



POWER
ELECTRONICS
CAPACITORS

LNK
SERIES

DC Applications
Metallized Polypropylene Film
Self Healing

Company profile

OUR MISSION:

“Develop and supply high-quality capacitors, providing all the customers with full assistance from the design through the delivery.

We will take care to any particular needs that the customer may have.”

Established in 1946, ICAR has rapidly reached, and since then maintained, a leadership position in the research and development of new capacitors and components of which capacitors are key parts.

In the early 60's, first in the world, ICAR started the production of metallized polypropylene film capacitors, by developing the film metallization by its own.

ICAR group nowadays controls all the manufacturing phases of the capacitor: from the polypropylene film extrusion through its metallization, to the production of the finished capacitor.

The know-how accrued in almost 70 years of metallized film production, has enabled ICAR to bring to the market innovative products.

Today ICAR Group is a leader in the production of capacitors, both for power electronics applications and for low and medium voltage power factor correction.

ICAR Group today offers a wide range of products, all manufactured at its 6 plants located in Europe, that includes:

- Power electronics and special capacitors
- Lighting capacitors
- Motor run capacitors
- Power Factor Correction capacitors and Systems
- L.V. and M.V. voltage stabilizers
- Transformers and chokes.

ICAR: products and solutions

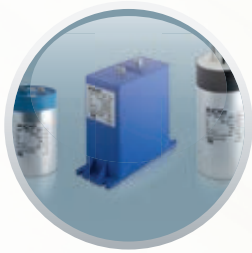
For details of the individual families, download the full catalogs on the web site, www.icar.com. Here are all the equipment and the solutions ICAR proposes.



Bank for power factor correction



Capacitors and MT power factor correction systems



Power electronics capacitors



Active filters



LV voltage stabilizers



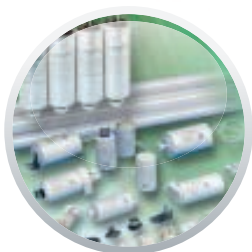
EMI RFI filters



Motor run capacitors



Capacitors for energy storage and rapid discharge



Lighting capacitors



Reactors and LV/LV special transformers

Quality policy

ICAR, a synonym for capacitor since 1946, has always considered the quality and the effectiveness of its internal processes as a key-factor in the company strategy.

The compliance with International Standards has always been kept as a fundamental reference for offering products and processes which completely match customers' requirements and expectations. ICAR Quality System is certified according to EN ISO 9001:2008 standard and for the products used in railways applications according to IRIS standard.

ICAR representatives are members of the most important international standard committees, in charge for issuing the reference standards for the capacitor industry.

In order to comply with the international regulations and with the most severe customers acceptance criteria, products are submitted to tests both in the internal laboratories and in the most important internationally recognized laboratories.



Selection rules and definitions

SELECTION RULES

VOLTAGE

Select a capacitor with surge peak voltage (U_S), rated voltage (U_N) and max ripple voltage (U_{rms}) higher than the operating ones.

Consider that:

- Rated DC voltage of the capacitor (U_N) shall be higher than the sum of operating dc voltage + operating ripple peak voltage
- Rms ripple voltage shall be lower than 10% of the rated voltage U_N , and it shall not exceed $150V_{rms}$

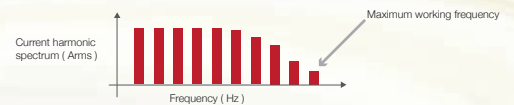
It is possible, within certain limits, to work above the rated voltage but this reduces the expected life of the capacitor.

CURRENT

Select a capacitor with maximum current I_{max} , higher than the operating current I_{rms}

Consider that:

- A thermal check shall be performed (see below) in order to verify that the chosen capacitor does not exceed the max operating temperature at operating I_{rms}
- For each series the I_{max} has been calculated considering a well defined $\vartheta_h - \vartheta_0$. The dielectric losses ($Q \tan \delta_0$) have been considered negligible and the harmonic spectrum is supposed to be made of different frequency components ending up to the specified maximum working frequency. I_{max} should not be considered totally concentrated at the maximum working frequency.



THERMAL CHECK

Double check the expected working temperature of the capacitor in your application.

Consider that:

the hot spot temperature can be estimated as follows:

$$\vartheta_h = R_{th} * P + \vartheta_0$$

the total dissipated power can be calculated as follows:

$$P = Q \tan \delta_0 + R_S I_{rms}^2$$

During stationary operation ϑ_h must not exceed the maximum hot spot temperature given in this catalogue for each families of capacitors.

WARNING

The thermal check is based on the hypothesis that the heat generated into the capacitor is transmitted to the environment through the case surface. Possible localised overheating (poor connections, hot components in the nearby as other capacitors, operation with high harmonics frequency etc.) would bring the capacitor to a dramatic failure or to a reduction of the expected life. Special tests by means of thermocouples should be performed to be sure that the maximum hot spot temperature is not exceeded even under the most critical ambient circumstances. Capacitors with thermocouples can be supplied on request.

DEFINITIONS

C_N	Rated Capacitance measured at 20°C
U_N	Maximum operating peak voltage of either polarity of a non reversing type waveform for which the capacitor has been designed for continuous operation
U_{rms}	Rated rms ripple voltage = $0.1 \times U_N$ max (max 150 V_{rms})
U_S	Surge (not repetitive) peak voltage
U_I	Rated insulation voltage. Rms value of the AC voltage for which the terminal to case insulation has been designed and tested
I_{MAX}	Maximum rms current value for continuous operation
Clearance	Shortest distance in air between terminals conducting parts or between terminal and case
Creepage	Shortest distance along an insulated surface between terminals conducting parts or between terminal and case
Q	Reactive power = $2 \times \pi \times f \times C \times U_{rms}^2$
f	Frequency of the ripple voltage
R_S	Series resistance representing the sum of all ohmic resistances in the capacitor. R_S is a typical estimated value based on average film metallization parameters
ESR	Equivalent Series Resistance defined as $ESR = R_S + \tan \delta_0 / (2 \times \pi \times f \times C)$
$\tan \delta_0$	Dielectric dissipation factor. It can be considered constant in the normal working frequency range. Typical value for polypropylene is 2×10^{-4}
$\tan \delta$	Dissipation factor calculated as follows: $\tan \delta_0 + 2 \times \pi \times f \times C \times R_S$
dv/dt	Maximum slope of the voltage waveform
I_{PK}	Peak current $I_{PK} = C \, dv/dt$
P	Active power (losses) = $Q \times \tan \delta_0 + R_S \times I_{rms}^2$

R_{th} Thermal resistance between the hot-spot in the winding and the environment (natural cooling), so that:
 $P = (\vartheta_h - \vartheta_0) / R_{th}$
 In case of forced air cooling the thermal resistance will be reduced of 20%.
 R_{th} is a global parameter that doesn't consider localized overheating due to high frequency current

ϑ_h Hottest point in the capacitor winding
 $= R_{th} \times P + \vartheta_0$

ϑ_0 Operating ambient temperature.
 It is the air temperature measured under steady conditions at 0,1m from the capacitor case and at two-thirds of the height from its base

Tc Temperature coefficient of capacitance.
 The coefficient is equal to $-260 \text{ ppm}/^\circ\text{C}$

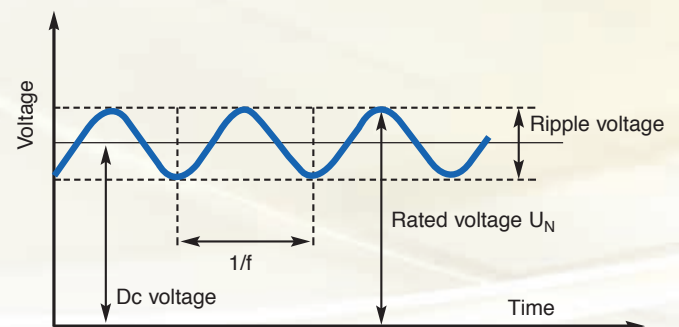
Ln Expected life at rated voltage U_N and hot-spot temperature of 70°C

L Expected life at the actual working conditions

Ls Self inductance of the capacitor.
 It is due to the internal connections, terminals, winding characteristics and physical dimensions

λ Failure rate (FIT) = $10^9 \times \text{failures/component} \times \text{hour}$

Graphical meaning of rated voltage U_N and peak to peak ripple voltage



The maximum allowed rms ripple voltage has to be lower than 10% of the rated voltage U_N (max 150 V_{rms})

Technical Information

Ratings

Capacitance tolerance: $\pm 10\%$, $\pm 5\%$ on request
Useful life: 100.000 hrs at 70°C hot-spot and U_N

Application

Expressly designed for operation with direct voltage

Environmental conditions

Operating temperature

ϑ_{\min} = -25°C or -40°C depending on the capacitors model

ϑ_{\max} = 70°C or 80°C depending on the capacitors model

ϑ_{\max} temperature of the hottest point on the case at which the capacitor may operate

ϑ_{\min} minimum operating ambient temperature at which the capacitor may operate

Storage temperature

$\vartheta_{S_{\min}}$ = -40°C, $\vartheta_{S_{\max}}$ = +85°C

$\vartheta_{S_{\max}}$ maximum ambient temperature at which the capacitor may be continuously maintained non-operating

$\vartheta_{S_{\min}}$ minimum ambient temperature at which the capacitor may be continuously maintained non-operating

Humidity class

Class F Max relative humidity: 75% annual on average, 95% 30 days per year, condensation not permitted

Design

The capacitor consists of metalized polypropylene windings filled with dry resin.


This technology gives many advantages:

- High DC voltage load capability
- High specific ratio capacitance to volume
- High capability to withstand surge currents
- Very good self healig characteristics

Case material and resin

- Self extinguishing in accordance to UL 94 V0

UL Approval

Capacitors families identified with simbol  are UL approved:
UL file E191589



Environmental Compatibility

LNK series do not contain PCB and is manufactured in accordance to RoHS restrictions

Protection against accidental contact

All the capacitors are NOT protected against accidental contact

Discharge

All the capacitors are NOT provided with internal/external discharge device

Type of protection

Unprotected: no presence of overpressure disconnecter/detector

Assembly/Cooling

The useful life of a capacitor can be dramatically reduced if exposed to excessive heat. In general, an increase in the ambient temperature of 7°C will halve the expected lifetime. Capacitors must be allowed to cool and should be shielded from external heat sources. Special tests by means of thermocouples should be conducted to be sure that the maximum hot spot temperature is not exceeded even under the most critical ambient circumstances. Capacitors shall not be placed near to heat source and a minimum clearance of 20mm between the capacitors shall be maintained

Overvoltages according to IEC 61071

Overvoltage	Maximum duration
$1,1 \times U_N$	30% of on load duration
$1,15 \times U_N$	30 min / day
$1,2 \times U_N$	5 min / day
$1,3 \times U_N$	1 min /day
$1,5 \times U_N$	30 ms, no more than 1000 times in the lifetime

Mounting position

LNK capacitors shown in this catalogue can operate in any position without restrictions

Failure criteria

Capacitors are considered failed when one of the following conditions happens:

- short circuit
- open circuit
- capacitance reduction higher than 5% of the initial value
- $\tan \delta$ increase over 3 times the initial value

Please contact ICAR Tech. Dept. in case of doubt

Routine dielectric tests

The performed tests before delivery are the following:

- capacitance and $\tan \delta$ measurement
- D.C. voltage test between terminals ($1.5 U_N$ for 10s)
- A.C. voltage test between terminals and case
 $1.414 \times U_N + 1000V$ for 10s but not less than 2000 V

Risk of Explosion and Fire

Capacitors consist mainly of polypropylene film.

The film may ignite as a result of internal fault or external overload. Appropriate measures should be ensured to avoid any risk of hazard in the event of failure.

FIRE LOAD: 46MJ/kg

EXTINGUISH WITH: solid extinguish agent, CO₂, foam

Reference standard

IEC 61071

Storage and handling

We suggest not to keep the capacitors stored for more than 6 years.

After 1 years of storage, we recommend before energizing a preliminary measurement of capacitance and dissipation factor.

Polypropylene film capacitors do not need to be energized before using (polypropylene film capacitor do not need reforming process as for electrolytic one).

Storage condition to be respected are the following:

- Relative humidity: 75% annual on average
- Maximum relative humidity: 95%, 30 days per year
- Condensation: not permitted
- Minimum storage temperature: -40°C
- Maximum storage temperature: +85°C

Capacitors shall be stored indoors packed.

Do not store capacitors in corrosive atmosphere (as example it is not allowed the presence of chloride and sulphide gas, acid, alkali, salt or equivalent substances).

Move packed capacitors with care, especially when using a fork lift truck. Do not strain connectors.

The theoretical expected life time curves given in "Operating Life pag.7" are not applicable after 2 years storage

Maintenance

Before any operation, disconnect the capacitor or the bank, wait 5 minutes, short-circuit and earth the terminals.

Do not touch any capacitor terminal if not previously short circuited and earthed.

Periodical checks and inspections are required to ensure reliable operations: disregarding the following basic maintenance rules may result in severe operation, bursting and fire.

Two weeks after installation

- current measurement in the capacitors and comparison with the nominal one. In case of difference from the nominal value, check the capacitors and the application where they are installed
- check the tightness of the connection and terminals.
This operation is always required before the start up.

Periodically* (at least every year)

- visual inspection in order to check mechanical deformation;
- clean the bushings and terminal boards to avoid short circuit due to dust or contaminants
- check the temperature in the cabinet where the capacitors are installed. An increase of temperature could be an indication of reduced efficiency of the cooling systems due to dust and other contaminants
- current measurement in the capacitors and comparison with the nominal one. In case of difference from the nominal value, check the application where they are installed
- check the surface temperature of energized capacitors.
In case of excessive temperature is recommended to replace the capacitor. This could be due to an increase of loss angle which is an indication of reached end of life
- check the tightness of the connection and terminals
- perform a C and $\tan \delta$ measurement. In case of capacitance reduction higher than 3% of the initial value or in case of $\tan \delta$ increase over 3 times the initial value, capacitors shall be replaced.

* maintenance schedule has to be established according to the specific operating conditions (for instance, in a polluted environment cleaning should be more frequent) and to the total safety requirement of the whole equipment where they are installed.

Operating Life

The lifetime of a capacitor depends on the hot spot temperature and on the field strength in its dielectric during operation. The capacitors have been designed for an average probable service life of 100.000hrs at rated duty (voltage, temperature and frequency).

Lifetime is a statistical value calculated on the basis of experience and on theoretical evaluations.

It does not have an absolute value and it is not possible to transfer automatically data coming from a limited quantity of capacitors to a whole population or even to a single batch of capacitors.

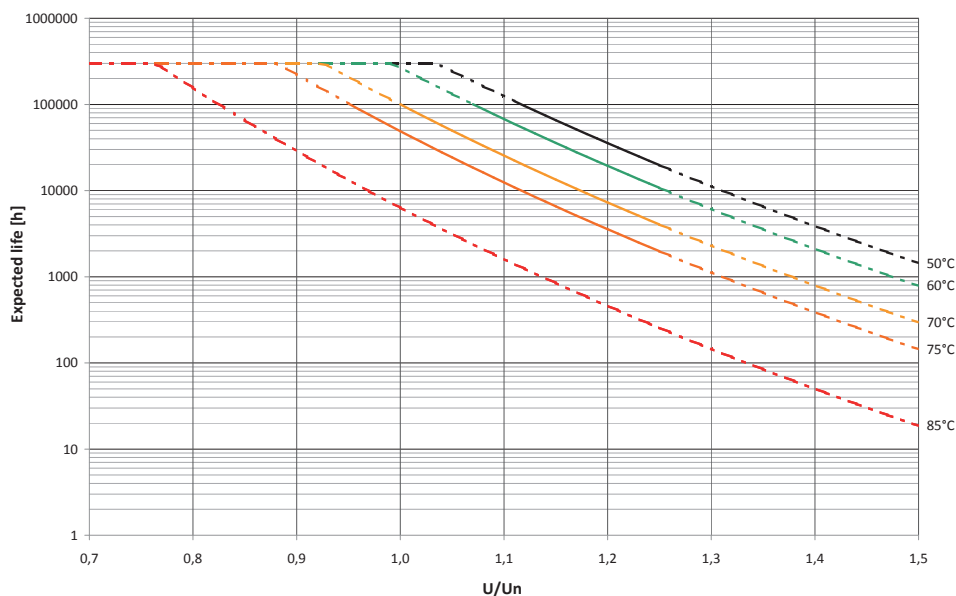
The following diagrams show the correlation between useful life, hot spot temperature and operating voltage.

The diagrams should be considered only as a theoretical reference.

In the lifetime graphic, statements for more than 300.000hrs are cut off as they are technically unreasonable.

Dashed lines underline a high degree of uncertainty in case of voltage and hot temperature far from the rated ones, whose effect is a wide scattering in the experimental data. Please consult our technical department in case of working condition different from the rated ones.

Theoretical expected life time vs voltage and hot spot temperature



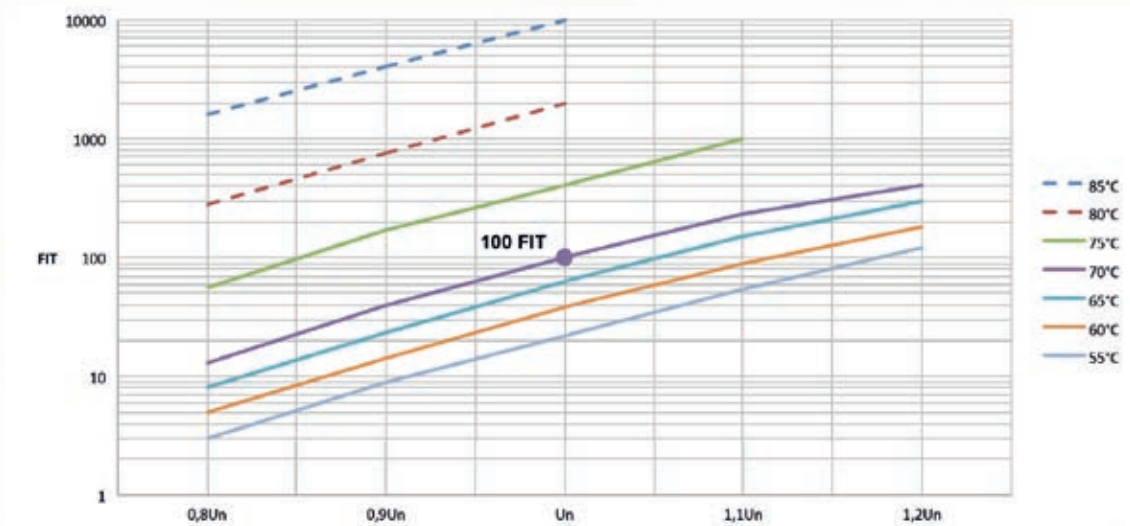
FIT Rate

Failure probability of a component is a statistical value described by a log normal distribution. It is related to an operating lifetime of 100.000hrs with hot spot temperature of 70°C. Failure considered are short circuits, interruptions, capacitance drifts exceeding 5% out of the rated tolerance limit and $\tan \delta$ increase over 3 times the initial value.

