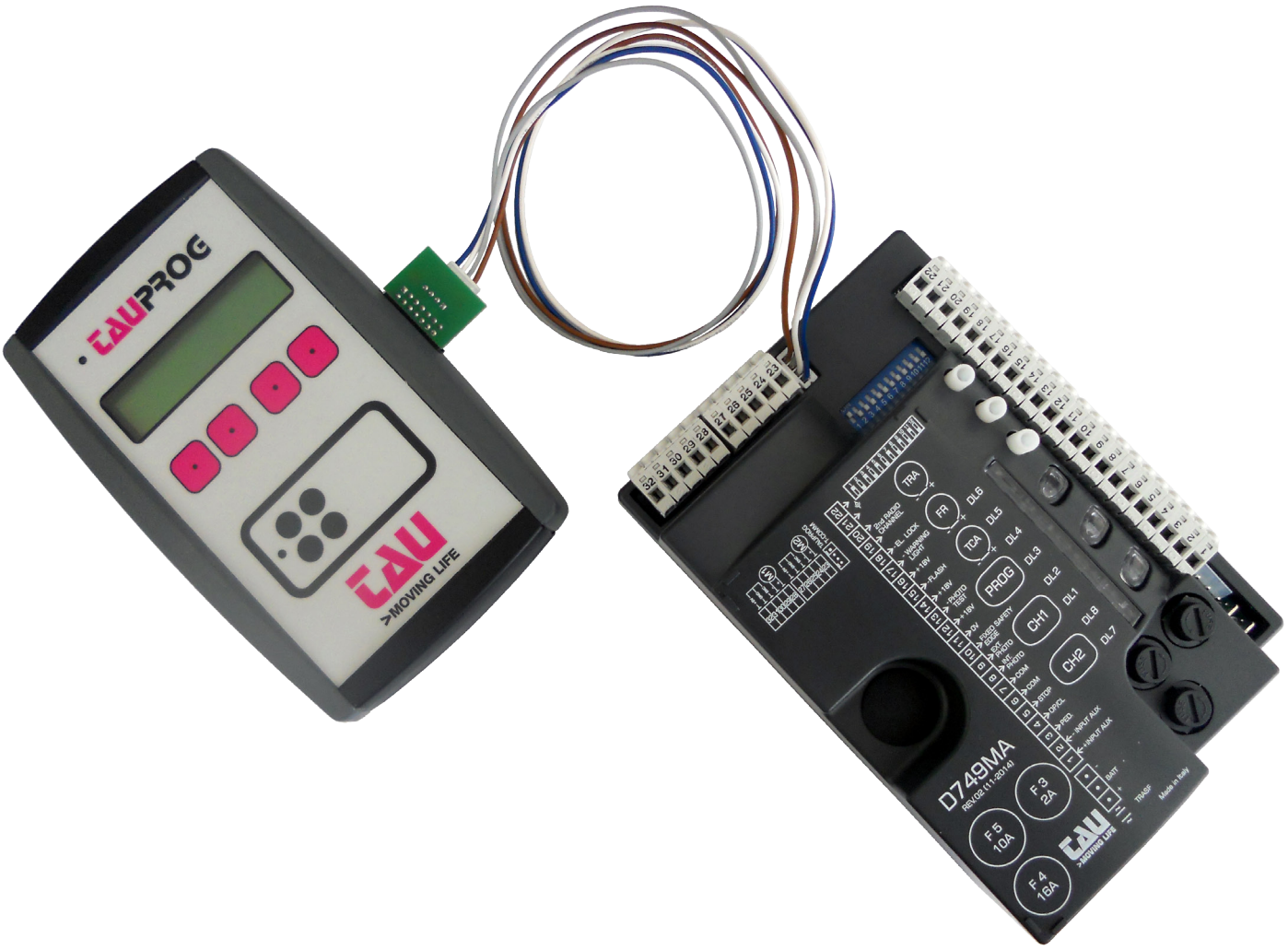
TAUPROG

Quadri di comando in DC serie “DIAMOND”

