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S U M M A R Y

AC Power Electronic Capacitor

PECWA 250 ... 480 V

04

AC Power Electronic Capacitor

PECWA 550 ... 1,000 V

08

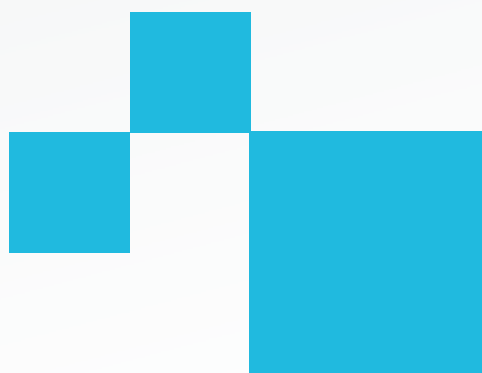
DC Power Electronic Capacitor

PECWD 900 ... 3,600 V

12

Selection Codes

16





AC Power Electronic Capacitor – PECWA

CAPACITANCE:
20 ... 400 μ F
VOLTAGE:
250 ... 480 V

General Application

For AC general purpose application use in power electronics.

Reference Standard

IEC 61071
UL 810

Certification ¹⁾



Construction

- Dielectric: polypropylene film
- Filling: Non-PCB, polyurethane resin
- Safety device: self-healing technology, overpressure disconnecter
- Casing: aluminum with M12 stud on bottom
- Cover material: self-extinguishing plastic in accordance to UL 94 V0
- Terminals: external thread M6 and M10 screw terminals, tin plated brass
- Environmental compatibility: do not contain PCB and is manufactured in accordance to RoHS restrictions

Note: 1) UL in progress.



Safety

- Self-healing characteristics: the capacitor is self-healing and regenerates after breakdown of the dielectric.
- In case of grounding for capacitor enclosures, ensure that M12 stud is effectively grounded.
- Discharge resistors can be supplied on demand.

Thermal Load

After the design of the product and installation of the capacitor, it is necessary to verify that maximum hotspot temperature is not exceeded at extreme service conditions.

Overpressure Disconnecter

The internal over-pressure caused by the cumulative of self-healing effect of the polypropylene film will create a force on the internal walls of the capacitor. This force will act on the expandable grooves (capacitive units with plastic closing top) resulting in the breaking of the overpressure disconnecter safety device and, consequently, disconnecting the capacitor from the power source. This mechanism provides total protection against over-pressure.

For further information or necessity of different dimensions, capacitances or electrical characteristics, please consult our sales office or engineering. Some solutions can be adapted and supplied according to customer necessity.

Caution

- The capacitor is not protected against inadvertent contact.
- The capacitor is not provided with internal / external discharge device.
- Discharge the capacitor before handling it: the energy stored in the capacitor can be lethal. To avoid any chance of shock, discharge and short-circuit the capacitor before handling it.
- To use this type of capacitor, it is mandatory to control the overvoltage levels.

Technical Characteristics

Product Line

Rated AC voltage (RMS)	Capacitance ¹⁾ µF	I _{max} ²⁾ A	Reference	D ³⁾ mm	H ³⁾ mm	Terminal	Ordering code
250	50	25	PECWA 50 R025 R M6	60	68	M6	13992812
	60	25	PECWA 60 R025 R M6	60	85	M6	15309000
	70	25	PECWA 70 R025 R M6	60	85	M6	15318673
	80	25	PECWA 80 R025 R M6	60	85	M6	15318676
	100	25	PECWA 100 R025 R M6	60	105	M6	13437968
	200	25	PECWA 200 R025 R M6	60	141	M6	14514570
	200	50	PECWA 200 R025 R M10	75	163	M10	15318720
	250	50	PECWA 250 R025 R M10	75	163	M10	15318722
	300	50	PECWA 300 R025 R M10	75	203	M10	15318724
330	400	50	PECWA 400 R025 R M10	85	205	M10	15309004
	50	18	PECWA 50 R025 R M6	60	85	M6	15308955
	70	20	PECWA 70 R025 R M6	60	105	M6	15320985
	80	25	PECWA 80 R033 R M6	60	105	M6	14002527
	100	25	PECWA 100 R033 R M6	60	141	M6	15321098
	150	50	PECWA 150 R033 R M10	75	163	M10	14010883
	200	50	PECWA 200 R033 R M10	85	165	M10	15321104
	200	50	PECWA 200 R033 R M10	75	203	M10	15321240
	250	50	PECWA 250 R033 R M10	85	205	M10	15321244
480	300	50	PECWA 300 R033 R M10	85	205	M10	13989940
	20	20	PECWA 20 R048 R M6	60	85	M6	15308756
	30	25	PECWA 30 R048 R M6	60	105	M6	15308949
	50	25	PECWA 50 R048 R M6	60	141	M6	15308998
	60	25	PECWA 60 R048 R M6	60	156	M6	-
	75	50	PECWA 75 R048 R M10	75	163	M10	15322621
	80	50	PECWA 80 R048 R M10	75	163	M10	15322850
	100	50	PECWA 100 R048 R M10	75	203	M10	15322851

Notes: 1) For different capacitances, please consult WEG.