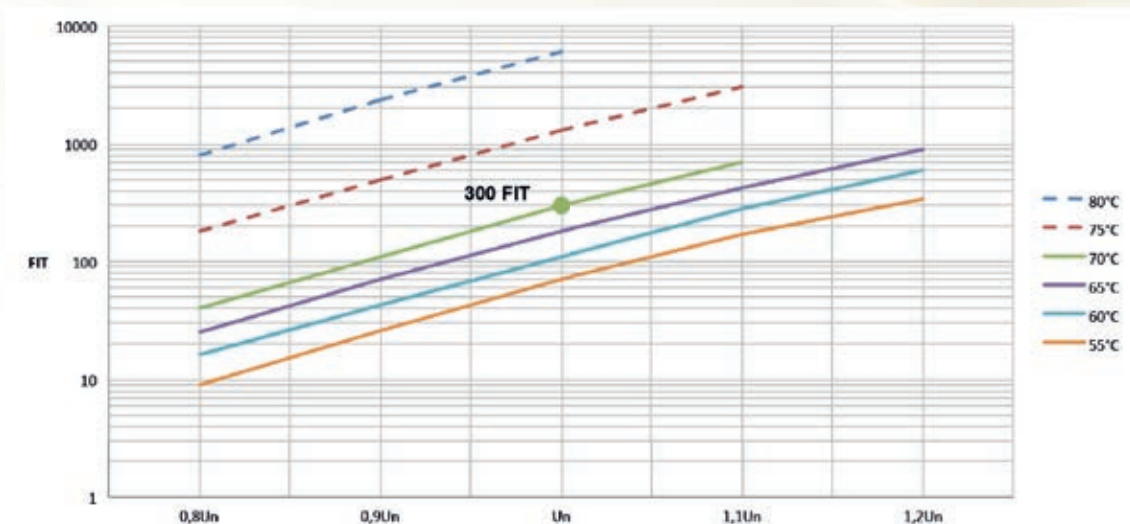
FIT is a statistical parameter coming from the empirical experience and should be considered as an approximate information about the effect of voltage and temperature conditions. It is not possible to automatically transfer the data coming from a limited quantity to a whole population or even to a batch of capacitors.

A simultaneous operation of capacitors at highest permissible voltage and operating temperature should be avoided otherwise, failure rate may increase.

Applicable for LNK-P1, LNK-P2, LNK-P3, LNK-P4, LNK-P5, LNK-P6 LNK-P7 LNK-P8 and LNK-M3 series.

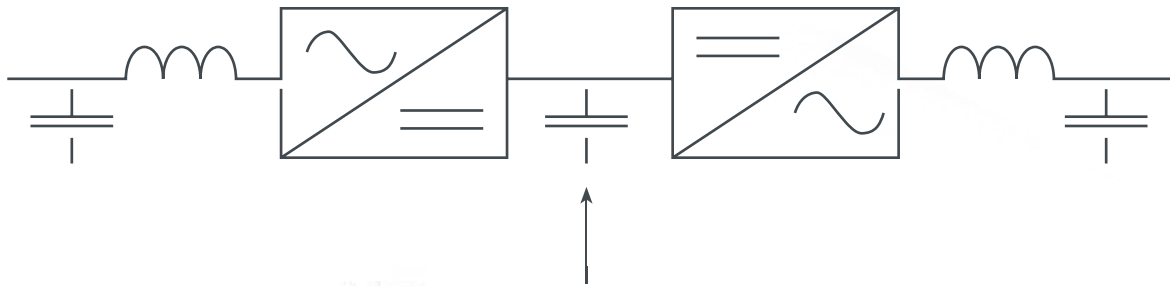


Applicable for LNK-P9 series.



LNK Series

THE EFFECTIVE WAY TO REPLACE ELECTROLYTIC CAPACITORS



LNK SERIES
DC LINK
CAPACITORS

KEY POINTS

- COMPACT DESIGN
- LOW LOSSES
- HIGH RIPPLE CURRENT
- DRY TECHNOLOGY I.E. NO LEAKAGE PROBLEMS
- SELF EXTINGUISHING RESINS AND PLASTICS ACCORDING TO UL94
- ON REQUEST, TECHNICAL DESIGN WITH DIFFERENT REQUIREMENTS AND HAZARD LEVELS ACCORDING TO EN 45545

ADVANTAGES OF LNK CAPACITORS AGAINST ELECTROLYTIC CAPACITORS

A typical industrial converter basically consists of an AC/DC section (to convert the AC voltage of the grid into a DC voltage) and a DC/AC section either at variable frequency (motor drive) or fixed frequency (generators or UPS). These two parts are connected through a DC bus (link circuit) where capacitors are required in order to filter the high frequency components (DC Link Capacitors).

Most important requirements for these capacitors are:

- capability to withstand high currents at frequencies above 1000 Hz
- high energy density (Joule/dm³)

Electrolytic Capacitors banks are used up to a voltage of 2000V, but their limits are:

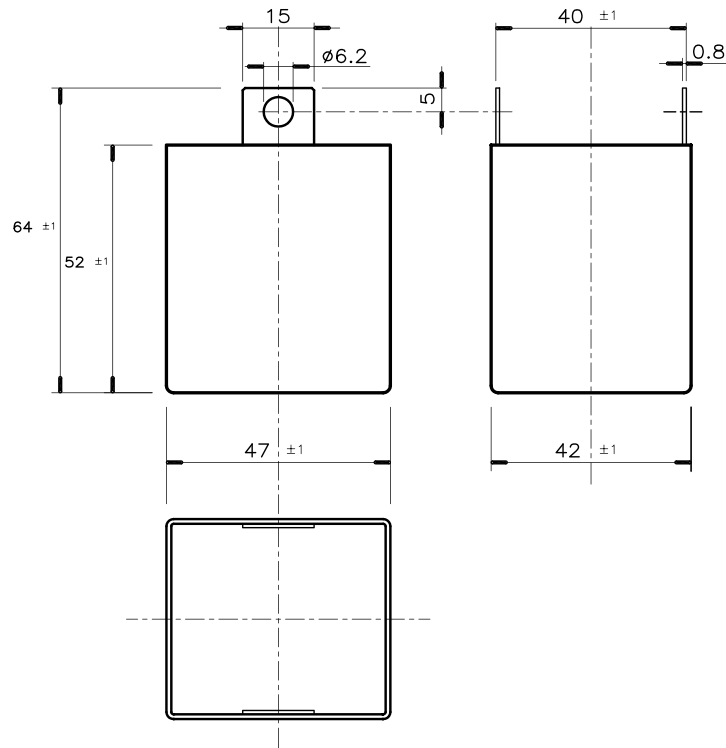
- maximum working voltage across each capacitor limited to about 450÷500V
- maximum current, especially at high frequency, limited by the high ESR (Equivalent Series Resistance) typical of this technology.

For these reasons, in general, Electrolytic Capacitors have to be connected in series/parallel to form banks able to withstand the voltages and the currents required by the application.

Polypropylene film capacitors are able to overcome these limits and **in most cases they are able to replace favourably electrolytic capacitors** in applications where the voltage is above 500Vdc.

Main advantages of Metallized Film Capacitor are:

- High current per capacitance (A/μF)
- High voltage per element
- High capability to withstand overvoltages up to 2 times the rated voltage
- More than 10 years estimated lifetime
- Easy connections and low equivalent inductance
- Non polar dielectric
- No leakage of dangerous or poisonous electrolytes.



LNK – P1X

- VERY LOW INDUCTANCE
- SMALL SIZE
- RESIN COMPLIES WITH REQUIREMENT R22, HL2 ACCORDING TO EN 45545

Failure rate: 100 FIT
 Operating Temperature -40°C / +70°C
 Maximum hot spot 85°C

MODEL	Capacitance C (µF)	Rated DC voltage U _N (V)	Peak voltage U _S (V)	Max rms current I _{max} (A)	Peak current I _{PK} (A)	Self inductance L _s (nH)	Series resistance R _s (mΩ)	Thermal resistance with natural cooling R _{thn} (°C/W)	Full current max working frequency (KHz)	Creepage between terminals (mm)	Clearance (mm)	Weight (kg)	Box quantity (pcs)
LNK-P1X-45-70	45	700	1400	40	1500	15	1,40	12,8	40	36	36	0,15	49
LNK-P1X-30-90	30	900	1800	35	1300	15	1,70	12,8	40	36	36	0,15	49
LNK-P1X-25-100	25	1000	2000	35	1300	15	1,80	12,8	40	36	36	0,15	49
LNK-P1X-22-110	22	1100	2200	35	1200	15	1,90	12,8	40	36	36	0,15	49
LNK-P1X-16-125	16	1250	2500	30	1000	15	2,28	12,8	40	36	36	0,15	49
LNK-P1X-10-145	10	1450	2900	25	700	15	3,00	12,8	40	36	36	0,15	49
LNK-P1X-7,5-180	7,5	1800	3600	20	700	15	3,25	12,8	40	36	36	0,15	49

- In case of doubt regarding the full current maximum working frequency, please contact ICAR Tech. Dept. for de-rating according to current spectrum
- The thermal resistance is estimated considering the capacitor alone, not fixed and in free air condition (natural convection)
- Routine dielectric test: DC voltage test between terminals = 1.5 U_N x 10 s
- I_{max} has been calculated for a thermal rise $\vartheta_n - \vartheta_0$ within about 30°C (for more details see "Selections rules and definitions").



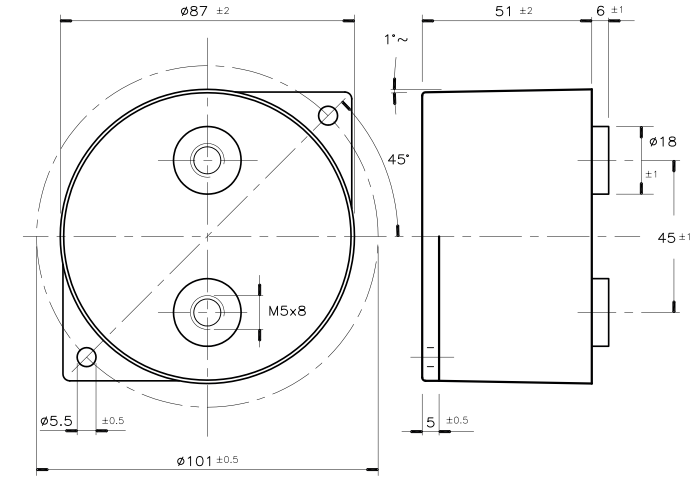
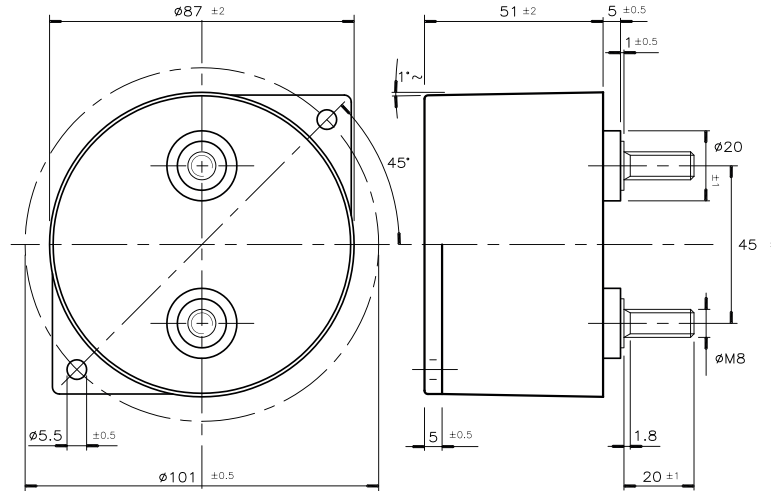
New version at 450V, 600V 2000V and 2200V

LNK – P2X

MALE TERMINALS

LNK – P2Z

FEMALE TERMINALS



ULfile: E191589 In accordance to EN45545

- HIGH CURRENT
- OPTIMIZED FOR HEATSINK MOUNTING
- RESIN COMPLIES WITH REQUIREMENT R22, HL2 ACCORDING TO EN 45545

Failure rate: 100 FIT
 Operating temperature -40°C / +70°C
 Max hot spot 85°C (70°C for 450V and 600V)

MODEL	Capacitance C(μF)	Rated DC voltage U _N (V)	Peak voltage U _S (V)	Max rms Current I _{max} (A)	Peak current I _{PK} (kA)	Self inductance L _s (nH)	Series resistance R _s (mΩ)	Thermal resistance R _{th} (°C/W)	Full current max working frequency (KHz)	Creepage between terminals (mm)	Clearance (mm)	Tightening torque (Nm)	Fixing feet tightening torque (Nm)	Weight (kg)	Box quantity (pcs)
LNK-P2X-250-45	250	450	900	80	6,8	<30	0,36	10	10	28	28	10	2	0,45	16
LNK-P2X-200-60	200	600	1200	80	6,5	<30	0,38	10	10	28	28	10	2	0,45	16
LNK-P2X-150-70	150	700	1400	85	5,3	<30	0,4	10	10	28	28	10	2	0,45	16
LNK-P2X-100-90	100	900	1800	75	4,5	<30	0,55	10	10	28	28	10	2	0,45	16
LNK-P2X-80-100	80	1000	2000	70	4	<30	0,6	10	10	28	28	10	2	0,45	16
LNK-P2X-70-110	70	1100	2200	70	3,8	<30	0,65	10	10	28	28	10	2	0,45	16
LNK-P2X-50-125	50	1250	2500	65	3,2	<30	0,75	10	10	28	28	10	2	0,45	16
LNK-P2X-40-145	40	1450	2900	60	2,9	<30	0,8	10	10	28	28	10	2	0,45	16
LNK-P2X-25-180	25	1800	3600	55	2,3	<30	1	10	10	28	28	10	2	0,45	16
LNK-P2X-20-200	20	2000	4000	50	2	<30	1,2	10	10	28	28	10	2	0,45	16
LNK-P2X-16-220	16	2200	4400	45	1,7	<30	1,3	10	10	28	28	10	2	0,45	16

- In order to decrease the thermal resistance, the capacitor should be installed on a heatsink through an heat conductive paste.
- The thermal resistance is estimated considering the capacitor alone, not fixed and in free air condition (natural convention)
- In case of doubt regarding the full current maximum working frequency, please contact ICAR Tech. Dept. for de-rating according to current spectrum
- Routine dielectric test: DC voltage test between terminals = 1.5 U_N x 10 s
- I_{max} has been calculated for a thermal rise $\vartheta_h - \vartheta_0$ within about 30°C (for more details see "Selections rules and definitions").



