

SAFETY IS OUR PRIORITY

MARMOT SYSTEM



APPLICATIONS

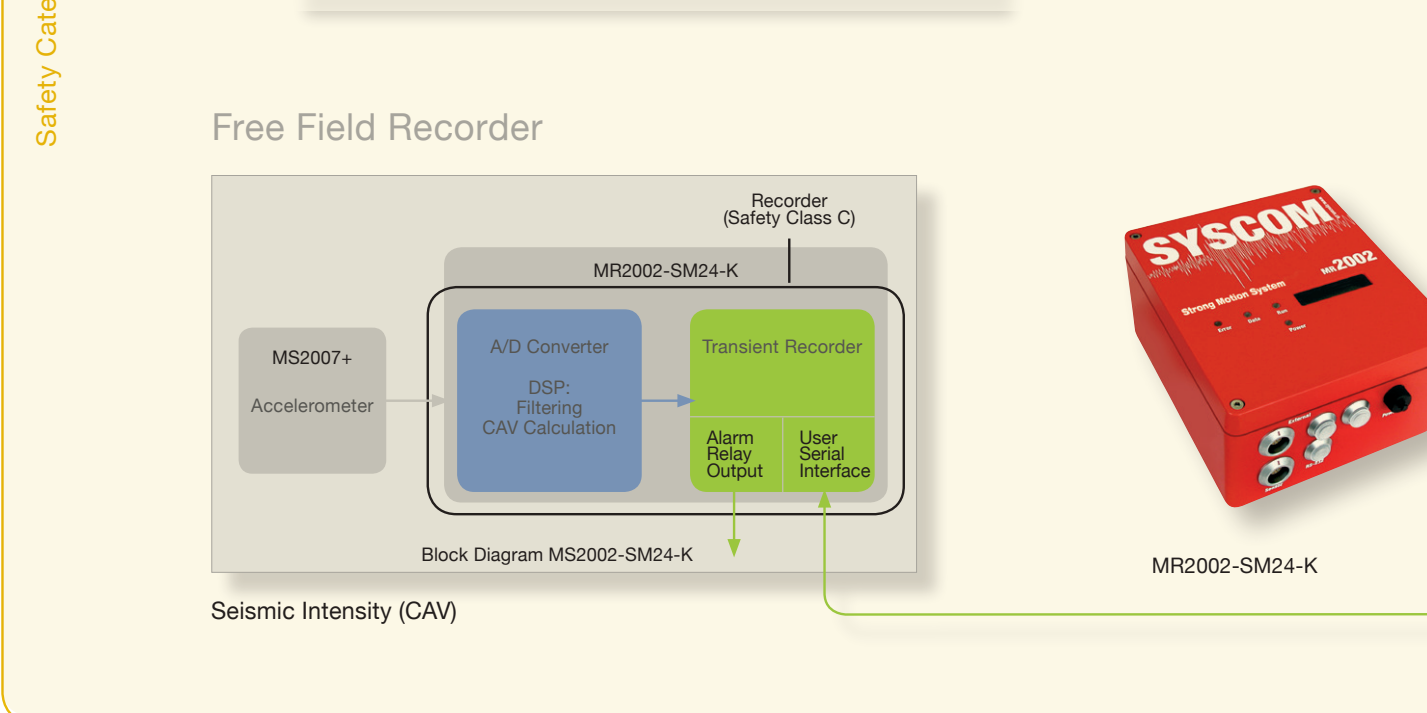
