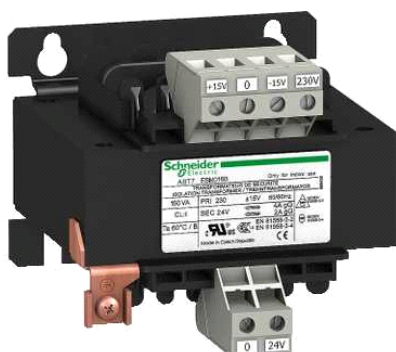


Dane produktu

Charakterystyki

ABT7ESM025B

Transformator napięcia 24V 250VA



Główne

Gama produktów	Phaseo Economic
Typ produktu lub komponentu	Transformator separacyjny dla celów bezpieczeństwa
Moc znamionowa w VA	250 VA
Napięcie wejściowe	230 V AC faza do fazy, zacisk(i): L1-L2 230 V AC jednofazowy, zacisk(i): N-L1
Napięcie wyjściowe	24 V AC
Uzwojenie wtórne	Pojedynczy
Pokrywa ochronna	Bez
Temperatura otoczenia dla pracy urządzenia	-20...40 °C

Uzupełnienie

Ograniczenia napięcia wejściowego	207...253 V
Granice częstotliwości sieciowej	47...63 Hz
Tolerancja napięcia wejściowego	+/- 15 V
Efektywność	89 %
Straty mocy w watach (W)	30.9 W
Zmiana napięcia przy obciążeniu znamionowym	5.04 % w 230 V
Podtrzymane przepięcie na wyjściu	6.3 % (brak obciążenia, stan gorący)
Spadek napięcia przy obciążeniu znamionowym	6.25 %
Brak strat obciążeniowych	12.3 W
Napięcie zwarcia	8.30 %
Rodzaj zabezpieczenia wyjścia	Przeciw przeciążeniu, technologia zabezpieczeniowa: zewnętrzny Przeciw przepięciu, technologia zabezpieczeniowa: zewnętrzny Przeciw zwarciom, technologia zabezpieczeniowa: zewnętrzny
Przyląca - zaciski	Zaciski typu śrubowego dla uziemienie wejścia, zdolność łączeniowa: 1 x 2.5...1 x 4 mm ² AWG 14...AWG 11 Zaciski typu śrubowego dla połączenie wejścia, zdolność łączeniowa: 4 x 2.5...4 x 4 mm ² AWG 14...AWG 11 Zaciski typu śrubowego dla połączenie wyjściowe, zdolność łączeniowa: 2 x 2.5...2 x 4 mm ² AWG 14...AWG 11
Oznakowanie	CE
Sposób mocowania	Przez 4 wkręty, śruba(y) Ø = 5 mm on panel poziomy z obciążeniem dopuszczalnym zmniejszonym do 90 % Przez 4 wkręty, śruba(y) Ø = 5 mm on panel pionowy, pozycja pracy: poziomy Przez 4 wkręty, śruba(y) Ø = 5 mm on panel pionowy, pozycja pracy: poziomy Przez 4 wkręty, śruba(y) Ø = 5 mm on panel pionowy, pozycja pracy: pionowy
Wysokość pracy (w metrach nad poziomem morza)	3000 m
Klasa ochronności	Klasa B
Masa produktu	3.54 kg

Środowisko

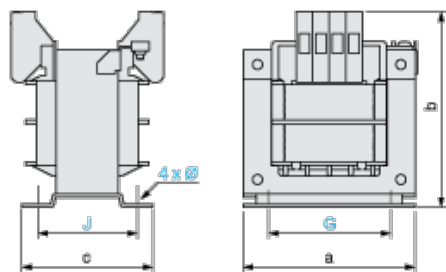
certyfikaty produktu	EAC
stopień ochrony IP	IP20
odporność na czynniki środowiskowe	EMC zgodnie z EN 62041 Bezpieczeństwo zgodnie z EN 61558-1 Bezpieczeństwo zgodnie z EN 61558-2-6
Temperatura otoczenia dla przechowywania	-40...80 °C
wilgotność względna	0...95 % podczas działania

kategoria przepięć	Klasa I zgodnie z VDE 0106-1
siła dielektryka	3200 V pomiędzy wejściem a uziemieniem 3200 V pomiędzy wyjściem a uziemieniem 5100 V pomiędzy wejściem a wyjściem

Contractual warranty

Okres	18 miesięcy
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Dimensions



