.19	▶ 4AM32 42-4TN00-0EA0		0.240	▶ 4AM32 42-4TV00-0EA0		0.240
0.1	0.31	▶ 4AM34 42-4TN00-0EA0		0.260	▶ 4AM34 42-4TV00-0EA0		0.260
0.16	0.49	▶ 4AM38 42-4TN00-0EA0		0.320	▶ 4AM38 42-4TV00-0EA0		0.320
0.25	0.85	▶ 4AM40 42-4TN00-0EA0		0.590	▶ 4AM40 42-4TV00-0EA0		0.590
0.315	1.12	B 4AM43 42-4TN00-0EB0		0.670	B 4AM43 42-4TV00-0EB0		0.670
0.4	1.44	B 4AM46 42-4TN00-0EB0		1.100	B 4AM46 42-4TV00-0EB0		1.100
0.5	2	B 4AM48 42-4TN00-0EB0		1.100	C 4AM48 42-4TV00-0EB0		1.100
Degree of protection IP23							
0.057	0.19	B 4AM32 42-4TN00-0EC0		0.240	D 4AM32 42-4TV00-0EC0		0.240
0.09	0.31	B 4AM34 42-4TN00-0EC0		0.260	D 4AM34 42-4TV00-0EC0		0.260
0.145	0.49	B 4AM38 42-4TN00-0EC0		0.320	B 4AM38 42-4TV00-0EC0		0.320
0.225	0.85	B 4AM40 42-4TN00-0EC0		0.590	B 4AM40 42-4TV00-0EC0		0.590
0.268	1.12	B 4AM43 42-4TN00-0EC0		0.670	B 4AM43 42-4TV00-0EC0		0.670
0.34	1.44	B 4AM46 42-4TN00-0EC0		1.100	B 4AM46 42-4TV00-0EC0		1.100
0.425	2	B 4AM48 42-4TN00-0EC0		1.100	B 4AM48 42-4TV00-0EC0		1.100
0.535	2.35	B 4AM52 42-4TN00-0EC0		1.820	B 4AM52 42-4TV00-0EC0		1.700
0.68	3.4	B 4AM55 42-4TN00-0EC0		1.900	D 4AM55 42-4TV00-0EC0		1.900
0.85	5	B 4AM57 42-4TN00-0EC0		2.000	B 4AM57 42-4TV00-0EC0		2.000
Degree of protection IP54							
0.05	0.19	B 4AM32 42-4TN00-0ED0		0.240	D 4AM32 42-4TV00-0ED0		0.240
0.08	0.31	C 4AM34 42-4TN00-0ED0		0.260	C 4AM34 42-4TV00-0ED0		0.260
0.128	0.49	B 4AM38 42-4TN00-0ED0		0.320	D 4AM38 42-4TV00-0ED0		0.320
0.2	0.85	B 4AM40 42-4TN00-0ED0		0.590	B 4AM40 42-4TV00-0ED0		0.590
0.236	1.12	B 4AM43 42-4TN00-0ED0		0.670	B 4AM43 42-4TV00-0ED0		0.670
0.3	1.44	B 4AM46 42-4TN00-0ED0		1.100	B 4AM46 42-4TV00-0ED0		1.100
0.375	2	B 4AM48 42-4TN00-0ED0		1.100	B 4AM48 42-4TV00-0ED0		1.100
0.475	2.35	B 4AM52 42-4TN00-0ED0		1.700	B 4AM52 42-4TV00-0ED0		1.700
0.6	3.4	B 4AM55 42-4TN00-0ED0		1.900	D 4AM55 42-4TV00-0ED0		1.900
0.75	5	B 4AM57 42-4TN00-0ED0		2.000	B 4AM57 42-4TV00-0ED0		2.000

¹⁾ For p.f. = 0.5 and $U_2 = 0.95 \times U_{2N}$.

²⁾ The delivery time class depends on the quantity, see page 11/5 "Options".

