



ESTAdry / ESTAprop LVAC CAPACITORS

Power Factor Correction (PFC) Capacitors
(For Asian markets only)

CAPACITORS

Vishay ESTA

German Technology Product

PRODUCT OVERVIEW





ESTAdry/ESTAprop ACMKP CAPACITORS

ACMKP Series - Low-Voltage Power Factor Correction Capacitors

Application

Vishay ESTA capacitors are suitable for use in standard duty, heavy duty and ultra heavy duty PFC applications. Target applications for these capacitors include:

- Automatic PFC capacitor panels
- Wind turbines
- Individual fixed compensation (e.g. motors, transformers)
- Group fixed compensation
- Tuned and detuned harmonic filters
- AC filters (e.g. UPS, frequency drives, converters)

Technical Data	
Standards	IEC 60831-1+2, EN 60831-1+2, IS 13340
Approvals	UL, ULc , BIS
Over-voltages (in accordance with the above standards)	Ucn + 10 % (up to 8 hours daily), Ucn + 15 % (up to 30 minutes daily) Ucn + 20 % (up to 5 minutes), Ucn + 30 % (up to 1 minute)
Tolerances on capacitance	± 5 %
Routine test voltage, terminal/terminal	2.15 x Ucn, AC, 2 seconds
Losses	< 0.25.....< 0.45 W/kVAr
Degree of protection	IP00 (terminal cover for higher protection class, for instance IP20, IP54 upon request), indoor mounting
Permitted casing temperature	Max. 65 °C (measured on top of the can)
Cooling	Naturally air-cooled
Permissible relative humidity	Maximum 95 %
Maximum allowed altitude	2000 m above sea level
Mounting position	Vertical and horizontal
Mounting and grounding	Threaded M 12 stud at the bottom of the container, max. torque 10 Nm
Safety features	ALL-PHASE over pressure tear-off fuse (irreversible current interruption), self-healing film technology
Casing	Aluminum
Dielectric	Polypropylene film, self-healing
Filling agent	Dry (gas filled) and oil filled

ESTAdry/ESTAprop ACMKP CAPACITORS

ACMKP Series - Low-Voltage Power Factor Correction Capacitors



Standard Duty	
Over-current	$1.5 \times I_N$
Inrush current	$200 \times I_N$
Life expectancy	$\geq 115\ 000$ operating hours
Routine test voltage, terminal/casing	3000 VAC, 10 seconds
Ambient temperature category	- 25/D

Heavy Duty	
Over-current	$1.8 \times I_N$
Inrush current	$250 \times I_N$
Life expectancy	$\geq 130\ 000$ operating hours
Routine test voltage, terminal/casing	4800 VAC, 2 seconds
Ambient temperature category	- 25/D

Ultra Heavy Duty	
Over-current	$2.5 \times I_N$
Inrush current	$300 \times I_N$
Life expectancy	$\geq 150\ 000$ operating hours
Routine test voltage, terminal/casing	4800 VAC, 2 seconds
Ambient temperature category	- 25/70 °C



ESTAdry/ESTAprop ACMKP CAPACITORS

ACMKP Series - Low-Voltage Power Factor Correction Capacitors

Standard Duty Capacitors (Dry Type, Gas Filled)

400 V, 50 Hz, 3-Phase, Delta Connection; IP20								
Type	Article No.	Output kVAr (400 V)	Capacitance (μF)	Current Amp (400 V)	Dia (mm)	Height (mm)	Weight (kg)	Drawing
ACMKPSD400.3.02,50	5348-50701-xx	2.5	3 x 16.5	3.6	64	190	0.6	1
ACMKPSD400.3.05,00	5348-50702-xx	5	3 x 33.2	7.2	64	190	0.6	1
ACMKPSD400.3.10,00	5348-50901-xx	10	3 x 66.3	14.4	84.4	190	0.70	2
ACMKPSD400.3.12,50	5348-50902-xx	12.5	3 x 82.9	18.0	84.4	190	1.40	2
ACMKPSD400.3.15,00	5348-50903-xx	15	3 x 99.5	21.6	84.4	190	1.40	2
ACMKPSD400.3.16,70	5348-50904-xx	16.7	3 x 110.7	24.1	84.4	265	1.40	2
ACMKPSD400.3.20,00	5348-50905-xx	20	3 x 132.6	28.8	84.4	265	1.40	2
ACMKPSD400.3.25,00	5348-50906-xx	25	3 x 165.8	36.1	84.4	265	1.50	2

