

# 7SG164 Ohmega 400 Series

Distance Protection Relays

## Document Release History

This document is issue 2010/02. The list of revisions up to and including this issue is:  
Pre release

|         |                                  |
|---------|----------------------------------|
| 2010/02 | Document reformat due to rebrand |
|         |                                  |
|         |                                  |

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# 1 Maintenance Instructions

The relay is a maintenance free device, with no user serviceable parts. During the life of the relay it should be checked for operation during the normal maintenance period for the site on which the product is installed. It is recommended the following tests are carried out:

- 1 Visual inspection of the metering display (every year)
- 2 Operation of output contacts (every 2 years)
- 3 Secondary injection of each element (every 5 years)

## 2 Trouble Shooting Guide

The following table describes the action of the relay under various conditions, and suggested remedial actions when problems are encountered.

If problems are being experienced and the suggested action does not work, or the problem is not detailed below, then please contact Siemens.

| SYMPTOM  | PROBLEM   | ACTION   |
|--|---|--|
| LCD Screen is faint or difficult to read.  | Contrast too low  | Press TEST/RESET & UP Button simultaneously  |
| LCD Screen is dark or has lines across it.   | Contrast too high   | Press TEST/RESET & DOWN Button simultaneously  |
| Protection Healthy LED not lit, LCD blank, Backlight off & No Flag LEDs lit.   | Relay is not powered up   | Check Auxiliary DC supply is available. Check connections on rear of relay.  |
| Relay LCD displays "PSU alarm asserted, supply out of limits"  | Power supply is too low.  | Check the magnitude of the input DC voltage. Ensure it is within the relay's working range of 37.5 to 137.5 V  |
|  | Internal ribbon cable connection not made.                              | Check ribbon connection cable to module A is correctly attached.   |
| Protection Healthy LED blinking, Messages & cursor blocks flashing across the LCD screen   | Internal ribbon connections not made correctly                          | Check ribbon connection cables to each module are correctly attached.  |
| Relay displays "Number of inputs or outputs changed... Relay must cold start... Settings will be defaulted...Please press enter"           | Relay has performed a cold start due to a perceived change in hardware. | If the hardware has not been changed (i.e. status input/relay output card added or removed) then there may be a problem with the hardware. Contact Siemens |
| Protection Healthy LED is flashing. Protection Healthy Output contact is not energised.  | Watchdog Operated: Hardware or Software Fault                           | Contact Siemens  |
| Protection Healthy LED is steady, and LCD screen displays ohmega symbols ( $\Omega$ ). Protection Healthy Output contact is not energised. |   |  |

| SYMPTOM  | PROBLEM  | ACTION   |
|--|--|--|
| Relay unable to communicate using Reydisp Evolution software | Communication channel incorrectly configured.  | Ensure connection between PC and relay (either via the front RS232 port or TX2 and RX2 on the rear of the relay) has been correctly made.                  |
|  | Refer to Section 6 of this manual for more details on the configuration of the Communication Channel | Ensure Relay address is set correctly on both the relay and within ReyDisp Evolution. If the relay address is set to "0" the relay will not communicate.   |
|  |  | Ensure the baud rate / parity settings on the PC are the same as those set on the relay.   |
|  |  | If using the front port ensure that the setting <i>IEC870 on Port</i> is set to COM2 & COM2 DIRECTION is set to either Auto-Detect or the port being used. |

### 3 Defect Report Form

**Form sheet for repairs and returned goods (fields marked with \* are mandatory fields)**

Sender:

|                            |   |   |
|----------------------------|---|---|
| * <b>Name, first name:</b> | Complete phone number (incl. country code): | Complete fax number (incl. country code): |
| Email address:             | * <b>Org-ID and GBK reference:</b>          | * <b>AWV:</b>                             |

\* **Order-/ reference-no (choosing at least 1 option):**

|                      |  |  |
|----------------------|--|--|
| Order-no for repair: | order-/ delivery note-no for return of commission failure: | Beginning order-no for credit note demand: |
|----------------------|--|--|

**Information concerning the product and its use:**

|  |  |                         |                    |
|--|--|-------------------------|--------------------|
| * <b>Order Code (MLFB):</b>              | Firmware version:<br>V                     | * <b>Serial number:</b> |                    |
| * <b>Customer:</b>                       | Product was in use approximately since:    | Station/project:        | Hotline Input no.: |
| Customer original purchase order number: | Delivery note number with position number: | Manufacturer:           |                    |

\* **Type of order (choosing at least 1 option):**

|  |   |  |
|--|---|--|
| <input type="checkbox"/> Repair                        | <input type="checkbox"/> Return of commission failure | <input type="checkbox"/> Credit Note   |
| <input type="checkbox"/> Upgrade / Modification to ... | <input type="checkbox"/> Warranty repair              | <input type="checkbox"/> Quotation (not repair V4 and current products! See prices in PMD) |
|  | <input type="checkbox"/> For collection               |  |

**Type of failure:**

|   |  |   |
|---|--|---|
| <input type="checkbox"/> Device or module does not start up | <input type="checkbox"/> Mechanical problem            | <input type="checkbox"/> Overload   |
| <input type="checkbox"/> Sporadic failure                   | <input type="checkbox"/> Knock sensitive               | <input type="checkbox"/> Transport damage                                 |
| <input type="checkbox"/> Permanent failure                  | <input type="checkbox"/> Temperature caused failure    | <input type="checkbox"/> Failure after ca <input type="text"/> hrs in use |
| <input type="checkbox"/> Repeated breakdown                 | <input type="checkbox"/> Failure after firmware update |   |

**Error description:**

|  |  |  |  |  |  |  |  |  |  |  |  |  |
|--|--|--|--|--|--|--|--|--|--|--|--|--|
| <input type="checkbox"/> Display message:<br>(use separated sheet for more info) | <input type="text"/>                                     |  |  |  |  |  |  |  |  |  |  |  |
| <input type="checkbox"/> Active LED messages:                                    | <input type="text"/>                                     |  |  |  |  |  |  |  |  |  |  |  |
| <input type="checkbox"/> Faulty Interface(s), which?                             | <input type="checkbox"/> Wrong measured value(s), which? | <input type="checkbox"/> Faulty input(s)/output(s), which? |  |  |  |  |  |  |  |  |  |  |

\* **Detailed error description (please refer to other error reports or documentation if possible):**

\* **Shall a firmware update be made during repair or mechanical upgrade of protective relays? (choosing at least 1 option)**

Yes, to most recent version     
  No     
  Yes, actual parameters must be reusable

**repair report:**

Yes, standard report (free of charge)     
  Yes, detailed report (charge: 400EUR)

**Shipping address of the repaired/upgraded product:**

Company, department \_\_\_\_\_

Name, first name \_\_\_\_\_

Street, number \_\_\_\_\_

Postcode, city, country \_\_\_\_\_

Date, Signature

Please contact the Siemens representative office in your country to obtain return instructions.

E D EA MF TCC 6 release from 1/1/2009