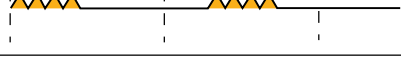
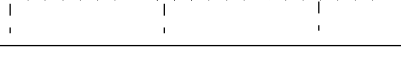
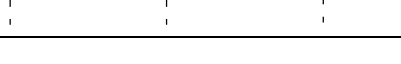


Diagnosis LED

The below table provides the different LED indication functions:

LED indication	Diagnosis indication	Diagnosis function
	The contacts are worn, see Diagnosis Functions, page 19	Diagnosis contact wear
	The control voltage is lower than 80 % of U_{cmin} , and the contactor is open, see Diagnosis Functions, page 19	Under voltage
	The control voltage is higher than 110 % of U_{cmax} , see Diagnosis Functions, page 19	Over voltage
	The remote wear diagnosis module is not synchronized with the contactor, see Diagnosis Functions, page 19	Remote wear diagnosis module synchronization
	The wear diagnosis reset is in progress, see Switching Module Replacement, page 120	Reset of remote wear diagnosis
	A control module internal malfunction is detected, see Troubleshooting, page 129	Internal functioning

QR Code

When the QR code on the front face of a TeSys Giga series device is scanned with a smartphone having a QR code reader and connected to the internet, Go2SE Landing Page, page 35 is displayed. The landing page displays some information about the device and a list of menus.

Diagnosis Functions

Contact Wear Diagnosis

The contact wear increases every time the contactor breaks the current in the power circuit.

The contact wear algorithm embedded in the control module calculates the remaining service life of the contacts. When the remaining service life of the contacts is below 15%, it is indicated:

- locally by the Diagnosis LED on the front face of the contactor.
- remotely by the optional remote wear diagnosis module, option available on advanced contactor only.

With this diagnosis indication, predictive maintenance can be planned for replacing the complete set of switching modules and avoiding breakdown maintenance.

For replacement of the switching modules and resetting the contact wear diagnosis, see [Switching Module Replacement](#), page 120.

Control Voltage Diagnosis

The control voltage supplying the control module on A1-A2 is monitored. If under voltage or over voltage are detected, see [Troubleshooting](#), page 129.

Under Voltage

If the control voltage supplying the control module on A1-A2 is lower than 80 % of U_{cmin} and the contactor is open, then:

- the contactor does not close (the control order is not executed by the control module)
- the Diagnosis LED flashes 2 times regularly.

U_{cmin} is the minimum value of rated control voltage range (U_c) of the control module.

Example: for a control module with $U_c = 48-130 \text{ Vac/Vdc}$, $U_{cmin} = 48 \text{ Vac/Vdc}$.

Over Voltage

If the control voltage supplying the control module on A1-A2 is higher than 110 % of U_{cmax} , it is indicated by the Diagnosis LED flashing 3 times regularly.

U_{cmax} is the maximum value of rated control voltage range (U_c) of the control module.

Example: for a control module with $U_c = 48-130 \text{ Vac/Vdc}$, $U_{cmax} = 130 \text{ Vac/Vdc}$.

Switching Module Replacement

1. Open the flip cover under the control module.

2. Release the switching modules screws (one screw per switching module) using an Allen key.

3. Push up the switching module to unlock and remove it.
- NOTE:** Clean the accessible parts of the contactor and visually check the overall condition of the contactor.
4. Recycle the switching modules.

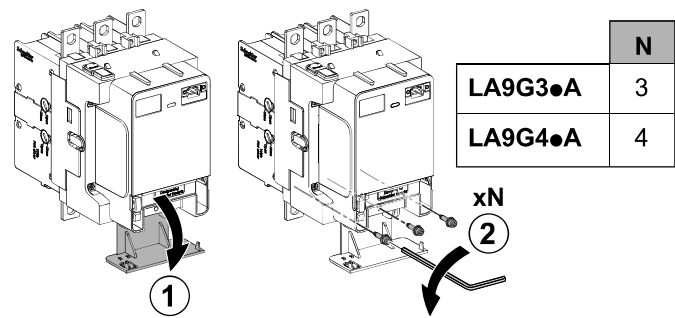
5. Take out the new switching modules from the box for replacement.

6. Push down the switching modules to lock it on the contactor.

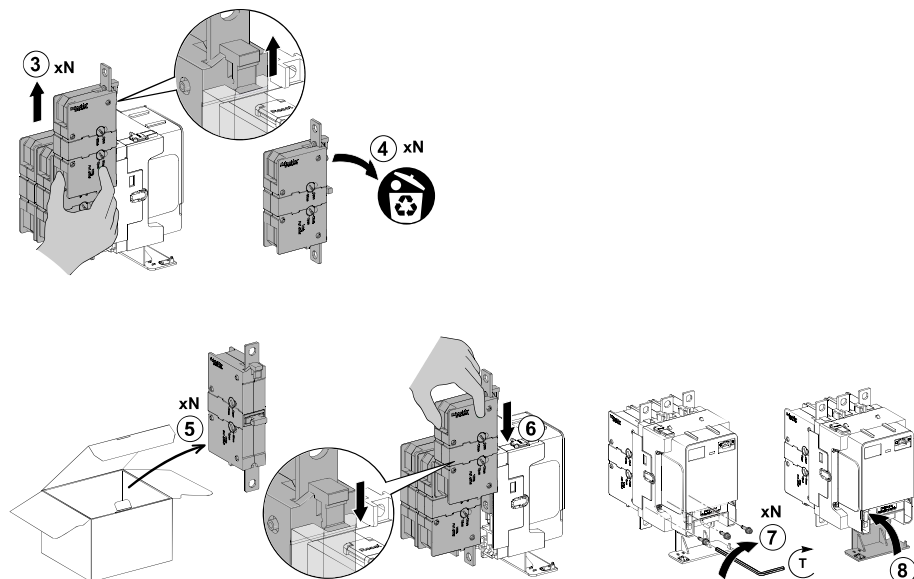
7. Tighten the switching modules screws (one screw per switching module) at the right torque.