2) For application close to the maximum current, it is necessary to verify if the maximum hotspot temperature is not exceeded at extreme service conditions.

3) For different dimensions, please contact WEG.


Technical Characteristics


Characteristics	
Capacitance	20 ... 400 μ F
Rated voltage	250 ... 480 V
Capacitance tolerance	\pm 5%
Dielectric power losses	0.2 W/kvar

Safety	
Polypropylene metalized film	Self-healing properties
Mechanical safety	Overpressure disconnecter
Max. short circuit capacity	10 kA
Protection degree	IP00

Maximum permissible voltage	
Overvoltage	1.1 x Un – 30% of on load duration
	1.15 x Un - 30min/day
	1.2 x Un - 5min/day
	1.3 x Un - 1min/day
	1.5 x Un - 30ms, no more than 1,000 times in the lifetime

Thermal conditions	
Lowest operating temperature	-25 °C
Maximum operating hotspot temperature	+70 °C
Storage temperature	-25 °C to +85 °C
Service life (at hotspot \leq 70 °C)	100,000h
Max. altitude	1,000 m above sea level
Humidity class	F (maximum relative humidity: 75% - annual average, 95% - 30 days a year)

Design data [according to figure 1]	
Terminals	Male M6 screw terminals
Maximum terminal torque	4 N.m
Mounting stud fastening type	
Capacitor fixing	M12 x 16 mm
Maximum torque for capacitor fixing	14 N.m
Mounting position	Vertical and horizontal (only for D=60 mm model)

Design data [according to figure 2]	
Terminals	Male M10 screw terminals
Maximum terminal torque	10 N.m
Mounting stud fastening type	
Capacitor fixing	M12 x 16 mm
Maximum torque for capacitor fixing	14 N.m
Mounting position	Vertical

Note: 1) Optional: discharge resistor upon request.

Figure 1 – M6 Screw Terminal

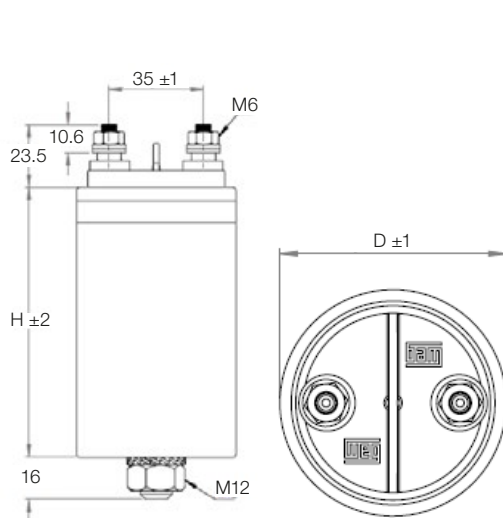
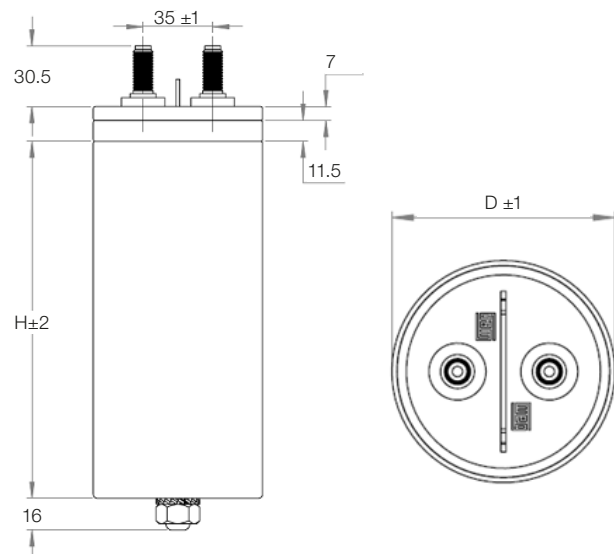


Figure 2 – M10 Screw Terminal



Note: 1) The grounding cable must be connected directly to the capacitor fixing screw or the capacitor must be fixed on a grounded base.