“DIAMOND” series of DC controllers



Guida per l’installatore esperto - *Advanced Installer’s Guide*

rev. 04 - del 01/10/2019

DIAMOND CONTROLLERS – PARAMETERS

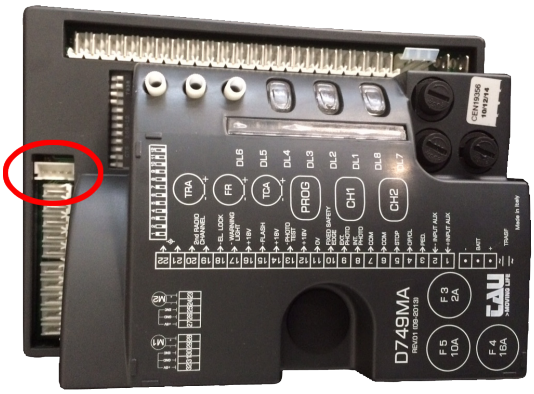
With TAU controllers of the DIAMOND Series (D749MA for Swing Gate Operators, K126MA for Sliding Gate Operators, K206MA for Automatic Barriers) most parameters may be set individually according to specific needs.

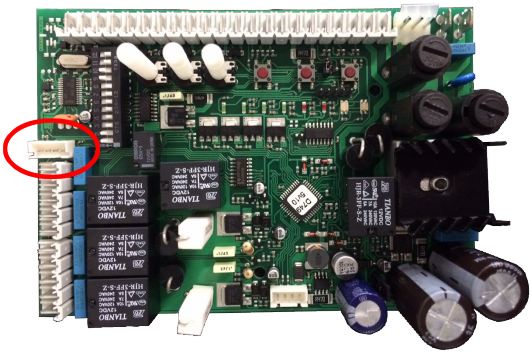
This option is exclusively intended for advanced installers trained at TAU.

At a glance:

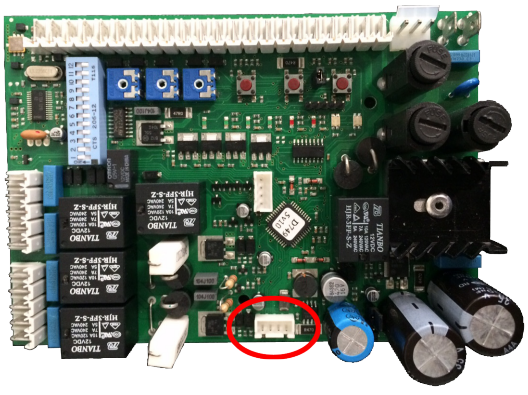
- TAUPROG MENU TREE
- DIAMOND – OPENING PARAMETERS LAYOUT
- DIAMOND – CLOSING PARAMETERS LAYOUT
- DIAMOND PARAMETERS 2015 EN (parameters can slightly change according to the version of the control board)

Please note that, according to the version, the serial port can be located either closed to the motor wire terminals (accessible without removing the plastic shell of the controller)





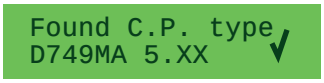
Or inside the plastic shell, which must then be removed



To proceed, turn ON the controller, then plug in the TAUPROG handheld device through the serial cable supplied. The device will automatically turn ON (no batteries are necessary).

Scroll down the menu until the display shows

Then confirm.
The TAUPROG will automatically detect the controller and report its name and version



then enter the menu where parameters can be changed: important: do not exit to the previous menu level, or stored modifications will be erased from the memory; the menu has various sections:

Skip **Diagnostics** – a function which provides information on the controller status (status, number of cycles performed, error diagnostic) and scroll down to find the **Change parameters** section.

This allows to set individually the parameters as shown in the enclosed list DIAMOND PARAMETERS 2015 EN. It is divided into three sections

Once the parameters have been modified, exit the section with the third button ◄ to find Change parameters once again.

Scroll down until you find **Upload parameters**: this will allows to upload the parameters changed with **Change parameters** into the controller (a new SET-UP procedure might be necessary, please refer to the enclosed parameter list)

