

Specialist article

# *5 things you need clarity on before you qualify and deploy your employees for electrotechnical work*

*And how you can even constructively  
compensate for your need for skilled  
personnel with these opportunities*

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## Is it really necessary to hire an electrician for all electrical work?

*A clear no!*

While it is true that electrical work is only carried out by, or under the direction and supervision of an electrical specialist, due to the precise question of

" electrical work"

and

"direction and supervision"

there are a number of options to qualify non-electrical staff for certain activities in electrical work.

This is no substitute for a fully trained electrician, but we can assure you from **our training and consulting experience in electrical qualification:**

The **valuable resource of a skilled electrical specialist** is used where it is needed and optimises personnel deployment through more flexible planning.

## So who is allowed to do what?

*Clarify which electrical work your employees have to carry out at all.*

Is it about working near electrical installations? Or is it about troubleshooting? There is a big difference!



The table on the next page serves as a basic guideline.

# Competence matrix

	<i>lay person</i>	<i>EiP</i>	<i>ESfdt</i>	<i>ES</i>	<i>ES with LLW</i>
Proper use of safe and tested electrical systems and equipment.	✓	✓	✓	✓	✓
Non-electrical work on electrical installations.	✗	✓	✓	✓	✓
Non-electrical work at a safe distance but in the vicinity of live parts.	✗	✓	✓	✓	✓
disconnection/recommissioning) under the direction and supervision of a qualified electrician.	✗	✓	✓	✓	✓
Autonomous electrotechnical work, including disconnection and recommissioning, only according to the "Checklist".	✗	✗	✓	✓	✓
Electrical work up to troubleshooting including disconnection and recommissioning.	✗	✗	✗	✓	✓
Required live work, including troubleshooting on the running system.	✗	✗	✗	✗	✓

Legend:

- EiP: Electrical instructed Person
- ESfdt: Electrical Specialist for defined tasks
- ES: Electrical Specialist
- LLW: Live Line Work

**Non-electrical staff can be qualified for electrical work as EiP (1-2 days training) or ESfdt (10 days training).**

## ***What does that mean in concrete terms?***

*This sounds quite abstract so far, but a few examples will make it clearer.*

	<b>Category</b>	<b>Example</b>
anybody	Proper use of safe and tested electrical systems and equipment.	<ul style="list-style-type: none"> <li>• Use of the standing drilling machine in the workshop by skilled workers.</li> <li>• Operation of the office coffee machine.</li> </ul>
EiP, Esfdt, ES, ES with LLW	Non-electrical work on electrical installations.	<ul style="list-style-type: none"> <li>• Painting work on a low-voltage transformer</li> <li>• Cleaning photovoltaic systems</li> </ul>
EiP, Esfdt, ES, ES with LLW	Non-electrical work at a safe distance but in the vicinity of live parts.	<ul style="list-style-type: none"> <li>• Tree pruning work near high-voltage power lines</li> <li>• Cleaning work on insulators</li> </ul>
EiP, Esfdt, ES, ES with LLW	disconnection/recommissioning) under the direction and supervision of a qualified electrician.	<ul style="list-style-type: none"> <li>• Carrying out device tests according to VDE 0702</li> <li>• Wiring of a control cabinet under instruction</li> </ul>
Esfdt, ES, ES with LLW	Autonomous electrotechnical work, including disconnection and recommissioning, only according to the "Checklist".	<ul style="list-style-type: none"> <li>• Disconnect according to five safety rules, change a surge protection device according to the checklist, recommissioning.</li> </ul>
ES, ES with LLW	Electrical work up to troubleshooting including disconnection and recommissioning.	<ul style="list-style-type: none"> <li>• Carrying out troubleshooting in a de-energised state on a production plant</li> <li>• Initial testing of a plant according to VDE 0100-600</li> </ul>
ES with LLW	Required live work, including troubleshooting on the running system.	<ul style="list-style-type: none"> <li>• troubleshooting on a running system without contact protection</li> <li>• Working on open and live 200 V batteries</li> </ul>

**Important: Distinguish between "carrying out individual work" and "establishing a safe condition" or the "autonomous activity".**

## What is the focus of an qualification for electrical work?

*It is not about individual tasks, but about the totality of his tasks.*

**It is about the totality of the works, meaning all the works and not the majority of them.**

**Example:** If an employee has to disconnect or partially verify the system is dead even once, at least an ESfddt qualification is required for this employee.

If you are sure that certain employees will be working in the electrotechnical environment, but never and under no circumstances run the risk of having to carry out an activity reserved for an ES or ESfddt, an EiP qualification remains the right choice.

**Always observe the competence limits of ESfddt and EiP!**

**No one replaces a fully qualified ES!**





## What is it like to deploy your employees with your clients?

*Clarify which tasks are to be carried out by your employees in detail.*

Only through expert and clear communication can you ensure that employees are neither over- nor under-qualified - both of which happen very easily. And this is despite the fact that you take great care to ensure that your employees are adequately qualified. Unfortunately, in communication it is easy for both sides to tacitly assume different circumstances.

### **Example:**

You employ several painters who are to paint transformers or other existing equipment at the customer's site. Now you could have the idea of having every painter qualified as ESfdt. So that they can really work safely and can and are allowed to determine for themselves whether the systems are really dead.

**But, is this also sensible and necessary?**

## In short: No

If you talk to your customer, it could become clear that he might never allow your employees to activate his equipment, let alone put it into operation. For your customer it is more than obvious that only his own employees activate his installations and release it for the work of your painters. He even insists on this. In this case, such a two-week qualification of your employees would not be necessary. A one to two-day qualification as an electrically instructed person is completely sufficient.



**Important:** More dramatic, of course, are the cases in which your employees are supposed to carry out an order and the person in charge prohibits the execution at your expense due to a lack of proof of qualification.



## Is it done with a basic qualification?

*In addition to professional training, consider required instruction and training.*

The good news is that very few comprehensive qualifications have to be repeated in full - of course it is not forbidden.

However, according to § 7 ArbSchG and § 7 DGUV V 1 as well as in accordance with VDE, the employer is obliged to maintain the qualification and according to § § 12 ArbSchG as well as 4 DGUV V 1, he is obliged to provide annual, professionally appropriate instruction.

	EIP	Esfdt	ES	ES with LMW
Recurring instruction, <b>at least once a year</b> Duration: approx. 4 hrs.	✓	✓	✓	* ✓
Obtaining professional qualification <b>every 2-3 years</b> (We recommend three years) Duration: 1 day	✗	✓	✓	✗
Retraining <b>all four years</b> Duration: 2 days	✗	✗	✗	✓
Occupational health examination (G25) <b>every three years</b> Duration: 1 h + medical waiting room	✗	✗	✗	✓

\* May be included in the general recurring instruction.

**All these trainings and instructions  
are part of our offer.**

**Any questions? We would like to get to know you.**

**We invite you to a 30-minute consultation on the electrical qualifications of your employees. Free of charge and without obligation, guaranteed!**



***Write or give us a call!***

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## *Columbo-guarantee*

We all know: The best questions all too often come afterwards. Even if it's more than a year after the training: "*One more little question*" is always welcome, we enjoy hearing from you. That's what we stand for.

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