AC Power Electronic Capacitor – PECWA

CAPACITANCE:
10 ... 100 μ F
VOLTAGE:
550 ... 1,000 V

General Application

For AC general purpose application use in power electronics.

Reference Standard

IEC 61071
UL 810

Certification ¹⁾



Construction

- Dielectric: polypropylene film
- Filling: Non-PCB, polyurethane resin
- Safety device: self-healing technology, overpressure disconnecter
- Casing: aluminum with M12 stud on bottom
- Cover material: tinned steel top cover
- Terminals: external thread M10 screw terminals, tin plated brass
- Environmental compatibility: do not contain PCB and is manufactured in accordance to RoHS restrictions

Note: 1) UL in progress.



Safety

- Self-healing characteristics: the capacitor is self-healing and regenerates after breakdown of the dielectric.
- In case of grounding for capacitor enclosures, ensure that M12 stud is effectively grounded.
- Discharge resistors can be supplied on demand.

Over-pressure Disconnect

The internal over-pressure caused by the cumulative of self-healing effect of the polypropylene film will create a force on the internal walls of the capacitor. This force will act on the expandable groove and cover (capacitive units with steel closing top) resulting in the breaking of the “mechanical fuse” and, consequently, disconnecting the capacitor from the power source. This mechanism provides total protection against over-pressure.

For further information or necessity of different dimensions, capacitances or electrical characteristics, please consult our sales office or engineering. Some solutions can be adapted and supplied according to customer necessity.

Thermal Load

After the design of the product and installation of the capacitor, it is necessary to verify that maximum hotspot temperature is not exceeded at extreme service conditions.

Caution

- The capacitor is not protected against inadvertent contact.
- The capacitor is not provided with internal / external discharge device.
- Discharge the capacitor before handling it: the energy stored in the capacitor can be lethal. To avoid any chance of shock, discharge and short-circuit the capacitor before handling it.
- It is mandatory to have a control of the overvoltage levels to use this type of capacitor.

Technical Characteristics

Product Line

Rated AC voltage (RMS)	Capacitance ¹⁾ (μF)	I _{max} ²⁾ (A)	Reference	D ³⁾ (mm)	H ³⁾ (mm)	H1 (mm)	H2 (mm)	P (mm)	Ordering code
550	10.0	10.0	PECWA 10 R055 R M10	75	118	59	27	35	15345678
	16.0	15.0	PECWA 16 R055 R M10	75	118	59	27	35	15345681
	25.0	20.0	PECWA 25 R055 R M10	100	118	59	27	35	15345687
	40.0	25.0	PECWA 40 R055 R M10	100	118	59	27	35	15346671
	63.0	35.0	PECWA 63 R055 R M10	136	108	59	27	35	15346672
	100.0	50.0	PECWA 100 R055 R M10	136	169	59	27	35	15307434
650	10.0	10.0	PECWA 10 R065 R M10	75	118	59	27	35	15359025
	16.0	15.0	PECWA 16 R065 R M10	100	118	59	27	35	15359138
	25.0	20.0	PECWA 25 R065 R M10	100	118	59	27	35	15359139
	40.0	25.0	PECWA 40 R065 R M10	136	108	59	27	35	15359141
	63.0	50.0	PECWA 63 R065 R M10	136	169	59	27	35	15359144
	100.0	60.0	PECWA 100 R065 R M10	136	169	59	27	35	15359145
720	10.0	10.0	PECWA 10 R072 R M10	75	118	59	27	35	15395648
	16.0	15.0	PECWA 16 R072 R M10	100	118	59	27	35	15395652
	25.0	20.0	PECWA 25 R072 R M10	100	118	59	27	35	15395654
	40.0	30.0	PECWA 40 R072 R M10	136	108	59	27	35	15395656
	63.0	50.0	PECWA 63 R072 R M10	136	169	59	27	35	15395779
	100.0	60.0	PECWA 100 R072 R M10	136	169	59	27	35	15395784
850	10.0	10.0	PECWA 10 R085 R M10	75	118	59	27	35	15496432
	16.0	15.0	PECWA 16 R085 R M10	100	118	59	27	35	15496479
	25.0	20.0	PECWA 25 R085 R M10	136	108	59	27	35	15496481
	40.0	30.0	PECWA 40 R085 R M10	136	169	59	27	35	15496482
	63.0	50.0	PECWA 63 R085 R M10	136	169	59	27	35	15496484
925	10.0	10.0	PECWA 10 R0925 R M10	100	118	59	27	35	15377721
	16.0	20.0	PECWA 16 R0925 R M10	100	118	59	27	35	15319536
	25.0	35.0	PECWA 25 R0925 R M10	136	108	59	27	35	14613207
	40.0	45.0	PECWA 40 R0925 R M10	136	169	59	27	35	15377832
	50.0	50.0	PECWA 50 R0925 R M10	136	169	59	27	35	14613240
1,000	10.0	10.0	PECWA 10 R100 R M10	100	118	59	27	35	15378383
	16.0	20.0	PECWA 16 R100 R M10	100	118	59	27	35	15378384
	25.0	35.0	PECWA 25 R100 R M10	136	169	59	27	35	15378386
	40.0	30.0	PECWA 40 R100 R M10	136	169	59	27	35	15378387