³⁾ For types 4AM32 to 4AM40, standard rail mounting is integrated in the standard version.

Single-Phase Transformers

Safety, Isolating, Control and Mains Transformers

SIRIUS 4AM safety and mains transformers

Overview

- According to EN 61558-2-6, -2-1
- c** **us**
- $t_a = 40\text{ °C/B}$
- AC 50/60 Hz
- Degree of protection IP00, IP23 and IP54
- For more products see Industry Mall and Interactive Catalog CA 01 or www.mdexx.com.



SIRIUS 4AM single-phase transformer with screw terminals/flat connectors



Selection and ordering data

With one input voltage

Rated input voltage U_{1N} **230 V $\pm$ 5 %**,
rated output voltages U_{2N} **24 V or 42 V**



PU (UNIT, SET, M) = 1
PS* = 1 unit
PG = 104

Rated power P_n	Short-time rating $P_{short.}$	DT ¹⁾	U_{2N} 24 V	Cu weight per PU approx.	DT ¹⁾	U_{2N} 42 V	Cu weight per PU approx.
			Screw terminals/ flat connectors			Screw terminals/ flat connectors	
kVA	kVA		Order No.	Price per PU		Order No.	Price per PU
				kg			kg
Degree of protection IP00, standard version							
0.025	--	▶	4AM23 42-4TN00-0EA0	0.110 C		4AM23 42-4TV00-0EA0	0.110
0.04	--	▶	4AM26 42-4TN00-0EA0	0.150 C		4AM26 42-4TV00-0EA0	0.150
Degree of protection IP00, standard rail mounting							
0.025	--	C	4AM23 42-4TN00-0EB0	0.110 D		4AM23 42-4TV00-0EB0	0.110
0.04	--	C	4AM26 42-4TN00-0EB0	0.150 D		4AM26 42-4TV00-0EB0	0.150
Degree of protection IP23							
0.023	--	D	4AM23 42-4TN00-0EC0	0.110 D		4AM23 42-4TV00-0EC0	0.110
0.036	--	D	4AM26 42-4TN00-0EC0	0.150 D		4AM26 42-4TV00-0EC0	0.150
Degree of protection IP54							
0.02	--	C	4AM23 42-4TN00-0ED0	0.110 D		4AM23 42-4TV00-0ED0	0.110
0.03	--	D	4AM26 42-4TN00-0ED0	0.150 D		4AM26 42-4TV00-0ED0	0.150

¹⁾ The delivery time class depends on the quantity, see page 11/5 "Options".

With one input voltage

Rated input voltage U_{1N} **400 V $\pm$ 5 %**,
rated output voltages U_{2N} **24 V or 42 V**



PU (UNIT, SET, M) = 1
PS* = 1 unit
PG = 104

Rated power P_n	Short-time rating $P_{short.}$	DT ¹⁾	U_{2N} 24 V	Cu weight per PU approx.	DT ¹⁾	U_{2N} 42 V	Cu weight per PU approx.
			Screw terminals/ flat connectors			Screw terminals/ flat connectors	
kVA	kVA		Order No.	Price per PU		Order No.	Price per PU
				kg			kg
Degree of protection IP00, standard version							
0.025	--	▶	4AM23 42-5AN00-0EA0	0.110 C		4AM23 42-5AV00-0EA0	0.110
0.04	--	▶	4AM26 42-5AN00-0EA0	0.150 C		4AM26 42-5AV00-0EA0	0.150
Degree of protection IP00, standard rail mounting							
0.025	--	C	4AM23 42-5AN00-0EB0	0.110 D		4AM23 42-5AV00-0EB0	0.110
0.04	--	C	4AM26 42-5AN00-0EB0	0.150 D		4AM26 42-5AV00-0EB0	0.150
Degree of protection IP23							
0.023	--	C	4AM23 42-5AN00-0EC0	0.110 D		4AM23 42-5AV00-0EC0	0.110
0.036	--	D	4AM26 42-5AN00-0EC0	0.150 D		4AM26 42-5AV00-0EC0	0.150
Degree of protection IP54							
0.02	--	D	4AM23 42-5AN00-0ED0	0.110 D		4AM23 42-5AV00-0ED0	0.110
0.03	--	C	4AM26 42-5AN00-0ED0	0.150 D		4AM26 42-5AV00-0ED0	0.150

¹⁾ The delivery time class depends on the quantity, see page 11/5 "Options".