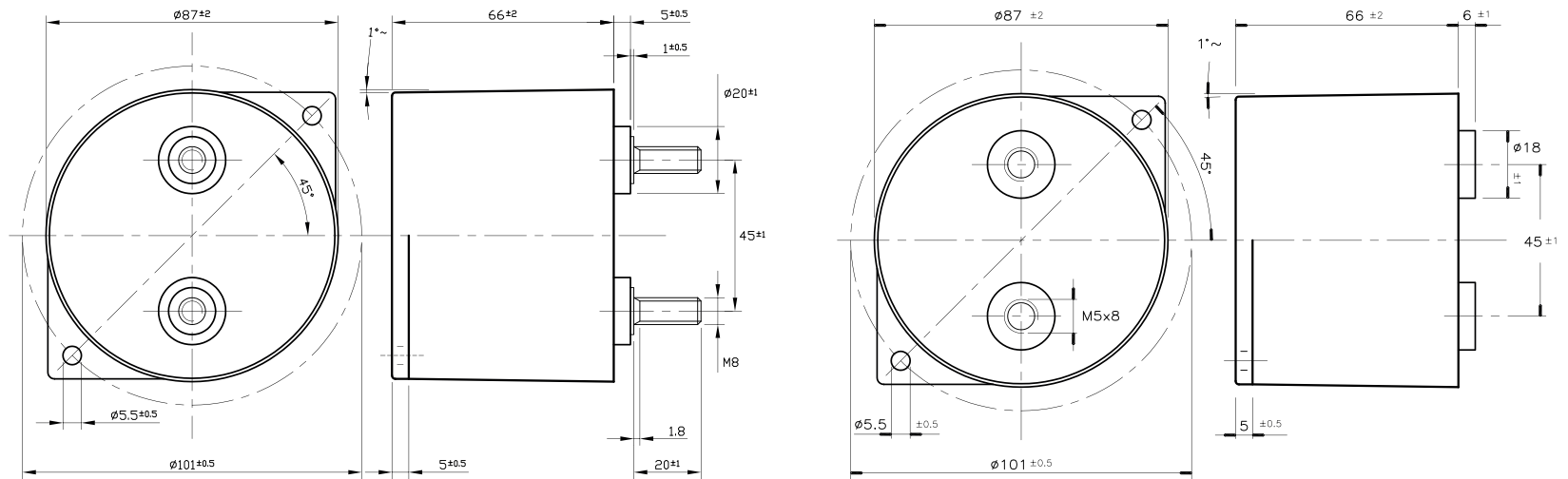
New version at 450V, 600V 2000V and 2200V

LNK – P2L

MALE TERMINALS

LNK – P2T

FEMALE TERMINALS



ULfile: E191589

- HIGH CURRENT
- OPTIMIZED FOR HEATSINK MOUNTING
- 🔥 RESIN COMPLIES WITH REQUIREMENT R22, HL2 ACCORDING TO EN 45545

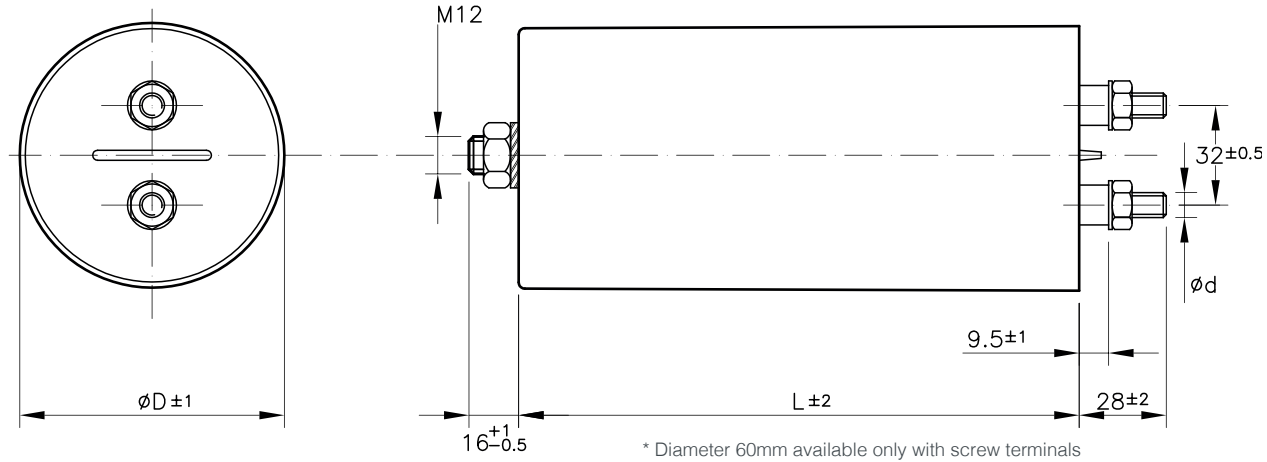
Failure rate: 100 FIT
 Operating temperature -40°C / +70°C
 Max hot spot 85°C (70°C for 450V and 600V)

MODEL	Capacitance C(μF)	Rated DC voltage U_N (V)	Peak voltage U_S (V)	Max rms current I_{max} (A)	Peak current I_{PK} (kA)	Self inductance L_s (nH)	Series resistance R_s (mΩ)	Thermal resistance R_{th} (°C/W)	Full current max working frequency (KHz)	Creepage between terminals (mm)	Clearance (mm)	Tightening Torque (Nm)	Fixing feet tightening torque (Nm)	Weight (Kg)	Box quantity (pcs)
LNK-P2L-350-45	350	450	900	60	6,5	40	0,65	8,75	10	28	28	10	2	0,55	16
LNK-P2L-280-60	280	600	1200	60	6	40	0,7	8,75	10	28	28	10	2	0,55	16
LNK-P2L-240-70	240	700	1400	60	5,6	40	1	8,75	10	28	28	10	2	0,55	16
LNK-P2L-150-90	150	900	1800	55	4,4	40	1,1	8,75	10	28	28	10	2	0,55	16
LNK-P2L-100-110	100	1100	2200	50	3,6	40	1,3	8,75	10	28	28	10	2	0,55	16
LNK-P2L-75-125	75	1250	2500	45	3,1	40	1,5	8,75	10	28	28	10	2	0,55	16
LNK-P2L-50-145	50	1450	2900	45	2,4	40	1,6	8,75	10	28	28	10	2	0,55	16
LNK-P2L-35-180	35	1800	3600	40	2,1	40	2	8,75	10	28	28	10	2	0,55	16
LNK-P2L-30-200	30	2000	4000	40	2	40	2,1	8,75	10	28	28	10	2	0,55	16
LNK-P2L-25-220	25	2200	4400	35	1,8	40	2,2	8,75	10	28	28	10	2	0,55	16

- In order to decrease the thermal resistance, the capacitor should be installed on a heatsink through an heat conductive paste.
- The thermal resistance is estimated considering the capacitor alone, not fixed and in free air condition (natural convention)
- In case of doubt regarding the full current maximum working frequency, please contact ICAR Tech. Dept. for de-rating according to current spectrum
- Routine dielectric test: DC voltage test between terminals = 1.5 U_N x 10 s
- I_{max} has been calculated for a thermal rise $\vartheta_h - \vartheta_0$ within about 30°C (for more details see "Selections rules and definitions").



LNK – P3Y



ULfile: E191589

- MECHANICAL LAYOUT OPTIMIZED TO EASY REPLACE ELECTROLYTIC CAPACITORS
- ALSO AVAILABLE WITH THREADED HOLE TERMINALS, ON REQUEST
- RESIN COMPLIES WITH REQUIREMENT R22, HL2 ACCORDING TO EN 45545

D (mm)	Creepage (mm)	Clearence (mm)	Screw terminals d	Tightening fixing stud (Nm)	Torque terminals (Nm)
60	30	19,5	M6	10	6
75	30	19,5	M6	10	6
85	30	19,5	M8	10	6
100	30	19,5	M8	10	10

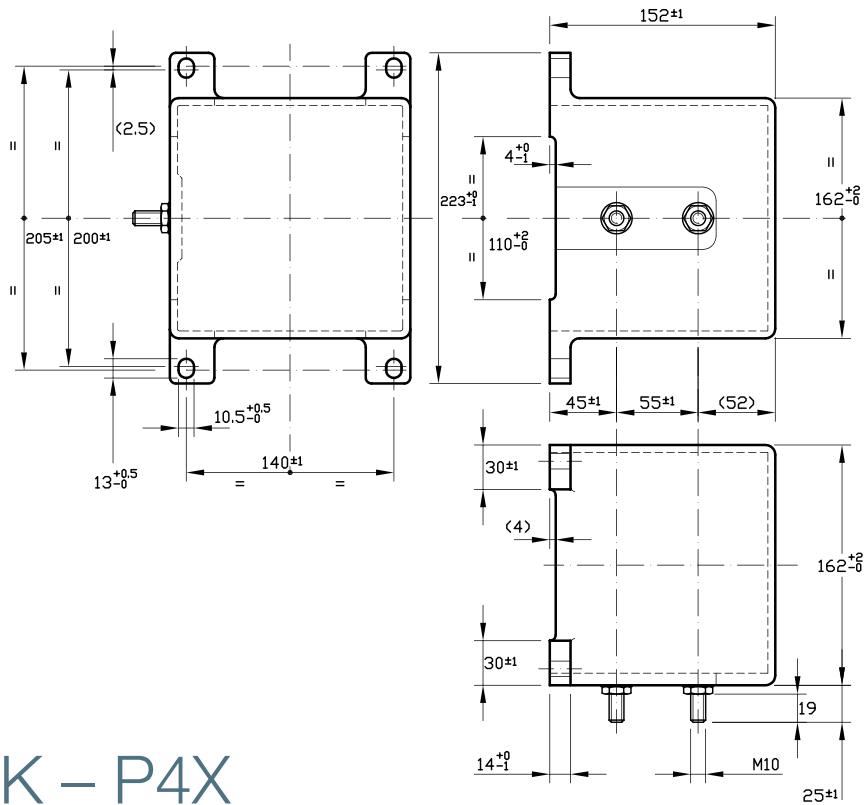
Failure rate: 100 FIT
 Operating temperature -40°C / +70°C
 Max hot spot 85°C (70°C for 450V and 600V)

MODEL	Capacitance C(μF)	Rated DC voltage U _N (V)	Peak voltage U _S (V)	Max rms current I _{max} (A)	Peak current I _{PK} (kA)	Self inductance L _s (nH)	Series resistance R _s (mΩ)	Thermal resistance R _{th} (°C/W)	Full current max working frequency (KHz)	Weight (kg)	Diameter (mm)	Length (mm)	Box quantity (pcs)
LNK-P3Y-350-45	350	450	680	25	1,4	65	4,8	6,1	5	0,5	60	140	36
LNK-P3Y-630-45	630	450	680	35	2,5	65	2,9	5,9	5	0,75	75	140	16
LNK-P3Y-720-45	720	450	680	33	2,5	75	3,2	5,9	5	0,8	75	155	16
LNK-P3Y-850-45	850	450	680	40	3,3	65	2,3	5,7	5	0,9	85	140	16
LNK-P3Y-1300-45	1300	450	680	45	4,4	75	2,1	5,5	5	1,4	100	155	9
LNK-P3Y-260-60	260	600	900	25	1,2	65	5,3	6,1	5	0,5	60	140	36
LNK-P3Y-470-60	470	600	900	35	2,1	65	3,2	5,9	5	0,75	75	140	16
LNK-P3Y-540-60	540	600	900	33	2,1	75	3,5	5,9	5	0,8	75	155	16
LNK-P3Y-640-60	640	600	900	40	2,9	65	2,6	5,7	5	0,9	85	140	16
LNK-P3Y-1000-60	1000	600	900	45	4	75	2,3	5,5	5	1,4	100	155	9

MODEL

MODEL	Capacitance C(μF)	Rated DC voltage U _N (V)	Peak voltage U _S (V)	Max rms current I _{max} (A)	Peak current I _{PK} (kA)	Self inductance Ls (nH)	Series resistance Rs (mΩ)	Thermal resistance R _{th} (°C/W)	Full current max working frequency (KHz)	Weight (kg)	Diameter (mm)	Length (mm)	Box quantity (pcs)
LNK-P3Y-220-80	220	800	1200	25	1,1	65	5,7	6,1	5	0,5	60	140	36
LNK-P3Y-400-80	400	800	1200	35	2	65	3,4	5,9	5	0,75	75	140	16
LNK-P3Y-460-80	460	800	1200	30	2	75	3,7	5,9	5	0,8	75	155	16
LNK-P3Y-540-80	540	800	1200	40	2,7	65	2,7	5,7	5	0,9	85	140	16
LNK-P3Y-870-80	870	800	1200	40	3,8	75	2,4	5,5	5	1,4	100	155	9
LNK-P3Y-160-110	160	1100	1650	25	0,9	65	6,5	6,1	5	0,5	60	140	36
LNK-P3Y-285-110	285	1100	1650	30	1,7	65	3,9	5,9	5	0,75	75	140	16
LNK-P3Y-320-110	320	1100	1650	30	1,6	75	4,4	5,9	5	0,8	75	155	16
LNK-P3Y-380-110	380	1100	1650	35	2,2	65	3,1	5,7	5	0,9	85	140	16
LNK-P3Y-620-110	620	1100	1650	40	3,2	75	2,6	5,5	5	1,4	100	155	9
LNK-P3Y-105-130	105	1300	1950	20	0,8	65	7,8	6,1	5	0,5	60	140	36
LNK-P3Y-190-130	190	1300	1950	30	1,4	65	4,6	5,9	5	0,75	75	140	16
LNK-P3Y-210-130	210	1300	1950	25	3	75	5,2	5,9	5	0,8	75	155	16
LNK-P3Y-260-130	260	1300	1950	30	1,9	65	3,6	5,7	5	0,9	85	140	16
LNK-P3Y-420-130	420	1300	1950	35	2,6	75	3	5,5	5	1,4	100	155	9
LNK-P3Y-65-165	65	1650	2475	18	0,6	65	9,9	6,1	5	0,5	60	140	36
LNK-P3Y-120-165	120	1650	2475	25	1,1	65	5,6	5,9	5	0,75	75	140	16
LNK-P3Y-140-165	140	1650	2475	25	1,1	75	6,2	5,9	5	0,8	75	155	16
LNK-P3Y-160-165	160	1650	2475	30	1,4	65	4,4	5,7	5	0,9	85	140	16
LNK-P3Y-270-165	270	1650	2475	30	2,1	75	3,6	5,5	5	1,4	100	155	9
LNK-P3Y-50-185	50	1850	2775	18	0,5	65	11,1	6,1	5	0,5	60	140	36
LNK-P3Y-90-185	90	1850	2775	25	0,9	65	6,4	5,9	5	0,75	75	140	16
LNK-P3Y-100-185	100	1850	2775	20	0,9	75	7,4	5,9	5	0,8	75	155	16
LNK-P3Y-125-185	125	1850	2775	25	1,3	65	4,9	5,7	5	0,9	85	140	16
LNK-P3Y-200-185	200	1850	2775	30	1,8	75	4,1	5,5	5	1,4	100	155	9
LNK-P3Y-40-200	40	2000	3000	15	0,5	65	12,2	6,1	5	0,5	60	140	36
LNK-P3Y-70-200	70	2000	3000	20	0,8	65	7,2	5,9	5	0,75	75	140	16
LNK-P3Y-80-200	80	2000	3000	20	0,8	75	8,1	5,9	5	0,8	75	155	16
LNK-P3Y-100-200	100	2000	3000	25	1,1	65	5,3	5,7	5	0,9	85	140	16
LNK-P3Y-160-200	160	2000	3000	30	1,6	75	4,4	5,5	5	1,4	100	155	9
LNK-P3Y-33-220	33	2200	3300	15	0,4	65	13,2	6,1	5	0,5	60	140	36
LNK-P3Y-60-220	60	2200	3300	20	0,8	65	7,5	5,9	5	0,75	75	140	16
LNK-P3Y-65-220	65	2200	3300	20	0,7	75	8,9	5,9	5	0,8	75	155	16
LNK-P3Y-80-220	80	2200	3300	25	1	65	5,8	5,7	5	0,9	85	140	16
LNK-P3Y-125-220	125	2200	3300	25	1,4	75	5	5,5	5	1,4	100	155	9

- In order to decrease the thermal resistance, the capacitor should be installed on a heatsink through an heat conductive paste.
- The thermal resistance is estimated considering the capacitor alone, not fixed and in free air condition (natural convention)
- In case of doubt regarding the full current maximum working frequency, please contact ICAR Tech. Dept. for de-rating according to current spectrum
- Routine dielectric test: DC voltage test between terminals = 1.5 U_N x 10 s, AC voltage test between terminals and fixing stud = 1.414U_N + 1000 x10s or 2000V whichever is the highest value
- I_{max} has been calculated for a thermal rise $\vartheta_h - \vartheta_0$ within about 30°C (for more details see "Selections rules and definitions").



LNK – P4X

ULfile: E191589

- HEAVY DUTY CONSTRUCTION
- EXTERNAL RESIN AND CASE COMPLIES WITH REQUIREMENT R22, HL2 ACCORDING TO EN 45545

Failure rate: 100 FIT
 Operating temperature -40°C / +80°C
 Max hot spot 85°C (70°C for 650V)

MODEL	Capacitance C(μF)	Rated DC voltage U_N (V)	Peak voltage U_S (V)	Max rms current I_{max} (A)	Peak current I_{PK} (kA)	Self inductance L_s (nH)	Series resistance R_s (mΩ)	Thermal resistance with natural cooling R_{thn} (°C/W)	Full current Max Working Frequency (KHz)	Creepage between terminals (mm)	Clearance (mm)	Tightening torque (Nm)	Fixing feet tightening torque (Nm)	Weight (kg)	Box quantity (pcs)
LNK-P4X-2750-65	2750	650	975	120	10500	<30	0,62	2,75	15	47	35	20	8	5,2	4
LNK-P4X-2000-70	2000	700	1400	120	8800	<30	0,5	2,75	15	47	35	20	8	5,2	4
LNK-P4X-2350-80	2350	800	1200	120	10000	<30	0,65	2,75	15	47	35	20	8	5,2	4
LNK-P4X-1300-90	1300	900	1800	120	7200	<30	0,6	2,75	15	47	35	20	8	5,2	4

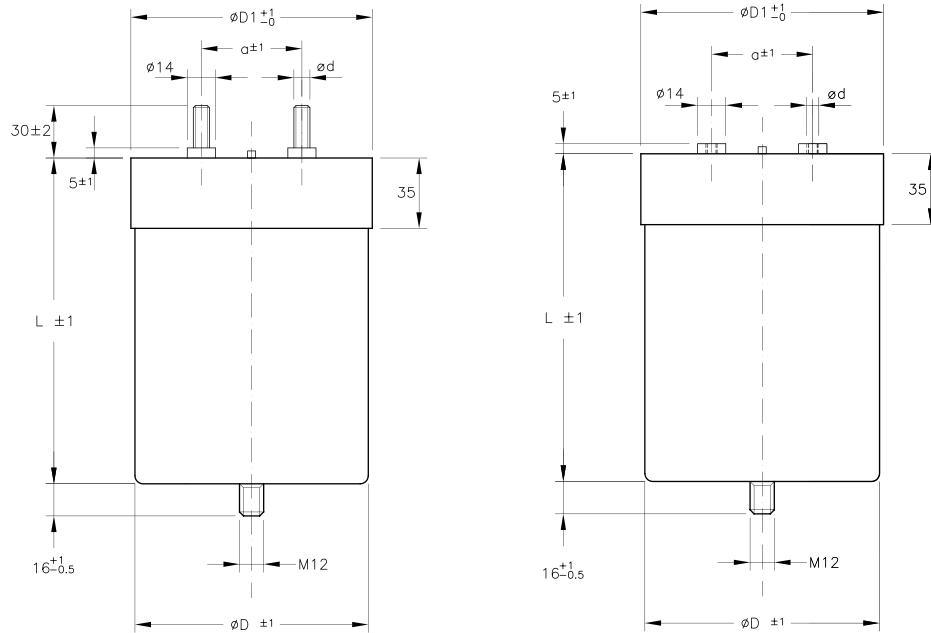
- In case of doubt regarding the full current maximum working frequency, please contact ICAR Tech. Dept. for de-rating according to current spectrum
- The thermal resistance is estimated considering the capacitor alone, not fixed and in free air condition (natural convection)
- Maximum hot spot temperature: 85°C
- Routine dielectric test: DC voltage test between terminals = $1.5 U_N \times 10 s$
- I_{max} has been calculated for a thermal rise $\vartheta_h - \vartheta_0$ within about 30°C (for more details see "Selections rules and definitions").

