Научно-техническая конференция
«ТЕХНИЧЕСКОЕ ДИАГНОСТИРОВАНИЕ ВЫСОКОВОЛЬТНЫХ ВРАЩАЮЩИХСЯ МАШИН. ПРЕДПОСЫЛКИ ПЕРЕХОДА НА ОБСЛУЖИВАНИЕ ПО РЕАЛЬНОМУ СОСТОЯНИЮ»
ПОСТЕР-СЕССИЯ

CONDITION BASED MONITORING OF LARGE TURBO GENERATORS

Mladen Šašić
IRIS POWER-CANADA

Introduction

• Condition Based Maintenance (CBM) is a predictive maintenance technique focusing on performing a maintenance action based on the actual condition of a system
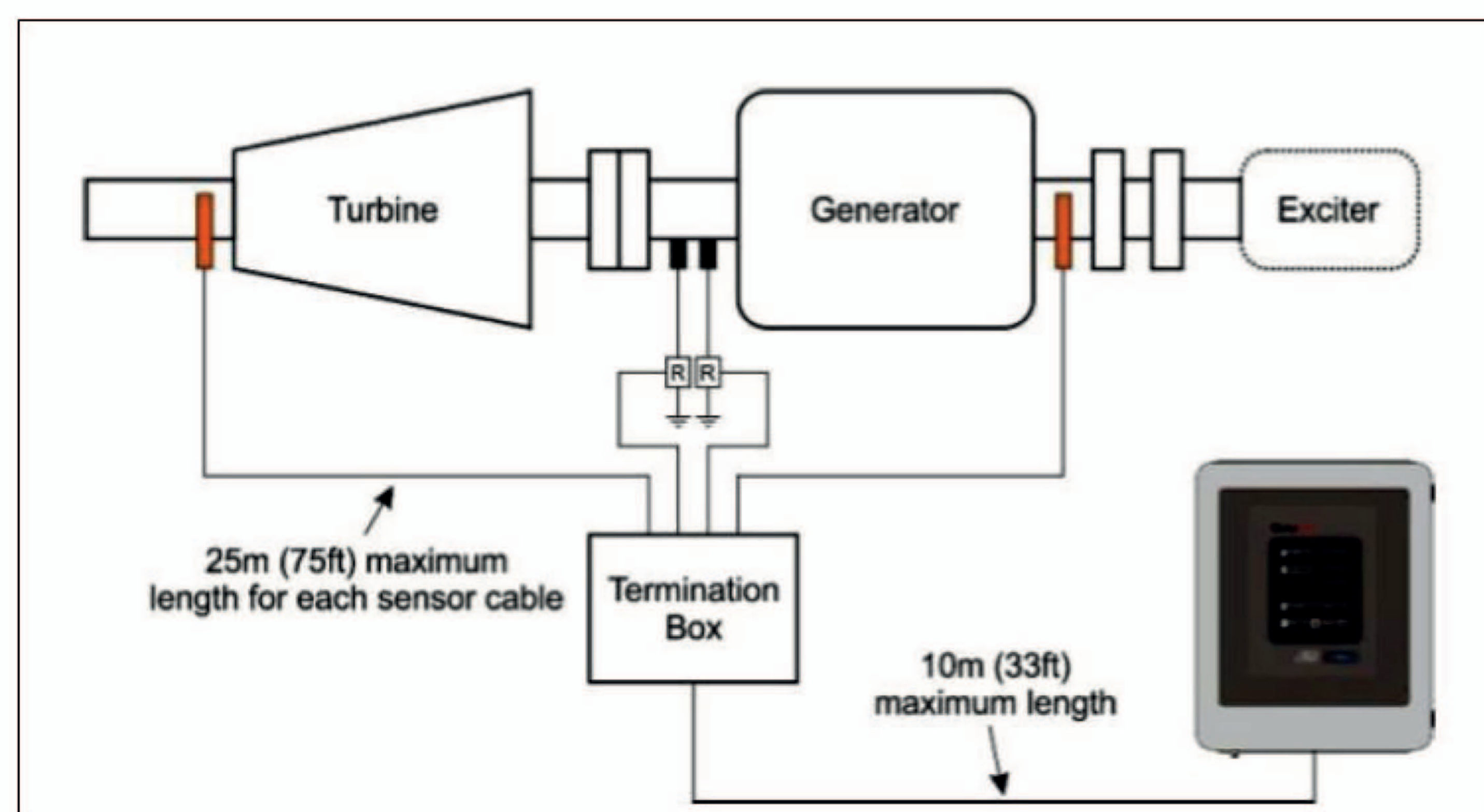• On-line data collection offers multiple advantages

