Índice

The system leds **“pow, run, stop, err”** are found on the front panel and on the rear of controllers with display and only on the top of controllers without display.

The user leds **“L1, L2, L3** e **L4”** are found on the rear:

“System Leds” Signals

Leggend:

Led ON

Led OFF

Led Blinking

Led	Colour	Status	Description
pow	Green		Power on
			Only this led on, signals the CPU reset status
run	Green		CPU in RUN status
			CPU in READY status
stop	Yellow		With **pow** on, signals the STOP status of the CPU With **pow** off, signals the BOOT status of the CPU
err	Red		With **pow** off, signals a hardware error. See paragraph Hardware Error codes With **pow** blinking, the flash rate gives the type of error. See paragraph **err** led signals

Err led signals

N. flashes	Error	Description	Recommended action
1	**Bus error**	Bus configuration different to application software.	Check the correspondence between the QMOVE application (BUS section of configuration unit) and the product configurations (cards mounted in BUS).
2	**CheckSum Error**	Negative outcome on the integrity control of retentive variables . (see Reset Error Checksum)	Restore the machine data from a backup (.DAT file) or cancel the error with in system functions and enter the values manually.
3	**Index Out of Bound**	An array index is pointing on an inexistent element	Open a unit editor in Qview development environment and use the “Edit→Go to PC” command to find the program line that is cause of the error. In general the index value has a value <1 or >array dimension.
4	**Program Over Range**	The program selection index in the DATAGROUP has attempted to access an inexistent program.	With the Qview development environment open the editor of a unit and user the “Edit→Go to PC” command to highlight the program line that has caused the error. In general the value used as index is lower than 1 or over the array dimension.
5	**Step Over Range**	The step selection index in the DATAGROUP has attempted to access an inexistent step.	With the Qview development environment open the editor of a unit and user the “Edit→Go to PC” command to highlight the program line that has caused the error. In general the value used as index is lower than 1 or over the array dimension.
6	**Division By Zero**	The denominator of a division operation of the application program has a zero value.	With the Qview development environment open the editor of a unit and user the “Edit→Go to PC” command to highlight the program line that has caused the error.
7	**Syntax Error**	The application program has an invalid instruction	This error may appear because the program counter has met the QCL END instruction.
8	**Watch Dog Error**	A CAN module does not function correctly, or a specialist card has a hardware problem	With the Qview development environment open the “Monitor→Bus” panel and the righthand column called “Watchdog Bus” indicates the card that caused the problem.
9	**Stack Error**	The applciation program has used all permitted levels of calls to subroutines	With the Qview software environment open the editor of a unit and use the “Edit→Go to PC” command to highlight the program line that caused the error. Analyse the unit execution flow, the call to subroutines nestings have a limit, over which this error is generated.

Hardware error codes

During the startup sequence, if a malfunction of any peripheral is detected, the system blocks and the error is signaled by the flashing led  err while the other system led's remain off.

The number of flashes indicates the type of error according to the following table :

Number of flashes	Error
1	Display
2	FPGA
3	Media
4	Bootloader
5	FW
6	Bus
7	*Signal not active*
8	*Signal not active*
9	Exception

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Each of these signals indicates a serious error situation. The product must be sent to the QEM aftersales service.

“User Led” signal

Led	Colour	Description
L1	Yellow	Programmable in the application program by the QMOVE system variable:sys003 and used by the system functions
L2		
L3		
L4		