

Instruction Manual
352-56001-13

Upgrade KRM Receiver

Retrofit Kato Rotor Monitor KRM2000™



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INTRODUCTION

Foreword

This manual contains the instructions to properly uninstall the KRM100 receiver and install Kato Engineering's KRM2000™ receiver. The KRM2000™ is a rotor monitoring system for series redundant brushless exciters that also monitors insulation resistance and detects ground failures utilizing wireless telemetry. This system is primarily used on large turbine driven synchronous generators.

Please read this manual and all included manuals in entirety before unpacking, installing, and operating this equipment. If your manual came on a CD, read all the files included on the CD.

NOTE: Due to rapid changes in designs and processes and the variability of Kato Engineering's products, information in this manual must not be regarded as binding and is subject to change without notice. The image on the front cover is representative only. Several variations are available within the range of products covered within this manual.

Safety Instructions

In order to prevent injury or equipment damage, everyone involved in installation, operation, and maintenance of the KRM2000™ system described in this manual must be qualified and trained in the current safety standards that govern his or her work.

While "common-sense" prevention of injury or equipment damage cannot be completely defined by any manual (nor built into any piece of equipment), the following paragraphs define warnings, cautions, and notes as they are used in this manual:

WARNING: Warnings identify an installation, operation, or maintenance procedure, practice, condition, or statement that, if not strictly followed, could result in death or serious injury to personnel.

CAUTION: Cautions identify an installation, operation, or maintenance procedure, practice, condition, or statement that, if not strictly followed, could result in destruction of or damage to equipment or serious impairment of system operation.

NOTE: Notes highlight an installation, operation, or maintenance procedure, condition, or statement and are essential or helpful but are not of known hazardous nature as indicated by warnings and cautions.

WARNING: Shock hazard—Do not service the rotor monitor or other electrical machinery or equipment without de-energizing and tagging the circuits as out of service. Dangerous voltages are present, which could cause serious or fatal shock.

Description

The KRM2000™ rotor monitoring system consists of five components to provide the basic functions.

1. Stationary induction power loop antenna
2. Stationary dipole receiver antenna
3. Non-rotating receiver
4. Power supply
5. Rotor mounted transmitter

Figure 1 demonstrates these components and their general location. This diagram does not demonstrate every application but is provided as a generic guide to how the system is laid out.

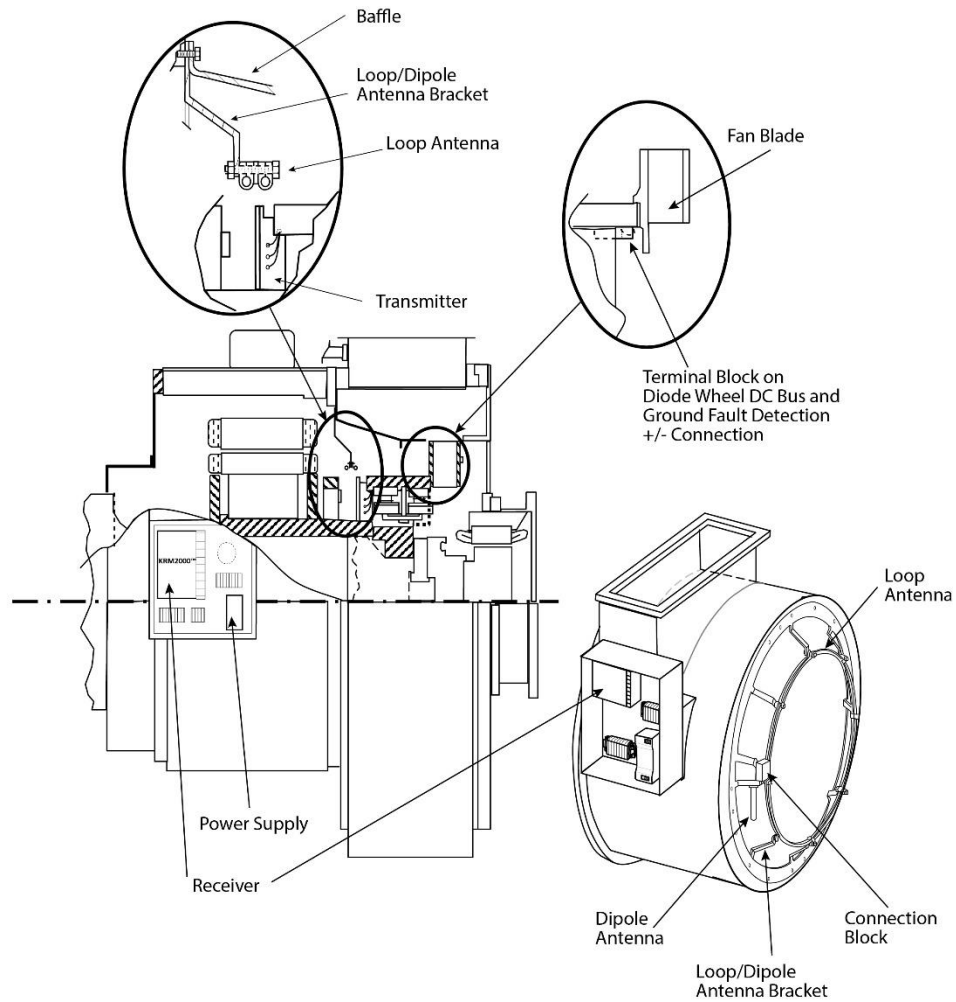


Figure 1 Typical Location of Rotor Monitoring System Components

UNINSTALL KRM100

Disconnect Power

De-energize prime mover and generator. Follow lock-out procedures as required to comply with safety mandates.