Rotor Flux Monitoring

• Two types of flux probes, one per machine
• Simple diagnostic of rotor shorted turns
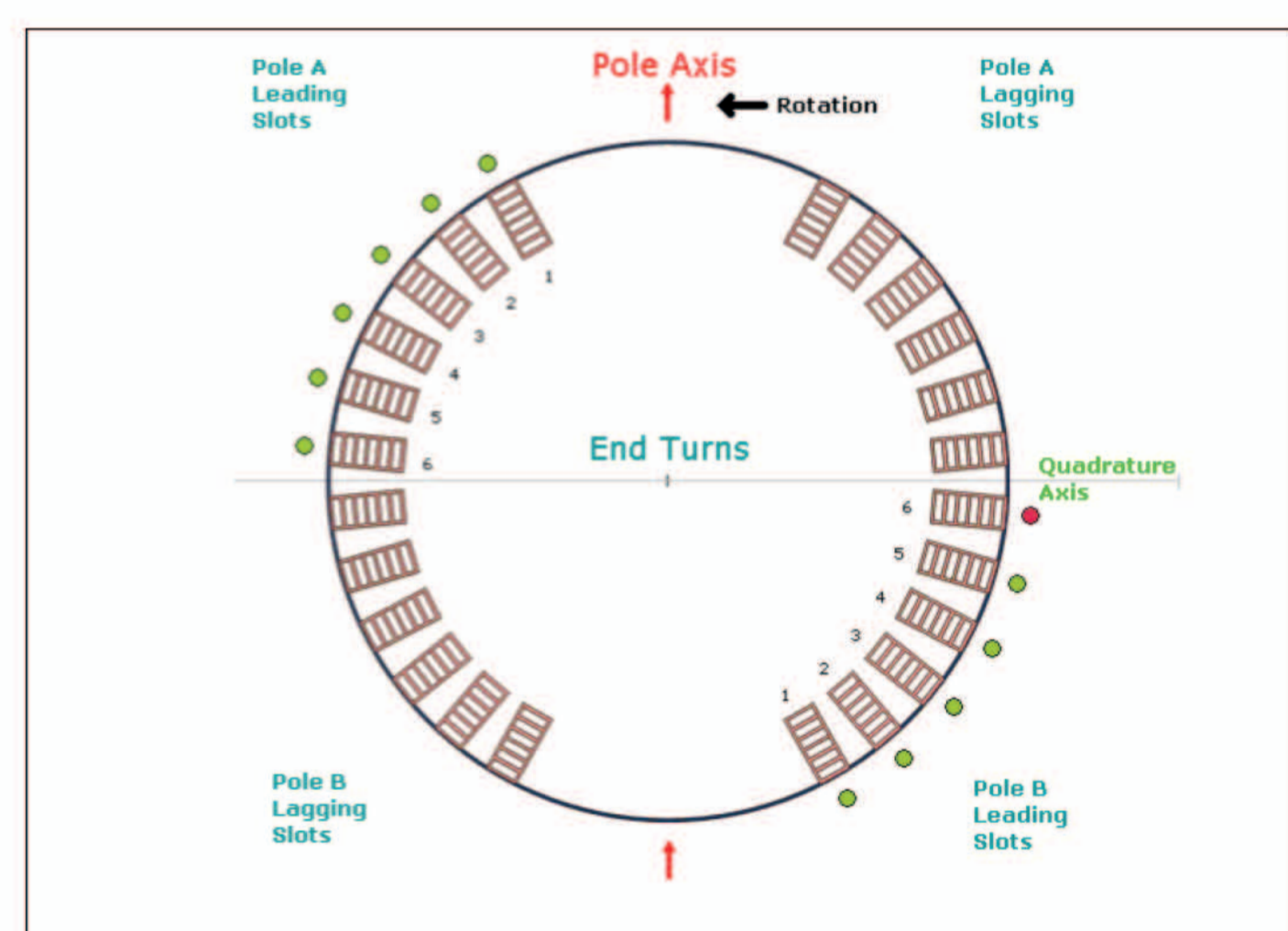
Shaft Voltage/Current Monitoring

• Detection of dangerous levels of shaft current and voltage
• Two voltage and two grounding brushes monitoring
• Prevention of bearing damages

Partial Discharge Monitoring

• More than 77.000 PD sensors installed
• Database with 660.000 results
• Portable and continuous instruments IEC 600-34-27-2

