Transformers
Phaseo ABT7, ABL6
230 V to 400 V - 25 VA to 2500 VA

Catalog

January 2019

Schneider Electric

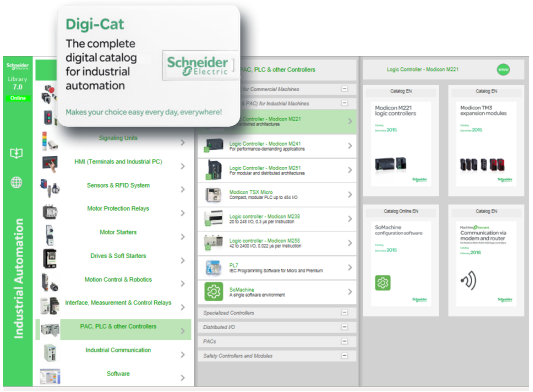
Quick access to Product information

Select your Catalog, your Training

With just 3 clicks, you can reach the 7,000 pages of the Industrial Automation & Control catalog, in both English and French.

- Digi-Cat is available on a USB key (for PC). To get your Digi-Cat, please contact your local center
- Download Digi-Cat from this address:

http://digi-cat.schneider-electric.com/download.html

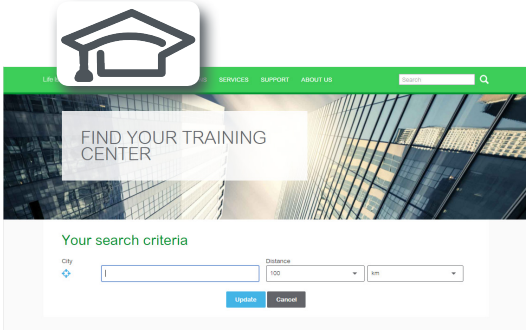


Find your training

- Find the right training for your needs
- Locate the training center with the selector tool, using this address:

http://www.schneider-electric.com/b2b/en/services/training/technical-training.jsp

then click on Find your training center

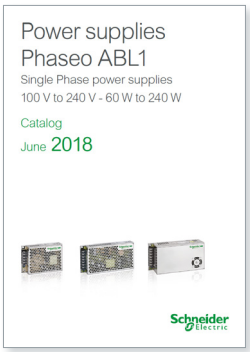


Life Is On Schneider Electric

General content

Transformers

Phaseo ABT7, ABL6



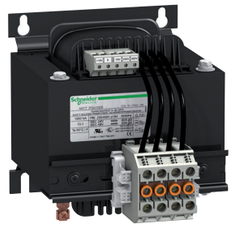
DIA3ED2170402EN

DIA3ED2170401EN

DIA3ED2170404EN

& Other offers, consult the catalogs

Transformers
Phaseo ABT7, ABL6

Transformers for AC control circuits		Transformers 230 V Single winding transformers Operating temperature: 40 °C	Transformers 230/400 V Single winding transformers Operating temperature: 50 °C	Transformers 230/400 V Single winding transformers Operating temperature: 50 °C	Transformers 230/400 V Double winding transformers Operating temperature: 60 °C	
						
Input voltage		230 V ∿, ± 15 V	230 V ∿ and 400 V ∿, ± 15 V	230 V ∿ and 400 V ∿, ± 15 V	230 V ∿ and 400 V ∿, ± 15 V	
Connection to world-wide line supplies	United States - 120 V (in phase-to-neutral) - 240 V (in phase-to-phase)	– –	– 2-phase (L1-L2) connection	– 2-phase (L1-L2) connection	– 2-phase (L1-L2) connection	
	Europe - 230 V (in phase-to-neutral) - 400 V (in phase-to-phase)	Single-phase (N-L1) connection	Single-phase (N-L1) connection 2-phase (L1-L2) connection	Single-phase (N-L1) connection 2-phase (L1-L2) connection	Single-phase (N-L1) connection 2-phase (L1-L2) connection	
Applications		SELV transformer (Safety Extra Low Voltage)	SELV transformer (Safety Extra Low Voltage)	Isolation transformer	SELV transformer (Safety Extra Low Voltage)	Isolation transformer
Secondary winding		Single winding	Single winding	Single winding	Double winding	
Signalling		–	–	–	Presence of input voltage by LED (up to 320 VA)	
Conformity to standards		EN 61558-2-6, EN 61558-1, EN 62041	EN 61558-2-6, UL 506, EN 61558-1, EN 62041	EN 61558-2-6, EN 61558-1, EN 62041	EN 61558-2-6, UL 506, EN 61558-1, EN 62041	EN 61558-2-4, UL 506, EN 61558-1, EN 62041
Certifications		CE marking, EAC	cULus CE marking, UL (506), EAC	cULus CE marking, UL (506), EAC	cULus CE marking, UL (506), EAC	
Output voltage		24 V ∿	12 V ∿	24 V ∿	115 V ∿	230 V ∿	2 x 24 V ∿	2 x 115 V ∿
Power supply type	Nominal power 25 VA		ABL6TS02J	ABL6TS02B	ABL6TS02G	ABL6TS02U		ABT7PDU002G
	40 VA	ABT7ESM004B	ABL6TS04J	ABL6TS04B	ABL6TS04G	ABL6TS04U	ABT7PDU004B	ABT7PDU004G
	63 VA	ABT7ESM006B	ABL6TS06J	ABL6TS06B	ABL6TS06G	ABL6TS06U	ABT7PDU006B	ABT7PDU006G
	100 VA	ABT7ESM010B	ABL6TS10J	ABL6TS10B	ABL6TS10G	ABL6TS10U	ABT7PDU010B	ABT7PDU010G
	160 VA	ABT7ESM016B	ABL6TS16J	ABL6TS16B	ABL6TS16G	ABL6TS16U	ABT7PDU016B	ABT7PDU016G
	250 VA	ABT7ESM025B	ABL6TS25J	ABL6TS25B	ABL6TS25G	ABL6TS25U	ABT7PDU025B	ABT7PDU025G
	320 VA	ABT7ESM032B					ABT7PDU032B	ABT7PDU032G
	400 VA	ABT7ESM040B		ABL6TS40B	ABL6TS40G	ABL6TS40U	ABT7PDU040B	ABT7PDU040G
	630 VA			ABL6TS63B	ABL6TS63G	ABL6TS63U	ABT7PDU063B	ABT7PDU063G
	1 000 VA			ABL6TS100B	ABL6TS100G	ABL6TS100U	ABT7PDU100B	ABT7PDU100G
	1 600 VA			ABL6TS160B	ABL6TS160G	ABL6TS160U	ABT7PDU160B	ABT7PDU160G
	2 500 VA			ABL6TS250B	ABL6TS250G	ABL6TS250U	ABT7PDU250B	ABT7PDU250G
Pages		4			4			