WARNING: When working or mounting any components, make sure the prime mover and generator cannot be energized. Use appropriate lock out/tag out procedures. Failure to do so may result in serious injury.

Remove KRM100

1. Label all wires attached to the KRM100.
2. Disconnect all wires and the BNC connector attached to the KRM100.
3. Loosen and remove four (4) nuts and remove KRM100. Retain hardware for KRM2000 installation. See Figure 2.

Note: The studs remain in backplate of existing enclosure.

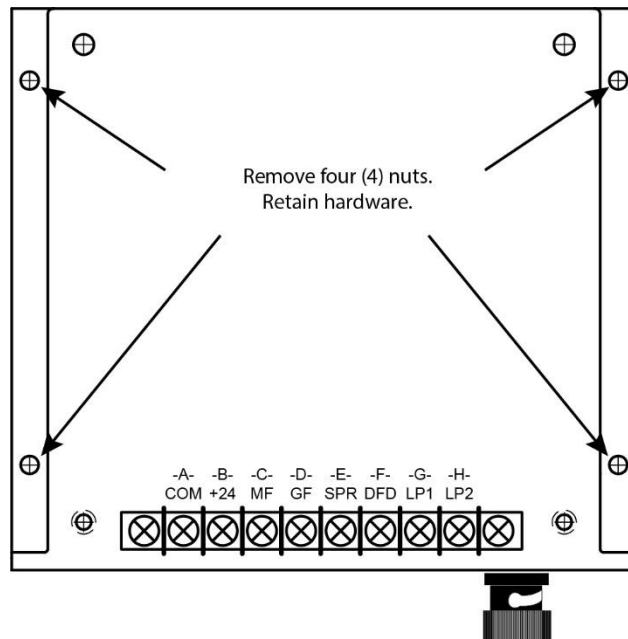


Figure 2 Remove Nuts on KRM100

INSTALL KRM2000™ RECEIVER

Install Mounting Plate

1. Mount din rail to plate with included hardware.
2. Use retained hardware to mount plate to studs which previously held the KRM100. See Figure 3.

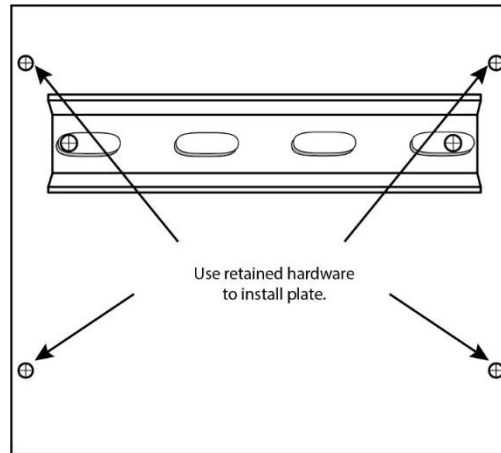


Figure 3 Install Mounting Plate

Mount the Receiver

The KRM2000™ has a standard din rail clip. See Figure 4. Use the clip to attach the receiver to the din rail.

1. Engage the lower end of the standard mounting bracket on the din rail.
2. Push up to compress the spring latch.
3. Pivot the KRM2000™ to push top of the latch over the rail, and release.

The mounting bracket will firmly grip the din rail.

Note: To remove KRM2000™, reverse the process.

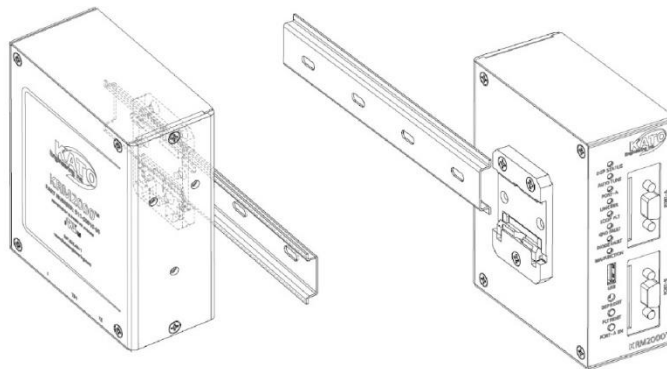


Figure 4 Mount KRM2000™ to Din Rail

Wire the Receiver

Wire KRM2000™ per revised connection drawing.

Table 1 Corresponding Terminals of KRM2000™ and KRM100

KRM2000™			KRM100
Name	Description	Number	Letter
+24V	+24V power supply input	TB1-1	B
COM	Power supply common	TB1-2	A
MF RLY	Malfunction relay	TB1-3	
GF RLY	Ground fault relay	TB1-4	
SERVICE RLY	Service relay	TB1-5	
RLY COM	Relay common	TB1-6	
GF OUT	Ground fault signal output (source/sink)	TB1-7	D
DF OUT	Diode fault signal output (source/sink)	TB1-8	F
MF OUT	Malfunction signal output (source/sink)	TB1-9	C
N/C	No connect	TB1-10	
ANT-H	Loop antenna driver high	TB1-11	G
ANT-L	Loop antenna driver low	TB1-12	H
ANTENNA	Coax connector for receiver antenna	BNC CONNECTOR	BNC CONNECTOR
PORT-A	Communications port (Bluetooth)	-	
PORT-B	Communications port (USB)	-	
		Not used on KRM2000	E

Notes for Wiring KRM2000™

- KRM100 wire E is not used on KRM2000™. Remove the wire from the terminal block (terminal 14) and dispose.
- KRM2000™ terminals 7, 8, and 9 have limited capability to source current. If needed, they can be used to synch up to 250mA.

Warning: KRM2000™ terminals 7, 8, and 9 are referenced to the KRM system 24VDC power supply. If higher currents are required, use the dry contacts available on terminals 3, 4, 5, and 6.



Kato Engineering Support

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