440 V/415 V, 50 Hz, 3-Phase, Delta Connection; IP20									
Type	Article No.	Output kVAr (440 V)	Output kVAr (415 V)	Capacitance (μF)	Current Amp (440 V/ 415 V)	Dia (mm)	Height (mm)	Weight (kg)	Drawing
ACMKPSD440.3.01,00	5348-50703-xx	1	0.89	3 x 5.5	1.2/1.3	64	130	0.4	1
ACMKPSD440.3.02,00	5348-50704-xx	2	1.8	3 x 11.0	2.6/2.4	64	130	0.4	1
ACMKPSD440.3.03,00	5348-50705-xx	3	2.7	3 x 6.5	3.9/3.7	64	130	0.4	1
ACMKPSD440.3.04,00	5348-50706-xx	4	3.6	3 x 21.9	5.2/4.9	64	160	0.5	1
ACMKPSD440.3.05,00	5348-50707-xx	5	4.4	3 x 27.4	6.6/6.1	64	190	0.6	1
ACMKPSD440.3.06,00	5348-50708-xx	6	5.3	3 x 32.9	7.9/7.4	64	190	0.6	1
ACMKPSD440.3.06,70	5348-50709-xx	6.7	6	3 x 36.7	8.8/8.3	64	190	0.6	1
ACMKPSD440.3.07,50	5348-50710-xx	7.5	6.7	3 x 41.1	9.8/9.3	64	190	0.6	1
ACMKPSD440.3.08,33	5348-50711-xx	8.33	7.4	3 x 45.7	10.9/10.3	64	190	0.6	1
ACMKPSD440.3.09,00	5348-50712-xx	9	8	3 x 49.3	11.8/11.1	64	190	0.6	1
ACMKPSD440.3.10,00	5348-50713-xx	10	8.9	3 x 54.8	13.1/12.4	64	265	0.8	1
ACMKPSD440.3.11,20	5348-50714-xx	11.2	10	3 x 61.4	14.7/13.9	64	265	0.8	1
ACMKPSD440.3.12,50	5348-50907-xx	12.5	11.1	3 x 68.5	16.4/15.4	84.4	190	1.1	2
ACMKPSD440.3.14,00	5348-50908-xx	14	12.5	3 x 76.7	18.4/17.4	84.4	190	1.1	2
ACMKPSD440.3.15,00	5348-50909-xx	15	13.3	3 x 82.2	19.7/18.5	84.4	190	1.1	2
ACMKPSD440.3.16,90	5348-50910-xx	16.9	15	3 x 92.6	22.2/20.9	84.4	190	1.2	2
ACMKPSD440.3.18,80	5348-50911-xx	18.8	16.7	3 x 103	24.7/23.2	84.4	265	1.3	2
ACMKPSD440.3.20,00	5348-50912-xx	20	17.8	3 x 109.6	26.2/24.8	84.4	265	1.4	2
ACMKPSD440.3.22,50	5348-50913-xx	22.5	20	3 x 123.3	29.5/27.8	84.4	265	1.4	2
ACMKPSD440.3.25,00	5348-50914-xx	25	22.2	3 x 137	32.8/30.9	84.4	265	1.5	2
ACMKPSD440.3.28,10	5348-50915-xx	28.1	25	3 x 154	36.9/34.7	84.4	265	1.5	2
ACMKPSD440.3.30,00	5348-50916-xx	30	26.7	3 X 164.4	39.4/37.1	84.4	340	1.8	2

ESTAdry/ESTAprop ACMKP CAPACITORS

ACMKP Series - Low-Voltage Power Factor Correction Capacitors



Heavy Duty Capacitors (Dry Type, Gas Filled)