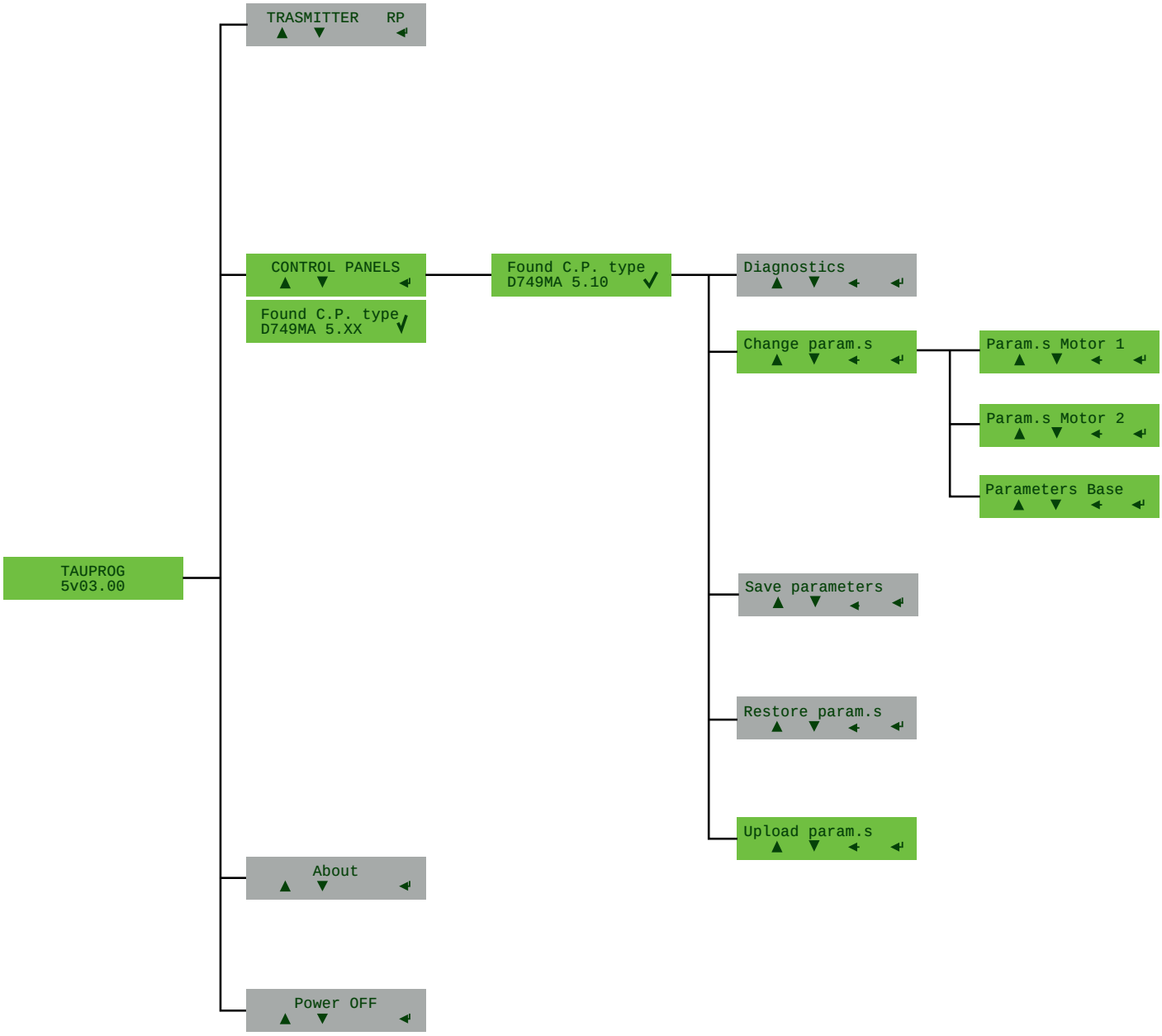
While scrolling down to find **Upload parameters** two under-menu appeared: while their use is not so frequent, they could be useful in specific situations:

Save parameters allows to save into the TAUPROG memory the parameters of a gate operator, in order to use them later on another controller (useful for identical installations, for example barriers)

