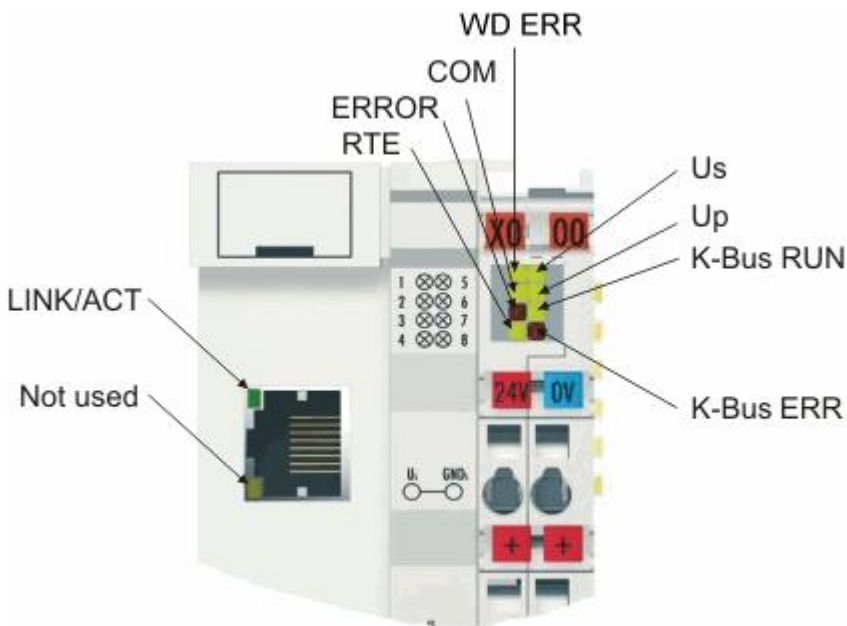




Beckhoff bus coupler (BK9050) troubleshooting



LEDs for power supply diagnostics

Us off: Bus Coupler has no voltage 24 V_{DC}

Up off: No 24 V_{DC} power supply connected to the power contacts

LEDs for K-bus diagnostics

K-bus RUN on or flashing: K-bus running

K-bus ERR flashing: see following table Error code for k-bus diagnosis

Error code for K-bus diagnosis

A flashing code is made up as follows:

- rapid flicker
 - short break
 - LED flashes m times for error code m
 - short break
 - LED flashes n times for error argument n
 - short break
- Count the error code and the error argument.

The flashing code is repeated continuously. The error code for a K-bus interruption is 4. The error argument indicates the Bus Terminal after which communication was interrupted.



Error code	Error argument	Description	Remedy
-	flashing continuously	EMC problems	<ul style="list-style-type: none"> ▪Check power supply for undervoltage or overvoltage peaks ▪Implement EMC measures ▪If a K-bus error is present, it can be localized by a restart of the coupler (by switching it off and then on again)
1	0	EEPROM checksum error	Enter factory settings with the KS2000 configuration software
	1	Code buffer overflow	Insert fewer Bus Terminals. Too many entries in the table for the programmed configuration
	2	Unknown data type	Software update required for the Bus Coupler
2	-	Reserve	-
3	0	K-bus command error	<ul style="list-style-type: none"> ▪No Bus Terminal inserted ▪One of the Bus Terminals is defective; halve the number of Bus Terminals attached and check whether the error is still present with the remaining Bus Terminals. Repeat until the defective Bus Terminal is located.
	n	Break behind Bus Terminal n	Check whether the Bus End Terminal KL9010 is connected.
4	0	K-bus data error, break behind the Bus Coupler	Check whether the n+1 Bus Terminal is correctly connected; replace if necessary.
	n	Break behind Bus Terminal n	Check whether the Bus End Terminal KL9010 is connected.
5	n	K-bus error in register communication with Bus Terminal n	Exchange the n th bus terminal
6	0	Error at initialization	Exchange Bus Coupler
	1	Internal data error	Perform a hardware reset on the Bus Coupler (switch off and on again)
	2	IP address already exists	Check the IP address; the coupler has already found its set IP address in the network
	4	BootP invalid DIP switch setting	With BootP the DIP switches 1-8 must be all On or all Off



Error code	Error argument	Description	Remedy
7	0	Note: cycle time was exceeded	Warning: the set cycle time was exceeded. This indication (flashing LEDs) can only be cleared by booting the Bus Coupler again. Remedy: increase the cycle time
9	0	Checksum error in Flash program	Transmit program to the BC again
	1	Incorrect or faulty library implemented	Remove the faulty library
10	n	Bus Terminal n is not consistent with the configuration that existed when the boot project was created	Check the n th Bus Terminal. The boot project must be deleted if the insertion of an n th Bus Terminal is intentional
14	n	n th Bus Terminal has the wrong format	Start the Bus Coupler again, and if the error occurs again then exchange the Bus Terminal
15	n	Number of Bus Terminals is no longer correct	Start the Bus Coupler again. If the error occurs again, restore the manufacturers setting using the KS2000 configuration software
16	n	Length of the K-bus data is no longer correct	Start the Bus Coupler again. If the error occurs again, restore the manufacturers setting using the KS2000 configuration software

LEDs for Ethernet diagnosis

WD ERR on: Watchdog error

COM on or flashing: communication with controller

ERROR flashing: DHCP or BootP active. Waiting for an IP address

RTE on: hard real-time with TC is switched on. No ADS communication is possible at the same time. All TCP, UPD and ICMP telegrams (e.g. ping) remain unanswered.

LINK/ACT on: LINK present
flashing: LINK present and communication active