Single-Phase Transformers

Safety, Isolating, Control and Mains Transformers

SIRIUS 4AM, 4AT
isolating, control and mains transformers

Overview

- According to EN 61558-2-4, -2-2, -2-1
- cULus**¹⁾
- 4AM: $t_a = 40\text{ °C/B}$, 4AT: $t_a = 55\text{ °C/H}$
- AC 50/60 Hz
- Degree of protection IP00, IP23 and IP54
- For more products see Industry Mall and Interactive Catalog CA 01 or www.mdexx.com.



SIRIUS 4AM single-phase transformer with screw terminals/flat connectors (left) and SIRIUS 4AT single-phase transformer with screw terminals (right)



¹⁾ cULus approvals for voltages $\leq 600\text{ V}$ (excluding tappings).

Selection and ordering data

With one input voltage

**Rated input voltage U_{1N} 230 V $\pm 5\%$,
rated output voltages U_{2N} 110 V or 230 V,
degree of protection IP00**



PU (UNIT, SET, M) = 1
PS* = 1 unit
PG = 104

Rated power P_n	Short-time rating $P_{short.}^{1)}$	DT ²⁾	U_{2N} 110 V			Cu weight per PU approx.	DT ²⁾	U_{2N} 230 V			Cu weight per PU approx.
			Screw terminals ^{3)/} flat connectors ³⁾					Screw terminals ^{3)/} flat connectors ³⁾			
kVA	kVA		Order No.	Price per PU	kg			Order No.	Price per PU	kg	
Degree of protection IP00, standard version ⁴⁾											
0.063	0.19	▶	4AM32 42-4TJ10-0FA0		0.240	▶		4AM32 42-4TT10-0FA0		0.240	
0.1	0.31	▶	4AM34 42-4TJ10-0FA0		0.260	▶		4AM34 42-4TT10-0FA0		0.260	
0.16	0.49	▶	4AM38 42-4TJ10-0FA0		0.320	▶		4AM38 42-4TT10-0FA0		0.320	
0.25	0.85	▶	4AM40 42-4TJ10-0FA0		0.590	▶		4AM40 42-4TT10-0FA0		0.590	
0.315	1.12	▶	4AM43 42-4TJ10-0FA0		0.670	▶		4AM43 42-4TT10-0FA0		0.670	
0.4	1.44	▶	4AM46 42-4TJ10-0FA0		1.100	▶		4AM46 42-4TT10-0FA0		1.100	
0.5	2	▶	4AM48 42-4TJ10-0FA0		1.100	▶		4AM48 42-4TT10-0FA0		1.100	
0.63	2.35	▶	4AM52 42-4TJ10-0FA0		1.700	▶		4AM52 42-4TT10-0FA0		1.700	
0.8	3.4	▶	4AM55 42-4TJ10-0FA0		1.900	▶		4AM55 42-4TT10-0FA0		1.900	
1	5	▶	4AM57 42-4TJ10-0FA0		2.000	▶		4AM57 42-4TT10-0FA0		2.000	
1.6	7.3	C	4AM61 42-4TJ10-0FA0		4.100	▶		4AM61 42-4TT10-0FA0		4.100	
2	9.7	C	4AM64 42-4TJ10-0FA0		4.700	▶		4AM64 42-4TT10-0FA0		4.700	
2.5	13.3	C	4AM65 42-4TJ10-0FA0		6.400	▶		4AM65 42-4TT10-0FA0		6.400	
4	16	C	4AT30 32-4TJ10-0FA0		9.900	C		4AT30 32-4TT10-0FA0		9.900	
5	18.5	C	4AT36 12-4TJ10-0FA0		6.900	C		4AT36 12-4TT10-0FA0		6.900	
6.3	22.5	C	4AT36 32-4TJ10-0FA0		11.300	C		4AT36 32-4TT10-0FA0		11.300	
8	28.5	C	4AT39 12-4TJ10-0FA0		12.800	C		4AT39 12-4TT10-0FA0		12.800	
10	30	C	4AT39 32-4TJ10-0FA0		22.100	C		4AT39 32-4TT10-0FA0		22.100	
Degree of protection IP00, standard rail mounting ⁴⁾											
0.063	0.19	▶	4AM32 42-4TJ10-0FA0		0.240	▶		4AM32 42-4TT10-0FA0		0.240	
0.1	0.31	▶	4AM34 42-4TJ10-0FA0		0.260	▶		4AM34 42-4TT10-0FA0		0.260	
0.16	0.49	▶	4AM38 42-4TJ10-0FA0		0.320	▶		4AM38 42-4TT10-0FA0		0.320	
0.25	0.85	▶	4AM40 42-4TJ10-0FA0		0.590	▶		4AM40 42-4TT10-0FA0		0.590	
0.315	1.12	B	4AM43 42-4TJ10-0FB0		0.670	B		4AM43 42-4TT10-0FB0		0.670	
0.4	1.44	B	4AM46 42-4TJ10-0FB0		1.100	B		4AM46 42-4TT10-0FB0		1.100	
0.5	2	B	4AM48 42-4TJ10-0FB0		1.100	B		4AM48 42-4TT10-0FB0		1.100	