MODEL

MODEL	Capacitance C(μF)	Rated DC voltage U _N (V)	Peak voltage U _S (V)	Max rms current I _{max} (A)	Peak current I _{PK} (kA)	Self inductance L _s (nH)	Series resistance R _s (mΩ)	Thermal resistance with natural cooling R _{thn} (°C/W)	Full current max working frequency (KHz)	Creepage between terminals (mm)	Clearance (mm)	Tightening torque (Nm)	Fixing feet tightening torque (Nm)	Weight (kg)	Box quantity (pcs)
LNK-P4X-1500-90	1500	900	1350	110	8000	<30	0,80	2,75	15	47	35	20	8	5,2	4
LNK-P4X-900-110	900	1100	2200	120	6000	<30	0,7	2,75	15	47	35	20	8	5,2	4
LNK-P4X-1150-110	1150	1100	1650	105	7000	<30	0,90	2,75	15	47	35	20	8	5,2	4
LNK-P4X-650-125	650	1250	2500	115	5200	<30	0,8	2,75	15	47	35	20	8	5,2	4
LNK-P4X-1000-125	1000	1250	1875	100	6500	<30	0,95	2,75	15	47	35	20	8	5,2	4
LNK-P4X-500-145	500	1450	2900	100	8800	<30	0,9	2,75	15	47	35	20	8	5,2	4
LNK-P4X-730-145	730	1450	2175	95	5500	<30	1,10	2,75	15	47	35	20	8	5,2	4
LNK-P4X-350-180	350	1800	3600	100	7600	<30	1,1	2,75	15	47	35	20	8	5,2	4
LNK-P4X-430-180	430	1800	2700	85	4000	<30	1,40	2,75	15	47	35	20	8	5,2	4
LNK-P4X-220-220	220	2200	4400	120	8400	<30	0,7	2,75	15	47	35	20	8	5,2	4
LNK-P4X-265-220	265	2200	3300	105	6800	<30	0,90	2,75	15	47	35	20	8	5,2	4
LNK-P4X-170-280	170	2800	4200	95	5400	<30	1,10	2,75	15	47	35	20	8	5,2	4
LNK-P4X-55-400	55	4000	8000	60	4200	<30	2,85	2,75	15	47	35	20	8	5,2	4
LNK-P4X-75-400	75	4000	6000	55	3400	<30	3,25	2,75	15	47	35	20	8	5,2	4
LNK-P4X-20-500	20	5000	10000	50	2300	<30	4,5	2,75	15	47	35	20	8	5,2	4
LNK-P4X-50-500	50	5000	7500	50	2600	<30	4,05	2,75	15	47	35	20	8	5,2	4

- In order to decrease the thermal resistance, the capacitor should be installed on a heatsink through an heat conductive paste.
- The thermal resistance is estimated considering the capacitor alone, not fixed and in free air condition (natural convention)
- Routine dielectric test: DC voltage test between terminals = 1.5 U_N x 10 s
- I_{max} has been calculated for a thermal rise $\vartheta_n - \vartheta_0$ within about 30°C (for more details see "Selections rules and definitions").

new



LNK – M3

ULfile: E191589

- MECHANICAL LAYOUT OPTIMIZED TO EASY REPLACE ELECTROLYTIC CAPACITORS
- AVAILABLE BOTH WITH SCREW AND THREADED HOLES TERMINALS
- RESIN COMPLIES WITH REQUIREMENT R22, HL2 ACCORDING TO EN 45545

Terminals selection

M3R	M6 threaded holes
M3S	M8 threaded holes
M3T	M6 screw terminals
M3U	M8 screw terminals

D (mm)	D1 (mm)	a (mm)	Creepage between terminals (mm)	Clearance (mm)	Terminal screw or threaded hole	Torque fixing stud M12 (Nm)	Torque terminals M6/M8 (Nm)
85	89	32	36	20	M6/M8	10	6/8
100	104	32	36	18	M6/M8	10	6/8
116	120	50	45	36	M6/M8	10	6/8
136	140	50	48	36	M6/M8	10	6/8

Failure rate: 100 FIT
 Operating temperature -40°C / +75°C
 Maximum hot spot 85°C (70°C for 550V and 700V)

*M2 version (lower diameter) available on request.

LNK – M3...1 HIGH CURRENT

MODEL	U _N : 550V	U _s : 820V									
	Capacitance C(μF)	Max rms current I _{max} (A)	Peak current I _{PK} (kA)	Self inductance L _s (nH)	Series resistance R _s (mΩ)	Thermal resistance R _{th} (°C/W)	Full current max working frequency (KHz)	Weight (kg)	Diameter (mm)	Length (mm)	Box quantity (pcs)
LNK-M3_1-750-55	750	70	6,2	40	0,62	6,2	10	0,9	85	133	16
LNK-M3_1-900-55	900	70	6,2	45	0,75	5,3	10	1,1	85	158	16
LNK-M3_1-1000-55	1000	90	8,5	40	0,53	5,2	10	1,3	100	133	9
LNK-M3_1-1100-55	1100	70	6,2	50	0,85	4,6	10	1,2	85	182	16
LNK-M3_1-1250-55	1250	90	8,5	45	0,53	4,4	10	1,5	100	158	9
LNK-M3_1-1500-55	1500	100	13	40	0,38	4,3	10	1,6	116	133	9
LNK-M3_1-1530-55	1530	70	6,2	60	1,25	3,7	10	1,5	85	233	4
LNK-M3_1-1550-55	1550	90	8,5	50	0,68	4	10	1,7	100	182	9
LNK-M3_1-1900-55	1900	100	13	45	0,42	3,7	10	1,9	116	158	9
LNK-M3_1-2000-55	2000	80	8,5	60	0,95	3,2	10	2	100	233	3
LNK-M3_1-2300-55	2300	85	8,5	60	0,95	3	10	2,1	100	253	3
LNK-M3_1-2350-55	2350	100	13	50	0,48	3,3	10	2,2	116	182	9
LNK-M3_1-2600-55	2600	90	8,5	60	0,95	2,6	10	2,4	100	283	3
LNK-M3_1-3200-55	3200	100	13	60	0,65	2,7	10	2,7	116	233	3
LNK-M3_1-3250-55	3250	100	18	60	0,48	2,3	10	3,1	116	270	3
LNK-M3_1-3500-55	3500	100	13	60	0,7	2,5	10	2,9	116	253	3
LNK-M3_1-4000-55	4000	100	13	60	0,7	2,2	10	3,2	116	283	3
LNK-M3_1-4500-55	4500	100	18	70	0,57	1,9	10	3,9	116	345	3
LNK-M3_1-4700-55 *	4700	120	25	60	0,42	1,9	10	4,3	136	270	2
LNK-M3_1-5600-55 *	5600	120	18	60	0,58	1,8	10	4,4	136	283	2
LNK-M3_1-6400-55 *	6400	120	25	70	0,52	1,6	10	5,4	136	345	2

* Not UL approved

- In case of doubt regarding the full current maximum working frequency, please contact ICAR Tech. Dept. for de-rating according to current spectrum
- The thermal resistance is estimated considering the capacitor alone, not fixed and in free air condition (natural convection).
- Routine dielectric test: DC voltage test between terminals = 1.5 U_N x 10 s, AC voltage test between terminals and case = 1.414U_N + 1000 x10s or 2000V whichever is the highest value
- I_{max} has been calculated for a thermal rise $\vartheta_h - \vartheta_0$ within about 25°C (for more details see "Selections rules and definitions").

LNK – M3...1 HIGH CURRENT

U_N: 700V

U_s: 1050V

MODEL

MODEL	Capacitance C(μF)	Max rms current I _{max} (A)	Peak current I _{PK} (kA)	Self inductance L _s (nH)	Series resistance R _s (mΩ)	Thermal resistance R _{th} (°C/W)	Full current max working frequency (KHz)	Weight (kg)	Diameter (mm)	Length (mm)	Box quantity (pcs)
LNK-M3_1-560-70	560	70	6	40	0,65	6,2	10	0,9	85	133	16
LNK-M3_1-710-70	710	70	6	45	0,75	5,3	10	1,1	85	158	16
LNK-M3_1-770-70	770	90	8	40	0,55	5,2	10	1,3	100	133	9
LNK-M3_1-870-70	870	70	6	50	0,9	4,6	10	1,2	85	182	16
LNK-M3_1-950-70	950	90	8	45	0,55	4,4	10	1,5	100	158	9
LNK-M3_1-1100-70	1100	100	12	40	0,4	4,3	10	1,6	116	133	9
LNK-M3_1-1180-70	1180	70	6	60	1,3	3,7	10	1,5	85	233	4
LNK-M3_1-1200-70	1200	90	8	50	0,7	4	10	1,7	100	182	9
LNK-M3_1-1450-70	1450	100	12	45	0,45	3,7	10	1,9	116	158	9
LNK-M3_1-1600-70	1600	80	8	60	1	3,2	10	2	100	233	3
LNK-M3_1-1750-70	1750	100	12	50	0,5	3,3	10	2,2	116	182	9
LNK-M3_1-1800-70	1800	85	8	60	1	3	10	2,1	100	253	3
LNK-M3_1-2000-70	2000	90	8	60	1	2,6	10	2,4	100	283	3
LNK-M3_1-2400-70	2400	100	12	60	0,7	2,7	10	2,7	116	233	3
LNK-M3_1-2450-70	2450	100	16	60	0,5	2,3	10	3,1	116	270	3
LNK-M3_1-2650-70	2650	100	12	60	0,75	2,5	10	2,9	116	253	3
LNK-M3_1-3000-70	3000	100	12	60	0,75	2,2	10	3,2	116	283	3
LNK-M3_1-3300-70	3300	100	16	70	0,6	1,9	10	3,9	116	345	3
LNK-M3_1-3500-70 *	3500	120	23	60	0,45	1,9	10	4,3	136	270	2
LNK-M3_1-4200-70 *	4200	120	16	60	0,6	1,8	10	4,4	136	283	2
LNK-M3_1-4700-70 *	4700	120	23	70	0,55	1,6	10	5,4	136	345	2

* Not UL approved

- In case of doubt regarding the full current maximum working frequency, please contact ICAR Tech. Dept. for de-rating according to current spectrum
- The thermal resistance is estimated considering the capacitor alone, not fixed and in free air condition (natural convection).
- Routine dielectric test: DC voltage test between terminals = 1.5 U_N x 10 s, AC voltage test between terminals and case = 1.414U_N + 1000 x10s or 2000V whichever is the highest value
- I_{max} has been calculated for a thermal rise $\vartheta_h - \vartheta_0$ within about 25°C (for more details see "Selections rules and definitions").

LNK – M3...1 HIGH CURRENT

MODEL	U _N : 900V		U _s : 1350V								
	Capacitance C(μF)	Max rms current I _{max} (A)	Peak current I _{PK} (kA)	Self inductance L _s (nH)	Series resistance R _s (mΩ)	Thermal resistance R _{th} (°C/W)	Full current max working frequency (KHz)	Weight (kg)	Diameter (mm)	Length (mm)	Box quantity (pcs)
LNK-M3_1-470-90	470	70	5,5	40	0,7	6,2	10	0,9	85	133	16
LNK-M3_1-605-90	605	70	5,5	45	0,8	5,3	10	1,1	85	158	16
LNK-M3_1-660-90	660	90	7,3	40	0,55	5,2	10	1,3	100	133	9
LNK-M3_1-740-90	740	70	5,5	50	0,95	4,6	10	1,2	85	182	16
LNK-M3_1-830-90	830	90	7,3	45	0,6	4,4	10	1,5	100	158	9
LNK-M3_1-950-90	950	100	11	40	0,4	4,3	10	1,6	116	133	9
LNK-M3_1-1000-90	1000	70	5,5	60	1,4	3,7	10	1,5	85	233	4
LNK-M3_1-1020-90	1020	85	7,3	50	0,75	4	10	1,7	100	182	9
LNK-M3_1-1220-90	1220	100	11	45	0,45	3,7	10	1,9	116	158	9
LNK-M3_1-1350-90	1350	80	7,3	60	1,1	3,2	10	2	100	233	3
LNK-M3_1-1500-90	1500	100	11	50	0,55	3,3	10	2,2	116	182	9
LNK-M3_1-1530-90	1530	85	7,3	60	1,05	3	10	2,1	100	253	3
LNK-M3_1-1700-90	1700	90	7,3	60	1,05	2,6	10	2,4	100	283	3
LNK-M3_1-2000-90	2000	100	14	60	0,5	2,3	10	3,1	116	270	3
LNK-M3_1-2030-90	2030	100	11	60	0,75	2,7	10	2,7	116	233	3
LNK-M3_1-2250-90	2250	100	11	60	0,78	2,5	10	2,9	116	253	3
LNK-M3_1-2570-90	2570	100	11	60	0,78	2,2	10	3,2	116	283	3
LNK-M3_1-2800-90	2800	100	14	70	0,65	1,9	10	3,9	116	345	3
LNK-M3_1-3000-90 *	3000	120	21	60	0,45	1,9	10	4,3	136	270	2
LNK-M3_1-3500-90 *	3500	120	14	60	0,65	1,8	10	4,4	136	283	2
LNK-M3_1-4000-90 *	4000	120	21	70	0,55	1,6	10	5,4	136	345	2

* Not UL approved

- In case of doubt regarding the full current maximum working frequency, please contact ICAR Tech. Dept. for de-rating according to current spectrum
- The thermal resistance is estimated considering the capacitor alone, not fixed and in free air condition (natural convection).
- Routine dielectric test: DC voltage test between terminals = 1.5 U_N x 10 s, AC voltage test between terminals and case = 1.414U_N + 1000 x10s or 2000V whichever is the highest value
- I_{max} has been calculated for a thermal rise $\vartheta_h - \vartheta_0$ within about 25°C (for more details see "Selections rules and definitions").

LNK – M3...1 HIGH CURRENT

U_N: 1100V

U_s: 1650V

MODEL

MODEL	Capacitance C(μF)	Max rms current I _{max} (A)	Peak current I _{PK} (kA)	Self inductance L _s (nH)	Series resistance R _s (mΩ)	Thermal resistance R _{th} (°C/W)	Full current max working frequency (KHz)	Weight (kg)	Diameter (mm)	Length (mm)	Box quantity (pcs)
LNK-M3_1-335-110	335	70	4,7	40	0,75	6,2	10	0,9	85	133	16
LNK-M3_1-430-110	430	70	4,7	45	0,9	5,3	10	1,1	85	158	16
LNK-M3_1-470-110	470	85	6,1	40	0,6	5,2	10	1,3	100	133	9
LNK-M3_1-530-110	530	70	4,7	50	1,05	4,6	10	1,2	85	182	16
LNK-M3_1-580-110	580	90	6,1	45	0,6	4,4	10	1,5	100	158	9
LNK-M3_1-680-110	680	100	9,4	40	0,45	4,3	10	1,6	116	133	9
LNK-M3_1-720-110	720	65	4,7	60	1,55	3,7	10	1,5	85	233	4
LNK-M3_1-730-110	730	85	6,1	50	0,8	4	10	1,7	100	182	9
LNK-M3_1-870-110	870	100	9,4	45	0,5	3,7	10	1,9	116	158	9
LNK-M3_1-950-110	950	80	6,1	60	1,2	3,2	10	2	100	233	3
LNK-M3_1-1065-110	1065	100	9,4	50	0,58	3,3	10	2,2	116	182	9
LNK-M3_1-1100-110	1100	80	6,1	60	1,2	3	10	2,1	100	253	3
LNK-M3_1-1250-110	1250	90	6,1	60	1,15	2,6	10	2,4	100	283	3
LNK-M3_1-1450-110	1450	100	9,4	60	0,85	2,7	10	2,7	116	233	3
LNK-M3_1-1500-110	1500	100	12	60	0,55	2,3	10	3,1	116	270	3
LNK-M3_1-1600-110	1600	100	9,4	60	0,85	2,5	10	2,9	116	253	3
LNK-M3_1-1850-110	1850	100	9,4	60	0,85	2,2	10	3,2	116	283	3
LNK-M3_1-2000-110	2000	100	12	70	0,7	1,9	10	3,9	116	345	3
LNK-M3_1-2100-110 *	2100	120	18	60	0,5	1,9	10	4,3	136	270	2
LNK-M3_1-2500-110 *	2500	120	12	60	0,7	1,8	10	4,4	136	283	2
LNK-M3_1-2900-110 *	2900	120	18	70	0,6	1,6	10	5,4	136	345	2

* Not UL approved

- In case of doubt regarding the full current maximum working frequency, please contact ICAR Tech. Dept. for de-rating according to current spectrum
- The thermal resistance is estimated considering the capacitor alone, not fixed and in free air condition (natural convection).
- Routine dielectric test: DC voltage test between terminals = 1.5 U_N x 10 s, AC voltage test between terminals and case = 1.414U_N + 1000 x10s or 2000V whichever is the highest value
- I_{max} has been calculated for a thermal rise $\vartheta_h - \vartheta_0$ within about 25°C (for more details see "Selections rules and definitions").