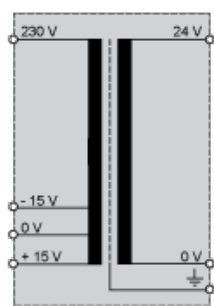
Dimensions in mm

a	b	c	G	J	Ø
98	106	105	84	86	5.8

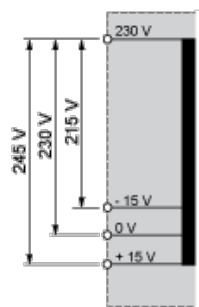
Dimensions in in.

a	b	c	G	J	Ø
3.86	4.17	4.13	3.31	3.39	0.23

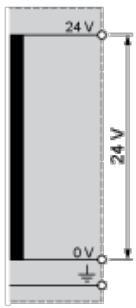
Internal Scheme



Primary Voltage Wiring



Secondary Voltage Wiring



Transformers

Phaseo ABT7, ABL6

230 V to 400 V - 25 VA to 2500 VA

Catalog

March 2017



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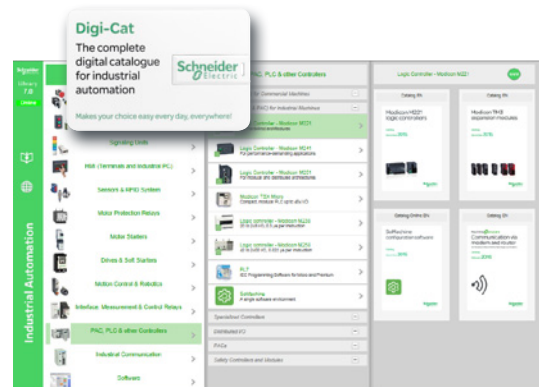
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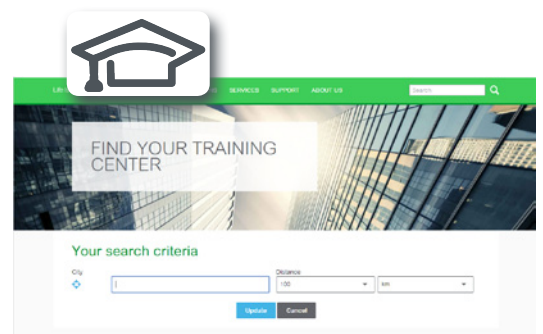
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General contents

Transformers

Phaseo ABT7, ABL6

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 - Separate parts for ABT7 and ABL6 transformers page 11
 - Replacement parts for ABT7 and ABL6 transformers page 11
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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



Tension d'entrée	
Connection to world-wide line supplies	United States - 120 V (in phase-to-neutral) - 240 V (in phase-to-phase) Europe - 230 V (in phase-to-neutral) - 400 V (in phase-to-phase)

230 V ~, ± 15 V	
–	
–	
Single-phase (N-L1) connection	

230 V ~ and 400 V ~, ± 15 V	
–	
2-phase (L1-L2) connection	
Single-phase (N-L1) connection	
2-phase (L1-L2) connection	

230 V ~ and 400 V ~, ± 15 V	
–	
2-phase (L1-L2) connection	
Single-phase (N-L1) connection	
2-phase (L1-L2) connection	

230 V ~ and 400 V ~, ± 15 V	
–	
2-phase (L1-L2) connection	
Single-phase (N-L1) connection	
2-phase (L1-L2) connection	

Applications	
Secondary winding	
Signalling	
Conformity to standards	
Certifications	

SELV transformer (Safety Extra Low Voltage)	
Single winding	
–	
CEI 61558-2-6, EN 61558-2-6, EN 61558-1, EN 62041	
C _E marking, EAC	

SELV transformer (Safety Extra Low Voltage)	
Single winding	
–	
CEI 61558-2-6, EN 61558-2-6, UL 506, EN 61558-1, EN 61558-2-6, EN 62041	
C _{UL} us C _E marking, UL (506), EAC	

Isolation transformer	
Single winding	
–	
CEI 61558-2-4, EN 61558-2-4, UL 506, EN 61558-1, EN 61558-2-6, EN 62041	
C _{UL} us C _E marking, UL (506), EAC	

SELV transformer (Safety Extra Low Voltage)	Isolation transformer
Double winding	
Presence of input voltage by LED (up to 320 VA)	
CEI 61558-2-6, EN 61558-2-6, UL 506, EN 61558-1, EN 61558-2-6, EN 62041	CEI 61558-2-4, EN 61558-2-4, UL 506, EN 61558-1, EN 61558-2-6, EN 62041
C _{UL} us C _E marking, UL (506), EAC	