Transformers
Phaseo ABT7, ABL6

Presentation

The Phaseo ABT7, ABL6 single-phase transformers offer is designed to supply control circuits in electrical equipment from a 230 V ∿ or 400 V ∿ supply (depending on the model) at 50 or 60 Hz. ± 15 V connectors at the primary ensure adaptation to the actual values of the supply networks to which they are connected.

Transformers 230 V, Single winding: ABT7ESM

This range of simplified single-winding transformers is primarily designed for repetitive applications and offers the following as standard:
- 230 V ∿ ± 15 V input voltage
- 24 V ∿ output voltages
- Panel mounting using 4 screws
- Operating temperature of 40°C

Transformers 230/400 V, Single winding: ABL6TS

The following characteristics demonstrate the suitability of this tried and tested range of single-winding transformers for standard applications:
- 230 V/400 V ∿ ± 15 V input voltage
- 12 V, 24 V, 115 V or 230 V ∿ output voltage
- Panel mounting, using 4 screws (or clip-on ⊔ rail-mounting option available depending on the model)
- Operating temperature of 50°C
- cURus certifications

Transformers 230/400 V, Double winding: ABT7PDU

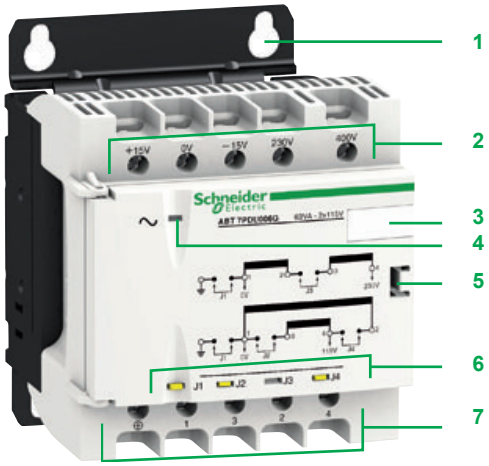
This range of transformers with double winding features a particularly innovative design and offers high-level characteristics (depending on the model) such as:
- 230 V/400 V ∿ ± 15 V input voltage
- 2 x 115 V or 2 x 24 V ∿ output voltage
- Clip-on ⊔ rail mounting (depending on the model) or panel mounting (using 4 screws)
- Series or parallel connection of secondary winding and grounding via internal jumpers
- LED indicator
- Operating temperature of 60°C
- cURus certification

Those components are concealed behind a plastic cover making it easier to integrate the Phaseo transformers in control cabinets.

Protection

The transformers can be protected against short-circuits by means of fuses or thermal-magnetic circuit-breakers mounted on the secondary.
For operation in compliance with UL standards, short-circuit protection must be achieved using fuses (UL approved) mounted on the primary.
Where the control circuit is isolated from the ground (IT system), a leakage detector will indicate any accidental ground faults.

Description



ABT7PDU002●…7PDU032●

1 Mounted using 4 screws or, depending on the model in the ABT7PDU range, by clipping on a 35 mm ⊔ rail
2 Screw terminals with ± 15 V connectors for connection of the AC input voltage
3 Clip-on marker tag or self-adhesive marker tag holder **AR1SB3**
4 LED (green) indicating presence of input voltage (depending on the model in the ABT7PDU range)
5 Access to the jumpers for selecting the secondary connection (opened using a screwdriver)
6 Windows (depending on the model in the ABT7PDU range) for viewing the connection via jumpers of the:
- □ 0 V to ground (J1 jumper)
- □ Series connection, totally freeing up the “customer” secondary wiring capacity (J3 jumper)
- □ Parallel connection, totally freeing up the “customer” secondary wiring capacity (J2 and J4 jumpers)