440 V/415 V, 50 Hz, 3-Phase, Delta Connection; IP20									
Type	Article No.	Output kVAr (440 V)	Output kVAr (415 V)	Capacitance (μF)	Current Amp (440 V/ 415 V)	Dia (mm)	Height (mm)	Weight (kg)	Drawing
ACMKPHD440.3.01,00	5348-55203-xx	1	0.89	3 x 5.5	1.2/1.3	64	130	0.4	1
ACMKPHD440.3.02,00	5348-55204-xx	2	1.8	3 x 11.0	2.6/2.4	64	130	0.4	1
ACMKPHD440.3.03,00	5348-55205-xx	3	2.7	3 x 6.5	3.9/3.7	64	130	0.4	1
ACMKPHD440.3.04,00	5348-55206-xx	4	3.6	3 x 21.9	5.2/4.9	64	160	0.5	1
ACMKPHD440.3.05,00	5348-55207-xx	5	4.4	3 x 27.4	6.6/6.1	64	190	0.6	1
ACMKPHD440.3.06,00	5348-55208-xx	6	5.3	3 x 32.9	7.9/7.4	64	190	0.6	1
ACMKPHD440.3.06,70	5348-55209-xx	6.7	6	3 x 36.7	8.8/8.3	64	190	0.6	1
ACMKPHD440.3.07.50	5348-55210-xx	7.5	6.7	3 x 41.1	9.8/9.3	64	190	0.6	1
ACMKPHD440.3.08,33	5348-55211-xx	8.33	7.4	3 x 45.7	10.9/10.3	64	190	0.6	1
ACMKPHD440.3.09,00	5348-55212-xx	9	8	3 x 49.3	11.8/11.1	64	190	0.6	1
ACMKPHD440.3.10,00	5348-55213-xx	10	8.9	3 x 54.8	13.1/12.4	64	265	0.8	1
ACMKPHD440.3.11,20	5348-55214-xx	11.2	10	3 x 61.4	14.7/13.9	64	265	0.8	1
ACMKPHD440.3.12,50	5348-55507-xx	12.5	11.1	3 x 68.5	16.4/15.4	84.4	190	1.1	2
ACMKPHD440.3.14,00	5348-55508-xx	14	12.5	3 x 76.7	18.4/17.4	84.4	190	1.1	2
ACMKPHD440.3.15,00	5348-55509-xx	15	13.3	3 x 82.2	19.7/18.5	84.4	190	1.1	2
ACMKPHD440.3.16,90	5348-55510-xx	16.9	15	3 x 92.6	22.2/20.9	84.4	190	1.2	2
ACMKPHD440.3.18,80	5348-55511-xx	18.8	16.7	3 x 103	24.7/23.2	84.4	265	1.3	2
ACMKPHD440.3.20,00	5348-55512-xx	20	17.8	3 x 109.6	26.2/24.8	84.4	265	1.4	2
ACMKPHD440.3.22,50	5348-55513-xx	22.5	20	3 x 123.3	29.5/27.8	84.4	265	1.4	2
ACMKPHD440.3.25,00	5348-55514-xx	25	22.2	3 x 137	32.8/30.9	84.4	265	1.5	2
ACMKPHD440.3.28,10	5348-55515-xx	28.1	25	3 x 154	36.9/34.7	84.4	265	1.5	2
ACMKPHD440.3.30,00	5348-55516-xx	30	26.7	3 X 164.4	39.4/37.1	84.4	340	1.8	2

