



TECHNICAL REQUIREMENTS

ELECTRICAL

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POWER SUPPLY FOR INSTRUMENT SYSTEMS

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TABLE OF CONTENTS

TABLE OF FIGURES	3
1. SCOPE	4
2. REFERENCES	4
3. TERMS AND DEFINITIONS	4
4. GENERAL	4

TABLE OF FIGURES

<i>Figure 1. Typical Circuit Diagram of Power Supply for Instrument Systems</i>	6
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1. SCOPE

The present document is intended to define the technical requirements of the power supply for instrument, DCS, ESD and BMS systems.

2. REFERENCES

The following standards, acts of law and other documents are referenced in the standards:

Elektros įrenginių įrengimo bendrosios taisyklės, patvirtintos energetikos ministro 2012 m. vasario 3 d. įsakymu Nr. 1-22 (Žin., 2012, Nr. 18-816)

OL-TR-GR-000	<i>General Requirements</i>
OL-TR-ER-000	<i>Electrical. General</i>
OL-TR-ER-015	<i>Uninterruptible Power Supply</i>

3. TERMS AND DEFINITIONS

BMS: Burner Management System.

DCS: Distributed Control System.

ESD: Emergency Shut-Down.

Local Rules: Rules, regulations and other documents which regulate the electrical sector in Lithuania.

UPS: Uninterruptible Power Supply.

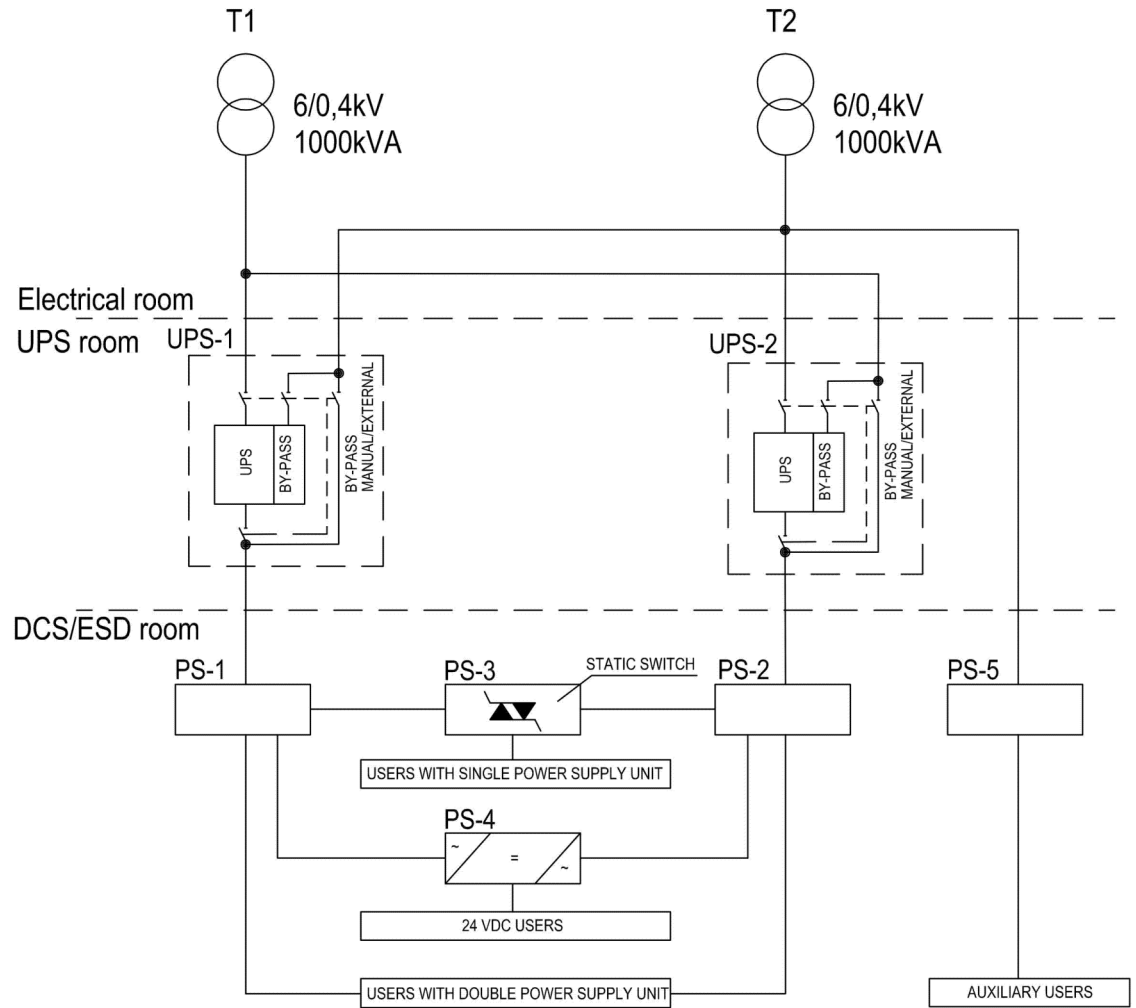
For general terms and definitions see:

OL-TR-ER-000	<i>Electrical. General</i>
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4. GENERAL

- 4.1 The reliability of electrical power supply for the instrument users shall meet the local requirements and shall be fixed in design of object.
- 4.2 The typical power supply diagram for instrument users which should be used is presented in Figure 1.
- 4.3 The powering shall be from 2 independent power sources and 3rd source from UPS accumulators – fulfill the requirements of local rules for sources and installation.
- 4.4 The additional input should be used for powering auxiliary circuits (lighting, heating, ventilation of cabinets and other)
- 4.5 UPS shall be located in separate with climate control room or in DCS/ESD technical room.
- 4.6 Power distribution panels of instrument power should be putted in to common cabinet preferred with natural ventilation.

- 4.7 The circuit breakers (thermal/electromagnetic trip) should be used for feeder's protection.
- 4.8 The fuses can be used for 24 VDC circuits.
- 4.9 Wiring of each panel in cabinet should be segregated from each other.
- 4.10 The dedicated and marked terminal blocks (L, N, PE) for each feeder should be used.
- 4.11 All wires in cabinet should have address type marking.
- 4.12 The lighting of cabinet operating from open door switch should be used.
- 4.13 Each distribution panel should have incoming switch disconnect.
- 4.14 The static switch should have manual by-pass and removable main part of unit.
- 4.15 The double rectifier/diode system should be used for 230VAC/24VDC circuits.
- 4.16 Cables entries typically are in bottom of cabinet.
- 4.17 The grounding bars with terminals for cable sheets/screens should be installed in bottom of cabinet.
- 4.18 Cable sealing and fixing tool in bottom of cabinet should be also.
- 4.19 The glass type doors of cabinet should be.
- 4.20 If forced ventilation system must be used the air entries in to cabinet should be equipped with fiber type air filters.



PS-x - distribution panels in common cabinet

Figure 1. Typical Circuit Diagram of Power Supply for Instrument Systems