LNK – M3...1 HIGH CURRENT

MODEL	U _N : 1300V	U _s : 1950V									
	Capacitance C(μF)	Max rms current I _{max} (A)	Peak current I _{PK} (kA)	Self inductance L _s (nH)	Series resistance R _s (mΩ)	Thermal resistance R _{th} (°C/W)	Full current max working frequency (KHz)	Weight (kg)	Diameter (mm)	Length (mm)	Box quantity (pcs)
LNK-M3_1-225-130	225	65	3,8	40	0,85	6,2	10	0,9	85	133	16
LNK-M3_1-290-130	290	65	3,8	45	1,05	5,3	10	1,1	85	158	16
LNK-M3_1-310-130	310	80	5,1	40	0,7	5,2	10	1,3	100	133	9
LNK-M3_1-350-130	350	65	3,8	50	1,25	4,6	10	1,2	85	182	16
LNK-M3_1-400-130	400	85	5,1	45	0,7	4,4	10	1,5	100	158	9
LNK-M3_1-455-130	455	100	7,7	40	0,5	4,3	10	1,6	116	133	9
LNK-M3_1-480-130	480	60	3,8	60	1,8	3,7	10	1,5	85	233	4
LNK-M3_1-490-130	490	75	5,1	50	0,95	4	10	1,7	100	182	9
LNK-M3_1-585-130	585	100	7,7	45	0,55	3,7	10	1,9	116	158	9
LNK-M3_1-650-130	650	75	5,1	60	1,35	3,2	10	2	100	233	3
LNK-M3_1-710-130	710	100	7,7	50	0,65	3,3	10	2,2	116	182	9
LNK-M3_1-720-130	720	75	5,1	60	1,4	3	10	2,1	100	253	3
LNK-M3_1-810-130	810	80	5,1	60	1,4	2,6	10	2,4	100	283	3
LNK-M3_1-970-130	970	100	7,7	60	0,95	2,7	10	2,7	116	233	3
LNK-M3_1-980-130	980	100	10,5	60	0,6	2,3	10	3,1	116	270	3
LNK-M3_1-1070-130	1070	100	7,7	60	1	2,5	10	2,9	116	253	3
LNK-M3_1-1230-130	1230	100	7,7	60	1	2,2	10	3,2	116	283	3
LNK-M3_1-1350-130	1350	100	10,5	70	0,8	1,9	10	3,9	116	345	3
LNK-M3_1-1400-130 *	1400	120	15	60	0,55	1,9	10	4,3	136	270	2
LNK-M3_1-1700-130 *	1700	120	10,5	60	0,8	1,8	10	4,4	136	283	2
LNK-M3_1-1900-130 *	1900	120	15	70	0,65	1,6	10	5,4	136	345	2

* Not UL approved

- In case of doubt regarding the full current maximum working frequency, please contact ICAR Tech. Dept. for de-rating according to current spectrum
- The thermal resistance is estimated considering the capacitor alone, not fixed and in free air condition (natural convection).
- Routine dielectric test: DC voltage test between terminals = 1.5 U_N x 10 s, AC voltage test between terminals and case = 1.414U_N + 1000 x10s or 2000V whichever is the highest value
- I_{max} has been calculated for a thermal rise $\vartheta_h - \vartheta_0$ within about 25°C (for more details see "Selections rules and definitions").

LNK – M3...1 HIGH CURRENT

U_N: 1650V

U_s: 2475V

MODEL

MODEL	Capacitance C(μF)	Max rms current I _{max} (A)	Peak current I _{PK} (kA)	Self inductance L _s (nH)	Series resistance R _s (mΩ)	Thermal resistance R _{th} (°C/W)	Full current max working frequency (KHz)	Weight (kg)	Diameter (mm)	Length (mm)	Box quantity (pcs)
LNK-M3_1-145-165	145	60	3,1	40	1	6,2	10	0,9	85	133	16
LNK-M3_1-190-165	190	60	3,1	45	1,2	5,3	10	1,1	85	158	16
LNK-M3_1-200-165	200	75	4,1	40	0,8	5,2	10	1,3	100	133	9
LNK-M3_1-230-165	230	60	3,1	50	1,45	4,6	10	1,2	85	182	16
LNK-M3_1-260-165	260	80	4,1	45	0,8	4,4	10	1,5	100	158	9
LNK-M3_1-300-165	300	100	6,2	40	0,55	4,3	10	1,6	116	133	9
LNK-M3_1-310-165	310	70	4,1	50	1,1	4	10	1,7	100	182	9
LNK-M3_1-315-165	315	55	3,1	60	2,15	3,7	10	1,5	85	233	4
LNK-M3_1-380-165	380	100	6,2	45	0,65	3,7	10	1,9	116	158	9
LNK-M3_1-420-165	420	65	4,1	60	1,6	3,2	10	2	100	233	3
LNK-M3_1-465-165	465	100	6,2	50	0,75	3,3	10	2,2	116	182	9
LNK-M3_1-470-165	470	70	4,1	60	1,65	3	10	2,1	100	253	3
LNK-M3_1-550-165	550	75	4,1	60	1,6	2,6	10	2,4	100	283	3
LNK-M3_1-635-165	635	90	6,2	60	1,1	2,7	10	2,7	116	233	3
LNK-M3_1-640-165	640	100	8,5	60	0,65	2,3	10	3,1	116	270	3
LNK-M3_1-700-165	700	90	6,2	60	1,15	2,5	10	2,9	116	253	3
LNK-M3_1-800-165	800	95	6,2	60	1,15	2,2	10	3,2	116	283	3
LNK-M3_1-880-165	880	100	8,5	70	0,9	1,9	10	3,9	116	345	3
LNK-M3_1-920-165 *	920	120	12	60	0,6	1,9	10	4,3	136	270	2
LNK-M3_1-1100-165 *	1100	100	8,5	60	0,95	1,8	10	4,4	136	283	2
LNK-M3_1-1250-165 *	1250	120	12	70	0,75	1,6	10	5,4	136	345	2

* Not UL approved

- In case of doubt regarding the full current maximum working frequency, please contact ICAR Tech. Dept. for de-rating according to current spectrum
- The thermal resistance is estimated considering the capacitor alone, not fixed and in free air condition (natural convection).
- Routine dielectric test: DC voltage test between terminals = 1.5 U_N x 10 s, AC voltage test between terminals and case = 1.414U_N + 1000 x10s or 2000V whichever is the highest value
- I_{max} has been calculated for a thermal rise $\vartheta_h - \vartheta_0$ within about 25°C (for more details see "Selections rules and definitions").

LNK – M3...1 HIGH CURRENT

MODEL	U _N : 1850V		U _s : 2780V								
	Capacitance C(μF)	Max rms current I _{max} (A)	Peak current I _{PK} (kA)	Self inductance L _s (nH)	Series resistance R _s (mΩ)	Thermal resistance R _{th} (°C/W)	Full current max working frequency (KHz)	Weight (kg)	Diameter (mm)	Length (mm)	Box quantity (pcs)
LNK-M3_1-112-185	112	60	2,7	40	1,1	6,2	10	0,9	85	133	16
LNK-M3_1-145-185	145	60	2,7	45	1,35	5,3	10	1,1	85	158	16
LNK-M3_1-150-185	150	70	3,5	40	0,9	5,2	10	1,3	100	133	9
LNK-M3_1-175-185	175	55	2,7	50	1,6	4,6	10	1,2	85	182	16
LNK-M3_1-200-185	200	75	3,5	45	0,9	4,4	10	1,5	100	158	9
LNK-M3_1-225-185	225	95	5,5	40	0,6	4,3	10	1,6	116	133	9
LNK-M3_1-245-185	245	50	2,7	60	2,4	3,7	10	1,5	85	233	4
LNK-M3_1-240-185	240	70	3,5	50	1,2	4	10	1,7	100	182	9
LNK-M3_1-290-185	290	95	5,5	45	0,75	3,7	10	1,9	116	158	9
LNK-M3_1-330-185	330	65	3,5	60	1,75	3,2	10	2	100	233	3
LNK-M3_1-350-185	350	65	3,5	60	1,95	3	10	2,1	100	253	3
LNK-M3_1-355-185	355	95	5,5	50	0,85	3,3	10	2,2	116	182	9
LNK-M3_1-410-185	410	70	3,5	60	1,8	2,6	10	2,4	100	283	3
LNK-M3_1-480-185	480	100	7,3	60	0,75	2,3	10	3,1	116	270	3
LNK-M3_1-485-185	485	85	5,5	60	1,25	2,7	10	2,7	116	233	3
LNK-M3_1-535-185	535	85	5,5	60	1,3	2,5	10	2,9	116	253	3
LNK-M3_1-610-185	610	90	5,5	60	1,3	2,2	10	3,2	116	283	3
LNK-M3_1-670-185	670	100	7,3	70	1	1,9	10	3,9	116	345	3
LNK-M3_1-700-185 *	700	120	10	60	0,6	1,9	10	4,3	136	270	2
LNK-M3_1-850-185 *	850	100	7,3	60	1	1,8	10	4,4	136	283	2
LNK-M3_1-950-185 *	950	120	10	70	0,8	1,6	10	5,4	136	345	2

* Not UL approved

- In case of doubt regarding the full current maximum working frequency, please contact ICAR Tech. Dept. for de-rating according to current spectrum
- The thermal resistance is estimated considering the capacitor alone, not fixed and in free air condition (natural convection).
- Routine dielectric test: DC voltage test between terminals = 1.5 U_N x 10 s, AC voltage test between terminals and case = 1.414U_N + 1000 x10s or 2000V whichever is the highest value
- I_{max} has been calculated for a thermal rise $\vartheta_h - \vartheta_0$ within about 25°C (for more details see "Selections rules and definitions").

LNK – M3...1 HIGH CURRENT

MODEL	U _N : 2000V	U _s : 3000V									
	Capacitance C(μF)	Max rms current I _{max} (A)	Peak current I _{PK} (kA)	Self inductance L _s (nH)	Series resistance R _s (mΩ)	Thermal resistance R _{th} (°C/W)	Full current max working frequency (KHz)	Weight (kg)	Diameter (mm)	Length (mm)	Box quantity (pcs)
LNK-M3_1-85-200	85	55	2,2	40	1,25	6,2	10	0,9	85	133	16
LNK-M3_1-110-200	110	55	2,2	45	1,45	5,3	10	1,1	85	158	16
LNK-M3_1-120-200	120	70	3,1	40	0,95	5,2	10	1,3	100	133	9
LNK-M3_1-135-200	135	50	2,2	50	1,8	4,6	10	1,2	85	182	16
LNK-M3_1-150-200	150	75	3,1	45	1	4,4	10	1,5	100	158	9
LNK-M3_1-170-200	170	85	4,6	40	0,7	4,3	10	1,6	116	133	9
LNK-M3_1-180-200	180	45	2,2	60	2,75	3,7	10	1,5	85	233	4
LNK-M3_1-190-200	190	65	3,1	50	1,35	4	10	1,7	100	182	9
LNK-M3_1-220-200	220	90	4,6	45	0,8	3,7	10	1,9	116	158	9
LNK-M3_1-250-200	250	60	3,1	60	2	3,2	10	2	100	233	3
LNK-M3_1-280-200	280	85	4,6	50	0,95	3,3	10	2,2	116	182	9
LNK-M3_1-285-200	285	60	3,1	60	2,1	3	10	2,1	100	253	3
LNK-M3_1-320-200	320	65	3,1	60	2	2,6	10	2,4	100	283	3
LNK-M3_1-380-200	380	100	6,5	60	0,8	2,3	10	3,1	116	270	3
LNK-M3_1-385-200	385	80	4,6	60	1,35	2,7	10	2,7	116	233	3
LNK-M3_1-410-200	410	80	4,6	60	1,5	2,5	10	2,9	116	253	3
LNK-M3_1-470-200	470	80	4,6	60	1,45	2,2	10	3,2	116	283	3
LNK-M3_1-520-200	520	100	6,5	70	1,1	1,9	10	3,9	116	345	3
LNK-M3_1-550-200 *	550	120	9,4	60	0,65	1,9	10	4,3	136	270	2
LNK-M3_1-670-200 *	670	100	6,5	60	1,1	1,8	10	4,4	136	283	2
LNK-M3_1-750-200 *	750	120	9,4	70	0,85	1,6	10	5,4	136	345	2

* Not UL approved

- In case of doubt regarding the full current maximum working frequency, please contact ICAR Tech. Dept. for de-rating according to current spectrum
- The thermal resistance is estimated considering the capacitor alone, not fixed and in free air condition (natural convection).
- Routine dielectric test: DC voltage test between terminals = 1.5 U_N x 10 s, AC voltage test between terminals and case = 1.414U_N + 1000 x10s or 2000V whichever is the highest value
- I_{max} has been calculated for a thermal rise $\vartheta_h - \vartheta_0$ within about 25°C (for more details see "Selections rules and definitions").

LNK – M3...1 HIGH CURRENT

MODEL	U _N : 2200V		U _s : 3300V								
	Capacitance C(μF)	Max rms current I _{max} (A)	Peak current I _{PK} (kA)	Self inductance L _s (nH)	Series resistance R _s (mΩ)	Thermal resistance R _{th} (°C/W)	Full current max workingfrequency (KHz)	Weight (kg)	Diameter (mm)	Length (mm)	Box quantity (pcs)
LNK-M3_1-70-220	70	55	2,1	40	1,3	6,2	10	0,9	85	133	16
LNK-M3_1-90-220	90	50	2,1	45	1,55	5,3	10	1,1	85	158	16
LNK-M3_1-100-220	100	65	2,8	40	1	5,2	10	1,3	100	133	9
LNK-M3_1-110-220	110	50	2,1	50	1,95	4,6	10	1,2	85	182	16
LNK-M3_1-125-220	125	70	2,8	45	1,05	4,4	10	1,5	100	158	9
LNK-M3_1-140-220	140	85	4,2	40	0,75	4,3	10	1,6	116	133	9
LNK-M3_1-150-220	150	45	2,1	60	2,95	3,7	10	1,5	85	233	4
LNK-M3_1-155-220	155	60	2,8	50	1,5	4	10	1,7	100	182	9
LNK-M3_1-180-220	180	85	4,2	45	0,85	3,7	10	1,9	116	158	9
LNK-M3_1-210-220	210	60	2,8	60	2,1	3,2	10	2	100	233	3
LNK-M3_1-220-220	220	80	4,2	50	1,05	3,3	10	2,2	116	182	9
LNK-M3_1-230-220	230	60	2,8	60	2,3	3	10	2,1	100	253	3
LNK-M3_1-260-220	260	60	2,8	60	2,2	2,6	10	2,4	100	283	3
LNK-M3_1-300-220	300	75	4,2	60	1,55	2,7	10	2,7	116	233	3
LNK-M3_1-310-220	310	100	5,9	60	0,85	2,3	10	3,1	116	270	3
LNK-M3_1-330-220	330	75	4,2	60	1,6	2,5	10	2,9	116	253	3
LNK-M3_1-380-220	380	80	4,2	60	1,6	2,2	10	3,2	116	283	3
LNK-M3_1-420-220	420	100	5,9	70	1,2	1,9	10	3,9	116	345	3
LNK-M3_1-450-220 *	450	120	8,4	60	0,7	1,9	10	4,3	136	270	2
LNK-M3_1-530-220 *	530	100	5,9	60	1,2	1,8	10	4,4	136	283	2
LNK-M3_1-600-220 *	600	120	8,4	70	0,95	1,6	10	5,4	136	345	2

* Not UL approved

- In case of doubt regarding the full current maximum working frequency, please contact ICAR Tech. Dept. for de-rating according to current spectrum
- The thermal resistance is estimated considering the capacitor alone, not fixed and in free air condition (natural convection).
- Routine dielectric test: DC voltage test between terminals = 1.5 U_N x 10 s, AC voltage test between terminals and case = 1.414U_N + 1000 x10s or 2000V whichever is the highest value
- I_{max} has been calculated for a thermal rise $\vartheta_h - \vartheta_0$ within about 25°C (for more details see "Selections rules and definitions").

LNK – M3...1 HIGH CURRENT

U_N: 2600V

U_s: 3900V

MODEL

MODEL	Capacitance C(μF)	Max rms current I _{max} (A)	Peak current I _{PK} (kA)	Self inductance L _s (nH)	Series resistance R _s (mΩ)	Thermal resistance R _{th} (°C/W)	Full current max working frequency (KHz)	Weight (kg)	Diameter (mm)	Length (mm)	Box quantity (pcs)
LNK-M3_1-45-260	45	55	3,5	40	1,1	6,2	10	0,9	85	133	16
LNK-M3_1-55-260	55	60	3,5	45	1,05	5,3	10	1,1	85	158	16
LNK-M3_1-60-260	60	70	4,8	40	0,9	5,2	10	1,3	100	133	9
LNK-M3_1-70-260	70	60	3,5	50	1,4	4,6	10	1,2	85	182	16
LNK-M3_1-80-260	80	85	4,8	45	0,7	4,4	10	1,5	100	158	9
LNK-M3_1-90-260	90	95	6,9	40	0,6	4,3	10	1,6	116	133	9
LNK-M3_1-95-260	95	70	4,8	50	1,1	4	10	1,7	100	182	9
LNK-M3_1-100-260	100	50	3,5	60	2,15	3,7	10	1,5	85	233	4
LNK-M3_1-110-260	110	100	6,9	45	0,6	3,7	10	1,9	116	158	9
LNK-M3_1-140-260	140	70	4,8	60	1,55	3,2	10	2	100	233	3
LNK-M3_1-145-260	145	95	6,9	50	0,8	3,3	10	2,2	116	182	9
LNK-M3_1-155-260	155	60	4,8	60	1,85	3	10	2,1	100	253	3
LNK-M3_1-180-260	180	75	4,8	60	1,45	2,6	10	2,4	100	283	3
LNK-M3_1-200-260	200	100	9,8	60	0,6	2,3	10	3,1	116	270	3
LNK-M3_1-205-260	205	85	6,9	60	1,15	2,7	10	2,7	116	233	3
LNK-M3_1-220-260	220	85	6,9	60	1,35	2,5	10	2,9	116	253	3
LNK-M3_1-260-260	260	95	6,9	60	1,05	2,2	10	3,2	116	283	3
LNK-M3_1-280-260	280	100	9,8	70	0,9	1,9	10	3,9	116	345	3
LNK-M3_1-285-260 *	285	120	14	60	0,55	1,9	10	4,3	136	270	2
LNK-M3_1-360-260 *	360	120	9,8	60	0,85	1,8	10	4,4	136	283	2
LNK-M3_1-410-260 *	410	120	14	70	0,75	1,6	10	5,4	136	345	2

* Not UL approved

- In case of doubt regarding the full current maximum working frequency, please contact ICAR Tech. Dept. for de-rating according to current spectrum
- The thermal resistance is estimated considering the capacitor alone, not fixed and in free air condition (natural convection).
- Routine dielectric test: DC voltage test between terminals = 1.5 U_N x 10 s, AC voltage test between terminals and case = 1.414U_N + 1000 x10s or 2000V whichever is the highest value
- I_{max} has been calculated for a thermal rise $\vartheta_h - \vartheta_0$ within about 25°C (for more details see "Selections rules and definitions").