7 Screw terminals for connection of the AC output voltage

Transformers
Phaseo ABT7, ABL6

Selection

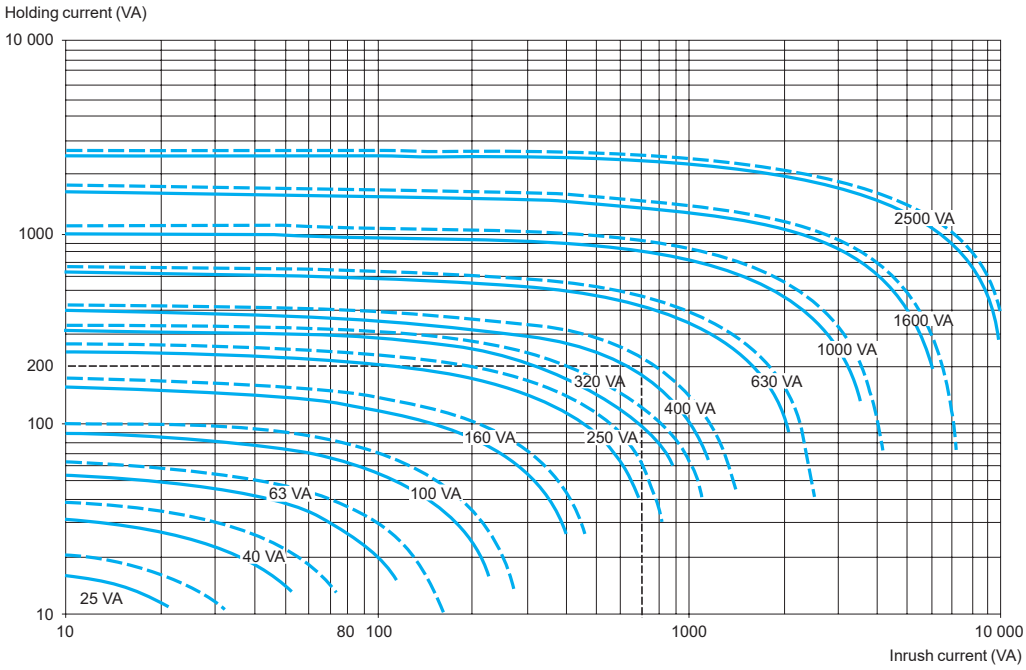
ABT7 and **ABL6TS** transformers are characterized by the apparent nominal power they can supply continuously. However, they are also designed to supply, when necessary, significantly higher powers, such as contactor inrush peaks.

Contactor inrush peaks can reach 10 to 20 times the required holding current. This leads to the transformer being oversized in relation to the continuous power it has to supply. The transformer must be sized so that the voltage drop at its terminals, caused by the inrush, remains with the permissible limits for the contactor to close properly.

The two power values that need to be taken into account to determine which transformer rating to use are therefore:
- The continuous power the transformer has to supply
- The maximum inrush power it has to provide

In practice, only the sum of the holding currents and the contactor inrush current need to be considered.

For **ABL6TS** transformers, the graph below can be used to select the appropriate rating according to these two currents. This gives a maximum voltage drop of 5% at the moment of inrush, compatible with correct operation of the entire installation. However, these transformers have been designed for continuous operation at nominal load and at an ambient temperature of 50°C. A reduction in the ambient temperature may uprate the transformer, which, in some cases, allows a lower rating to be used. The graph below has been drawn up for ambient temperatures of 35…50°C.



Example: A device with a total holding current of 200 VA and inrush current of the contactor of 700 VA can be supplied by a 630 VA transformer if it is used at an ambient temperature of 50°C. A 400 VA transformer is sufficient if the ambient temperature is 35°C.

Transformers
Phaseo ABT7, ABL6

Recommended protection for the primary

Protection on the primary by fuse or thermal magnetic circuit breaker

Transformer		230 V ∿ single-phase input voltage			
Reference	**Power**	**MDL fuses UL Listed** *(1)*	**aM fuses**	**TeSys GV2RT**	**Acti9 IC60** *(2)*
ABT7ESM004B	40 VA	0.3 A	0.25 A	GV2RT03	0.5 A D curve *(3)*
ABT7ESM006B	63 VA	0.4 A	0.5 A	GV2RT03	0.5 A D curve *(3)*
ABT7ESM010B	100 VA	0.5 A	0.5 A	GV2RT04	0.5 A D curve
ABT7ESM016B	160 VA	1 A	1 A	GV2RT05	1 A D curve
ABT7ESM025B	250 VA	1.25 A	2 A	GV2RT06	2 A D curve *(3)*
ABT7ESM032B	320 VA	1.5 A	2 A	GV2RT06	2 A D curve *(3)*
ABT7ESM040B	400 VA	2 A	2 A	GV2RT07	3 A D curve *(3)*

Recommended protection for the secondary

Protection on the secondary by fuses of thermal circuit breaker

Transformer		24 V ∿ secondary			
Reference	**Power**	**gG fuse** *(1)*	**aM fuses**	**TeSys GB2** *(IEC/ CSA-c/US)*	**Acti9 IC60** *(2)*
ABT7ESM004B	40 VA	1 A	1 A	GB2CD07	2 A C curve
ABT7ESM006B	63 VA	2 A	2 A	GB2CD08	3 A C curve
ABT7ESM010B	100 VA	4 A	4 A	GB2CD09	4 A C curve
ABT7ESM016B	160 VA	6 A	6 A	GB2CD12	6 A C curve
ABT7ESM025B	250 VA	10 A	10 A	GB2CD16	10 A C curve
ABT7ESM032B	320 VA	12 A	12 A	GB2CD20	16 A C curve
ABT7ESM040B	400 VA	16 A	16 A	GB2CD21	16 A C curve

(1) For operation in compliance with UL.
(2) Check your local catalogue for the exact reference.
For installation in North America, please select a UL489 compliant circuit breaker.
(3) Protection on the secondary is necessary.

