MODULO XD series
Cylindrical Aluminum Case

MODULO XD three-phase Capacitors are a reliable and effective solution for your AC-filtering needs and for high-performance PFC applications.
The Aluminum case, IP20 screw-tightened clamp connector and optional IP54 cap ensure maximum flexibility of use and installation even in case of challenging environmental conditions.

The DRY resin filling and the UL-approved overpressure safety mechanism tailored to each size and current level provide highest safety against critical failures in case of overload or at the end of operating life.

The internal construction is based on Δ-connected (Y-connection available on request) windings specially designed to provide high capacity stability of the capacitor's life as well as high RMS current capability over a very wide frequency range.

Main characteristics:

- Self-Healing Metallized Polypropylene Film
- UL-Approved Overpressure Safety Device
- Aluminum Case
- DRY Resin filling

Main applications:

- AC Filtering
- High-Performance PFC (high harmonics, voltage and RMS/surge current)
- UPS and Wind-Power Applications

General Characteristics

Rated voltage	AC 450 ÷ 800 V (*)
Capacitance range	1 ÷ 250 µF (*)
Capacitance tolerance	– 5% / +10%
Test voltage between terminals	2.15 x Urms - 2s
Test voltage between terminals and case	3.0 kVac 50 Hz - 10s
Operating temperatures	–40/85°C
Protection degree	IP 20 (IP54 on request)
Hot spot temperature	85 °C
Voltage raise (dV/dt)	110 V/µs
Dielectric losses (tan δo)	0.2 W/kVAr
Typical total losses (tan δ)	0.55 W/kVAr
Maximum cable section	25 mmq
Three-phase connection	Delta
Filling	Dry polyurethane resin
Dielectric	Metallized polypropylene film
Case	Aluminum
Life expectancy	100.000 h (**)
Failure quota	50/10E9
Installation	Vertical/horizontal
Reference standards	IEC 61071-1/2 - IEC 60831 - UL 810
UL–CSA approved c UL us	File n. E102953
M4 screw clamp terminals	Max 1.5 Nm
M12 fixing bolt	Max 10 Nm

(*) Standard values. other values on request.
(**) For details please refer to page 75e.

Capacitance 3x Cn [µF]	Dimension (ØxH) [mm]	RMS Current IRMS [A]	Repet. Peak Current Ip [kA]	Surge Current Is [kA]	Series Resistance Rs [mΩ]	Inductance Ls [nH]	Thermal Resistance R_{THC} [° C/W]	Typical Weight [kg]	Pcs. / box	Box type	Part number 416.46.xxxx
Urms = 450 V U_{nAC}= 640 V Surge Voltage [Us]= 1380 V											
3x7.9	65x165	10	0.3	0.9	5.90	120	5.8	0.65	14	E	3020
3x13	65x165	10	0.5	1.4	5.90	120	4.3	0.65	14	E	3030
3x26	75x165	14	1.0	2.9	5.90	120	2.2	0.80	12	F	3050
3x39	75x255	20	1.6	4.3	4.04	150	1.9	1.25	6	F	3080
3x52	75x255	27	2.1	5.7	3.03	150	1.9	1.60	6	F	3100
3x66	85x255	34	2.6	7.3	2.64	150	1.6	1.60	6	F	3150
3x79	90x255	40	3.2	8.7	2.20	150	1.4	1.80	6	F	3200
3x104	100x255	54	4.2	11.4	1.65	150	1.1	2.25	6	G	3260
3x131	116x255	55	5.2	12.0	2.15	150	0.9	2.85	6	H	3310
3x157	116x290	55	6.3	12.0	2.58	180	0.8	3.30	6	H	3360
3x235	116x370	65	9.4	14.0	2.72	200	0.7	4.20	4	I	3375
Urms= 500 V U_{nAC}= 710 V Surge Voltage [Us]= 1530 V											
3x6.3	65x165	10	0.3	0.7	5.90	120	5.8	0.65	14	E	4020
3x10.5	65x165	10	0.4	0.1	5.90	120	4.3	0.65	14	E	4030
3x21	75x165	12	0.8	2.3	5.90	120	2.2	0.80	12	F	4050
3x32	75x255	18	1.3	3.5	4.99	150	1.9	1.25	6	F	4080
3x43	75x255	24	1.7	4.7	3.74	150	1.9	1.60	6	F	4100
3x53	85x255	30	2.1	5.8	3.27	150	1.6	1.60	6	F	4150
3x64	90x255	36	2.6	7.0	2.72	150	1.4	1.80	6	F	4200
3x85	100x255	49	3.4	9.4	2.04	150	1.1	2.25	6	G	4260
3x106	116x255	55	4.2	11.7	2.15	150	0.9	2.85	6	H	4310
3x127	116x290	55	5.1	12.0	2.58	180	0.8	3.30	6	H	4360
3x190	116x370	65	8.5	14.0	2.72	200	0.7	4.20	4	I	4375
Urms= 550 V U_{nAC}= 780 V Surge Voltage [Us]= 1680 V											
3x5.1	65x165	10	0.2	0.6	6.50	120	5.8	0.65	14	E	5020
3x8.5	65x165	10	0.3	0.9	6.50	120	4.3	0.65	14	E	5030
3x17	75x165	11	0.7	1.9	6.50	120	2.2	0.80	12	F	5050
3x25	75x255	17	1.0	2.8	6.04	150	1.9	1.25	6	F	5080
3x34	75x255	22	1.4	3.7	4.53	150	1.9	1.60	6	F	5100
3x43	85x255	28	1.7	4.7	3.95	150	1.6	1.60	6	F	5150
3x52	90x255	33	2.1	5.7	3.29	150	1.4	1.80	6	F	5200
3x70	100x255	44	2.8	7.7	2.47	150	1.1	2.25	6	G	5260
3x87	116x255	55	3.5	9.6	2.15	150	0.9	2.85	6	H	5310
3x105	116x290	55	4.2	11.6	2.58	180	0.8	3.30	6	H	5360
3x158	116x370	65	7.6	14.0	2.72	200	0.7	4.20	4	I	5375

