



Free online seminar: Keys to develop high voltage industrial power supplies

A hand holding a red marker is writing the word 'INVITATION' in large, red, uppercase letters on a whiteboard. A horizontal red line is drawn below the word.

INVITATION

✓ Invitation

✓ Agenda

Invitation

Join the free online seminar series co-hosted by Würth Elektronik and ST to learn how to design a very high voltage power supply for industrial markets.

- ▶ Session 1 - Tuesday 27th October, 2020
- ▶ Session 2 - Tuesday 3rd November, 2020
- ▶ Session 3 - Thursday 10th November, 2020

▶ [REGISTER NOW!](#)

Who should attend?

Designers who want to develop their own auxiliary power supply for industrial systems requiring up to 440VAC or 600VDC.



Benefits you will take away:

- ✓ Learn how to select the best semiconductor and passive components to design a robust very high voltage power supply.
- ✓ Identify what contributes to power losses in your supply, in order to optimize its efficiency.
- ✓ Practical examples with real measurements carried out on a very high voltage auxiliary power supply.

Registration information:

To participate in this free online event, simply register on my.st.com. The registration will allow you to participate in all three sessions.

[!\[\]\(a870788d6ed9b8fd294b7654a8c8526b_img.jpg\) REGISTER NOW!](#)

Speakers:

Ester Spitale, Technical Marketing Manager at ST



Ester holds an MSc degree in Electronic Engineering (2004) and a Ph.D. in Electrical Engineering from the University of Catania (2009). She joined STMicroelectronics in 2005. After 6 years specializing in the design of analog controllers for SMPS, she has now been working in technical marketing for the EMEA region for more than 8 years, covering analog and power, with a focus on power conversion ICs.

Jiri Smutka, Senior Application Engineer at ST



Jiri was awarded a Master's degree from the Faculty of Electrical Engineering of the Czech Technical University in 1996 and now has 20 years' experience in SMPS design. He has been working for STMicroelectronics Application Center in Prague for 16 years. Besides providing technical support to European customers in SMPS design, Jiri participates in the development of reference designs with ST products and works with marketing teams and Product Groups to create new products.

Giuseppe Ballarin, Senior Field Application Engineer at Würth Elektronik



Giuseppe was awarded a Bachelor's and a Master's degree in Electronic Engineering from the University of Padova. He started working at STMicroelectronics in 2010 as a Technology R&D Engineer in the Smart Power Division, where he designed, developed and tested ESD protections on silicon. During this period, he also published international papers and documents on this topic.

Giuseppe has been a Field Application Engineer at Würth Elektronik since 2016. He focuses on the design of magnetic based circuitry, EMC compatibility and overvoltage protection. He also provides support during EMC tests and delivers seminars focused on electronic design and electromagnetic interferences.



Agenda

Online seminar dates and agenda

- **Session 1**

Tuesday 27th October, 2020

Time: 14:00 - 15:30

ST: Where & how to design very high voltage auxiliary power supplies

- MOSFETs & rectifier requirements
- Tips and tricks on high-voltage start-up
- 10W & 100W examples

Würth Elektronik: Basic principles of a transformer

- Operating principle & usage
- Ideal relationship between primary and secondary windings
- Dot convention and winding direction
- Relationship between inductance (mutual and leakage), airgap and energy storage
- Transformer vs coupled inductor
- Insulation

- **Session 2**

Tuesday 3rd November, 2020

Time: 14:00 - 15:30

ST: Design optimization

- How very high-voltage impacts over-current protections & switching losses
- How to improve efficiency: synchronous rectification vs. rectifiers at the secondary side

Würth Elektronik: Power transformer selection

- Key parameters of transformers that influence design
- Transformer selection process: how to find the right solution for each auxiliary power supply project



- **Session 3**

Tuesday 10th November, 2020

Time: 14:00 - 15:30

ST: 10W & 100W boards

- video with measurements

Würth Elektronik: How to optimize feedback with optocoupler

- Basic principles of optocoupler
- Key parameters
- Optocoupler from an efficiency point of view

WEBSites:



www.st.com



www.we-online.com