Notes: 1) For different capacitances, please consult WEG.

2) For application close to the maximum current, it is necessary to verify if the maximum hotspot temperature is not exceeded at extreme service conditions.

3) For different dimensions, please contact WEG.


Technical Characteristics ¹⁾

Characteristics	
Capacitance	10.0 ... 100.0 μ F
Rated voltage	550 ... 1,000 V
Capacitance tolerance	\pm 5%
Dielectric power losses	0.2 W/kvar

Safety	
Polypropylene metalized film	Self-healing properties
Mechanical safety	Overpressure disconnecter
Max. short circuit capacity	10 kA
Protection degree	IP00

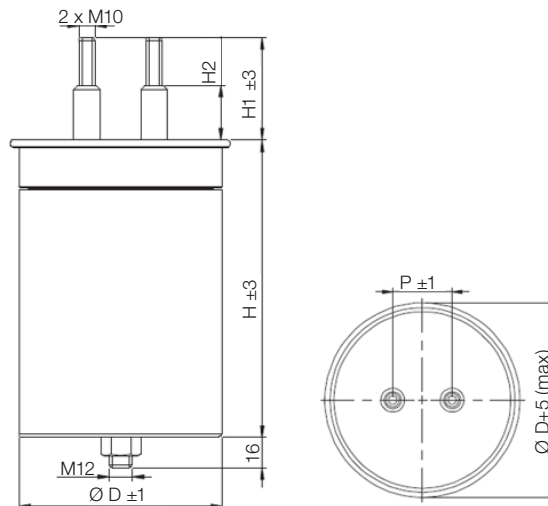
Maximum permissible voltage	
Overvoltage	1.1 x Un – 30% of on load duration
	1.15 x Un - 30min/day
	1.2 x Un - 5min/day
	1.3 x Un - 1min/day
	1.5 x Un - 30ms, no more than 1,000 times in the lifetime

Thermal conditions	
Lowest operating temperature	-25 °C
Maximum operating hotspot temperature	+55 °C
Storage temperature	-25 °C to + 85 °C
Service life (at hotspot \leq 70 °C)	180,000h
Max. altitude	1,000 m above sea level
Humidity class	F (maximum relative humidity: 75% - annual average, 95% - 30 days a year)

Design data [according to figure 3]	
Terminals	Male M10 screw terminals
Maximum terminal torque	4 N.m
Mounting stud fastening type	
Capacitor fixing	M12 x 16 mm
Maximum torque for capacitor fixing	14 N.m
Mounting position	Vertical

Note: 1) Optional: discharge resistor upon request.

Figure 3



Note: 1) The grounding cable must be connected directly to the capacitor fixing screw or the capacitor must be fixed on a grounded base.

DC Power Electronic Capacitor – PECWD

CAPACITANCE:
75 ... 1,300 μ F
VOLTAGE:
900 ... 3,600 V

General Application

- For DC general purpose application use in power electronics
- VSDs, UPSs, traction, automotive