For degrees of protection IP23 and IP54 see page 11/20.

¹⁾ For p.f. = 0.5 and $U_2 = 0.95 \times U_{2N}$.

²⁾ The delivery time class depends on the quantity, see page 11/5 "Options".

³⁾ The 4AT types are only supplied with screw terminals.

⁴⁾ For types 4AM32 to 4AM40, standard rail mounting is integrated in the standard version.

Single-Phase Transformers

Safety, Isolating, Control and Mains Transformers

SIRIUS 4AM, 4AT
isolating, control and mains transformers

With one input voltage
Rated input voltage U_{1N} 400 V $\pm$ 5 %,
rated output voltages U_{2N} 110 V or 230 V
cULus, 0, Δ , 0

PU (UNIT, SET, M) = 1
PS* = 1 unit
PG = 104

Rated power P_n	Short-time rating $P_{short.}$	DT ²⁾ U_{2N} 110 V	Cu weight per PU approx.	DT ²⁾ U_{2N} 230 V	Cu weight per PU approx.
		Screw terminals ³⁾ / flat connectors ³⁾		Screw terminals ³⁾ / flat connectors ³⁾	
kVA	kVA	Order No.	Price per PU	Order No.	Price per PU
			kg		kg
Degree of protection IP00, standard version⁴⁾					
0.063	0.19	4AM32 42-5AJ10-0FA0	0.240	4AM32 42-5AT10-0FA0	0.240
0.1	0.31	4AM34 42-5AJ10-0FA0	0.260	4AM34 42-5AT10-0FA0	0.260
0.16	0.49	4AM38 42-5AJ10-0FA0	0.320	4AM38 42-5AT10-0FA0	0.320
0.25	0.85	4AM40 42-5AJ10-0FA0	0.590	4AM40 42-5AT10-0FA0	0.590
0.315	1.12	4AM43 42-5AJ10-0FA0	0.670	4AM43 42-5AT10-0FA0	0.670
0.4	1.44	4AM46 42-5AJ10-0FA0	1.100	4AM46 42-5AT10-0FA0	1.100
0.5	2	4AM48 42-5AJ10-0FA0	1.100	4AM48 42-5AT10-0FA0	1.100
0.63	2.35	4AM52 42-5AJ10-0FA0	1.700	4AM52 42-5AT10-0FA0	1.700
0.8	3.4	4AM55 42-5AJ10-0FA0	1.900	4AM55 42-5AT10-0FA0	1.900
1	5	4AM57 42-5AJ10-0FA0	2.000	4AM57 42-5AT10-0FA0	2.000
1.6	7.3	4AM61 42-5AJ10-0FA0	4.100	4AM61 42-5AT10-0FA0	4.100
2	9.7	4AM64 42-5AJ10-0FA0	4.700	4AM64 42-5AT10-0FA0	4.700
2.5	13.3	4AM65 42-5AJ10-0FA0	6.400	4AM65 42-5AT10-0FA0	6.400