525 V/480 V, 50 Hz, 3-Phase, Delta Connection; IP20									
Type	Article No	Output kVAr (525 V)	Output kVAr (480 V)	Capacitance (μF)	Current Amp (525 V/ 480 V)	Dia (mm)	Height (mm)	Weight (kg)	Drawing
ACMKPHD525.3.05,00	5348-55215-xx	5	4.2	3 x 19.2	5.5/5.0	64	190	0.6	1
ACMKPHD525.3.08,33	5348-55216-xx	8.33	7	3 x 32.1	9.2/8.4	64	190	0.6	1
ACMKPHD525.3.10,00	5348-55517-xx	10	8.33	3 x 38.5	11.0/10.1	84.4	190	0.8	2
ACMKPHD525.3.12,50	5348-55518-xx	12.5	10.4	3 x 48.1	13.7/12.6	84.4	190	1.0	2
ACMKPHD525.3.13.80	5348-55519-xx	13.8	11.5	3 x 53.1	15.2/13.8	84.4	190	1.0	2
ACMKPHD525.3.15,00	5348-55520-xx	15	12.5	3 x 57.7	16.5/15.0	84.4	190	1.2	2
ACMKPSD525.3.20,00	5348-55521-xx	20	16.7	3 x 77	22.0/20.1	84.4	265	1.2	2
ACMKPHD525.3.25,00	5348-55101-xx	25	20.9	3 x 96.2	27.5/25.1	116	190	1.5	3
ACMKPHD525.3.30,00	5348-55102-xx	30	26.7	3 x 115.4	33.0/30.0	116	230	2.0	3



ESTAdry/ESTAprop ACMKP CAPACITORS

ACMKP Series - Low-Voltage Power Factor Correction Capacitors

660 V/690 V, 50 Hz, 3-Phase, Delta Connection; IP20

Type	Article No.	Output kVAr (660 V)	Output kVAr (690 V)	Capacitance (μF)	Current Amp (660 V/ 690 V)	Dia (mm)	Height (mm)	Weight (kg)	Drawing
ACMKPHD660.3.05,00	5348-55217-xx	5	8.33	3 x 12.2	4.4/4.6	64	190	0.6	1
ACMKPHD660.3.08,33	5348-55218-xx	8.33	10.4	3 x 20.3	7.3/7.6	64	265	0.8	1
ACMKPHD660.3.10,00	5348-55522-xx	10	11.5	3 x 24.4	8.7/9.1	84.4	190	1.1	2
ACMKPHD660.3.12,50	5348-55523-xx	12.5	13.7	3 X 30.4	10.9/11.5	84.4	265	1.2	2
ACMKPHD660.3.15,00	5348-55524-xx	15	16.4	3 x 36.5	13.1/13.7	84.4	265	1.4	2
ACMKPHD660.3.16,70	5348-55525-xx	16.7	18.3	3 x 40.7	14.6/15.3	84.4	265	1.5	2
ACMKPHD660.3.20,00	5348-55526-xx	20	21.9	3 x 48.7	17.5/18.3	84.4	340	1.7	2
ACMKPHD660.3.22,90	5348-55527-xx	22.9	25	3 X 55.8	20.0/20.9	84.4	340	1.9	2

Ultra Heavy Duty Capacitors (Oil Filled)

440 V/415 V, 50 Hz, 3-Phase, Delta Connection; IP20

Type	Article No.	Output kVAr (440 V)	Output kVAr (415 V)	Capacitance (μF)	Current Amp (440 V/ 415 V)	Dia (mm)	Height (mm)	Weight (kg)	Drawing
ACMKPUD440.3.05,00	5348-55604-xx	5	4.4	3 x 27.4	6.6/6.1	84.4	190	1.3	2
ACMKPUD440.3.07,50	5348-55605-xx	7.5	6.7	3 x 41.1	9.8/9.3	84.4	190	1.3	2
ACMKPUD440.3.08,33	5348-55600-xx	8.33	7.5	3 x 45.7	10.9/10.3	84.4	190	1.3	2
ACMKPUD440.3.10,00	5348-55601-xx	10	8.9	3 x 54.8	13.1/12.4	84.4	265	1.8	2
ACMKPUD440.3.12,50	5348-55602-xx	12.5	11.1	3 x 68.5	16.4/15.4	84.4	265	1.8	2
ACMKPUD440.3.14,00	5348-55702-xx	14	12.5	3 x 76.7	18.4/17.4	116	190	2.1	3
ACMKPUD440.3.15,00	5348-55703-xx	15	13.3	3 x 82.2	19.7/18.5	116	190	2.2	3
ACMKPUD440.3.16,90*	5348-55704-xx	16.9	15	3 x 92.6	22.2/20.9	116	190	2.3	3
ACMKPUD440.3.20,00*	5348-55700-xx	20	17.8	3 x 109.6	26.2/24.8	116	265	2.9	3
ACMKPUD440.3.25,00*	5348-55701-xx	25	22.2	3 x 137	32.8/30.9	116	340	3.6	3