Transformers
Phaseo ABT7, ABL6

Recommended protection for the primary

Protection on the primary by fuse or thermal magnetic circuit breaker

Transformer		230 V ∼ single-phase					400 V ∼ single-phase				
Reference	**Power**	**MDL fuses UL listed** *(1)*	**aM fuses**	**TeSys GB2** (IEC/ CSA-c/US)	**TeSys GV2RT**	**Acti9 IC60** *(2)*	**MDL fuses UL Listed** *(1)*	**aM fuses**	**TeSys GB2** (IEC/ CSA-c/US)	**TeSys GV2RT**	**Acti9 IC60** *(2)*
ABT7PDU002G	25 VA	0.2 A	0.25 A	–	–	–	0.25 A	0.16 A	–	–	–
ABT7PDU004B/G	40 VA	0.3 A	0.25 A	GB2DB05	GV2RT03	0.5 A D curve *(3)*	0.25 A	0.16 A	–	–	–
ABT7PDU006B/G	63 VA	0.5 A	0.5 A	GB2DB06	GV2RT04	0.5 A D curve *(3)*	0.25 A	0.25 A	–	–	–
ABT7PDU010B/G	100 VA	0.5 A	0.5 A	GB2DB06	GV2RT04	1 A D curve *(3)*	0.3 A	0.5 A	GB2DB05	GV2RT03	0.5 A D curve
ABT7PDU016B/G	160 VA	1 A	1 A	GB2DB07	GV2RT05	1 A D curve *(3)*	0.5 A	0.5 A	GB2DB06	GV2RT04	1 A D curve
ABT7PDU025B/G	250 VA	1.25 A	2 A	GB2DB07	GV2RT06	2 A D curve *(3)*	0.75 A	1 A	GB2DB06	GV2RT05	1 A D curve
ABT7PDU032B/G	320 VA	1.5 A	2 A	GB2DB07	GV2RT07	2 A D curve	1 A	1 A	GB2DB06	GV2RT05	1 A D curve
ABT7PDU040B/G	400 VA	2 A	2 A	GB2DB09	GV2RT07	3 A D curve *(3)*	1.25 A	2 A *(3)*	GB2DB07	GV2RT06	2 A D curve
ABT7PDU063B/G	630 VA	3 A	4 A	GB2DB12 *(3)*	GV2RT08	6 A D curve *(3)*	2 A	2 A	GB2DB09 *(3)*	–	4 A D curve *(3)*
ABT7PDU100B/G	1000 VA	5 A	6 A	GB2DB16 *(3)*	GV2RT10	10 A D curve *(3)*	3 A	4 A *(3)*	GB2DB12 *(3)*	–	6 A D curve *(3)*
ABT7PDU160B/G	1600 VA	8 A	8 A	GB2DB21 *(3)*	GV2RT14	16 A D curve *(3)*	4 A	6 A *(3)*	GB2DB14 *(3)*	GV2RT10	10 A D curve *(3)*
ABT7PDU250B/G	2500 VA	–	12 A	–	–	25 A D curve *(3)*	7 A	8 A *(3)*	GB2DB21 *(3)*	GV2RT14	16 A D curve *(3)*

Recommanded protection for the secondary

Protection on the secondary by fuses of thermal circuit breaker

Transformer		24 V ∼ secondary				48 V ∼ secondary			
Reference	**Power**	**gG fuse** *(1)*	**aM fuses**	**TeSys GB2** *(IEC/ CSA-c/ US)*	**Acti9 IC60** *(2)*	**gG fuse** *(1)*	**aM fuses**	**TeSys GB2** *(IEC/ CSA-c/US)*	**Acti9 IC60** *(2)*
ABT7PDU004B	40 VA	2 A	2 A	GB2CD07	2 A C curve	1 A	1 A	GB2CD06	1 A C curve
ABT7PDU006B	63 VA	2 A	2 A	GB2CD08	3 A C curve	1 A	1 A	GB2CD06	1 A C curve
ABT7PDU010B	100 VA	4 A	4 A	GB2CD09	4 A C curve	2 A	2 A	GB2CD07	2 A C curve
ABT7PDU016B	160 VA	6 A	6 A	GB2CD12	6 A C curve	2 A	2 A	GB2CD08	3 A C curve
ABT7PDU025B	250 VA	10 A	10 A	GB2CD16	10 A C curve	4 A	4 A	GB2CD10	6 A C curve
ABT7PDU032B	320 VA	12 A	12 A	GB2CD20	16 A C curve	6 A	6 A	GB2CD12	10 A C curve
ABT7PDU040B	400 VA	16 A	16 A	GB2CD21	16 A C curve	8 A	8 A	GB2CD14	10 A C curve
ABT7TDU063B	630 VA	25 A	25 A	–	25 A C curve	12 A	12 A	GB2CD20	16 A C curve
ABT7TDU100B	1000 VA	40 A	40 A	–	40 A C curve	20 A	20 A	GB2CD22	20 A C curve
ABT7TDU160B	1600 VA	63 A	63 A	–	63 A C curve	32 A	32 A	–	32 A C curve
ABT7TDU250B	2500 VA	100 A	100 A	–	–	50 A	50 A	–	50 A C curve

Transformer		115 V ∼ secondary				230 V ∼ secondary			
Reference	**Power**	**gG fuse** *(1)*	**aM fuses**	**TeSys GB2** *(IEC/ CSA-c/US)*	**Acti9 IC60** *(2)*	**gG fuse** *(1)*	**aM fuses**	**TeSys GB2** *(IEC/ CSA-c/US)*	**Acti9 IC60** *(2)*
ABT7PDU002G	25 VA	–	0.25 A	–	–	–	0.16 A	–	–
ABT7PDU004G	40 VA	0.5 A	0.5 A	GB2CD05	–	–	0.25 A	–	–
ABT7PDU006G	63 VA	0.5 A	0.5 A	GB2CD05	0.5 A C curve	–	0.25 A	–	–
ABT7PDU010G	100 VA	1 A	1 A	GB2CD05	1 A C curve	0.5 A	0.5 A	GB2CD06	0.5 A C curve
ABT7PDU016G	160 VA	1 A	1 A	GB2CD06	2 A C curve	0.5 A	0.5 A	GB2CD07	1 A C curve
ABT7PDU025G	250 VA	2 A	2 A	GB2CD06	2 A C curve	1 A	1 A	GB2CD07	1 A C curve
ABT7PDU032G	320 VA	2 A	2 A	GB2CD07	3 A C curve	1 A	1 A	GB2CD08	2 A C curve
ABT7PDU040G	400 VA	4 A	4 A	GB2CD07	4 A C curve	2 A	2 A	GB2CD08	2 A C curve
ABT7TDU063G	630 VA	4 A	4 A	GB2CD09	4 A C curve	2 A	2 A	GB2CD07	2 A C curve
ABT7TDU100G	1000 VA	8 A	8 A	GB2CD14	10 A C curve	4 A	4 A	GB2CD09	4 A C curve
ABT7TDU160G	1600 VA	12 A	12 A	GB2CD20	16 A C curve	6 A	6 A	GB2CD12	6 A C curve
ABT7TDU250G	2500 VA	20 A	20 A	GB2CD22	20 A C curve	10 A	10 A	GB2CD16	10 A C curve

(1) For operation in compliance with UL.
(2) Check your local catalogue for the exact reference. For installation in North America. please select a UL489 compliant circuit breaker.
(3) Protection on the secondary is necessary.

