

 Solar-Log™

Overvoltage Protection for Small
and Large Plants

Publisher:
Solare Datensysteme GmbH
Fuhrmannstr. 9
72351 Geislingen-Binsdorf
Germany

International support
Tel.: +49 7428 9418 -640
Fax: +49 7428 9418 -280

e-mail: support@solar-log.com

Italy
Technical support: +39 0471 631032
e-mail: italy-support@solar-log.com

France
Technical support: +33 97 7909708
e-mail: france-support@solar-log.com

Switzerland
Technical support: +41 565 355346
e-mail: switzerland-fl-support@solar-log.com

United States
Technical support: +1 203 702 7189
e-mail: usa-support@solar-log.com

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1 Overvoltage Protection for Small Plants

1.1 General information on overvoltage and overvoltage protection

Whenever electronic components are used, a combination of adverse factors can lead to overvoltage.

This also applies to photovoltaics and the large number of related private solar plants.

These factors go beyond just lightning strikes and also include electro-magnetic induction that, for example, can lead to overvoltage spikes with unprotected cables. Overvoltage can cause irreparable damage to the Solar-Log™ interfaces. Overvoltage protection is needed for the Solar-Log™ to counter these influences and to minimize discharge damage.

Overvoltage protection can be installed at the RS485-A and RS485/422-B interface of the Solar-Log™ and is a cost-effective protection from overvoltage damage. The installation of the overvoltage module is relative easy; it only has to be attached to the appropriate interface and then has to be grounded.

That is why it is recommended to install appropriate overvoltage protection on the inverter for smaller plants to prevent damage to the interface (as described above) as well as to prevent any resulting data loss.



Fig.: Example of overvoltage protection with a Solar-Log¹⁰⁰⁰

2 Overvoltage Protection for Large Plants

2.1 Lightning and Overvoltage Protection Concept

For larger plants with many inverters, it is strongly advised to take the factors mentioned into account and to install a lightning and overvoltage protection concept to protect the Solar-Log™ from overvoltage. Due to the complexity of this overall concept, it is recommended to work with a specialist or the manufacturer to develop such a concept.

Here are two examples of an overall concept based on the recommendations from the companies Leutron GmbH and Dehn & Söhne GmbH & Co. KG.