LNK – M3...1 HIGH CURRENT

U_N: 3000V

U_s: 4500V

MODEL

MODEL	Capacitance C(μF)	Max rms current I _{max} (A)	Peak current I _{PK} (kA)	Self inductance L _s (nH)	Series resistance R _s (mΩ)	Thermal resistance R _{th} (°C/W)	Full current max working frequency (KHz)	Weight (kg)	Diameter (mm)	Length (mm)	Box quantity (pcs)
LNK-M3_1-32-300	32	55	2,9	40	1,25	6,2	10	0,9	85	133	16
LNK-M3_1-40-300	40	60	2,9	45	1,2	5,3	10	1,1	85	158	16
LNK-M3_1-45-300	45	65	4	40	1	5,2	10	1,3	100	133	9
LNK-M3_1-50-300	50	55	2,9	50	1,65	4,6	10	1,2	85	182	16
LNK-M3_1-55-300	55	80	4	45	0,8	4,4	10	1,5	100	158	9
LNK-M3_1-65-300	65	90	5,9	40	0,7	4,3	10	1,6	116	133	9
LNK-M3_1-70-300	70	50	2,9	60	2,55	3,7	10	1,5	85	233	4
LNK-M3_1-72-300	72	70	4	50	1,2	4	10	1,7	100	182	9
LNK-M3_1-80-300	80	95	5,9	45	0,65	3,7	10	1,9	116	158	9
LNK-M3_1-100-300	100	90	5,9	50	0,9	3,3	10	2,2	116	182	9
LNK-M3_1-105-300	105	65	4	60	1,8	3,2	10	2	100	233	3
LNK-M3_1-110-300	110	60	4	60	2,2	3	10	2,1	100	253	3
LNK-M3_1-130-300	130	75	4	60	1,65	2,6	10	2,4	100	283	3
LNK-M3_1-145-300	145	100	8,5	60	0,65	2,3	10	3,1	116	270	3
LNK-M3_1-150-300	150	85	5,9	60	1,25	2,7	10	2,7	116	233	3
LNK-M3_1-160-300	160	80	5,9	60	1,55	2,5	10	2,9	116	253	3
LNK-M3_1-190-300	190	95	5,9	60	1,2	2,2	10	3,2	116	283	3
LNK-M3_1-210-300	210	100	8,5	70	1	1,9	10	3,9	116	345	3
LNK-M3_1-215-300 *	215	120	12	60	0,55	1,9	10	4,3	136	270	2
LNK-M3_1-260-300 *	260	100	8,3	60	0,95	1,8	10	4,4	136	283	2
LNK-M3_1-300-300 *	300	120	12	70	0,8	1,6	10	5,4	136	345	2

* Not UL approved

- In case of doubt regarding the full current maximum working frequency, please contact ICAR Tech. Dept. for de-rating according to current spectrum
- The thermal resistance is estimated considering the capacitor alone, not fixed and in free air condition (natural convection).
- Routine dielectric test: DC voltage test between terminals = 1.5 U_N x 10 s, AC voltage test between terminals and case = 1.414U_N + 1000 x10s or 2000V whichever is the highest value
- I_{max} has been calculated for a thermal rise $\vartheta_h - \vartheta_0$ within about 25°C (for more details see "Selections rules and definitions").

LNK – M3...2 HIGH SPECIFIC CAPACITANCE

U_N: 550V

U_S: 820V

MODEL

MODEL	Capacitance C(μF)	Max rms current I _{max} (A)	Peak current I _{PK} (kA)	Self inductance Ls(nH)	Series resistance Rs (mΩ)	Thermal resistance R _{th} (°C/W)	Full current max working frequency (KHz)	Weight (kg)	Diameter (mm)	Length (mm)	Box quantity (pcs)
LNK-M3_2-600-55	600	45	3,5	45	1,3	7,7	10	0,7	85	102	16
LNK-M3_2-820-55	820	45	3,5	45	1,8	6,4	10	0,8	85	127	16
LNK-M3_2-900-55	900	45	3,5	45	1,9	6	10	0,9	85	137	16
LNK-M3_2-800-55	800	60	4,7	45	1,1	6,2	10	1	100	102	9
LNK-M3_2-1000-55	1000	45	3,5	50	1,9	5,5	10	1	85	152	16
LNK-M3_2-1100-55	1100	55	4,7	45	1,4	5,3	10	1,1	100	127	9
LNK-M3_2-1200-55	1200	55	4,7	45	1,5	5	10	1,2	100	137	9
LNK-M3_2-1400-55	1400	60	4,7	50	1,4	4,6	10	1,4	100	152	9
LNK-M3_2-1600-55	1600	70	6,8	45	1	4,5	10	1,5	116	127	9
LNK-M3_2-1800-55	1800	70	6,8	45	1,05	4,2	10	1,6	116	137	9
LNK-M3_2-2000-55	2000	75	6,8	50	1,1	3,8	10	1,8	116	152	9
LNK-M3_2-2800-55 *	2800	90	9	50	0,85	3,1	10	2,5	136	152	4

* Not UL approved

U_N: 700V

U_S: 1050V

MODEL

MODEL	Capacitance C(μF)	Max rms current I _{max} (A)	Peak current I _{PK} (kA)	Self inductance Ls(nH)	Series resistance Rs (mΩ)	Thermal resistance R _{th} (°C/W)	Full current max working frequency (KHz)	Weight (kg)	Diameter (mm)	Length (mm)	Box quantity (pcs)
LNK-M3_2-445-70	445	45	3,1	45	1,45	7,7	10	0,7	85	102	16
LNK-M3_2-610-70	610	45	3,1	45	2,05	6,4	10	0,8	85	127	16
LNK-M3_2-670-70	670	45	3,1	45	2,15	6	10	0,9	85	137	16
LNK-M3_2-770-70	770	45	3,1	50	2,1	5,5	10	1	85	152	16
LNK-M3_2-600-70	600	55	4	45	1,2	6,2	10	1	100	102	9
LNK-M3_2-800-70	800	55	4	45	1,6	5,3	10	1,1	100	127	9
LNK-M3_2-900-70	900	55	4	45	1,7	5	10	1,2	100	137	9
LNK-M3_2-1000-70	1000	55	4	50	1,65	4,6	10	1,4	100	152	9
LNK-M3_2-1220-70	1220	70	6,2	45	1,1	4,5	10	1,5	116	127	9
LNK-M3_2-1350-70	1350	70	6,2	45	1,15	4,2	10	1,6	116	137	9
LNK-M3_2-1550-70	1550	75	6,2	50	1,15	3,8	10	1,8	116	152	9
LNK-M3_2-2000-70 *	2000	85	7,9	50	1	3,1	10	2,5	136	152	4

* Not UL approved

- In case of doubt regarding the full current maximum working frequency, please contact ICAR Tech. Dept. for de-rating according to current spectrum
- The thermal resistance is estimated considering the capacitor alone, not fixed and in free air condition (natural convection).
- Routine dielectric test: DC voltage test between terminals = 1.5 U_N x 10 s, AC voltage test between terminals and case = 1.414U_N + 1000 x 10s or 2000V whichever is the highest value
- I_{max} has been calculated for a thermal rise $\theta_n - \theta_0$ within about 25°C (for more details see "Selections rules and definitions").

LNK – M3...2 HIGH SPECIFIC CAPACITANCE

MODEL	UN: 900V		UG: 1350V								
	Capacitance C(μF)	Max rms current I _{max} (A)	Peak current I _{PK} (kA)	Self inductance Ls(nH)	Series resistance Rs (mΩ)	Thermal resistance R _{th} (°C/W)	Full current max working frequency (KHz)	Weight (kg)	Diameter (mm)	Length (mm)	Box quantity (pcs)
LNK-M3_2-380-90	380	45	2,9	45	1,65	7,7	10	0,7	85	102	16
LNK-M3_2-510-90	510	55	3,7	45	1,3	6,2	10	1	100	102	9
LNK-M3_2-520-90	520	40	2,9	45	2,2	6,4	10	0,8	85	127	16
LNK-M3_2-570-90	570	40	2,9	45	2,3	6	10	0,9	85	137	16
LNK-M3_2-655-90	655	45	2,9	50	2,25	5,5	10	1	85	152	16
LNK-M3_2-680-90	680	50	3,7	45	1,7	5,3	10	1,1	100	127	9
LNK-M3_2-750-90	750	50	3,7	45	1,8	5	10	1,2	100	137	9
LNK-M3_2-850-90	850	55	3,7	50	1,75	4,6	10	1,4	100	152	9
LNK-M3_2-1040-90	1040	65	5,7	45	1,15	4,5	10	1,5	116	127	9
LNK-M3_2-1150-90	1150	70	5,7	45	1,25	4,2	10	1,6	116	137	9
LNK-M3_2-1320-90	1320	70	5,7	50	1,25	3,8	10	1,8	116	152	9
LNK-M3_2-1700-90 *	1700	85	7,3	50	1,05	3,1	10	2,5	136	152	4

* Not UL approved

MODEL	UN: 1100V		UG: 1650V								
	Capacitance C(μF)	Max rms current I _{max} (A)	Peak current I _{PK} (kA)	Self inductance Ls(nH)	Series resistance Rs (mΩ)	Thermal resistance R _{th} (°C/W)	Full current max working frequency (KHz)	Weight (kg)	Diameter (mm)	Length (mm)	Box quantity (pcs)
LNK-M3_2-270-110	270	40	2,4	45	1,95	7,7	10	0,7	85	102	16
LNK-M3_2-350-110	350	50	3,1	45	1,45	6,2	10	1	100	102	9
LNK-M3_2-370-110	370	40	2,4	45	2,55	6,4	10	0,8	85	127	16
LNK-M3_2-420-110	420	40	2,4	45	2,6	6	10	0,9	85	137	16
LNK-M3_2-470-110	470	40	2,4	50	2,6	5,5	10	1	85	152	16
LNK-M3_2-480-110	480	45	3,1	45	2	5,3	10	1,1	100	127	9
LNK-M3_2-540-110	540	45	3,1	45	2,1	5	10	1,2	100	137	9
LNK-M3_2-620-110	620	50	3,1	50	2	4,6	10	1,4	100	152	9
LNK-M3_2-740-110	740	60	4,8	45	1,35	4,5	10	1,5	116	127	9
LNK-M3_2-820-110	820	65	4,8	45	1,45	4,2	10	1,6	116	137	9
LNK-M3_2-940-110	940	65	4,8	50	1,4	3,8	10	1,8	116	152	9
LNK-M3_2-1200-110 *	1200	80	6,1	50	1,2	3,1	10	2,5	136	152	4

* Not UL approved

- In case of doubt regarding the full current maximum working frequency, please contact ICAR Tech. Dept. for de-rating according to current spectrum
- The thermal resistance is estimated considering the capacitor alone, not fixed and in free air condition (natural convection).
- Routine dielectric test: DC voltage test between terminals = 1.5 U_N x 10 s, AC voltage test between terminals and case = 1.414U_N + 1000 x10s or 2000V whichever is the highest value
- I_{max} has been calculated for a thermal rise $\vartheta_n - \vartheta_0$ within about 25°C (for more details see "Selections rules and definitions").

LNK – M3...2 HIGH SPECIFIC CAPACITANCE

MODEL	UN: 1300V		UG: 1950V								
	Capacitance C(μF)	Max rms current I _{max} (A)	Peak current I _{PK} (kA)	Self inductance Ls(nH)	Series resistance Rs (mΩ)	Thermal resistance R _{th} (°C/W)	Full current max working frequency (KHz)	Weight (kg)	Diameter (mm)	Length (mm)	Box quantity (pcs)
LNK-M3_2-180-130	180	40	2	45	2,2	7,7	10	0,7	85	102	16
LNK-M3_2-240-130	240	45	2,5	45	1,7	6,2	10	1	100	102	9
LNK-M3_2-245-130	245	35	2	45	3,05	6,4	10	0,8	85	127	16
LNK-M3_2-275-130	275	35	2	45	3,2	6	10	0,9	85	137	16
LNK-M3_2-310-130	310	35	2	50	3,1	5,5	10	1	85	152	16
LNK-M3_2-330-130	330	45	2,5	45	2,3	5,3	10	1,1	100	127	9
LNK-M3_2-350-130	350	40	2,5	45	2,6	5	10	1,2	100	137	9
LNK-M3_2-420-130	420	45	2,5	50	2,35	4,6	10	1,4	100	152	9
LNK-M3_2-495-130	495	60	4	45	1,6	4,5	10	1,5	116	127	9
LNK-M3_2-550-130	550	60	4	45	1,7	4,2	10	1,6	116	137	9
LNK-M3_2-625-130	625	60	4	50	1,65	3,8	10	1,8	116	152	9
LNK-M3_2-800-130 *	800	70	5	50	1,4	3,1	10	2,5	136	152	4

* Not UL approved

MODEL	UN: 1650V		UG: 2475V								
	Capacitance C(μF)	Max rms current I _{max} (A)	Peak current I _{PK} (kA)	Self inductance Ls(nH)	Series resistance Rs (mΩ)	Thermal resistance R _{th} (°C/W)	Full current max working frequency (KHz)	Weight (kg)	Diameter (mm)	Length (mm)	Box quantity (pcs)
LNK-M3_2-118-165	118	35	1,6	45	2,65	7,7	10	0,7	85	102	16
LNK-M3_2-150-165	150	40	2	45	2,1	6,2	10	1	100	102	9
LNK-M3_2-160-165	160	30	1,6	45	3,65	6,4	10	0,8	85	127	16
LNK-M3_2-180-165	180	30	1,6	45	3,85	6	10	0,9	85	137	16
LNK-M3_2-205-165	205	35	1,6	50	3,75	5,5	10	1	85	152	16
LNK-M3_2-210-165	210	40	2	45	2,9	5,3	10	1,1	100	127	9
LNK-M3_2-240-165	240	40	2	45	3	5	10	1,2	100	137	9
LNK-M3_2-270-165	270	40	2	50	2,9	4,6	10	1,4	100	152	9
LNK-M3_2-325-165	325	50	3,2	45	1,95	4,5	10	1,5	116	127	9
LNK-M3_2-360-165	360	50	3,2	45	2,05	4,2	10	1,6	116	137	9
LNK-M3_2-410-165	410	55	3,2	50	1,95	3,8	10	1,8	116	152	9
LNK-M3_2-550-165 *	550	65	4,2	50	1,6	3,1	10	2,5	136	152	4

* Not UL approved

- In case of doubt regarding the full current maximum working frequency, please contact ICAR Tech. Dept. for de-rating according to current spectrum
- The thermal resistance is estimated considering the capacitor alone, not fixed and in free air condition (natural convection).
- Routine dielectric test: DC voltage test between terminals = 1.5 U_N x 10 s, AC voltage test between terminals and case = 1.414U_N + 1000 x10s or 2000V whichever is the highest value
- I_{max} has been calculated for a thermal rise $\vartheta_n - \vartheta_0$ within about 25°C (for more details see "Selections rules and definitions").

LNK – M3...2 HIGH SPECIFIC CAPACITANCE

U_N: 1850V U_S: 2780V

MODEL

MODEL	Capacitance C(μF)	Max rms current I _{max} (A)	Peak current I _{PK} (kA)	Self inductance L _s (nH)	Series resistance R _s (mΩ)	Thermal resistance R _{th} (°C/W)	Full current max working frequency (KHz)	Weight (kg)	Diameter (mm)	Length (mm)	Box quantity (pcs)
LNK-M3_2-90-185	90	35	1,4	45	3	7,7	10	0,7	85	102	16
LNK-M3_2-120-185	120	40	1,8	45	2,25	6,2	10	1	100	102	9
LNK-M3_2-122-185	122	30	1,4	45	4,15	6,4	10	0,8	85	127	16
LNK-M3_2-135-185	135	30	1,4	45	4,4	6	10	0,9	85	137	16
LNK-M3_2-155-185	155	30	1,4	50	4,25	5,5	10	1	85	152	16
LNK-M3_2-160-185	160	35	1,8	45	3,25	5,3	10	1,1	100	127	9
LNK-M3_2-180-185	180	35	1,8	45	3,45	5	10	1,2	100	137	9
LNK-M3_2-200-185	200	40	1,8	50	3,3	4,6	10	1,4	100	152	9
LNK-M3_2-245-185	245	50	2,8	45	2,15	4,5	10	1,5	116	127	9
LNK-M3_2-270-185	270	50	2,8	45	2,3	4,2	10	1,6	116	137	9
LNK-M3_2-310-185	310	50	2,8	50	2,25	3,8	10	1,8	116	152	9
LNK-M3_2-420-185 *	420	65	3,7	50	1,8	3,1	10	2,5	136	152	4

* Not UL approved

U_N: 2000V U_S: 3000V

MODEL

MODEL	Capacitance C(μF)	Max rms current I _{max} (A)	Peak current I _{PK} (kA)	Self inductance L _s (nH)	Series resistance R _s (mΩ)	Thermal resistance R _{th} (°C/W)	Full current max working frequency (KHz)	Weight (kg)	Diameter (mm)	Length (mm)	Box quantity (pcs)
LNK-M3_2-70-200	70	30	1,2	45	3,3	7,7	10	0,7	85	102	16
LNK-M3_2-90-200	90	40	1,5	45	2,6	6,2	10	1	100	102	9
LNK-M3_2-95-200	95	30	1,2	45	4,8	6,4	10	0,8	85	127	16
LNK-M3_2-100-200	100	25	1,2	45	5,4	6	10	0,9	85	137	16
LNK-M3_2-120-200	120	30	1,2	50	4,85	5,5	10	1	85	152	16
LNK-M3_2-125-200	125	35	1,5	45	3,65	5,3	10	1,1	100	127	9
LNK-M3_2-140-200	140	35	1,5	45	3,9	5	10	1,2	100	137	9
LNK-M3_2-160-200	160	35	1,5	50	3,65	4,6	10	1,4	100	152	9
LNK-M3_2-190-200	190	45	2,4	45	2,45	4,5	10	1,5	116	127	9
LNK-M3_2-210-200	210	45	2,4	45	2,7	4,2	10	1,6	116	137	9
LNK-M3_2-240-200	240	50	2,4	50	2,5	3,8	10	1,8	116	152	9
LNK-M3_2-330-200 *	330	60	3,3	50	2	3,1	10	2,5	136	152	4

* Not UL approved

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- The thermal resistance is estimated considering the capacitor alone, not fixed and in free air condition (natural convection).
- Routine dielectric test: DC voltage test between terminals = 1.5 U_N x 10 s, AC voltage test between terminals and case = 1.414U_N + 1000 x10s or 2000V whichever is the highest value
- I_{max} has been calculated for a thermal rise $\vartheta_n - \vartheta_0$ within about 25°C (for more details see "Selections rules and definitions").