Recommended protection for the primary

Protection on the primary by fuse or thermal magnetic circuit breaker

Transformer		230 V ~ single-phase input voltage					400 V ~ single-phase input voltage				
Reference	**Power**	**MDL fuses UL listed** *(1)*	**aM fuses**	**TeSys GB2** *(IEC/ CSA-c/ US)*	**TeSys GV2RT**	**Acti9 IC60** *(2)*	**MDL fuses UL Listed** *(1)*	**aM fuses**	**TeSys GB2** *(IEC/ CSA-c/US)*	**TeSys GV2RT**	**Acti9 IC60** *(2)*
ABL6TS02J	25 VA	0.18 A	0.16 A	–	–	–	0.25 A	0.16 A	–	–	–
ABL6TS04J	40 VA	0.25 A	0.25 A	GB2DB05	GV2RT03	0.5 A D curve *(3)*	0.25 A	0.16 A	–	–	–
ABL6TS06J	63 VA	0.37 A	0.5 A	GB2DB05	GV2RT03	0.5 A D curve *(3)*	0.25 A	0.25 A	–	–	–
ABL6TS10J	100 VA	0.5 A	0.5 A	GB2DB06	GV2RT04	1 A D curve *(3)*	0.3 A	0.5 A	GB2DB05	GV2RT03	0.5 A D curve
ABL6TS16J	160 VA	1 A	1 A	GB2DB07	GV2RT05	2 A D curve *(3)*	0.5 A	0.5 A	GB2DB06	GV2RT04	1 A D curve
ABL6TS25J	250 VA	1.25 A	2 A	GB2DB07	GV2RT06	2 A D curve *(3)*	0.75 A	1 A	GB2DB06	GV2RT05	1 A D curve

Recommanded protection for the secondary

Protection on the secondary by fuses of thermal circuit breaker

Transformer		12 V ~ secondary			
Reference	**Power**	**gG fuse** *(1)*	**aM fuses**	**TeSys GB2** *(IEC/ CSA-c/US)*	**Acti9 IC60** *(2)*
ABL6TS02J	25 VA	2 A	2 A	GB2CD07	2 A C curve
ABL6TS04J	40 VA	4 A	4 A	GB2CD08	3 A C curve
ABL6TS06J	63 VA	6 A	6 A	GB2CD10	6 A C curve
ABL6TS10J	100 VA	8 A	8 A	GB2CD14	10 A C curve
ABL6TS16J	160 VA	12 A	12 A	GB2CD20	16 A C curve
ABL6TS25J	250 VA	20 A	20 A	GB2CD22	20 A C curve

Recommended protection for the primary

Protection on the primary by fuse or thermal magnetic circuit breaker

Transformer		230 V ~ single-phase input voltage					400 V ~ single-phase input voltage				
Reference	**Power**	**MDL fuses UL listed** *(1)*	**aM fuses**	**TeSys GB2** *(IEC/ CSA-c/ US)*	**TeSys GV2RT**	**Acti9 IC60** *(2)*	**MDL fuses UL Listed** *(1)*	**aM fuses**	**TeSys GB2** *(IEC/ CSA-c/US)*	**TeSys GV2RT**	**Acti9 IC60** *(2)*
ABL6TS02B	25 VA	0.18 A	0.16 A	–	–	–	0.25 A	0.16 A	–	–	–
ABL6TS04B	40 VA	0.25 A	0.25 A	GB2DB05	GV2RT03	0.5 A D curve *(3)*	0.25 A	0.16 A	–	–	–
ABL6TS06B	63 VA	0.37 A	0.5 A	GB2DB05	GV2RT03	0.5 A D curve *(3)*	0.25 A	0.25 A	–	–	–
ABL6TS10B	100 VA	0.5 A	0.5 A	GB2DB05	GV2RT04	1 A D curve *(3)*	0.3 A	0.5 A	GB2DB05	GV2RT03	0.5 A D curve
ABL6TS16B	160 VA	1 A	1 A	GB2DB06	GV2RT05	2 A D curve *(3)*	0.5 A	0.5 A	GB2DB06	GV2RT04	1 A D curve
ABL6TS25B	250 VA	1.25 A	2 A	GB2DB07	GV2RT06	2 A D curve *(3)*	0.75 A	1 A	GB2DB06	GV2RT05	1 A D curve
ABL6TS40B	400 VA	2 A	2 A	GB2DB09	GV2RT07	3 A D curve *(3)*	1.5 A	1 A	GB2DB07	GV2RT06	2 A D curve
ABL6TS63B	630 VA	3 A	4 A	GB2DB12	GV2RT08	6 A D curve *(3)*	2.5 A	2 A	GB2DB09	GV2RT07	3 A D curve
ABL6TS100B	1000 VA	5 A	6 A	GB2DB16	GV2RT10	10 A D curve *(3)*	3.5 A	4 A	GB2DB10	GV2RT08	6 A D curve
ABL6TS160B	1600 VA	8 A	8 A	GB2DB20	GV2RT14	16 A D curve *(3)*	5 A	4 A	GB2DB14	GV2RT10	10 A D curve
ABL6TS250B	2500 VA	–	12 A	GB2DB22	GV2RT16	20 A D curve *(3)*	7.5 A	8 A *(3)*	GB2DB20	GV2RT14	10 A D curve