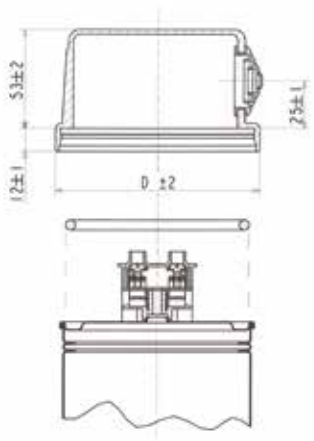
MODULO XD series

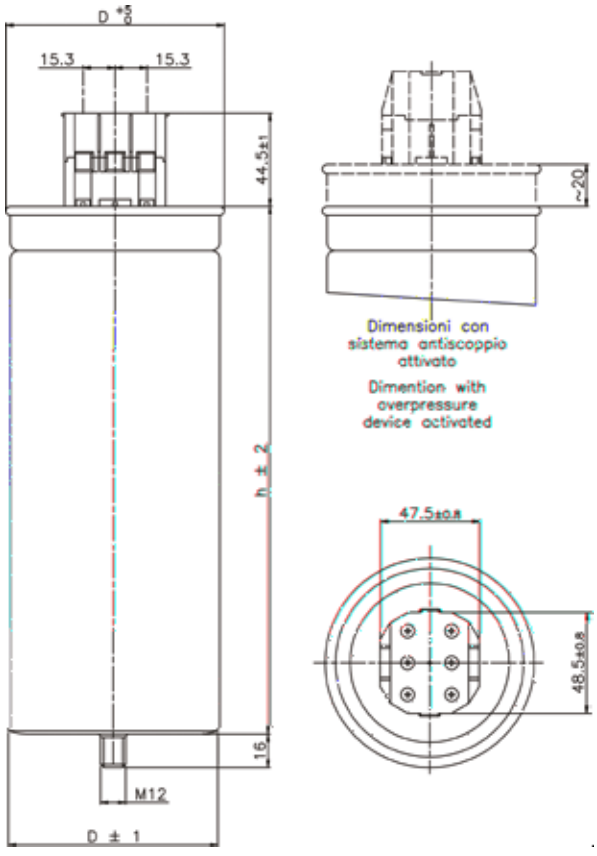
3-Phase AC filter capacitors

Capacitance 3x Cn [µF]	Dimension (ØxH) [mm]	RMS Current IRMS [A]	Repet. Peak Current Ip [kA]	Surge Current Is [kA]	Series Resistance Rs [mΩ]	Inductance Ls [nH]	Thermal Resistance R_{THC} [° C/W]	Typical Weight [kg]	Pcs. / box	Box type	Part number 416.46.xxxx
U ms= 690 V		**U_{nAC}= 980 V**		**Surge Voltage [Us]= 2110 V**							
3x22	75x255	18	0.9	2.4	5.83	150	1.9	1.60	6	F	6100
3x28	85x255	22	1.1	3.1	4.66	150	1.6	1.60	6	F	6150
3x33	90x255	26	1.3	3.6	4.75	150	1.4	1.80	6	F	6200
3x45	100x255	35	1.8	5.0	3.56	150	1.1	2.25	6	G	6260
3x56	116x255	44	2.2	6.2	2.85	150	0.9	2.85	6	H	6310
3x67	116x290	53	2.7	7.4	2.59	180	0.8	3.30	6	H	6360
Urms= 800 V		**U_{nAC}=1140 V**		**Surge Voltage [Us]= 2440 V**							
3x17	75x255	15	0.7	1.9	7.84	150	1.9	1.60	6	F	8100
3x21	85x255	19	0.8	2.3	6.27	150	1.6	1.60	6	F	8150
3x25	90x255	23	1.0	2.8	6.39	150	1.4	1.80	6	F	8200
3x33	100x255	30	1.3	3.6	4.79	150	1.1	2.25	6	G	8260
3x41	116x255	38	1.6	4.5	3.83	150	0.9	2.85	6	H	8310
3x50	116x290	46	2.0	5.5	3.48	180	0.8	3.30	6	H	8360

NOTES:
(Cn) Tolerance standard value: –5% / +10%. Other tolerance values on request. **(Cn) - (Urms)** Capacitance and rated voltage standard values, other values on request. (**Rs**)Releted at 1 KHz. (R_{THC}) Thermal resistance natural cooling,AMBIENT to CASE. **(Irms)** RMS Current @ 45 °C ambient temperature.
On request, external box discharge resistor (not available for series 690 V - 800 V).

Safety system:
Overpressure protection device. To enable the device to operate efficiently, it is necessary to leave a gap of at least 30 mm above the element and use flexible leads for the connection. Dimension with overpressure device activated.





Capacitor diameter (Ø)	Terminal cover	Terminal cover (Ø MAX)	Pcs. x box
[mm]	CODE	[mm]	
85	316523338	94	30
90	316523339	99	30
100	316523340	109	30
116	316523341	125	30