LNK – M3...2 HIGH SPECIFIC CAPACITANCE

U_N: 2200V U_S: 3300V

MODEL

MODEL	Capacitance C(μF)	Max rms current I _{max} (A)	Peak current I _{PK} (kA)	Self inductance L _s (nH)	Series resistance R _s (mΩ)	Thermal resistance R _{th} (°C/W)	Full current max working frequency (KHz)	Weight (kg)	Diameter (mm)	Length (mm)	Box quantity (pcs)
LNK-M3_2-55-220	55	30	1	45	3,7	7,7	10	0,7	85	102	16
LNK-M3_2-75-220	75	35	1,4	45	2,8	6,2	10	1	100	102	9
LNK-M3_2-77-220	77	25	1	45	5,4	6,4	10	0,8	85	127	16
LNK-M3_2-85-220	85	25	1	45	5,7	6	10	0,9	85	137	16
LNK-M3_2-100-220	100	30	1	50	5,2	5,5	10	1	85	152	16
LNK-M3_2-105-220	105	30	1,4	45	4,1	5,3	10	1,1	100	127	9
LNK-M3_2-110-220	110	30	1,4	45	4,4	5	10	1,2	100	137	9
LNK-M3_2-130-220	130	35	1,4	50	4	4,6	10	1,4	100	152	9
LNK-M3_2-150-220	150	45	2,1	45	2,8	4,5	10	1,5	116	127	9
LNK-M3_2-170-220	170	45	2,1	45	3	4,2	10	1,6	116	137	9
LNK-M3_2-190-220	190	45	2,1	50	2,8	3,8	10	1,8	116	152	9
LNK-M3_2-260-220 *	260	55	2,9	50	2,2	3,1	10	2,5	136	152	4

* Not UL approved

U_N: 2600V U_S: 3900V

MODEL

MODEL	Capacitance C(μF)	Max rms current I _{max} (A)	Peak current I _{PK} (kA)	Self inductance L _s (nH)	Series resistance R _s (mΩ)	Thermal resistance R _{th} (°C/W)	Full current max working frequency (KHz)	Weight (kg)	Diameter (mm)	Length (mm)	Box quantity (pcs)
LNK-M3_2-35-260	35	35	1,7	45	2,6	7,7	10	0,7	85	102	16
LNK-M3_2-47-260	47	45	2,3	45	2	6,2	10	1	100	102	9
LNK-M3_2-50-260	50	30	1,7	45	3,8	6,4	10	0,8	85	127	16
LNK-M3_2-55-260	55	30	1,7	45	4,8	6	10	0,9	85	137	16
LNK-M3_2-66-260	66	35	1,7	50	3,4	5,5	10	1	85	152	16
LNK-M3_2-68-260	68	40	2,3	45	2,9	5,3	10	1,1	100	127	9
LNK-M3_2-75-260	75	35	2,3	45	3,6	5	10	1,2	100	137	9
LNK-M3_2-90-260	90	45	2,3	50	2,5	4,6	10	1,4	100	152	9
LNK-M3_2-100-260	100	50	3,5	45	2	4,5	10	1,5	116	127	9
LNK-M3_2-115-260	115	50	3,5	45	2,4	4,2	10	1,6	116	137	9
LNK-M3_2-130-260	130	55	3,5	50	1,8	3,8	10	1,8	116	152	9
LNK-M3_2-180-260 *	180	70	4,9	50	1,45	3,1	10	2,5	136	152	4

* Not UL approved

- In case of doubt regarding the full current maximum working frequency, please contact ICAR Tech. Dept. for de-rating according to current spectrum
- The thermal resistance is estimated considering the capacitor alone, not fixed and in free air condition (natural convection).
- Routine dielectric test: DC voltage test between terminals = 1.5 U_N x 10 s, AC voltage test between terminals and case = 1.414U_N + 1000 x10s or 2000V whichever is the highest value
- I_{max} has been calculated for a thermal rise $\vartheta_n - \vartheta_0$ within about 25°C (for more details see "Selections rules and definitions").

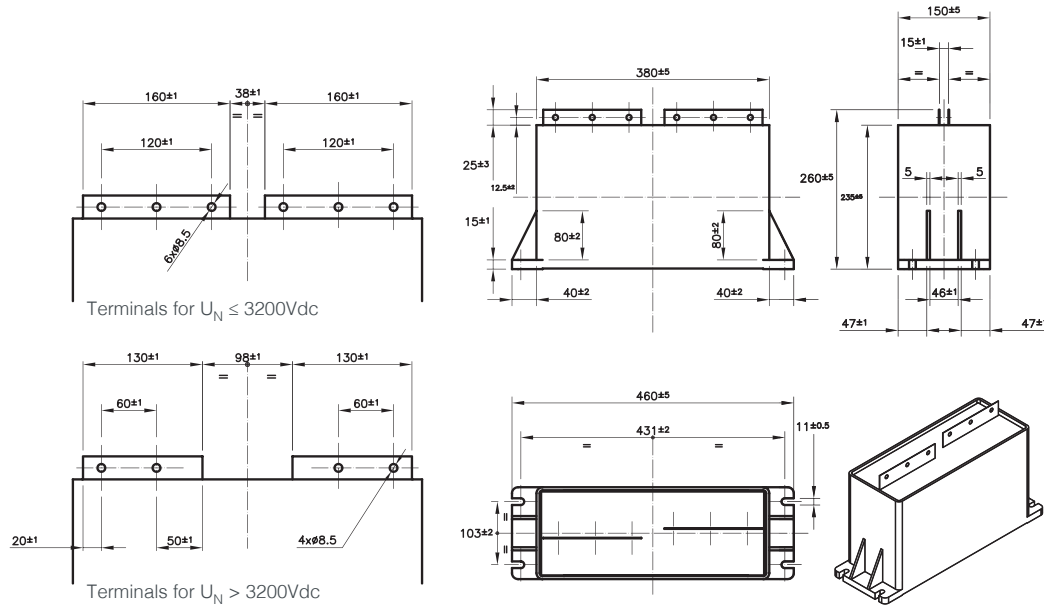
LNK – M3...2 HIGH SPECIFIC CAPACITANCE

MODEL	UN: 3000V	US: 4500V									
	Capacitance C(μF)	Max rms current I _{max} (A)	Peak current I _{PK} (kA)	Self inductance Ls(nH)	Series resistance Rs (mΩ)	Thermal resistance R _{th} (°C/W)	Full current max working frequency (KHz)	Weight (kg)	Diameter (mm)	Length (mm)	Box quantity (pcs)
LNK-M3_2-25-300	25	30	1,5	45	3,1	7,7	10	0,7	85	102	16
LNK-M3_2-35-300	35	40	2	45	2,3	6,2	10	1	100	102	9
LNK-M3_2-37-300	37	30	1,5	45	4,6	6,4	10	0,8	85	127	16
LNK-M3_2-40-300	40	25	1,5	45	5,6	6	10	0,9	85	137	16
LNK-M3_2-47-300	47	30	1,5	50	4	5,5	10	1	85	152	16
LNK-M3_2-50-300	50	35	2	45	3,2	5,3	10	1,1	100	127	9
LNK-M3_2-55-300	55	35	2	45	4,1	5	10	1,2	100	137	9
LNK-M3_2-65-300	65	40	2	50	2,9	4,6	10	1,4	100	152	9
LNK-M3_2-75-300	75	50	3	45	2,2	4,5	10	1,5	116	127	9
LNK-M3_2-85-300	85	45	3	45	2,7	4,2	10	1,6	116	137	9
LNK-M3_2-90-300	90	55	3	50	2,2	3,8	10	1,8	116	152	9
LNK-M3_2-130-300 *	130	65	4,2	50	1,65	3,1	10	2,5	136	152	4

* Not UL approved

- In case of doubt regarding the full current maximum working frequency, please contact ICAR Tech. Dept. for de-rating according to current spectrum
- The thermal resistance is estimated considering the capacitor alone, not fixed and in free air condition (natural convection).
- Routine dielectric test: DC voltage test between terminals = $1.5 U_N \times 10$ s, AC voltage test between terminals and case = $1.414U_N + 1000 \times 10$ s or 2000V whichever is the highest value
- I_{max} has been calculated for a thermal rise $\vartheta_n - \vartheta_0$ within about 25°C (for more details see "Selections rules and definitions").

new



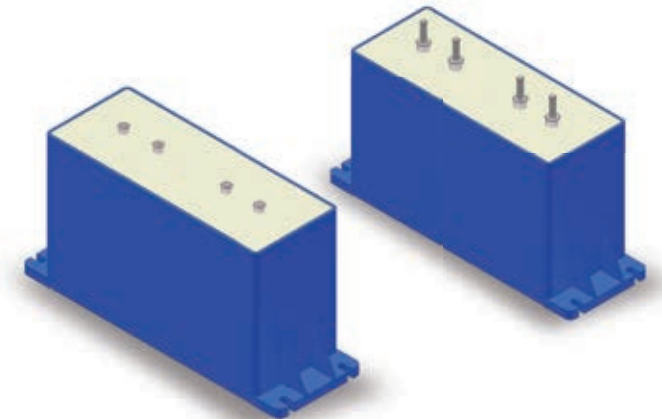
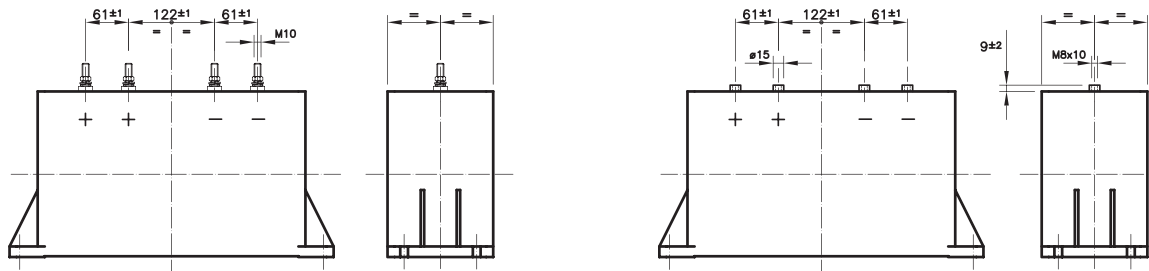
LNK – P5Y

ULfile: E191589

- HIGH CAPACITANCE
- LOW INDUCTANCE CONNECTIONS
- STANDARD CONFIGURATION
- EXTERNAL RESIN COMPLIES WITH REQUIREMENT R22, HL2 ACCORDING TO EN 45545

Failure rate: 100 FIT
 Operating temperature $-25^{\circ}C / +70^{\circ}C$
 Maximum hot spot $85^{\circ}C$ ($70^{\circ}C$ for 450V and 600V)

CUSTOM VERSIONS WITH SCREWS OR THREADED HOLES TERMINALS ARE AVAILABLE ON REQUEST

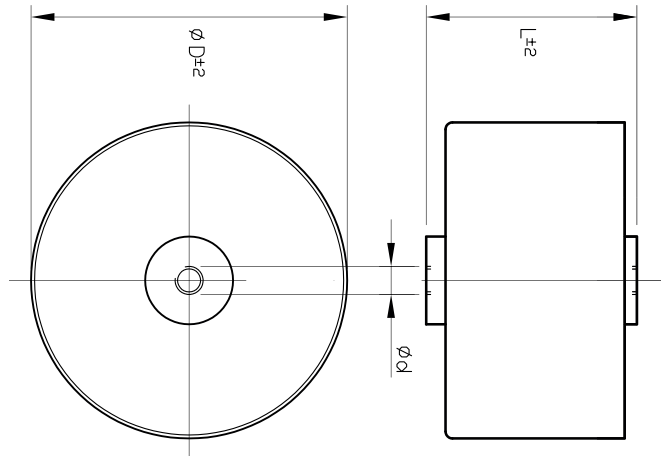


MODEL	Capacitance C(μF)	Rated DC voltage U _N (V)	Peak voltage U _S (V)	Max rms current I _{max} (A)	Peak current I _{PK} (kA)	Self inductance L _s (nH)	Series resistance R _s (mΩ)	Thermal resistance R _{th} (°C/W)	Full current max working frequency (KHz)	Creepage between terminals (mm)	Clearance (mm)	Fixing feet tightening torque (Nm)	Weight (kg)	Box quantity (pcs)
LNK-P5Y-12000-45	12000	450	680	300	40	<30	0,19	1,45	20	40	40	8	16	1
LNK-P5Y-10000-60	10000	600	900	300	39	<30	0,2	1,45	20	40	40	8	16	1
LNK-P5Y-8000-80	8000	800	1200	250	34	<30	0,22	1,45	20	40	40	8	16	1
LNK-P5Y-5500-110	5500	1100	1650	250	28	<30	0,25	1,45	20	40	40	8	16	1
LNK-P5Y-4000-130	4000	1300	1950	250	24	<30	0,28	1,45	20	40	40	8	16	1
LNK-P5Y-2700-165	2700	1650	2475	220	21	<30	0,35	1,45	20	40	40	8	16	1
LNK-P5Y-2000-185	2000	1850	2775	200	17,5	<30	0,38	1,45	20	40	40	8	16	1
LNK-P5Y-1600-200	1600	2000	3000	200	16	<30	0,4	1,45	20	40	40	8	16	1
LNK-P5Y-1300-220	1300	2200	3300	200	14,5	<30	0,45	1,45	20	40	40	8	16	1
LNK-P5Y-900-260	900	2600	3900	220	24,5	<30	0,28	1,45	20	40	40	8	16	1
LNK-P5Y-650-300	650	3000	4500	220	21	<30	0,32	1,45	20	40	40	8	16	1
LNK-P5Y-500-340	500	3400	5100	200	18	<30	0,36	1,45	20	95	95	8	16	1
LNK-P5Y-300-400	300	4000	6000	180	14	<30	0,45	1,45	20	95	95	8	16	1

- In case of doubt regarding the full current maximum working frequency, please contact ICAR Tech. Dept. for de-rating according to current spectrum
- The thermal resistance is estimated considering the capacitor alone, not fixed and in free air condition (natural convection)
- Routine dielectric test: DC voltage test between terminals = 1.5 U_N x 10 s
- I_{max} has been calculated for a thermal rise $\vartheta_n - \vartheta_0$ within about 30°C (for more details see "Selections rules and definitions").



New version at 450V, 600V 2000V and 2200V



LNK – P6X

- VERY LOW INDUCTANCE
- 🔥 RESIN COMPLIES WITH REQUIREMENT R22, HL2 ACCORDING TO EN 45545

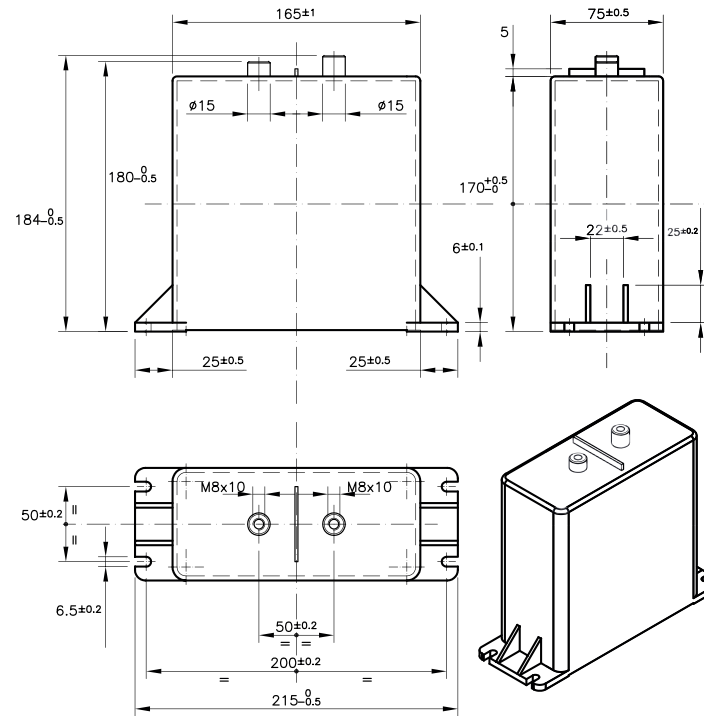
Failure rate: 100 FIT
 Operating temperature -25°C / +70°C
 Maximum hot spot 85°C (70°C for 450V and 600V)

MODEL	Capacitance C(μF)	Rated DC voltage $U_N(V)$	Peak voltage $U_S(V)$	Max rms current $I_{max}(A)$	Peak current $I_{PK}(kA)$	Self inductance $L_s(nH)$	Series resistance $R_s(m\Omega)$	Thermal resistance $R_{th}(^{\circ}C/W)$	Full current max working frequency (KHz)	Tightening torque (Nm)	Weight (kg)	Terminals d	Diameter (mm)	Length (mm)	Box quantity (pcs)
LNK-P6X-140-45	140	450	900	80	3,9	15	0,6	7,3	20	6	0,27	M6	70	59	25
LNK-P6X-190-45	190	450	900	80	5,3	15	0,45	7	20	10	0,41	M8	80	60	16
LNK-P6X-230-45	230	450	900	90	6,4	15	0,33	6,7	20	10	0,47	M8	90	60	16
LNK-P6X-110-60	110	600	1200	80	3,5	15	0,65	7,3	20	6	0,27	M6	70	59	25
LNK-P6X-140-60	140	600	1200	80	4,5	15	0,5	7	20	10	0,41	M8	80	60	16
LNK-P6X-175-60	175	600	1200	90	5,7	15	0,37	6,7	20	10	0,47	M8	90	60	16
LNK-P6X-90-70	90	700	1400	80	3,1	15	0,7	7,3	20	6	0,27	M6	70	59	25
LNK-P6X-125-70	125	700	1400	80	4,4	15	0,5	7	20	10	0,41	M8	80	60	16
LNK-P6X-150-70	150	700	1400	80	5,3	15	0,4	6,7	20	10	0,47	M8	90	60	16