ESTAdry/ESTAprop ACMKP CAPACITORS

ACMKP Series - Low-Voltage Power Factor Correction Capacitors



525 V/480 V, 50 Hz, 3-Phase, Delta Connection; IP20

Type	Article No.	Output kVAr (525 V)	Output kVAr (480 V)	Capacitance (μF)	Current Amp (525 V/ 480 V)	Dia (mm)	Height (mm)	Weight (kg)	Drawing
ACMKPUD525.3.05,00	5348-55606-xx	5	4.2	3 x 19.2	5.5/5.0	84.4	190	1.3	2
ACMKPUD525.3.08,33	5348-55607-xx	8.33	7	3 x 32.1	9.2/8.4	84.4	190	1.3	2
ACMKPUD525.3.10,00	5348-55608-xx	10	8.33	3 x 38.5	11.0/10.1	84.4	265	1.7	2
ACMKPUD525.3.12,50	5348-55609-xx	12.5	10.4	3 x 48.1	13.7/12.6	84.4	265	1.7	2
ACMKPUD525.3.13.80	5348-55705-xx	13.8	11.5	3 x 53.1	15.2/13.8	116	190	2.2	3
ACMKPUD525.3.15,00	5348-55706-xx	15	12.5	3 x 57.7	16.5/15.0	116	190	2.2	3
ACMKPUD525.3.20,00*	5348-55707-xx	20	16.7	3 x 77	22.0/20.1	116	265	2.9	3
ACMKPUD525.3.25,00*	5348-55708-xx	25	20.9	3 x 96.2	27.5/25.1	116	340	3.7	3

660 V/690 V, 50 Hz, 3-Phase, Delta Connection; IP20

Type	Article No.	Output kVAr (660 V)	Output kVAr (690 V)	Capacitance (μF)	Current Amp (660 V/ 690 V)	Dia (mm)	Height (mm)	Weight (kg)	Drawing
ACMKPUD660.3.05,00	5348-55610-xx	5	5.5	3 x 12.2	4.4/4.6	84.4	190	1.3	2
ACMKPUD660.3.08,33	5348-55611-xx	8.33	9.1	3 x 20.3	7.3/7.6	84.4	190	1.3	2
ACMKPUD660.3.10,00	5348-55612-xx	10	10.9	3 x 24.4	8.7/9.1	84.4	265	1.7	2
ACMKPSD525.3.12,50	5348-55613-xx	12.5	13.7	3 X 30.4	10.9/11.5	84.4	265	1.8	2
ACMKPUD660.3.15,00	5348-55709-xx	15	16.4	3 x 36.5	13.1/13.7	116	190	2.2	3
ACMKPUD660.3.16,70	5348-55710-xx	16.7	26.7	3 x 40.7	14.6/15.3	116	190	2.2	3
ACMKPUD660.3.20,00*	5348-55711-xx	20	21.9	3 x 48.7	17.5/18.3	116	265	2.9	3
ACMKPUD660.3.22,90*	5348-55712-xx	22.9	25	3 X 55.8	20.0/20.9	116	265	2.9	3

Notes:

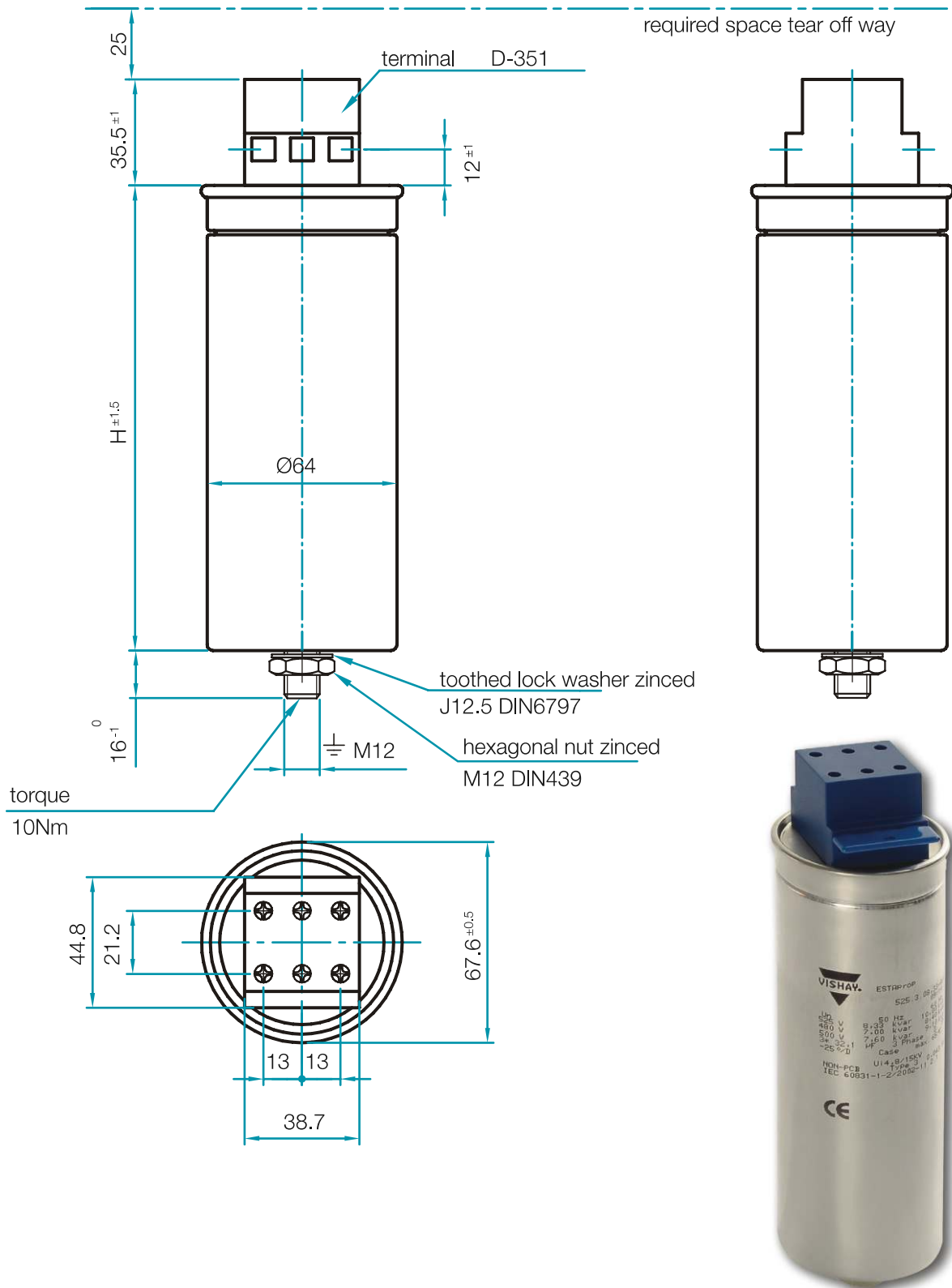
- Version no. xx may differ in limited respects, such as labelling.
- Other voltage ratings, outputs and frequencies available upon request. All ACMKP-type capacitors can be applied in 60 Hz networks. Output and current will be 20 % higher in such applications. A lower class of temperature must be taken into account.
- * Average 24 h/60 °C; average 365 d/50 °C.