Output voltage		
Power supply type	Nominal power	25 VA
		40 VA
		63 VA
		100 VA
		160 VA
		250 VA
		320 VA
		400 VA
		630 VA
		1 000 VA
		1 600 VA
		2 500 VA

24 V ~	
ABT7ESM004B	
ABT7ESM006B	
ABT7ESM010B	
ABT7ESM016B	
ABT7ESM025B	
ABT7ESM032B	
ABT7ESM040B	

12 V ~	24 V ~
ABL6TS02J	ABL6TS02B
ABL6TS04J	ABL6TS04B
ABL6TS06J	ABL6TS06B
ABL6TS10J	ABL6TS10B
ABL6TS16J	ABL6TS16B
ABL6TS25J	ABL6TS25B
	ABL6TS40B
	ABL6TS63B
	ABL6TS100B
	ABL6TS160B
	ABL6TS250B

115 V ~	230 V ~
ABL6TS02G	ABL6TS02U
ABL6TS04G	ABL6TS04U
ABL6TS06G	ABL6TS06U
ABL6TS10G	ABL6TS10U
ABL6TS16G	ABL6TS16U
ABL6TS25G	ABL6TS25U
ABL6TS40G	ABL6TS40U
ABL6TS63G	ABL6TS63U
ABL6TS100G	ABL6TS100U
ABL6TS160G	ABL6TS160U
ABL6TS250G	ABL6TS250U

2 x 24 V ~	2 x 115 V ~
	ABT7PDU002G
ABT7PDU004B	ABT7PDU004G
ABT7PDU006B	ABT7PDU006G
ABT7PDU010B	ABT7PDU010G
ABT7PDU016B	ABT7PDU016G
ABT7PDU025B	ABT7PDU025G
ABT7PDU032B	ABT7PDU032G
ABT7PDU040B	ABT7PDU040G
ABT7PDU063B	ABT7PDU063G
ABT7PDU100B	ABT7PDU100G
ABT7PDU160B	ABT7PDU160G
ABT7PDU250B	ABT7PDU250G



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 $\perp$ 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 $\perp$ 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

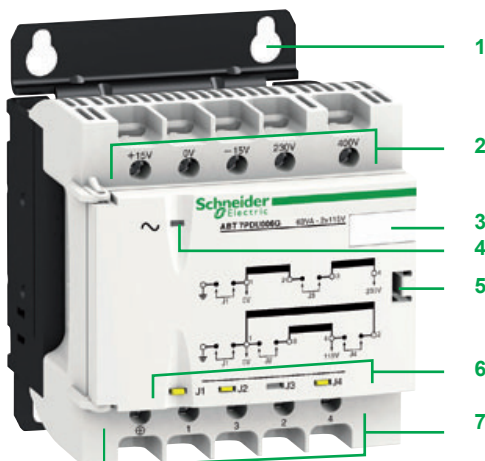
The transformers can be protected against short-circuits by means of fuses or thermal-magnetic circuit-breakers mounted on the secondary.

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

- 1 Mounted using 4 screws or, depending on the model in the ABT7PDU range, by clipping on a 35 mm $\perp$ 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



ABT7PDU002...7PDU032

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.

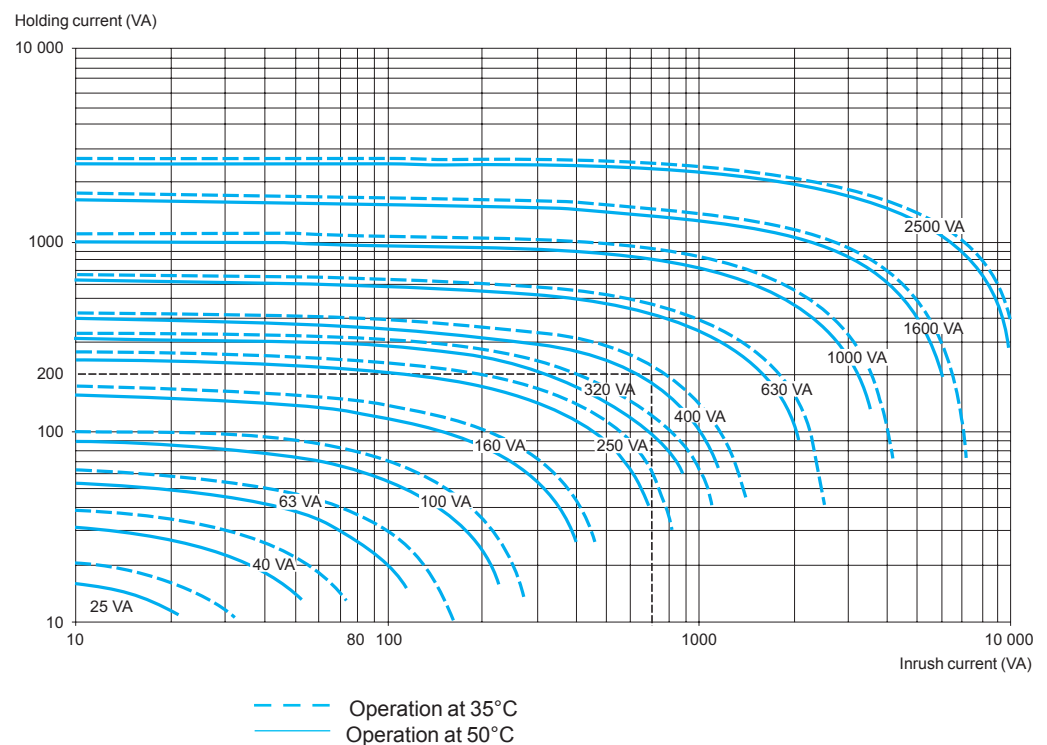
Contactor inrush peaks can reach 10 to 20 times the required holding current. This leads to the transformer being oversized in relation to the continuous power it has to supply. The transformer must be sized so that the voltage drop at its terminals, caused by the inrush, remains within the permissible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

