# How to Select an GLI...A Capacitor

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## INTRODUCTION

This application note shows in a four-step approach how somebody can select the most suitable capacitor from the GLI...A series for their application.

## STEP 1

First, a Request for Power Electronic Capacitors needs to be filled out by the customer; orange blocks are mandatory, yellow ones are optional.

**Request for Power Electronic Capacitors (Example and Extract)**

| RFQ FOR PECS | EXAMPLE / UNIT | CUSTOMER INPUT | |
|---|---|---|---|
| PROJECT | Name | xyz | |
| APPLICATION | AC/DC, filter etc. | Voltage converter | (1) |
| ENVIRONMENTAL | Humidity, sea water, altitude | | |
| OUTLINE | Rectangular / tubular | Tubular | (2) |
| QUANTITY | pcs, pcs/a | | |
| APPLICABLE STANDARDS | IEC 61071, IEC 61881-1 | IEC 61071 | (5) |
| TECHNOLOGY | All film, metalized PP, etc. | Metalized PP | (4) |
| IMPREGNATION AGENT | Dry resin, castor oil, synthetic oil | Dry | (3) |
| RATED CAPACITANCE | µF | 100 µF | (8) |
| CAPACITOR TOLERANCE | ± % | ± 5 % | |
| RATED AC VOLTAGE | $V_{AC}$ | | |
| RATED DC VOLTAGE | $V_{DC}$ | 900 $V_{DC}$ | (6) |
| RIPPLE VOLTAGE | $V_{pp}$ | 100 $V_{pp}$ | (7) |
| RATED FREQUENCY (AC) | Hz | | |
| RIPPLE FREQUENCY (DC) | Hz | | |
| MAX. PEAK CURRENT (I) | kA | | |
| MAX. RMS CURRENT ($I_{MAX.}$) | $A_{RMS}$ | 40 $A_{RMS}$ | (9) |

## STEP 2

With the customer input in the example above, we can see that it is a voltage converter application **(1)** with a tubular outline **(2)**, making the GLI...A series applicable.

The GLI...A series features dry **(3)** and metalized PP **(4)** technology. The devices' design is based on the IEC 61071 or IEC 61881-1 standard **(5)**.

APPLICATION NOTE

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## STEP 3

Taking all the specified electrical features into consideration, in particular the DC voltage $U_{NDC}$ **(6)** including the ripple peak **(7)**, the requested capacitance $C_n$ **(8)**, and the continuous maximum RMS current $I_{max.}$ **(9)**, we can already select the most suitable capacitor from the GLI...A datasheet table (extract):

| | | | | | | | | | (11) | | (12) | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | **TYPE DESCRIPTION** | | | | | | | | | | | |
| **(10)** | **TYPE GLI...-... A** | **$C_N$ (µF)** | **$U_{NDC}$ ($V_{DC}$)** | **$R_S$ (mΩ)** | **$R_{th}$ (K/W)** | **$I_{max.}$ (A)** | **Î (kA)** | **$Î_S$ (kA)** | **H (mm)** | **DIA. (mm)** | **MOQ / PU (pcs)** | **DRAWING NO.** |
| | **GLI 900,$U_{NDC}$ = 900 $V_{DC}$** | | | | | | | | | | | |
| | 900-25 | 25 | 900 | 0.3 | 7.7 | 80 | 0.8 | 2.4 | 44 | 87 | 12 | 1 |
| **(10)** | 900-100 | 100 | 900 | 0.7 | 7.1 | 50 | 1.0 | 3.0 | 64 | 87 | 12 | 1 |
| | 900-150 | 150 | 900 | 0.9 | 6.3 | 52 | 1.1 | 3.3 | 74 | 87 | 12 | 1 |

## STEP 4

The required specs in this example lead to the yellow marked GLI 900-100 A type of capacitor **(10)**. In addition to other electrical parameters, you can find the mechanical dimensions for the height H = 64 mm and the diameter DIA = 87 mm **(11)**. The minimum order quantity (MOQ) is same as the packing unit (PU) and indicates 12 pieces **(12)**.