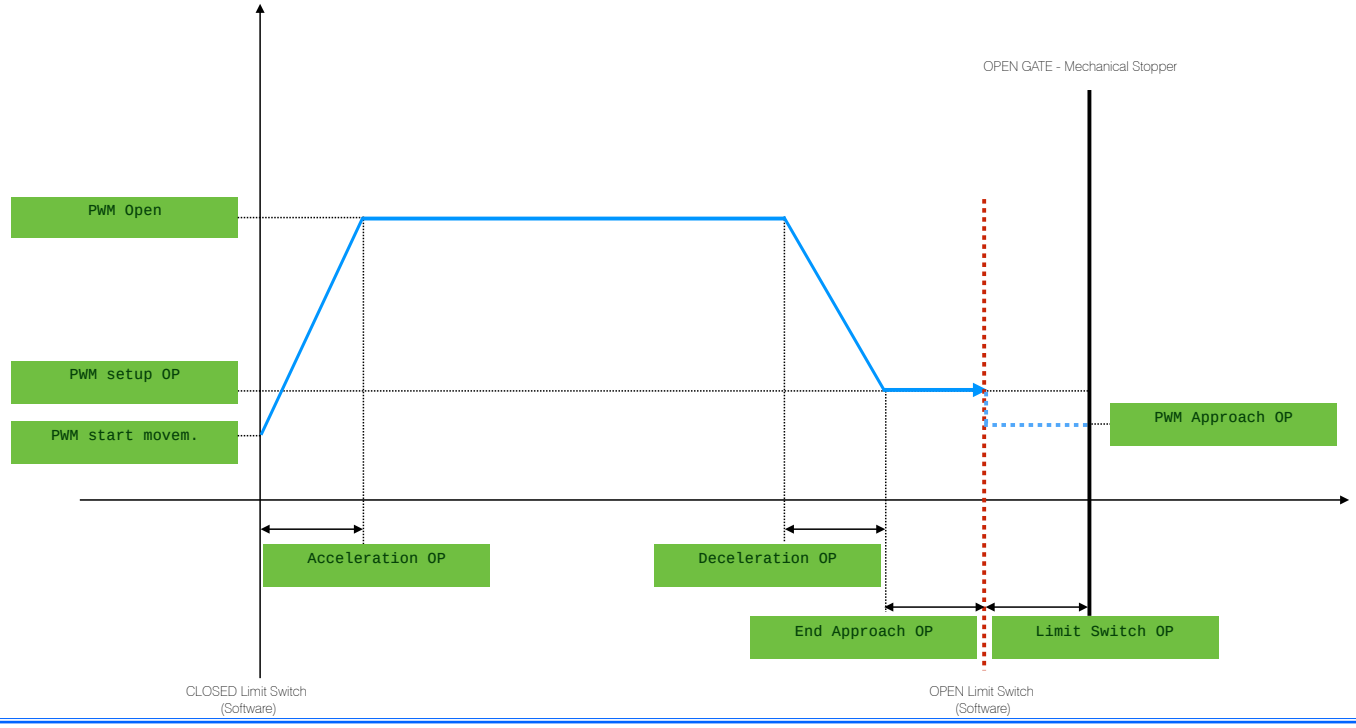
Restore parameters allows to recall these parameters previously saved with the Save parameters option

Once the TAUPROG has been connected to the second control board and after having restored (Restore parameters) the previous saved parameters (Save parameters), scroll the menu in order to send parameters to the new control board (Upload Parameters).
According to the parameters that have been changed, it could be necessary to carry out a new SET-UP procedure (stroke saving). Check the enclosed list of parameters to make it sure.