MODEL

MODEL	Capacitance C(μ F)	Rated DC voltage U _N (V)	Peak voltage U _S (V)	Max rms current I _{max} (A)	Peak current I _{PK} (kA)	Self inductance L _s (nH)	Series resistance R _s (m Ω)	Thermal resistance R _{th} ($^{\circ}$ C/W)	Full current max working frequency (KHz)	Tightening torque (Nm)	Weight (kg)	Terminals d	Diameter (mm)	Length (mm)	Box quantity (pcs)
LNK-P6X-50-90	50	900	1800	55	2,2	15	1	7,3	20	6	0,27	M6	70	59	25
LNK-P6X-75-90	75	900	1800	70	3,4	15	0,7	7	20	10	0,41	M8	80	60	16
LNK-P6X-100-90	100	900	1800	80	4,4	15	0,5	6,7	20	10	0,47	M8	90	60	16
LNK-P6X-33-110	33	1100	2200	50	1,7	15	1,3	7,3	20	6	0,27	M6	70	59	25
LNK-P6X-50-110	50	1100	2200	60	2,7	15	0,9	7	20	10	0,41	M8	80	60	16
LNK-P6X-66-110	66	1100	2200	75	3,5	15	0,6	6,7	20	10	0,47	M8	90	60	16
LNK-P6X-30-125	30	1250	2500	50	1,9	15	1,6	7,3	20	6	0,27	M6	70	59	25
LNK-P6X-40-125	40	1250	2500	55	2,5	15	1,1	7	20	10	0,41	M8	80	60	16
LNK-P6X-50-125	50	1250	2500	65	3,1	15	0,8	6,7	20	10	0,47	M8	90	60	16
LNK-P6X-20-145	20	1450	2900	45	1,4	15	1,6	7,3	20	6	0,27	M6	70	59	25
LNK-P6X-30-145	30	1450	2900	55	2,1	15	1,1	7	20	10	0,41	M8	80	60	16
LNK-P6X-40-145	40	1450	2900	65	2,9	15	0,8	6,7	20	10	0,47	M8	90	60	16
LNK-P6X-15-180	15	1800	3600	40	1,3	15	1,7	7,3	20	6	0,27	M6	70	59	25
LNK-P6X-20-180	20	1800	3600	50	1,8	15	1,3	7	20	10	0,41	M8	80	60	16
LNK-P6X-25-180	25	1800	3600	60	2,3	15	1	6,7	20	10	0,47	M8	90	60	16
LNK-P6X-10-200	10	2000	4000	40	1	15	1,8	7,3	20	6	0,27	M6	70	59	25
LNK-P6X-15-200	15	2000	4000	45	1,5	15	1,6	7	20	10	0,41	M8	80	60	16
LNK-P6X-18-200	18	2000	4000	50	1,8	15	1,3	6,7	20	10	0,47	M8	90	60	16
LNK-P6X-9-220	9	2200	4400	35	0,9	15	1,9	7,3	20	6	0,27	M6	70	59	25
LNK-P6X-12-220	12	2200	4400	40	1,3	15	1,8	7	20	10	0,41	M8	80	60	16
LNK-P6X-15-220	15	2200	4400	45	1,6	15	1,4	6,7	20	10	0,47	M8	90	60	16

- In case of doubt regarding the full current maximum working frequency, please contact ICAR Tech. Dept. for de-rating according to current spectrum
- The thermal resistance is estimated considering the capacitor alone, not fixed and in free air condition (natural convection)
- Routine dielectric test: DC voltage test between terminals = $1.5 U_N \times 10$ s
- I_{max} has been calculated for a thermal rise $\theta_1 - \theta_0$ within about 35 $^{\circ}$ C (for more details see "Selections rules and definitions").



LNK – P7Y

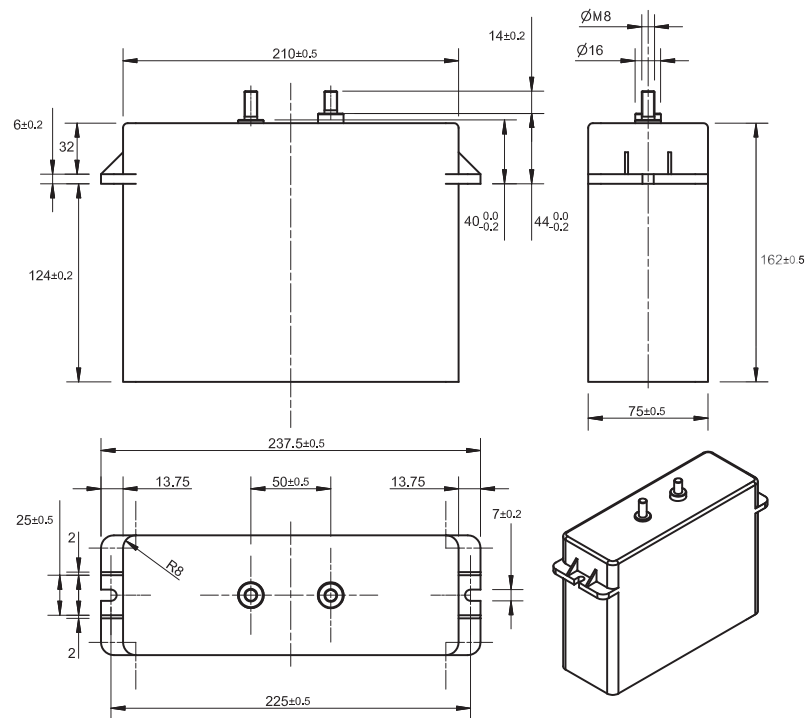
ULfile: E191589

- HIGH CURRENT
- DESIGNED FOR BUSBARS CONNECTIONS
- 🔥 RESIN AND CASE COMPLIES WITH REQUIREMENT R22, HL2 ACCORDING TO EN 45545

Failure rate: 100 FIT
 Operating temperature -25°C / +80°C
 Maximum hot spot 85°C (70°C for 450V and 600V)

MODEL	Capacitance C(µF)	Rated DC voltage $U_N(V)$	Peak voltage $U_S(V)$	Max rms current $I_{max}(A)$	Peak current $I_{PK}(kA)$	Self inductance $L_s(nH)$	Series resistance $R_s(m\Omega)$	Thermal resistance $R_{th}(^{\circ}C/W)$	Full current max working frequency (KHz)	Creepage between terminals (mm)	Clearance (mm)	Tightening torque (Nm)	Fixing feet tightening torque (Nm)	Weight (kg)	Box quantity (pcs)
LNK-P7Y-2000-45	2000	450	680	150	14	30	0,25	4,1	15	45	35	12	6	2,8	8
LNK-P7Y-1450-60	1450	600	900	150	12	30	0,29	4,1	15	45	35	12	6	2,8	8
LNK-P7Y-1200-80	1200	800	1200	140	11	30	0,32	4,1	15	45	35	12	6	2,8	8
LNK-P7Y-850-110	850	1100	1650	130	9,1	30	0,37	4,1	15	45	35	12	6	2,8	8
LNK-P7Y-600-130	600	1300	1950	120	7,9	30	0,42	4,1	15	45	35	12	6	2,8	8
LNK-P7Y-400-165	400	1650	2475	110	6,5	30	0,5	4,1	15	45	35	12	6	2,8	8
LNK-P7Y-290-185	290	1850	2775	100	5,4	30	0,6	4,1	15	45	35	12	6	2,8	8
LNK-P7Y-220-200	220	2000	3000	90	4,6	30	0,7	4,1	15	45	35	12	6	2,8	8
LNK-P7Y-180-220	180	2200	3300	90	4,2	30	0,75	4,1	15	45	35	12	6	2,8	8

- In case of doubt regarding the full current maximum working frequency, please contact ICAR Tech. Dept. for de-rating according to current spectrum
- The thermal resistance is estimated considering the capacitor alone, not fixed and in free air condition (natural convection)
- Routine dielectric test: DC voltage test between terminals = 1.5 $U_N \times 10$ s
- I_{max} has been calculated for a thermal rise $\theta_h - \theta_0$ within about 30°C (for more details see "Selections rules and definitions").



LNK – P8Y

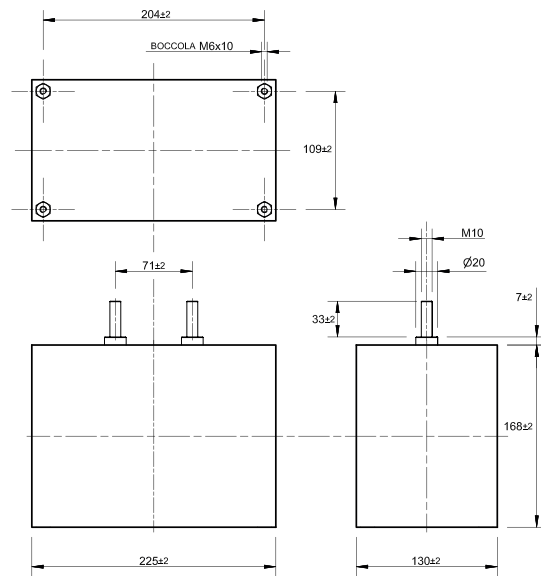
ULfile: E191589

- HEAVY DUTY CONSTRUCTION
- DESIGNED FOR BUSBARS CONNECTIONS
- LOW INDUCTANCE
- EXTERNAL RESIN AND CASE COMPLIES WITH REQUIREMENT R22, HL2 ACCORDING TO EN 45545

Failure rate: 100 FIT
 Operating temperature -25°C / +80°C
 Maximum hot spot 85°C (70°C for 450V and 600V)

MODEL	Capacitance C(µF)	Rated DC voltage U _N (V)	Peak voltage U _S (V)	Max rms current I _{max} (A)	Peak current I _{PK} (kA)	Self inductance Ls(nH)	Series resistance Rs (mΩ)	Thermal resistance R _{th} (°C/W)	Full current Max Working Frequency (KHz)	Creepage between terminals (mm)	Clearance (mm)	Tightening torque (Nm)	Fixing feet tightening torque (Nm)	Weight (kg)	Box quantity (pcs)
LNK-P8Y-2200-45	2200	450	680	150	15	30	0,24	3,4	15	34	34	12	6	3,8	6
LNK-P8Y-1700-60	1700	600	900	150	14	30	0,26	3,4	15	34	34	12	6	3,8	6
LNK-P8Y-1500-80	1500	800	1200	150	13,5	30	0,27	3,4	15	34	34	12	6	3,8	6
LNK-P8Y-1000-110	1000	1100	1650	140	10,7	30	0,33	3,4	15	34	34	12	6	3,8	6
LNK-P8Y-680-130	680	1300	1950	130	9	30	0,39	3,4	15	34	34	12	6	3,8	6
LNK-P8Y-430-165	430	1650	2475	115	7	30	0,48	3,4	15	34	34	12	6	3,8	6
LNK-P8Y-330-185	330	1850	2775	110	6,1	30	0,53	3,4	15	34	34	12	6	3,8	6
LNK-P8Y-250-200	250	2000	3000	100	5,2	30	0,62	3,4	15	34	34	12	6	3,8	6
LNK-P8Y-200-220	200	2200	3300	95	4,7	30	0,68	3,4	15	34	34	12	6	3,8	6

- In case of doubt regarding the full current maximum working frequency, please contact ICAR Tech. Dept. for de-rating according to current spectrum
- The thermal resistance is estimated considering the capacitor alone, not fixed and in free air condition (natural convection)
- Routine dielectric test: DC voltage test between terminals = 1.5 U_N x 10 s
- I_{max} has been calculated for a thermal rise $\vartheta_h - \vartheta_0$ within about 25°C (for more details see "Selections rules and definitions").



LNK – P9X

ULfile: E191589

- HIGH CURRENT
- LOW INDUCTANCE
- DESIGNED FOR BUSBARS CONNECTIONS
- 🔥 EXTERNAL RESIN AND CASE COMPLIES WITH REQUIREMENT R22, HL2 ACCORDING TO EN 45545

Failure rate: 300 FIT
 Operating temperature -25°C / +80°C
 Maximum hot spot 85°C

MODEL	Capacitance C(µF)	Rated DC voltage U _N (V)	Peak voltage U _S (V)	Max rms current I _{max} (A)	Peak current I _{PK} (A)	Self inductance L _s (nH)	Series resistance R _s (mΩ)	Thermal resistance with natural cooling R _{thn} (°C/W)	Full current max working frequency (KHz)	Creepage between terminals (mm)	Clearance (mm)	Fixing feet tightening torque (Nm)	Weight (kg)	Box quantity (pcs)
LNK-P9X-3000-80	3000	800	1400	150	14500	<30	0,32	2,75	10	51	51	6	6,5	4
LNK-P9X-1750-100	1750	1000	2000	150	11000	<30	0,41	2,75	10	51	51	6	6,5	4
LNK-P9X-1350-110	1350	1100	2200	150	9500	<30	0,46	2,75	10	51	51	6	6,5	4
LNK-P9X-1250-120	1250	1200	2400	150	9500	<30	0,46	2,75	10	51	51	6	6,5	4
LNK-P9X-850-140	850	1400	2800	140	7500	<30	0,56	2,75	10	51	51	6	6,5	4
LNK-P9X-650-160	650	1600	3200	135	6500	<30	0,63	2,75	10	51	51	6	6,5	4
LNK-P9X-500-180	500	1800	3600	125	11000	<30	0,71	2,75	10	51	51	6	6,5	4
LNK-P9X-400-200	400	2000	4000	120	10000	<30	0,79	2,75	10	51	51	6	6,5	4
LNK-P9X-330-220	330	2200	4400	150	13500	<30	0,27	2,75	10	51	51	6	6,5	4
LNK-P9X-300-240	300	2400	4800	150	13000	<30	0,28	2,75	10	51	51	6	6,5	4
LNK-P9X-220-270	220	2700	5400	150	11000	<30	0,30	2,75	10	51	51	6	6,5	4
LNK-P9X-200-280	200	2800	5600	150	10000	<30	0,38	2,75	10	51	51	6	6,5	4
LNK-P9X-150-320	150	3200	6400	150	8500	<30	0,38	2,75	10	51	51	6	6,5	4
LNK-P9X-120-350	120	3500	7000	150	8000	<30	0,41	2,75	10	51	51	6	6,5	4

- In case of doubt regarding the full current maximum working frequency, please contact ICAR Tech. Dept. for de-rating according to current spectrum
- The thermal resistance is estimated considering the capacitor alone, not fixed and in free air condition (natural convection)
- Routine dielectric test: DC voltage test between terminals = 1.5 U_N x 10 s, AC voltage test between terminals and fixing bolts = 1.414U_N + 1000 x10s or 2000V whichever is the highest value
- I_{max} has been calculated for a thermal rise $\vartheta_h - \vartheta_0$ within about 35°C (for more details see "Selections rules and definitions").

Custom DC link capacitors

Beside the standard products shown in this catalogue, ICAR produces also a wide range of custom capacitors. ICAR technical department is ready to support customers in developing capacitors based on their requests and specifications.

Custom capacitors for DC link are grouped as follows:

- **LNK-P** series are the capacitors based on the same technology as standard products: metallised polypropylene film, plastic case, dry type resin filled. Customization is mostly related to connections, capacitance value and other special characteristics; the cases are the same used in the standard series.
- **LNK-M** series are metallised polypropylene film, metal cases (aluminium or steel) capacitors, dry type resin filled. Beside the personalization of the P series, the metal case allows our designers to follow mechanical requirements of the customer without any investment related to the plastic case mould.
- **BIOENERGY-D65** series are metallised polypropylene film, metal case (aluminium or steel) capacitors, oil filled. This solution is generally suggested for higher voltage applications

The range of our customized products is extremely wide and covers most of the possible requirements in the railway and traction equipments, industrial drives, wind and solar inverters, special industrial plants.

For any further information please contact our sales department: sales@icar.com.



Warning

DO NOT MISAPPLY CAPACITORS FOR POWER ELECTRONICS

Icar is not responsible for any kind of possible damages to persons or things, derived from the improper installation and application of Power Electronics capacitors

MOST COMMON MISAPPLICATION FORMS:

- Ripple current and peak current beyond specification or not according the maximum power that can be dissipated.
- Surge or working voltage beyond specified value.
- Hot spot or storage temperature beyond the specified limits or not according the maximum power that can be dissipated.
- Incorrect mounting or wrong installation
 - installation nearby hot components or heat sources
 - not suitable connections (not adequate cable or busbars cross section)
 - nuts and washers material, shape or size not suitable for the application
 - tightening torque not according to the specification
- Unusual service conditions as:
 - mechanical shock and vibrations
 - corrosive or abrasive conductive parts in cooling air
 - oil or water vapour or corrosive substances
 - explosive gas or dust
 - radioactivity
 - excessive and fast variations of ambient conditions
 - areas higher than 2000 m above sea level

Periodic check of the connection conditions and tightening torque is strongly recommended.

In case of doubt in the right capacitor **Icar technical service MUST be contacted.**

DISCLAIMER

All the information and data shown in this catalogue are not binding and can be modified without notice. Contact ICAR sales department to get updated specifications. Reliability data by ICAR are based on statistical evaluations, and does not guarantee performances of each single component.

All the products described in the catalogue shall be used within the limits stated in the technical specifications, nevertheless it is that a failure or an abnormal operation, even when capacitors are working within the specified limits, cannot be completely excluded or foreseen at the current state of the art of technology.

Capacitors may become hazardous. Most common risks are related to combustible gas generation, explosion, fire, electrocution or abnormal operation of the capacitor. In order to reduce the risk of explosion, capacitors shall not be mounted in ermetically sealed enclosure with no air exchange. Not all the possible risks and safety measures are mentioned in this catalogue, further information are available on request. It is on customer responsibility to select and take all the necessary safety measures in order to avoid any possible personal injury or property damage related to the use of capacitors. This is particularly valid in for applications in which a failure or an abnormal operation of the capacitors could put at risk human life or health.

ICAR SpA and all the persons acting on its behalf, disclaim any and all liabilities for possible damages resulting from the use of the products described in this catalogue or in any other publication.

ICAR reserves the right to discontinue the production of any item without notice. All orders are subject to ICAR General Conditions of Sales – latest revision.



NOTES

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