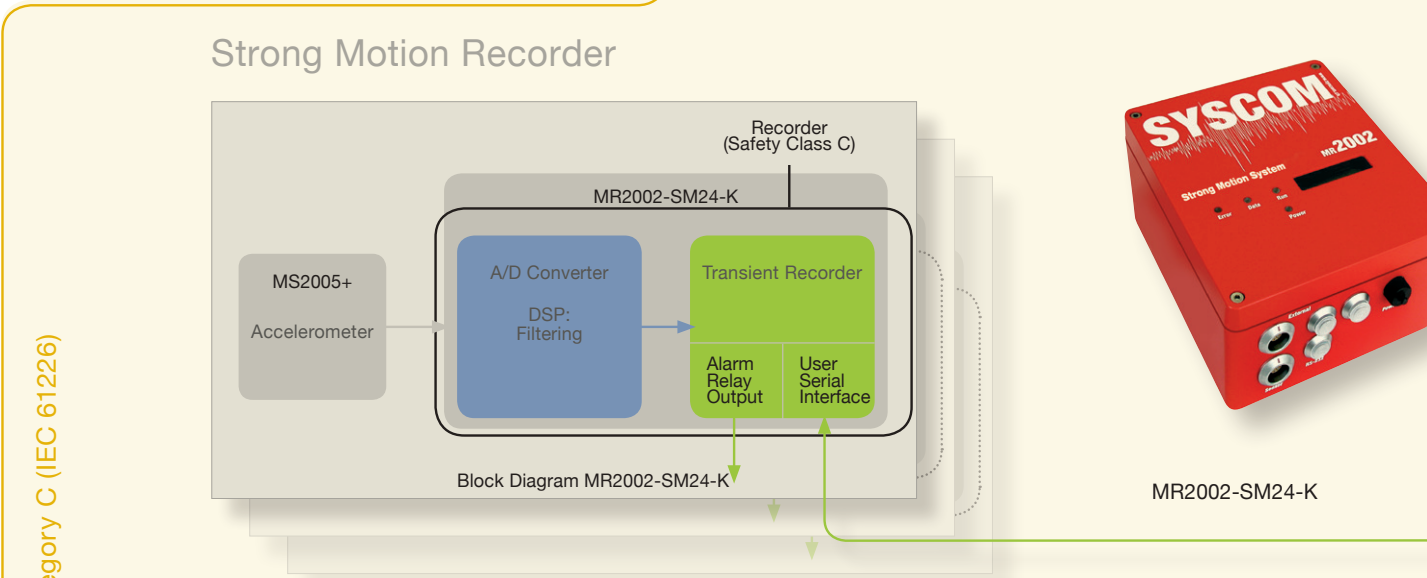
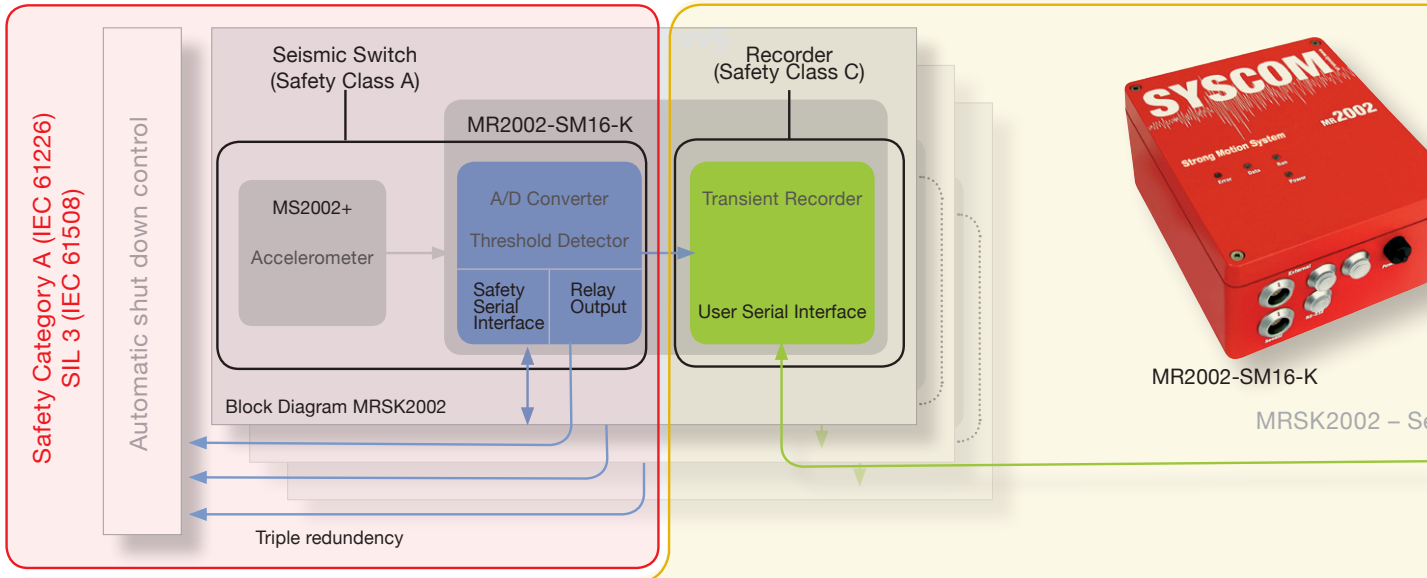
Seismic Monitoring and Trip System for :