Reference Standard

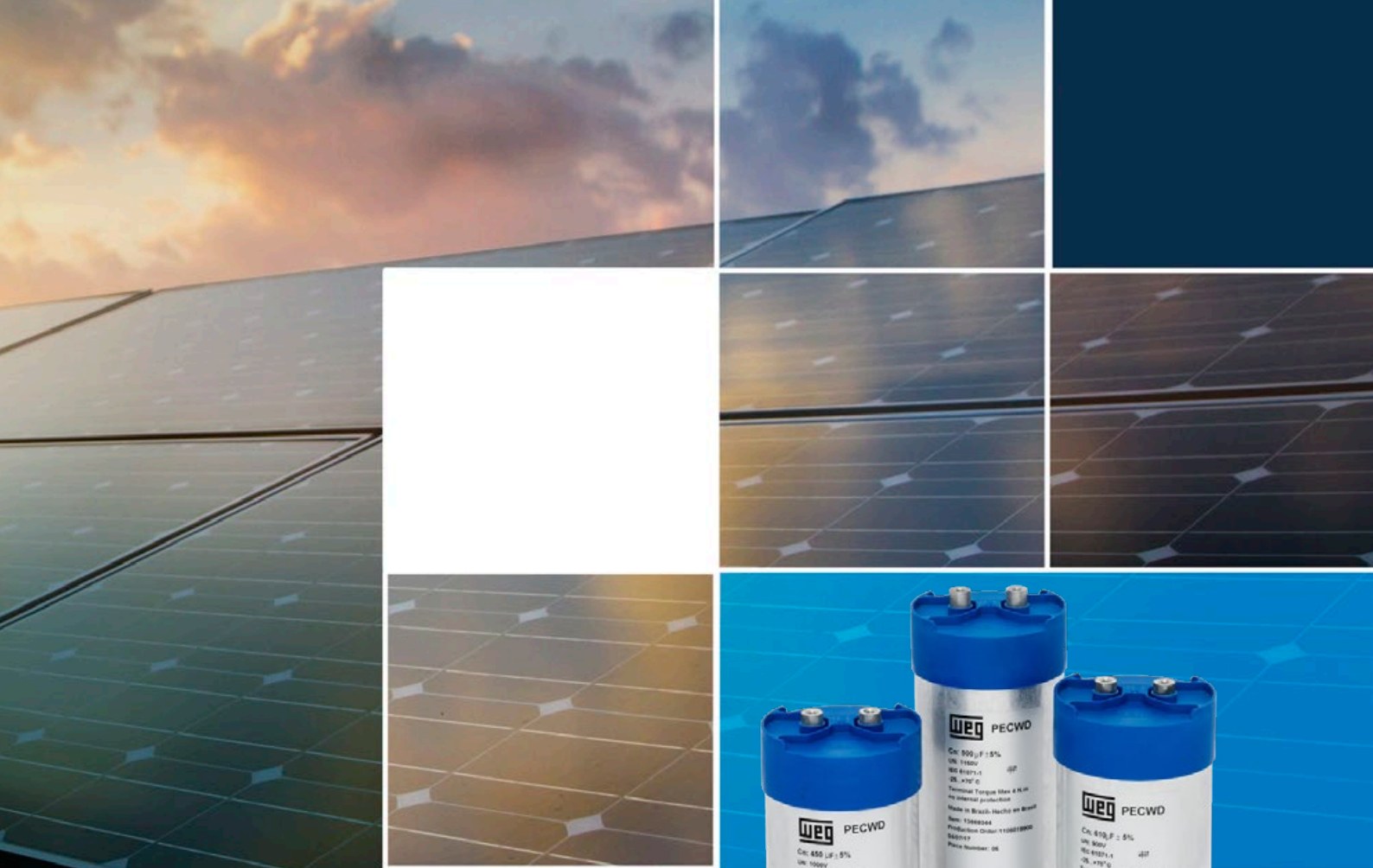
IEC 61071

Certification



Characteristics

- Simplifies the replacement of electrolytic capacitors
- Low ESR (Equivalent Series Resistance)
- Self-healing feature
- No polarity



Construction Characteristics

- Dielectric: polypropylene film
- Filling material: PCB-free polyurethane resin
- Casing: cylindrical aluminum case fixed with M12 screw at the bottom
- Cover material: self-extinguishing plastic material, according to UL 94 V0
- Terminals: M6 internal thread, tinned brass
- Environmental compatibility: PCB free and manufactured in accordance with RoHS restrictions

Capacitor Technology

The polypropylene film has self-healing characteristics; therefore, the electrical properties are rapidly restored after a local perforation of the dielectric. At the moment the dielectric breaks, the metal layer around the perforation is vaporized and the short circuit is insulated. The dielectric may break due to electrical or thermal overload, or the end of its life. Immediately after the dielectric breaks the capacitor is in normal operation. The reduction in capacitance caused by the self-healing is very low and can only be observed by a precision measuring instrument.

