

List of Commands

The following is a list of the commands used to communicate with the Industrial Colour Sensor.

These commands can be used together with PM39IO command: Command_To_COM. Please note that all the commands should be terminated with a semicolon “;” or a comma “,” (the command is given to the Colour Sensor as an abbreviation):

Command	Abbreviation	Function
Measure continuous	MC	The Colour Sensor transmits data continuously
Measure stop	MS	The Colour Sensor stops transmitting data immediately
Forced integration time request	F?	The Colour Sensor transmits the integration time in 0.5 ms
Identity request	I?	The Colour Sensor transmits the identity information, ie. Company: ie. “DK-AUDIO” NC: eg. “400820978930” KuNo: eg. “Ku000000” SoftWareRev: eg. “02.0”
Command	Abbreviation	Function
Memory address	MA n	Selects an address n in the international EEPROM in the Colour Sensor.
Read memory	RM	Reads a byte in the EEPROM in the Colour Sensor, address specified by the command MA.
Store in memory	SM n	Stores by n in EEPROM in the Colour Sensor, address specified by the command MA. The address in the EEPROM is incremented after this operation.
Set integration time	SI n	Sets integration time in the Colour Sensor, time specified in 0.5 ms.

Set baud rate

SB n

Sets the baud rate in the connected colour sensor.

n = 48 selects 4800 baud; n = 96 selects 9600 baud

Note: This command is not valuable with all sensor types.

See the sensor specifications.

Other commands used during factory calibration, (these commands will have a non permanent effect on the Colour Sensor and should be avoided in order for the Colour Sensor to function correctly):

TM, FG, MO, SO, ST, NR, RN, XY, MX, WR

List of Return Values

The following is a list of all the return values, (error codes), that the functions in the PM39IO module can return.

Return Value	Explanation
0	No error Success , nor error detected.
1	Error in receiver data The string(s) received from the industrial Colour Sensor could not be converted to an integer, (or real).
2	Serial COM port not supported The specified COM port is greater than 4 or less than 1. Only COM port 1 to 4 are supported, or the specified serial COM port are physical absent.
3	Serial Com port was not installed Trying to communicate with the Colour Sensor without having opened the serial COM port to which it is connected. Before using any commands be sure to have opened the specified serial COM port with the opening command Open_COM (int COM_Port);

Return Value	Explanation
4	Serial COM port already installed Trying to open the same serial port twice.
5	Timeout transmitting data to serial COM port Timeout occurred during transmitting data to the Colour Sensor via serial COM port. Since there is no handshake in the communication with the Colour Sensor this error indicates a fault in the UART, which handles the specified serial COM port.
6	Timeout receiving data from serial COM port Timeout during receiving data from the Colour Sensor. Be sure to check the cables and to ensure that the power supply is on.
7	_TIME_TICK was not installed Trying to close the _TIME_TICK function even though it hasn't been opened.
8	_Time_TICK already installed Trying to open the <i>TIME_TICK</i> function twice.

Return Value	Explanation
9	Integration time out of range The specified time is too low or too high. The range of the integration time is: $25 \leq \text{time} \leq 250$, where 25: gives app. 10 measurement per. second and 250: gives app. 3 measurement per. second.
10	White reference values NOT calculated The white reference values were not calculated because the values of X, Y or Z were too small, (calculated as: $(X + Y + Z) < 0.01$)
11	Overload

The sensor in at least one of the channels is overloaded by too much light.

12

Lowlight