Recommanded protection for the secondary

Protection on the secondary by fuses of thermal circuit breaker

Transformer		24 V ~ secondary			
Reference	**Power**	**gG fuse** *(1)*	**aM fuses**	**TeSys GB2** *(IEC/ CSA-c/US)*	**Acti9 IC60** *(2)*
ABL6TS02B	25 VA	1 A	1 A	GB2CD06	1 A C curve
ABL6TS04B	40 VA	1 A	1 A	GB2CD07	2 A C curve
ABL6TS06B	63 VA	2 A	2 A	GB2CD08	3 A C curve
ABL6TS10B	100 VA	4 A	4 A	GB2CD09	4 A C curve
ABL6TS16B	160 VA	6 A	6 A	GB2CD12	6 A C curve
ABL6TS25B	250 VA	10 A	10 A	GB2CD16	10 A C curve
ABL6TS40B	400 VA	16 A	16 A	GB2CD21	16 A C curve
ABL6TS63B	630 VA	25 A	25 A	–	25 A C curve
ABL6TS100B	1000 VA	40 A	40 A	–	40 A C curve
ABL6TS160B	1600 VA	63 A	63 A	–	63 A C curve
ABL6TS250B	2500 VA	100 A	100 A	–	–

(1) For operation in compliance with UL.
(2) Check your local catalogue for the exact reference. For installation in North America, please select a UL489 compliant circuit breaker.
(3) Protection on the secondary is necessary.

Recommended protection for the primary

Protection on the primary by fuse or thermal magnetic circuit breaker

Transformer		230 V ~ single-phase input voltage					400 V ~ single-phase input voltage				
Reference	**Power**	**MDL fuses UL listed** *(1)*	**aM fuses**	**TeSys GB2** *(IEC/ CSA-c/ US)*	**TeSys GV2RT**	**Acti9 IC60** *(2)*	**MDL fuses UL Listed** *(1)*	**aM fuses**	**TeSys GB2** *(IEC/ CSA-c/ US)*	**TeSys GV2RT**	**Acti9 IC60** *(2)*
ABL6TS02G	25 VA	0.18 A	0.16 A	–	–	–	0.25 A	0.16 A	–	–	–
ABL6TS04G	40 VA	0.25 A	0.25 A	GB2DB05	GV2RT03	0.5 A D curve *(3)*	0.25 A	0.16 A	–	–	–
ABL6TS06G	63 VA	0.37 A	0.5 A	GB2DB06	GV2RT03	0.5 A D curve *(3)*	0.25 A	0.25 A	–	–	–
ABL6TS10G	100 VA	0.5 A	0.5 A	GB2DB06	GV2RT04	1 A D curve *(3)*	0.3 A	0.5 A	GB2DB05	GV2RT03	0.5 A D curve
ABL6TS16G	160 VA	1 A	1 A	GB2DB07	GV2RT05	1 A D curve *(3)*	0.5 A	0.5 A	GB2DB06	GV2RT04	1 A D curve
ABL6TS25G	250 VA	1.25 A	2 A	GB2DB07	GV2RT06	2 A D curve *(3)*	0.75 A	1 A	GB2DB06	GV2RT05	1 A D curve
ABL6TS40G	400 VA	2 A	2 A	GB2DB09	GV2RT07	4 A D curve *(3)*	1.5 A	2 A *(3)*	GB2DB07	GV2RT06	2 A D curve
ABL6TS63G	630 VA	3 A	4 A	GB2DB12	GV2RT08	6 A D curve *(3)*	2.5 A	4 A *(3)*	GB2DB08	GV2RT07	3 A D curve
ABL6TS100G	1000 VA	5 A	6 A	GB2DB16	GV2RT10	10 A D curve *(3)*	3.5 A	4 A	GB2DB10	GV2RT08	6 A D curve
ABL6TS160G	1600 VA	8 A	8 A	GB2DB16	GV2RT14	10 A D curve *(3)*	5 A	4 A	GB2DB12	GV2RT10	6 A D curve
ABL6TS250G	2500 VA	–	25 A *(3)*	–	–	–	–	10 A *(3)*	GB2DB22	GV2RT16 *(3)*	–

Recommanded protection for the secondary

Protection on the secondary by fuses of thermal circuit breaker

Transformer		115 V ~ secondary			
Reference	**Power**	**gG fuse** *(1)*	**aM fuses**	**TeSys GB2** *(IEC/ CSA-c/US)*	**Acti9 IC60** *(2)*
ABL6TS02G	25 VA	–	0.25 A	–	–
ABL6TS04G	40 VA	0.5 A	0.5 A	–	–
ABL6TS06G	63 VA	0.5 A	0.5 A	GB2CD05	0.5 A C curve
ABL6TS10G	100 VA	1 A	1 A	GB2CD06	1 A C curve
ABL6TS16G	160 VA	1 A	1 A	GB2CD07	2 A C curve
ABL6TS25G	250 VA	2 A	2 A	GB2CD07	2 A C curve
ABL6TS40G	400 VA	4 A	4 A	GB2CD09	4 A C curve
ABL6TS63G	630 VA	6 A	6 A	GB2CD12	6 A C curve
ABL6TS100G	1000 VA	8 A	8 A	GB2CD16	10 A C curve
ABL6TS160G	1600 VA	12 A	12 A	GB2CD21	16 A C curve
ABL6TS250G	2500 VA	20 A	20 A	GB2CD22	20 A C curve