Caution

- The capacitor is not protected against inadvertent contact.
- The capacitor is not provided with internal / external discharge device.
- Discharge the capacitor before handling it: the energy stored in the capacitor can be lethal. To avoid any chance of shock, discharge and short-circuit the capacitor before handling it.
- Unprotected capacitor (without the presence of a disconnect or overpressure detector).

Technical Characteristics

Product Line

Rated DC voltage (V dc) ¹⁾	Capacitance ¹⁾	I _{max} ²⁾ (A)	Reference	D1 ³⁾ (mm)	H1 ³⁾ (mm)	H2 (mm)	H3 (mm)	P (mm)	Øt (mm)	Ordering code
900	300	30	PECWD 300 P090 R F6	85	90	96	35	32	12	-
	300	30	PECWD 300 P090 R F6	85	100	106	35	32	12	-
	560	30	PECWD 560 P090 R F6	85	136	142	35	32	12	-
	610	50	PECWD 610 P090 R F6	85	155	161	35	32	12	12971060
	770	50	PECWD 770 P090 R F6	85	180	186	35	32	12	-
1,000	230	30	PECWD 230 P100 R F6	85	100	106	35	32	12	-
	450	30	PECWD 450 P100 R F6	85	136	142	35	32	12	13178748
	470	50	PECWD 470 P100 R F6	85	155	161	35	32	12	-
	610	50	PECWD 610 P100 R F6	85	180	186	35	32	12	-
	1300	50	PECWD 1300 P100 R F6	136	185	191	35	32	12	-
1,100	190	30	PECWD 190 P110 R F6	85	100	106	35	32	12	-
	360	30	PECWD 360 P110 R F6	85	136	142	35	32	12	-
	380	50	PECWD 380 P110 R F6	85	155	161	35	32	12	-
	500	50	PECWD 500 P110 R F6	85	180	186	35	32	12	-
1,300	150	30	PECWD 150 P130 R F6	85	100	106	35	32	12	-
	290	30	PECWD 290 P130 R F6	85	136	142	35	32	12	-
	300	50	PECWD 300 P130 R F6	85	155	161	35	32	12	12971064
	400	50	PECWD 400 P130 R F6	85	180	186	35	32	12	-
1,500	95	30	PECWD 95 P150 R F6	85	100	106	35	32	12	-
	180	30	PECWD 180 P150 R F6	85	136	142	35	32	12	-
	190	50	PECWD 190 P150 R F6	85	155	161	35	32	12	-
	250	50	PECWD 250 P150 R F6	85	180	186	35	32	12	-
1,800	75	30	PECWD 75 P180 R F6	85	100	106	35	32	12	-
	140	30	PECWD 140 P180 R F6	85	136	142	35	32	12	-
	150	50	PECWD 150 P180 R F6	85	155	161	35	32	12	-
	190	50	PECWD 190 P180 R F6	85	180	186	35	32	12	-
2,800	430	50	PECWD 430 P280 R F6	136	345	350	60	50	14	14211406
3,000	380	50	PECWD 380 P300 R F6	136	345	350	60	50	14	14211405
3,600	210	50	PECWD 210 P360 R F6	136	345	350	60	50	14	14211407

Notes: 1) For different capacitances and voltages, please contact WEG.

2) Maximum repetitive peak current that can occur during continuous operation.

For applications close to maximum current, it is necessary to check if the maximum temperature on the capacitor hotspot is not exceeded under extreme operating conditions.

3) For different dimensions, please contact WEG.


Technical Characteristics

Characteristics	
Capacitance	75 ... 1300 μ F
Rated voltage	900 ... 3,600 V
Capacitance tolerance	\pm 5%
Dielectric power losses	0.2 W/kvar

Safety	
Polypropylene metalized film	Self-healing properties
Mechanical safety	Overpressure disconnecter
Max. short circuit capacity	10 kA
Protection degree	IP00

Maximum permissible voltage	
Overvoltage	1.1 x Un - 30% duration/day
	1.15 x Un - 30min/day
	1.2 x Un - 5min/day
	1.3 x Un - 1min/day
	1.5 x Un - 30ms, no more than 1,000 times in the lifetime