8. Put the flip cover back on the control module.

9. Reset the wear diagnosis indication.



Contactor	Tool	Length of Allen Key (L)	Torque	Screws
LC1G115-225	Allen key	≥ 95 mm (≥ 3.74 in.)	0.8 ± 0.08 N•m (7 ± 0.7 lb-in)	M4
LC1G265-500	Allen key	≥ 115 mm (≥ 4.52 in.)	1 ± 0.1 N•m (8.8 ± 0.88 lb-in)	M4
LC1G630-800	Allen key	≥ 115 mm (≥ 4.52 in.)	3 ± 0.3 N•m (26.5 ± 2.65 lb-in)	M6



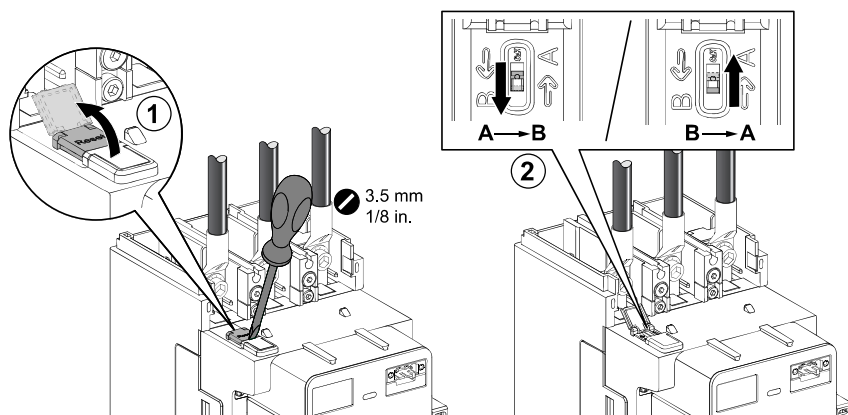
Wear Diagnosis Reset

Without Remote Wear Diagnosis Module

To reset the wear diagnosis indication after replacement of the switching modules on contactors without remote wear diagnosis module:

1. Open the cover of the **Reset** switch
2. Change the position of the **Reset** switch on the contactor (from A to B or from B to A).

After reset and after power on A1-A2, the contactor is in reset sequence for 10 s: the diagnosis LED is blinking, and the contactor remains open. It closes after the 10 s.



Troubleshooting

Installation

Problem description	Probable causes	Solution
Difficult to install the contactor on a plate	Incorrect drilling dimension or not use of hang on function pin or screws	Follow the contactor installation instructions, TeSys Giga Contactor Mounting on Plate, page 62.
Difficult to install the overload relay on a plate	Incorrect drilling dimension	Follow the overload relay installation instructions, TeSys Giga Electronic Overload Relays Mounting on Plate, page 64.
Difficult to install auxiliary contact modules on the contactor	Cannot position well the driving pin or the locating features	Follow the auxiliary contact module installation instructions, Installation of the Auxiliary Contact Modules, page 108.

Operation

Problem description	Probable causes	Solution
Contactors does not close and the Diagnosis LED on the control module flashes 2 times regularly	The control voltage is lower than 80 % of U _{cmin}	Check the control voltage.
Advanced contactor does not close	PLC Input switch status not aligned with control wiring diagram	Check the PLC Input switch status or the control wiring diagram.
Contactor does not close	Error in the wiring of the control circuit	Check the control wiring diagram, Control Mode, page 21.
	The magnetic circuit cannot close due to dust or mechanical issue	Remove the control module, Control Module Replacement, page 128, and clean the accessible parts with a dry cloth. If the problem persists, contact your Schneider Electric field service representative.
	Poles cannot close due to mechanical issue	Remove the switching modules, Switching Module Replacement, page 120, and clean the accessible parts with a dry cloth. Test manually the switching modules to detect if there is a blocking point. If the problem persists, replace the switching modules, Switching Module Replacement, page 120.
Overload relay unexpected trip	Error in the protection settings	Check the protection settings, Current-Based Protection Functions, page 27.
	Too high level of vibration on overload relay	Check the vibration environment.
	Huge magnetic field in the environment of the overload relay	Add an external magnetic shield around the overload relay.
Overload relay manual reset does not work	Reset button is not fully pushed	Fully push Reset button again.

Contactor Switching Modules

Problem description	Probable causes	Solution
Cannot remove switching modules	Still some screws tightened	Check all the screws are untightened.
Difficult to change the switching modules	Sequence to remove cable, auxiliary contact modules, mid frame screw	Follow the switching module replacement instructions, Switching Module Replacement, page 120.

Contactor Control Module

Problem description	Probable causes	Solution
The Diagnosis LED on the control module blinks continuously	Control module internal malfunction detected	Replace the control module, Control Module Replacement, page 128
The Diagnosis LED on the control module flashes 4 times regularly	Remote wear diagnosis module and contact wear diagnosis function are not synchronized	Change the position of Reset button on the remote wear diagnosis module.

Overload Relay

Problem description	Probable causes	Solution
Overload relay motor ON LED blinking	Overload relay internal malfunction detected	Replace the overload relay.