4	16	C 4AT30 32-5AJ10-0FA0	9.900 C	4AT30 32-5AT10-0FA0	9.900
5	18.5	C 4AT36 12-5AJ10-0FA0	6.900 C	4AT36 12-5AT10-0FA0	6.850
6.3	22.5	C 4AT36 32-5AJ10-0FA0	11.300 C	4AT36 32-5AT10-0FA0	11.300
8	28.5	C 4AT39 12-5AJ10-0FA0	12.800 C	4AT39 12-5AT10-0FA0	12.800
10	30	C 4AT39 32-5AJ10-0FA0	22.100 D	4AT39 32-5AT10-0FA0	22.100
Degree of protection IP00, standard rail mounting⁴⁾					
0.063	0.19	4AM32 42-5AJ10-0FA0	0.240	4AM32 42-5AT10-0FA0	0.240
0.1	0.31	4AM34 42-5AJ10-0FA0	0.260	4AM34 42-5AT10-0FA0	0.260
0.16	0.49	4AM38 42-5AJ10-0FA0	0.320	4AM38 42-5AT10-0FA0	0.320
0.25	0.85	4AM40 42-5AJ10-0FA0	0.590	4AM40 42-5AT10-0FA0	0.590
0.315	1.12	B 4AM43 42-5AJ10-0FB0	0.670 B	4AM43 42-5AT10-0FB0	0.670
0.4	1.44	B 4AM46 42-5AJ10-0FB0	1.100 B	4AM46 42-5AT10-0FB0	1.100
0.5	2	C 4AM48 42-5AJ10-0FB0	1.100 B	4AM48 42-5AT10-0FB0	1.100
Degree of protection IP23					
0.057	0.19	C 4AM32 42-5AJ10-0FC0	0.240 C	4AM32 42-5AT10-0FC0	0.240
0.09	0.31	D 4AM34 42-5AJ10-0FC0	0.260 C	4AM34 42-5AT10-0FC0	0.260
0.145	0.49	B 4AM38 42-5AJ10-0FC0	0.320 B	4AM38 42-5AT10-0FC0	0.320
0.225	0.85	B 4AM40 42-5AJ10-0FC0	0.590 B	4AM40 42-5AT10-0FC0	0.590
0.268	1.12	B 4AM43 42-5AJ10-0FC0	0.670 B	4AM43 42-5AT10-0FC0	0.670
0.34	1.44	B 4AM46 42-5AJ10-0FC0	1.100 B	4AM46 42-5AT10-0FC0	1.100
0.425	2	B 4AM48 42-5AJ10-0FC0	1.100 B	4AM48 42-5AT10-0FC0	1.100
0.535	2.35	B 4AM52 42-5AJ10-0FC0	1.700 B	4AM52 42-5AT10-0FC0	1.700
0.68	3.4	D 4AM55 42-5AJ10-0FC0	1.900 C	4AM55 42-5AT10-0FC0	1.900
0.85	5	D 4AM57 42-5AJ10-0FC0	2.000 C	4AM57 42-5AT10-0FC0	2.000
1.36	7.3	C 4AM61 42-5AJ10-0FC0	4.100 C	4AM61 42-5AT10-0FC0	4.100
1.7	9.7	D 4AM64 42-5AJ10-0FC0	4.700 C	4AM64 42-5AT10-0FC0	4.700
2.13	13.3	D 4AM65 42-5AJ10-0FC0	6.400 C	4AM65 42-5AT10-0FC0	6.400
3.6	16	C 4AT30 32-5AJ10-0FC0	9.900 C	4AT30 32-5AT10-0FC0	9.900