ESTAdry/ESTAprop ACMKP CAPACITORS

ACMKP Series - Low-Voltage Power Factor Correction Capacitors

Drawing 1

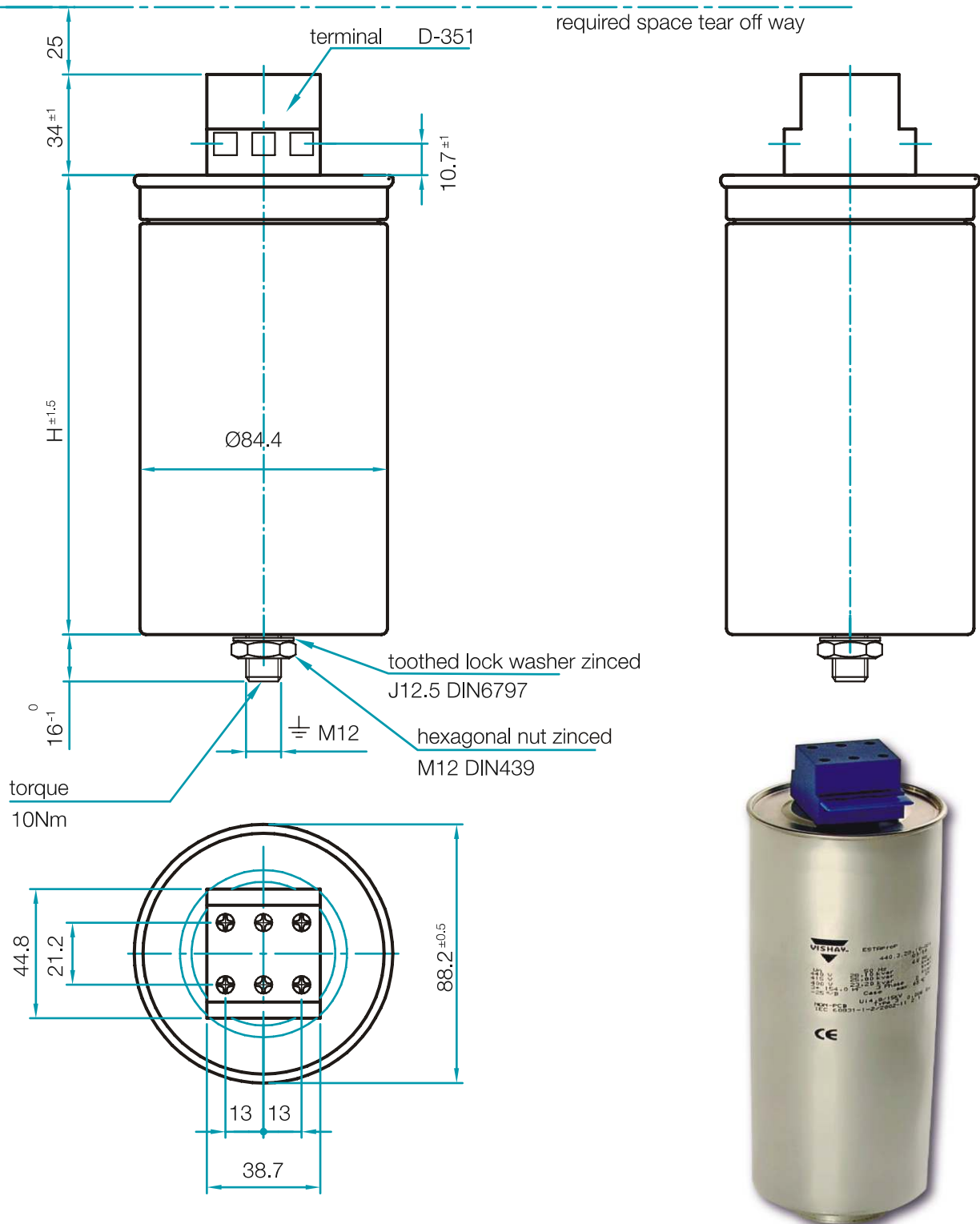


ESTAdry/ESTAprop ACMKP CAPACITORS

ACMKP Series - Low-Voltage Power Factor Correction Capacitors



Drawing 2

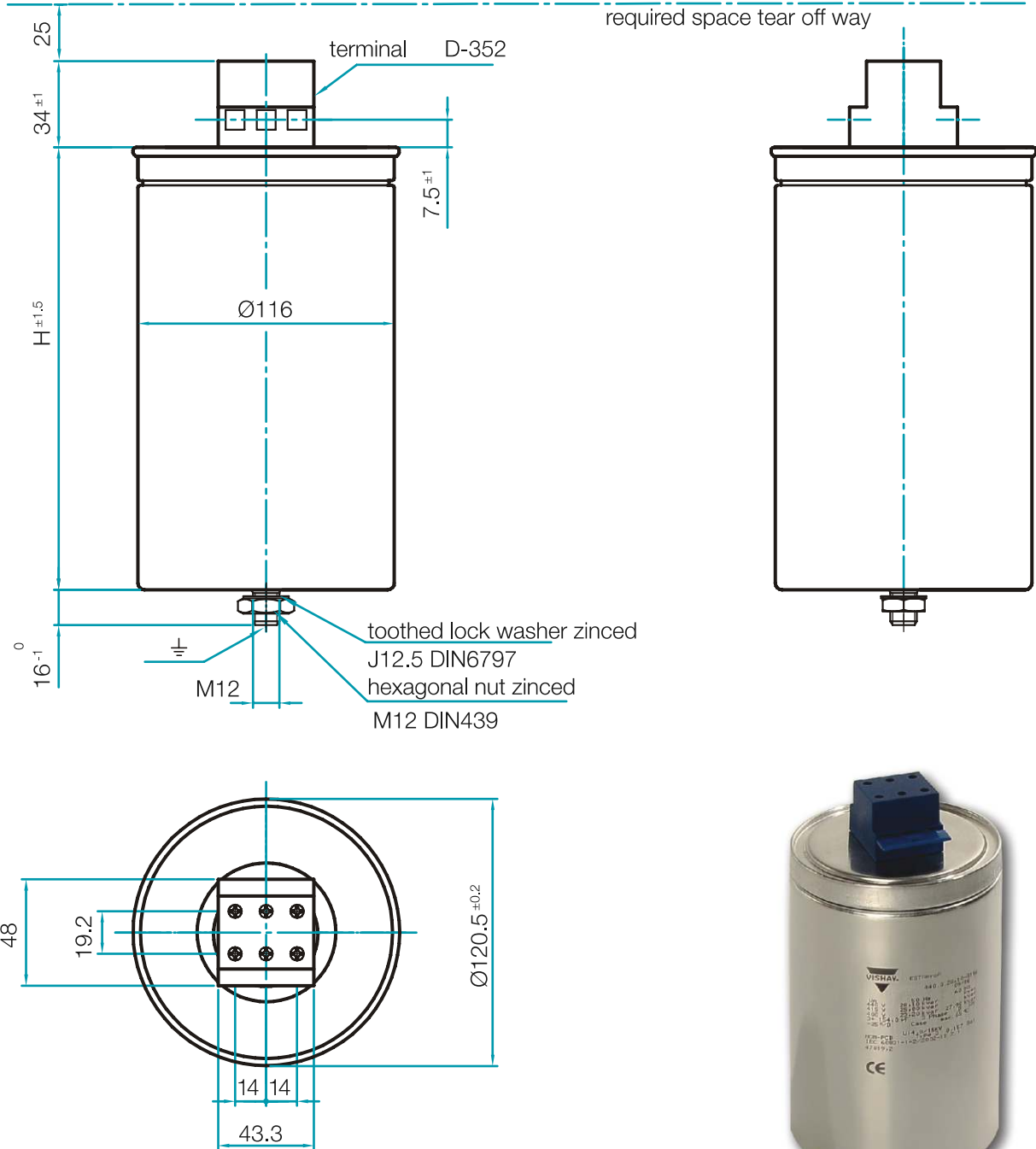




ESTdry/ESTaprop ACMKP CAPACITORS

ACMKP Series - Low-Voltage Power Factor Correction Capacitors

Drawing 3



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SEMICONDUCTORS:

Rectifiers • High-Power Diodes and Thyristors • Small-Signal Diodes • Zener and Suppressor Diodes
• FETs • Optoelectronics • ICs • Modules

PASSIVE COMPONENTS:

Resistive Products • Magnetics • Capacitors



One of the World's Largest Manufacturers of
Discrete Semiconductors and Passive Components

WORLDWIDE SALES CONTACTS