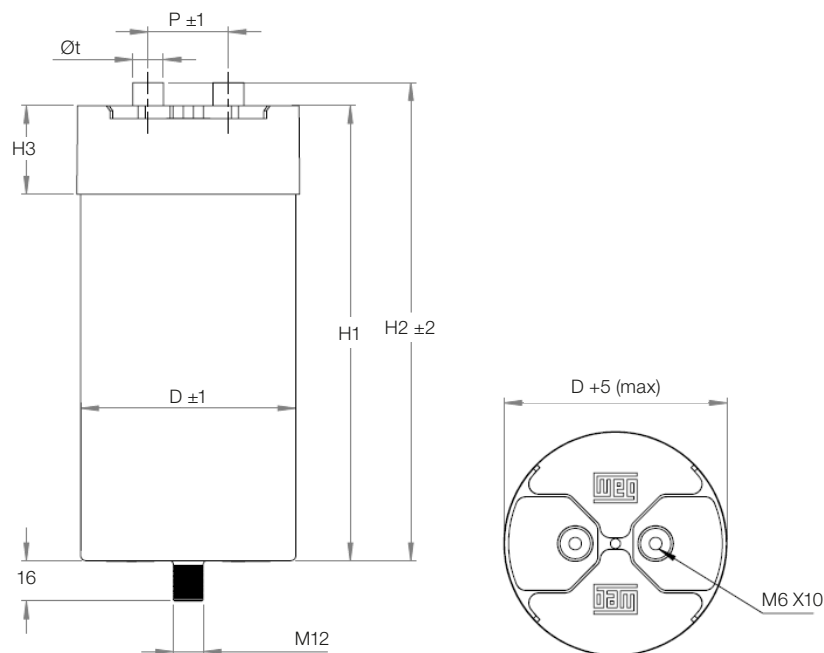
Thermal conditions	
Minimum operating temperature	-25 °C
Maximum temperature in hotspot of the case	+70 °C
Maximum temperature in the capacitor hotspot	+80 °C
Storage temperature	-25 °C to +85 °C
Service life (at hotspot \leq 70 °C)	100,000h
Maximum altitude	1,000 m above sea level
Humidity class	F (maximum relative humidity: 75% - annual average, 95% - 30 days a year)

Design data [according to figure 4]	
Terminals	M6 x 10 mm internal female
Maximum torque on the terminals	4 N.m
Mounting stud fastening type	
Capacitor fixing	M12 x 16 mm screw
Maximum torque for capacitor fixing	10 N.m
Mounting position	Any position

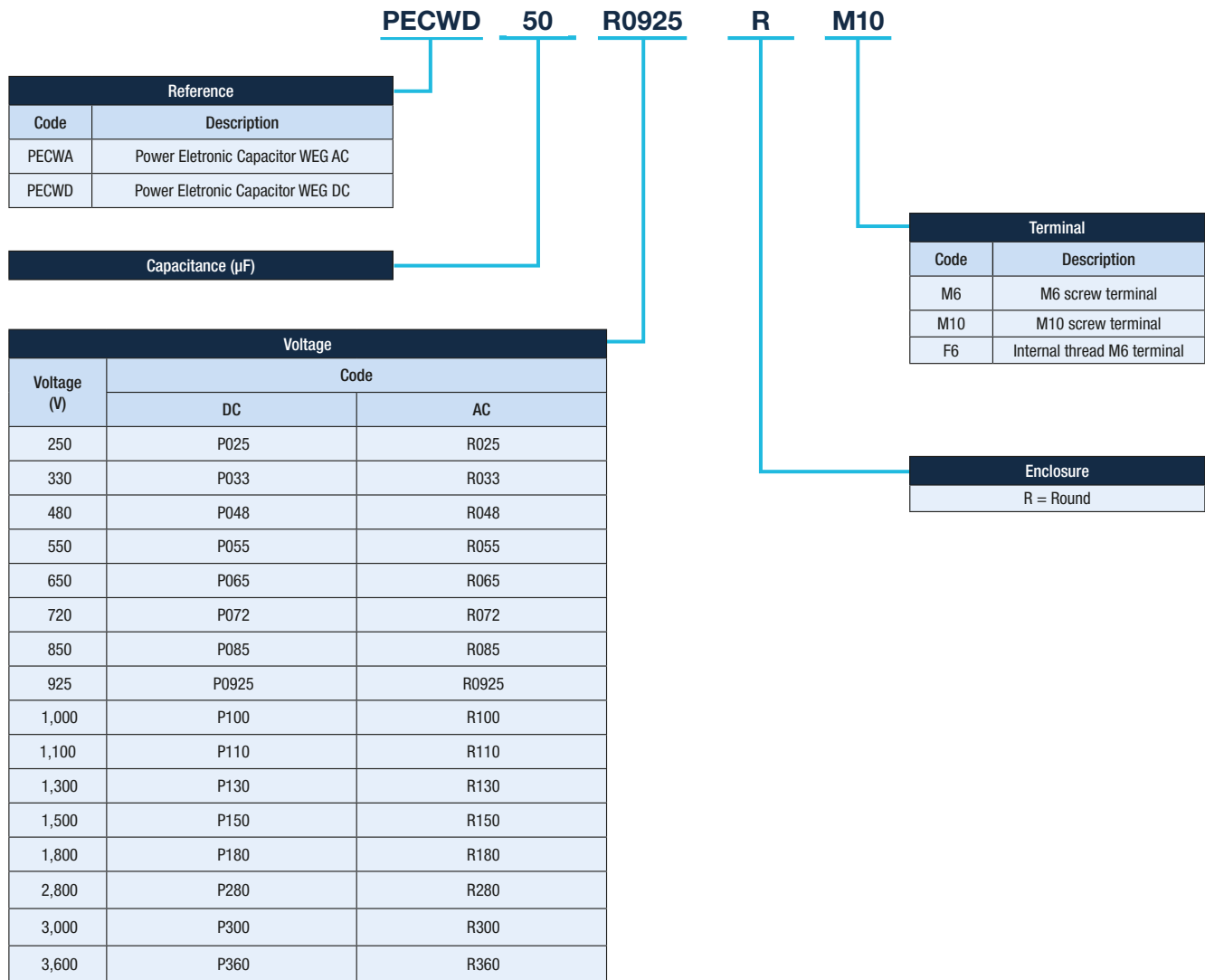
Optional Items
Terminals in different dimensions and gaps ¹⁾

