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## ELEQ Subassembly Sub-assembled package of current transformers

A complete product that can be installed in  
power transformers, distribution transformers  
and switchgear straight away



# Subassembly

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## Subassembly Construction: Package of current transformers for measurement, protection or for revenue metering (billing)

Over the past fifteen years ELEQ has successfully marketed the subassembly, which combines several current transformers as one unitized product with standard dimensions. This reduces costs for the application of the subassembly in power transformers, distribution transformers and switchgear. The subassembly is supplied ready to use and can be installed in the end product straight away. In short, a solution which reduces time and costs.



## Your Design Advantage

ELEQ's Subassembly is revolutionary. It is remarkable in its simplicity and it permits a high degree of standardization. This unique current transformer unit is aligned on the outside of the unit.

The dimensions of the subassembly are determined in accordance with customer requirements. Based on those dimensions one or more standard models are developed for the customer by ELEQ's product development centre. These form the basis for future orders. Fixed dimensions means time savings for the customers design department, because designers do not have to keep making new designs. Also they do not have to wait for the Subassembly to be manufactured and delivered every time. Every Subassembly is manufactured to a high standard. The design can withstand mechanical loads and has a high vibration resistance.

*"All measurements within compact dimensions"*

## Your Quality Advantage

All the transformers of one or more phases are brought together by ELEQ in the Subassembly. Each current transformer is then checked independently before assembly into the set. After assembly, the complete unit undergoes extensive testing. This eliminates measurement errors due to mechanical and electrical interference between the current transformers, if any. The test reports are available on the internet.

*"Fitted, tested, coded... Now that's what I call 'ready to use'"*

If required, the connecting cables of this sophisticated current transformer unit are provided with colour coding and on request with coding tags. ELEQ can adapt the design of the top and bottom plates for the subassembly to the connecting cable leadthrough according to the requirements. ELEQ's manufacturing department has advanced machines for this purpose (flexible curves on the outside plates). The basic construction of the subassembly is completed with aluminium plates; however, a non-metal construction with transformer board is also possible.



Reliable, easy-to-install, on customer request possible

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## Your Assembly Advantage

The Subassembly is supplied in a special packaging. This is to prevent damage during transport and to protect it from dust and metal particles. Once the unit has been removed from the packaging, assembling is simple. The only tools the fitter needs are a screw driver for fitting the four threaded rods and a wrench for securing them. Guides in the subassembly and screw slots in the threaded rods ensure the assembly goes smoothly. The fitter has no need to lift heavy weight either, since the subassembly comes with mounting points for lifting lugs. And last but not least coded wiring prevents incorrect connection, so that it is only a matter of minutes before the unit is fully assembled.

*"A screw driver  
and a wrench is all  
you need"*

## Your Logistical Advantage

The subassembly means reduced logistic costs. No longer separate components need to be ordered. Instead, a complete product can be ordered. A quality product that meets all requirements and is ready for operation almost instantaneously. Also, it is no longer needed to keep a stock of components in the stockroom, which need to be selected each time before assembling the product. This saves man-hour and improves quality. With a subassembly, you can use the just-in-time principle which also reduces storage expenses.

*"It's better to have  
one complete  
product than several  
components"*



# Subassembly

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## Short overview of subassemblies produced

Over the past fifteen years ELEQ has worked out several constructions that worked optimal in particular customer specific situations. Below a short overview of some constructions made.

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### *Subassembly with test lead*

The test lead is pressed between the plates and the CT, thus securing the fixation of the lead. This fixation is especially important for CTs near the bushing.



### *Non-metal subassembly*

For an application in or near active parts. All parts including the plates and screw rods are constructed out of non-metal materials.



### *Special model in non-metal subassembly*

The plates can be mounted using two holes on the corners of the subassembly. This solution has reduced the total cost of the CTs considerably.



### *Non-metal subassembly for three phases*

A three phase system that will be mounted in the tank near to the active part of the power transformer. This design is based on customer drawings.



### *Double stack subassembly*

A subassembly with different sized CTs. The total size of the subassembly is 1 meter. Used for protection of the sensible metering cores.



### *Subassembly with saturation transformer*

According to IEC standards, sometimes there is a need for a low  $F_s$  figure. If the low  $F_s$  figure can not be made by the core itself, a special saturation CT can be mounted on the outside.



Reliable, easy-to-install, on customer request possible

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## Ordering Specifications

To offer and manufacture the subassembly we require the specifications of the current transformers and the available space to install the subassembly. The minimum specifications ELEQ requires are the mounting location, the requested inner diameter, current ratio, accuracy class, standard, rated output and frequency. If other dimensions are critical, like the maximum height or maximum outer diameter of the set, we also require this information.

For more information about the ring core current transformers, please check the SB08 product sheet.

## General Technical Data\*

Application	Transformer oil up to 105°C or for use in SF6 gas, air or nitrogen
Standard	IEC61869-2, IEEE C57.13, CAN/CSA-C60044-1-07, AS 60044.1 and others on request
Rated primary current (I <sub>pr</sub> )	30...30.000A
Rated secondary current (I <sub>sr</sub> )	1A, 5A and others on request
Rated burden	As required. For example 2,5, 5, 10, 15, 30VA
Accuracy class	As required. For example 0,2S, 5P20, PX, TPY, C800
Rated short-time thermal current	100xI <sub>pr</sub> , max 125kA
Rated insulation level	0,72/3/-kV
Rated frequency	As required. For example 50-60Hz, 16,7Hz
Secondary leads	4 or 6mm <sup>2</sup> , L = 1,5m colour coded

\*Other options available on request. Please contact our sales department for the possibilities.





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ELEQ designs and manufactures smart electrotechnical applications for protecting, measuring and connecting electrical energy and works worldwide for renowned power companies, system builders and installers. Together with our clients we anticipate on the future and on required innovations.

ELEQ is a true producer and partner of clients and relations who are professionally involved in energy and public lighting systems and who rely on continuous precision and high services.

ELEQ delivers all its products and applications in accordance to the high Dutch and German quality standards and serves markets in Europe and beyond from its locations in the Netherlands (Steenwijk) and Germany (Kerpen).

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