- Nuclear Power Plants
- LNG-Terminals
- Gas Turbine Power Plants
- Chemical Process Industries

DATASHEET : MARMOT

SYSCOM's MARMOT Seismic Monitoring and Trip System perfectly responds to the increasing safety demand in vulnerable industries such as Nuclear Power Plants (NPP), Nuclear Storage Facilities and Liquid Natural Gas Storage (LNG). With its distributed intelligence it guarantees dependable alarms for automatic shut down (trip) information depending on the impact of earthquakes on structures.

Trip





MS2002+

Seismic Switch / Strong Motion Recorder

Serial Connections Fiberoptic



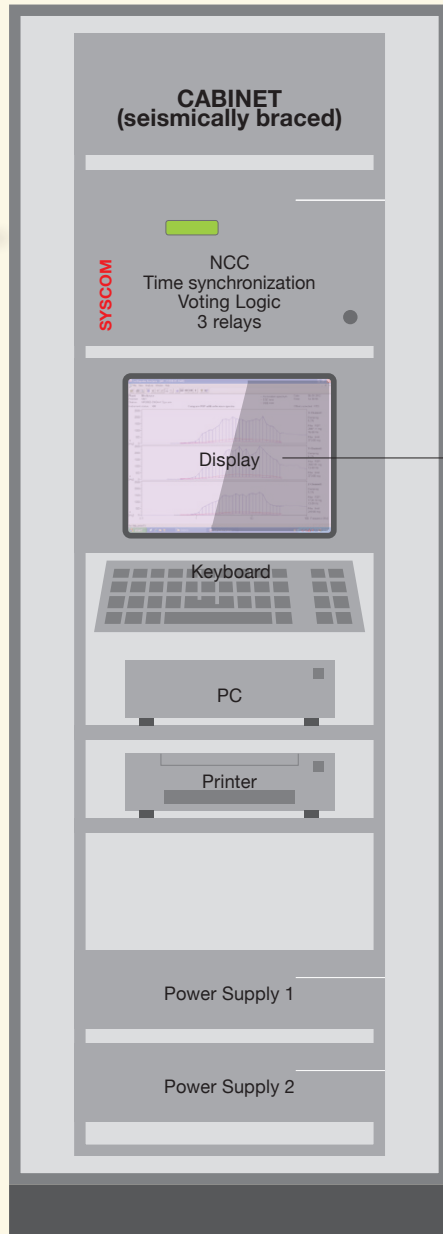
MS2005+

Serial Connections (Copper / Fiberoptic)



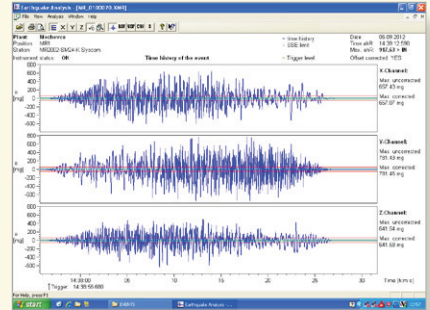
MS2007+

Serial Connections (Copper / Fiberoptic)

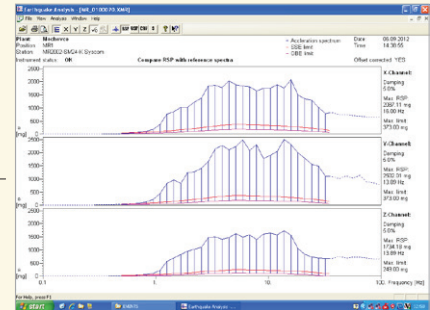


Safety Category C (IEC 61226)

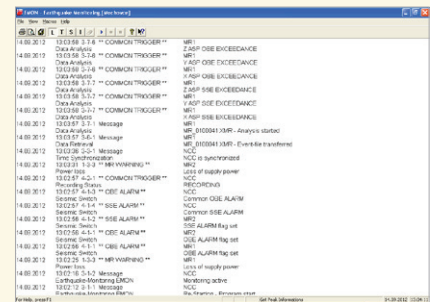
Time Histories



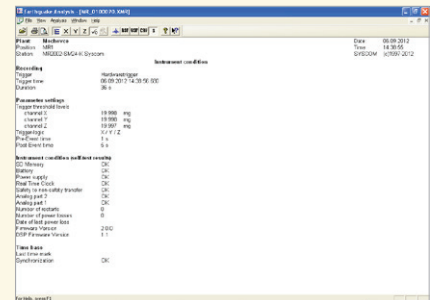
Spectra Comparison



Log files



System State of Health



MARMOT

Seismic Monitoring and Trip System for Nuclear Power Plants / LNG-Terminals / Gas Turbine Power Plants / Chemical Process Industries

SYSCOM's MARMOT Seismic Monitoring and Trip System perfectly responds to the increasing safety demand in vulnerable industries such as Nuclear Power Plants (NPP), Nuclear Storage Facilities and Liquid Natural Gas Storage (LNG). With its distributed intelligence it guarantees dependable alarms for automatic shut down (trip) information depending on the impact of earthquakes on structures.

MARMOT complies with all the relevant standards applicable in these industries, fully tested and certified. MARMOT's modular design offers cost effective solutions for the individual requirement of a plant structure. The use of proven state-of-the-art technology guarantees a minimum of 15 years of life and support!