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.

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)

Recommended 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

Recommended 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

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)
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)	–

Recommended 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

Recommended 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.



ABT7ESM000B



ABL6TS000

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

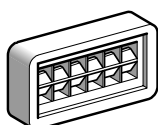
Input voltage	Secondary Type	Voltage	Nominal power	Reference	Weight kg/lb
Transformers 230 V, Single winding					
230 V ± 15 V single-phase, 50/60 Hz	Single winding	24 V	40 VA	ABT7ESM004B	1.020/2.249
			63 VA	ABT7ESM006B	1.140/2.513
			100 VA	ABT7ESM010B	1.900/4.189
			160 VA	ABT7ESM016B	2.720/5.997
			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
		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
			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



ABT7PDU002...032



ABT7PDU040...250



AR1SB3

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

Input voltage	Secondary Type	Voltage	Nominal power	Reference	Weight kg/lb
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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

A		ABT7PDU025B	11
ABL6AM00	11	ABT7PDU025G	11
ABL6AM01	11	ABT7PDU032B	11
ABL6AM02	11	ABT7PDU032G	11
ABL6AM03	11	ABT7PDU040B	11
ABL6AM04	11	ABT7PDU040G	11
ABL6TS02B	10	ABT7PDU063B	11
ABL6TS02G	10	ABT7PDU063G	11
ABL6TS02J	10	ABT7PDU100B	11
ABL6TS02U	10	ABT7PDU100G	11
ABL6TS04B	10	ABT7PDU160B	11
ABL6TS04G	10	ABT7PDU160G	11
ABL6TS04J	10	ABT7PDU250B	11
ABL6TS04U	10	ABT7PDU250G	11
ABL6TS06B	10	AR1SB3	11
ABL6TS06G	10		
ABL6TS06J	10		
ABL6TS06U	10		
ABL6TS100B	10		
ABL6TS100G	10		
ABL6TS100U	10		
ABL6TS10B	10		
ABL6TS10G	10		
ABL6TS10J	10		
ABL6TS10U	10		
ABL6TS160B	10		
ABL6TS160G	10		
ABL6TS160U	10		
ABL6TS16B	10		
ABL6TS16G	10		
ABL6TS16J	10		
ABL6TS16U	10		
ABL6TS250B	10		
ABL6TS250G	10		
ABL6TS250U	10		
ABL6TS25B	10		
ABL6TS25G	10		
ABL6TS25J	10		
ABL6TS25U	10		
ABL6TS40B	10		
ABL6TS40G	10		
ABL6TS40U	10		
ABL6TS63B	10		
ABL6TS63G	10		
ABL6TS63U	10		
ABT7ESM004B	10		
ABT7ESM006B	10		
ABT7ESM010B	10		
ABT7ESM016B	10		
ABT7ESM025B	10		
ABT7ESM032B	10		
ABT7ESM040B	10		
ABT7JMP01	11		
ABT7PDU002G	11		
ABT7PDU004B	11		
ABT7PDU004G	11		
ABT7PDU006B	11		
ABT7PDU006G	11		
ABT7PDU010B	11		
ABT7PDU010G	11		
ABT7PDU016B	11		
ABT7PDU016G	11		

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