Recommended protection for the primary

Protection on the primary by fuse or thermal magnetic circuit breaker

Transformer		230 V ~ single-phase input voltage					400 V ~ single-phase input voltage				
Reference	**Power**	**MDL fuses UL listed** *(1)*	**aM fuses**	**TeSys GB2** *(IEC/ CSA-c/ US)*	**TeSys GV2RT**	**Acti9 IC60** *(2)*	**MDL fuses UL Listed** *(1)*	**aM fuses**	**TeSys GB2** *(IEC/ CSA-c/ US)*	**TeSys GV2RT**	**Acti9 IC60** *(2)*
ABL6TS02U	25 VA	0.18 A	0.16 A	–	–	–	0.25 A	0.16 A	–	–	–
ABL6TS04U	40 VA	0.25 A	0.25 A	GB2DB05	GV2RT03	0.5 A D curve *(3)*	0.25 A	0.16 A	–	–	–
ABL6TS06U	63 VA	0.37 A	0.5 A	GB2DB05	GV2RT03	0.5 A D curve *(3)*	0.25 A	0.25 A	–	–	–
ABL6TS10U	100 VA	0.5 A	0.5 A	GB2DB05	GV2RT04	1 A D curve *(3)*	0.3 A	0.5 A	GB2DB05	GV2RT03	0.5 A D curve
ABL6TS16U	160 VA	1 A	1 A	GB2DB06	GV2RT05	2 A D curve *(3)*	0.5 A	0.5 A	GB2DB06	GV2RT04	1 A D curve
ABL6TS25U	250 VA	1.25 A	2 A	GB2DB07	GV2RT06	2 A D curve *(3)*	0.75 A	1 A	GB2DB06	GV2RT05	1 A D curve
ABL6TS40U	400 VA	2 A	2 A	GB2DB09	GV2RT07	3 A D curve *(3)*	1.5 A	2 A *(3)*	GB2DB07	GV2RT06	2 A D curve
ABL6TS63U	630 VA	3 A	4 A	GB2DB14	GV2RT10 *(3)*	10 A D curve *(3)*	2.5 A	4 A *(3)*	GB2DB10	GV2RT08 *(3)*	4 A D curve
ABL6TS100U	1000 VA	5 A	6 A	GB2DB20	GV2RT14 *(3)*	10 A D curve *(3)*	5 A *(3)*	4 A	GB2DB12	GV2RT10 *(3)*	6 A D curve
ABL6TS160U	1600 VA	8 A	8 A	GB2DB20	GV2RT14	16 A D curve *(3)*	5 A *(3)*	4 A	GB2DB14	GV2RT10	6 A D curve
ABL6TS250U	2500 VA	–	16 A *(3)*	–	–	–	–	10 A *(3)*	GB2DB22	GV2RT16 *(3)*	16 A D curve

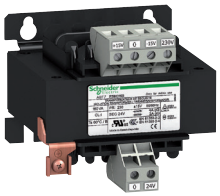
Recommanded protection for the secondary

Protection on the secondary by fuses of thermal circuit breaker

Transformer		230 V ~ secondary			
Reference	**Power**	**gG fuse** *(1)*	**aM fuses**	**TeSys GB2** *(IEC/ CSA-c/US)*	**Acti9 IC60** *(2)*
ABL6TS02U	25 VA	–	0.16 A	–	–
ABL6TS04U	40 VA	–	0.16 A	–	–
ABL6TS06U	63 VA	–	0.25 A	–	–
ABL6TS10U	100 VA	0.5 A	0.5 A	GB2CD05	0.5 A C curve
ABL6TS16U	160 VA	0.5 A	0.5 A	GB2CD06	1 A C curve
ABL6TS25U	250 VA	1 A	1 A	GB2CD06	1 A C curve
ABL6TS40U	400 VA	2 A	2 A	GB2CD07	2 A C curve
ABL6TS63U	630 VA	2 A	2 A	GB2CD08	3 A C curve
ABL6TS100U	1000 VA	4 A	4 A	GB2CD09	4 A C curve
ABL6TS160U	1600 VA	6 A	6 A	GB2CD14	6 A C curve
ABL6TS250U	2500 VA	10 A	10 A	GB2CD16	10 A C curve

(1) For operation in compliance with UL.
(2) Check your local catalogue for the exact reference. For installation in North America, please select a UL489 compliant circuit breaker.
(3) Protection on the secondary is necessary.