4.5	18.5	D 4AT36 12-5AJ10-0FC0	6.900 C	4AT36 12-5AT10-0FC0	6.900
5.6	22.5	D 4AT36 32-5AJ10-0FC0	11.300 C	4AT36 32-5AT10-0FC0	11.300
7.1	28.5	C 4AT39 12-5AJ10-0FC0	12.800 C	4AT39 12-5AT10-0FC0	12.800
9	30	D 4AT39 32-5AJ10-0FC0	22.100 C	4AT39 32-5AT10-0FC0	22.100
Degree of protection IP54					
0.05	0.19	C 4AM32 42-5AJ10-0FD0	0.240 C	4AM32 42-5AT10-0FD0	0.240
0.08	0.31	D 4AM34 42-5AJ10-0FD0	0.260 D	4AM34 42-5AT10-0FD0	0.260
0.128	0.49	B 4AM38 42-5AJ10-0FD0	0.320 C	4AM38 42-5AT10-0FD0	0.320
0.2	0.85	B 4AM40 42-5AJ10-0FD0	0.590 B	4AM40 42-5AT10-0FD0	0.590
0.236	1.12	B 4AM43 42-5AJ10-0FD0	0.670 B	4AM43 42-5AT10-0FD0	0.670
0.3	1.44	B 4AM46 42-5AJ10-0FD0	1.100 B	4AM46 42-5AT10-0FD0	1.100
0.375	2	B 4AM48 42-5AJ10-0FD0	1.100 B	4AM48 42-5AT10-0FD0	1.100
0.475	2.35	B 4AM52 42-5AJ10-0FD0	1.700 B	4AM52 42-5AT10-0FD0	1.700
0.6	3.4	D 4AM55 42-5AJ10-0FD0	1.900 C	4AM55 42-5AT10-0FD0	1.900
0.75	5	C 4AM57 42-5AJ10-0FD0	2.000 C	4AM57 42-5AT10-0FD0	2.000
1.2	7.3	D 4AM61 42-5AJ10-0FD0	4.100 C	4AM61 42-5AT10-0FD0	4.100
1.5	9.7	D 4AM64 42-5AJ10-0FD0	4.700 C	4AM64 42-5AT10-0FD0	4.700
1.875	13.3	D 4AM65 42-5AJ10-0FD0	6.400 C	4AM65 42-5AT10-0FD0	6.400
3.15	16	C 4AT30 32-5AJ10-0FD0	9.900 C	4AT30 32-5AT10-0FD0	9.900
4	18.5	C 4AT36 12-5AJ10-0FD0	6.900 C	4AT36 12-5AT10-0FD0	6.900
5	22.5	D 4AT36 32-5AJ10-0FD0	11.300 C	4AT36 32-5AT10-0FD0	11.300
6.3	28.5	D 4AT39 12-5AJ10-0FD0	12.800 C	4AT39 12-5AT10-0FD0	12.800
8	30	D 4AT39 32-5AJ10-0FD0	22.100 C	4AT39 32-5AT10-0FD0	22.100

¹⁾ For p.f. = 0.5 and $U_2 = 0.95 \times U_{2N}$.

²⁾ The delivery time class depends on the quantity, see page 11/5 "Options".

³⁾ The 4AT types are only supplied with screw terminals.

⁴⁾ For types 4AM32 to 4AM40, standard rail mounting is integrated in the standard version.