SYSCOM's System Qualification Plan for the MARMOT System is based on the following sources and guidelines

1. IEC 60780 10/1998
Nuclear power plants – Electrical equipment of the safety system - Qualification
2. IEC 60980 06/1989
Recommended practices for seismic qualification of electrical equipment of the safety system for nuclear generating stations
3. RCC-E 12/2005
Design and construction rules for electrical equipment of nuclear islands
4. IEC 61180-1 10/1992
High-voltage test techniques for low-voltage equipment
5. IEC 60439-1 04/2004
Low-voltage switchgear and control gear assemblies – Part 1: Type-tested and partially type-tested assemblies
6. IEC 60068-2-1 03/2007
Environmental testing - Part 2-1: Tests - Test A: Cold
7. IEC 60068-2-2 07/2007
Environmental testing - Part 2-2: Tests - Test B: Dry heat
8. IEC 60068-2-6 12/2007
Environmental testing – Part 2: Tests – Test Fc: Vibration (sinusoidal)
9. IEC 60068-2-14 01/1984
Basic environmental testing procedures. Part 2 : Tests. Test N: Change of temperature
10. IEC 60068-2-27 02/2008
Environmental testing - Part 2-27: Tests - Test Ea and guidance: Shock
11. IEC 60068-2-30 08/2005
Environmental testing - Part 2-30: Tests - Test Db: Damp heat, cyclic (12 h + 12 h cycle)
12. IEC 60068-2-57 11/1999
Environmental testing - Part 2-57: Tests - Test Ff: Vibration - Time-history method
13. IEC 60068-2-78 08/2001
Environmental testing – Part 2-78: Tests – Test Cab: Damp heat, steady state
14. IEC 61000-4-2 01/1995
Electromagnetic compatibility (EMC) - Part 4: Testing and measuring techniques - Section 2: Electrostatic discharge immunity test - Basic EMC publication

15. IEC 61000-4-3 11/2007
Electromagnetic compatibility (EMC) - Part 4-3: Testing and measurement techniques - Radiated, radio-frequency, electromagnetic field immunity test
16. IEC 61000-4-4 07/2004
Electromagnetic compatibility (EMC) - Part 4-4: Testing and measurement techniques - Electrical fast transient/burst immunity test
17. IEC 61000-4-5 11/2005
Electromagnetic compatibility (EMC) - Part 4-5: Testing and measurement techniques - Surge immunity test
18. IEC 61000-4-6 05/2006
Electromagnetic compatibility (EMC) - Part 4-6: Testing and measurement techniques - Immunity to conducted disturbances, induced by radio-frequency fields / Combines IEC 61000-4-6 (2003-05), AMD 1 (2004-10) and AMD 2 (2006-03)
19. IEC 61000-4-8 06/1993
Electromagnetic compatibility (EMC); part 4: testing and measurement techniques; section 8: power frequency magnetic field immunity test; basic EMC publication
20. IEC 61000-4-11 06/2004
Electromagnetic compatibility (EMC) - Part 4-11: Testing and measurement techniques Voltage dips, short interruptions and voltage variations immunity tests
21. IEC 61000-4-12 09/2006
Testing and measurement techniques – Ring wave immunity test
22. IEC 61000-6-4 07/2006
Electromagnetic compatibility (EMC) – Part 6-4: Generic standards – Emission standard for industrial environments
23. EN 55011 08/2007
Industrial scientific and medical (ISM) radio-frequency equipment - Electromagnetic disturbance characteristics - Limits and methods of measurement
24. IEC 61000-4-9 06/1993
Electromagnetic compatibility (EMC); part 4-9: Testing and measurement techniques; Pulse magnetic field immunity test
25. IEC 61000-4-18 06/2007
Electromagnetic compatibility (EMC) - Part 4-18: Testing and measurement techniques – Damped oscillatory wave immunity test

26. IEC 61000-4-16 06/1998
Electromagnetic compatibility (EMC) - Part 4-16: Testing and measurement techniques – Test for immunity to conducted, common mode disturbances in the frequency range 0 Hz to 150 kHz
27. IEC 61000-4-10 06/1993
Electromagnetic compatibility (EMC) - Part 4-10: Testing and measurement techniques Damped oscillatory magnetic field immunity test
28. IEC 60721-3-3 10/2002
Classification of environmental conditions – Part 3-3: Classification of groups of environmental parameters and their severities – Stationary use at weather protected locations
29. IEC 60364-3 12/1995
Electrical Installations of Buildings

All tests have been carried out by accredited test labs such as IABG (Munich) or Montena (Fribourg). Test reports are available.

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