Note: 1) Gaps between terminals can improve the connection to the busbars and reduce the system series inductance.

Figure 4



Selection Codes





Global presence

is essential, as much as understanding your needs.

Global Presence

With more than 30,000 employees worldwide, WEG is one of the largest electric motors, electronic equipments and systems manufacturers. We are constantly expanding our portfolio of products and services with expertise and market knowledge. We create integrated and customized solutions ranging from innovative products to complete after-sales service.

WEG's know-how guarantees our **Power Electronic Capacitors** are the right choice for your application and business, assuring safety, efficiency and reliability.



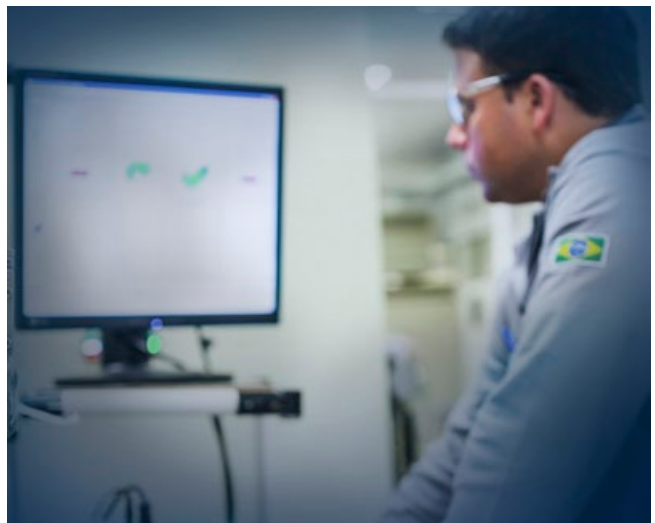
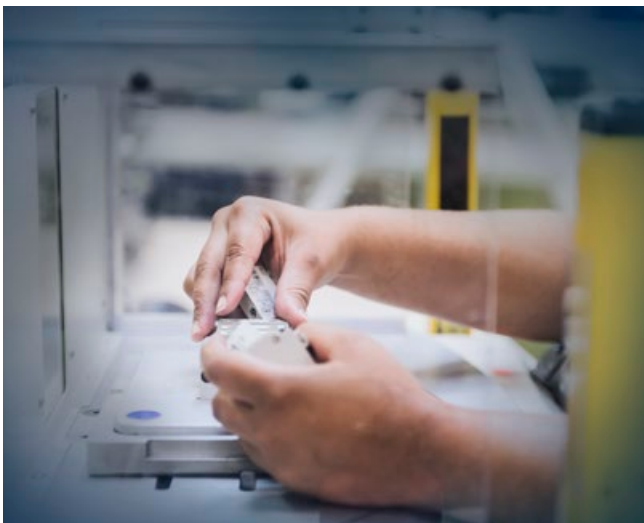
Availability is to have a global support network



Partnership is to create solutions that suits your needs



Competitive edge is to unite technology and innovation



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Cod: 50123747 | Rev: 02 | Date (m/y): 11/2022.

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