2.2 Examples for lightning and overvoltage protection concepts

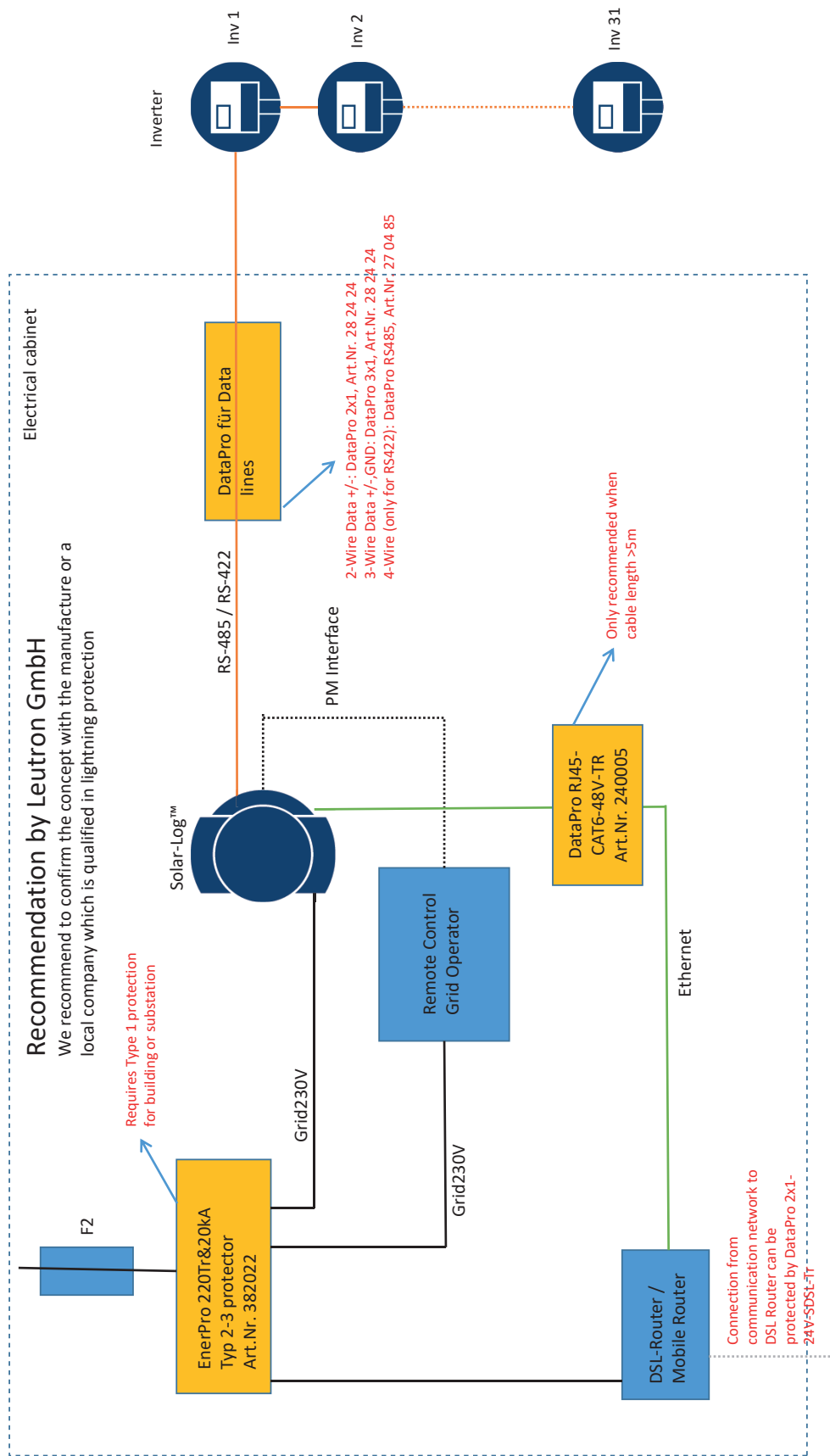


Fig.: Lightning and overvoltage protection concept from the company Leutron GmbH

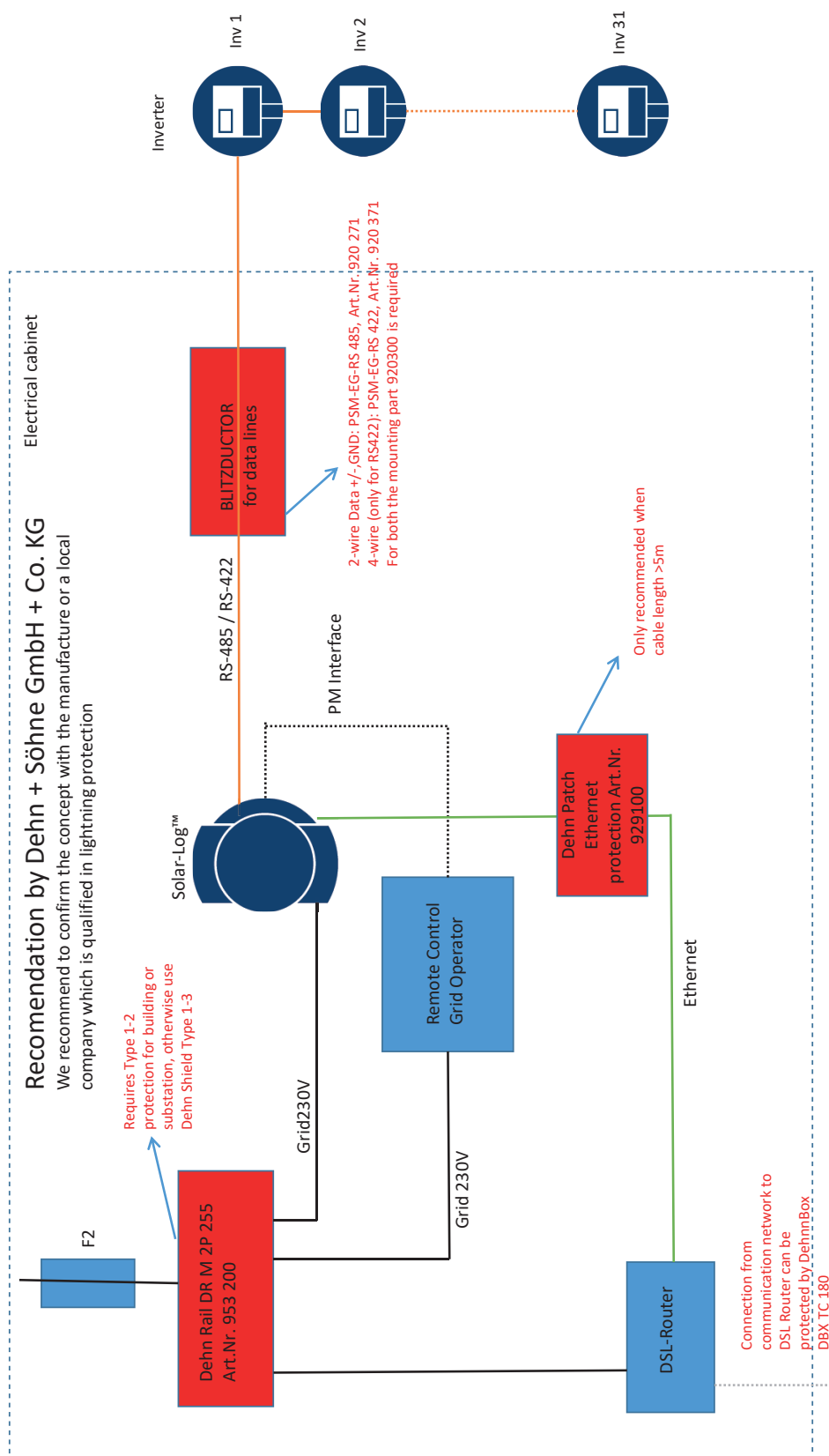


Fig.: Lightning and overvoltage protection concept from the company Dehn & Söhne GmbH & Co. KG

Solare Datensysteme GmbH
Fuhrmannstraße 9
72351 Geislingen-Binsdorf
Germany
Tel: +49 7428 9418 200
Fax: +49 7428 9418 280
info@solar-log.com
www.solar-log.com
www.solarlog-WEB.com
Hotline: +49 7428 9418 660

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