Figure 1 – Time domain disturbance separation by time of pulse arrival
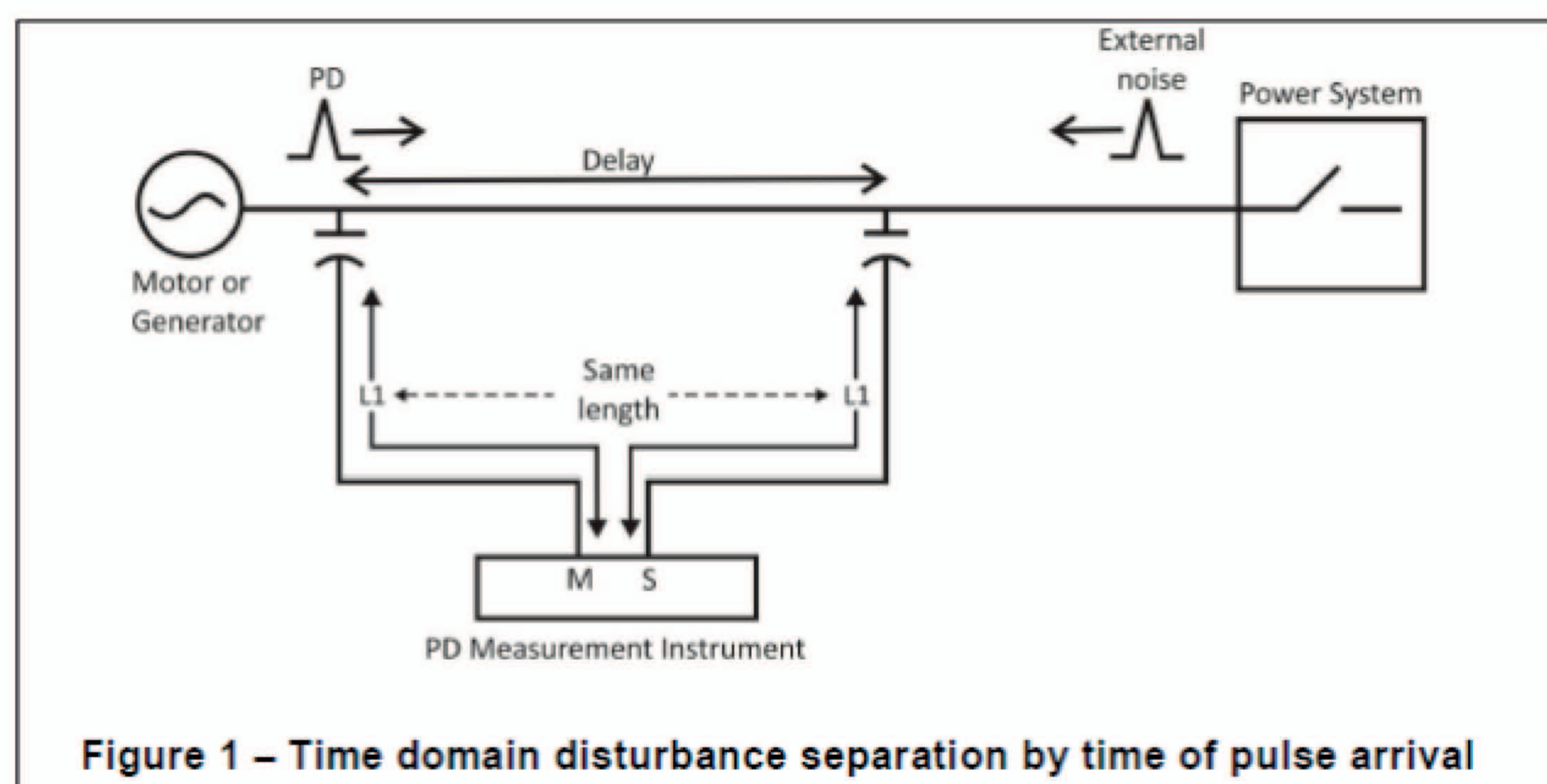
Endwinding Vibration Monitoring

• Simultaneous data collection from up to 32 sensors
• Optical accelerometers, single and dual axis
• Hydrogen gas penetration

Conclusions

• On-line monitoring of large generators provides additional diagnostic value and enables better planning
• The time between generator maintenance shut-downs can be extended, resulting in lower maintenance cost and increased availability
• Multiple monitoring technologies are integrated in one device
• Single software platform is used for configuration and data processing

IRIS POWER
A QUALITROL Company   www.irispower.com

www.cigre.ru