Transformers
Phaseo ABT7, ABL6



ABT7ESM0●●B

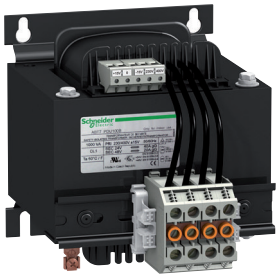
ABL6TS●●●

Transformers with phase-to-neutral (N-L1) or phase-to-phase (L1-L2) connection

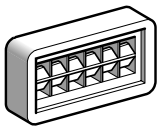
Input voltage	Secondary		Nominal power	Reference	Weight kg/*lb*
	Type	Voltage			
Transformers 230 V, Single winding					
230 V ± 15 V single-phase, 50/60 Hz	Single winding	24 V	40 VA	**ABT7ESM004B**	1.020/*2.249*
			63 VA	**ABT7ESM006B**	1.140/*2.513*
			100 VA	**ABT7ESM010B**	1.900/*4.189*
			160 VA	**ABT7ESM016B**	2.720/*5.997*
			250 VA	**ABT7ESM025B**	3.540/*7.804*
			320 VA	**ABT7ESM032B**	4.080/*8.995*
			400 VA	**ABT7ESM040B**	5.100/*11.244*
Transformers 230/400 V, Single winding					
230/400 V ± 15 V single-phase 50/60 Hz	Single winding	12 V	25 VA	**ABL6TS02J**	0.700/*1.543*
			40 VA	**ABL6TS04J**	1.200/*2.646*
			63 VA	**ABL6TS06J**	1.600/*3.527*
			100 VA	**ABL6TS10J**	2.100/*4.630*
			160 VA	**ABL6TS16J**	3.200/*7.055*
			250 VA	**ABL6TS25J**	4.400/*9.700*
		24 V	25 VA	**ABL6TS02B**	0.700/*1.543*
			40 VA	**ABL6TS04B**	1.200/*2.646*
			63 VA	**ABL6TS06B**	1.600/*3.527*
			100 VA	**ABL6TS10B**	2.100/*4.630*
			160 VA	**ABL6TS16B**	3.200/*7.055*
			250 VA	**ABL6TS25B**	4.400/*9.700*
			400 VA	**ABL6TS40B**	6.500/*14.330*
			630 VA	**ABL6TS63B**	9.800/*21.605*
			1000 VA	**ABL6TS100B**	14.300/*31.526*
			1600 VA	**ABL6TS160B**	19.400/*42.770*
			2500 VA	**ABL6TS250B**	27.400/*60.407*
		115 V	25 VA	**ABL6TS02G**	0.700/*1.543*
			40 VA	**ABL6TS04G**	1.200/*2.646*
			63 VA	**ABL6TS06G**	1.600/*3.527*
			100 VA	**ABL6TS10G**	2.100/*4.630*
			160 VA	**ABL6TS16G**	3.200/*7.055*
			250 VA	**ABL6TS25G**	4.400/*9.700*
			400 VA	**ABL6TS40G**	6.500/*14.330*
			630 VA	**ABL6TS63G**	9.800/*21.605*
			1000 VA	**ABL6TS100G**	14.300/*31.526*
			1600 VA	**ABL6TS160G**	19.400/*42.770*
			2500 VA	**ABL6TS250G**	27.400/*60.407*
		230 V	25 VA	**ABL6TS02U**	0.700/*1.543*
			40 VA	**ABL6TS04U**	1.200/*2.646*
			63 VA	**ABL6TS06U**	1.600/*3.527*
			100 VA	**ABL6TS10U**	2.100/*4.630*
			160 VA	**ABL6TS16U**	3.200/*7.055*
			250 VA	**ABL6TS25U**	4.400/*9.700*
			400 VA	**ABL6TS40U**	6.500/*14.330*
			630 VA	**ABL6TS63U**	9.800/*21.605*
			1000 VA	**ABL6TS100U**	14.300/*31.526*
			1600 VA	**ABL6TS160U**	19.400/*42.770*
			2500 VA	**ABL6TS250U**	27.400/*60.407*

Transformers
Phaseo ABT7, ABL6

ABT7PDU002●…032●



ABT7PDU040●…250●



AR1SB3

Transformers with phase-to-neutral (N-L1) or phase-to-phase (L1-L2) connection (continued)

Input voltage	Secondary Type	Secondary Voltage	Nominal power	Reference	Weight kg/*lb*
Transformers 230/400 V, Double winding					
With cover, connected by internal jumpers with LED indicators					
230/400 V ± 15 V single-phase 50/60 Hz	Double winding	2 x 24 V	40 VA	**ABT7PDU004B**	1.400/*3.086*
			63 VA	**ABT7PDU006B**	1.940/*4.277*
			100 VA	**ABT7PDU010B**	2.860/*6.305*
			160 VA	**ABT7PDU016B**	4.400/*9.700*
			250 VA	**ABT7PDU025B**	5.600/*12.346*
			320 VA	**ABT7PDU032B**	7.100/*15.653*
		2 x 115 V	25 VA	**ABT7PDU002G**	1.100/*2.425*
			40 VA	**ABT7PDU004G**	1.400/*3.086*
			63 VA	**ABT7PDU006G**	1.940/*4.277*
			100 VA	**ABT7PDU010G**	2.860/*6.305*
			160 VA	**ABT7PDU016G**	4.400/*9.700*
			250 VA	**ABT7PDU025G**	5.600/*12.346*
			320 VA	**ABT7PDU032G**	7.100/*15.653*
Without cover, connected by external jumpers					
230/400 V ± 15 V single-phase 50/60 Hz	Double winding	2 x 24 V	400 VA	**ABT7PDU040B**	7.400/*16.314*
			630 VA	**ABT7PDU063B**	7.900/*17.418*
			1000 VA	**ABT7PDU100B**	14.000/*30.865*
			1600 VA	**ABT7PDU160B**	20.000/*44.092*
			2500 VA	**ABT7PDU250B**	28.000/*61.729*
		2 x 115 V	400 VA	**ABT7PDU040G**	7.400/*16.314*
			630 VA	**ABT7PDU063G**	7.900/*17.418*
			1000 VA	**ABT7PDU100G**	14.000/*30.865*
			1600 VA	**ABT7PDU160G**	20.000/*44.092*
			2500 VA	**ABT7PDU250G**	28.000/*61.729*

Separate parts for ABT7 and ABL6

Designation	Use on transformers	Order in multiples of	Unit reference	Weight kg/*lb*
Plates for mounting on ⊔ rail	ABL6TS02●	5	**ABL6AM00**	0.045/*0.099*
	ABT7ESM004B/006B ABL6TS04●	5	**ABL6AM01**	0.050/*0.110*
	ABL6TS06●	5	**ABL6AM02**	0.055/*0.121*
	ABT7ESM010B ABL6TS10●	5	**ABL6AM03**	0.065/*0.143*
	ABT7ESM016B	5	**ABL6AM04**	0.085/*0.187*
Self-adhesive marker tag holder 20 x 10 mm	–	50	**AR1SB3**	0.001/*0.002*

Replacement parts for ABT7 and ABL6

Designation	Use on	Reference	Weight kg/*lb*
Pack of 10 jumpers	ABT7PDU range double-winding transformer	**ABT7JMP01**	0.010/*0.022*

Transformers
Phaseo ABT7, ABL6
Product reference index

www.schneider-electric.com/Machine control solutions

Schneider Electric Industries SAS

Head Office
35, rue Joseph Monier
F-92500 Rueil-Malmaison
France

Design: Schneider Electric
Photos: Schneider Electric

January 2019 - V2.0

DIA3ED2170403EN