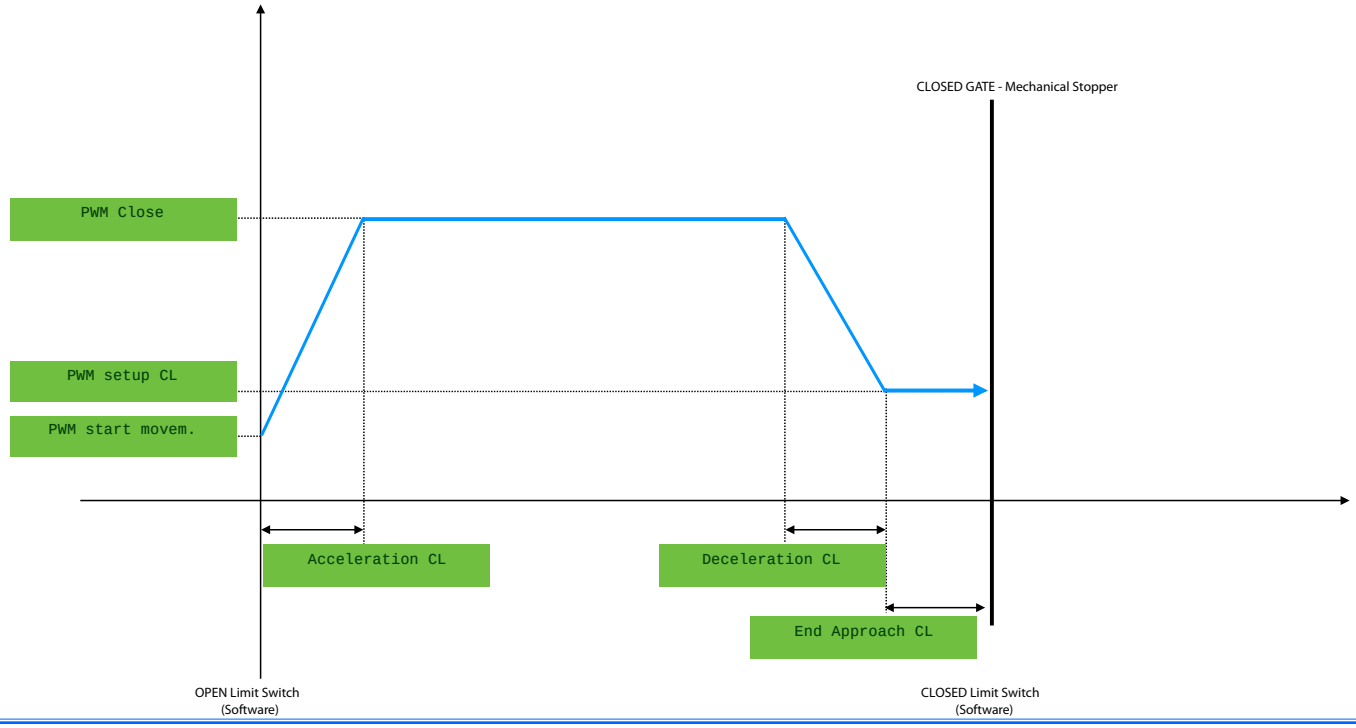
TAUPROG TREE MENU



OPENING PARAMETERS



CLOSING PARAMETERS



D749MA

Update 15.06.2017 ID=1206

PARAMETERS – MOTOR 1 AND MOTOR 2

TAUPROG LABEL	DESCRIPTION	UNIT	RANGE	UPDATE MODUS
PWM Open	Opening speed *(max speed that the operators reaches during opening)*	PWM	0-1005	Up+Setup
PWM Close	Closing speed *(max speed that the operators reaches during closing)*	PWM	0-1005	Up+Setup
PWM setup OP	Default minimum opening speed during setup *(might be automatically increased by the controller if necessary)*	PWM	0-1005	Up+Setup
PWM start movem.	Starting speed (normal operation) *(the controller will automatically add a little acceleration when starting)*	PWM	0-1005	Up+Setup
PWM setup CL	Default minimum closing speed setting during setup *(might be automatically increased by the controller if necessary)*	PWM	0-1005	Up+Setup
End Approach OP	Soft Stop in opening *(slow approach to OPEN limit position, as a % of the total opening cycle)*	%	1-100	Up+Setup
End Approach CL	Soft Stop in closing *(slow approach to CLOSE limit position, as a % of the total opening cycle)*	%	1-100	Up+Setup
Limit switch OP	Limit switch in opening *Gap between OPEN Limit position (software) and mechanical stopper*	PE	0-255	Up+Setup
Acceleration OP	Soft Start Time in opening *Time to accelerate from min to max speed in opening*	100/sec	1-2000	Up+Setup
Acceleration CL	Soft Start Time in closing *Time to accelerate from min to max speed in closing*	100/sec	1-2000	Up+Setup
Deceleration OP	Soft Stop Time in opening *Time to decelerate from max to min speed in opening*	100/sec	1-2000	Up+Setup
Deceleration CL	Soft Stop Time in closing *Time to decelerate from max to min speed in closing*	100/sec	1-2000	Up+Setup
Base power OP	Obstacle detection threshold in opening *Higher value = less sensitivity; can be increased by the FR trimmer and the setup*	-	1-255	Upload
Base power CL	Obstacle detection threshold in closing *Higher value = less sensitivity; can be increased by the FR trimmer and the setup*	-	1-255	Upload
PWM Approach CL	Speed increase towards gate stopper *Further speed increase towards CLOSE gate stopper (only with Electro-lock)*	PWM	0-1005	Upload
Tmr Approach CL	Time of push against Close Limit Switch	100/sec	0-1005	Upload
Limit Obstacle	Extra offset to limit obstacle detection area *Additional offset (added to the limit switches) to define obstacle detection area*	PE	0-255	Up+Setup
Pedestrian	% of total opening in case of pedestrian opening *Motor 1 only*	%	1-100	Up+Setup

UNIT

PWM	Fraction of the motor power supply, 0 = 0 V, 1005 = max V
PE	Encoder Steps, usually 1 PE = approx. 1 mm
PEx10	Encoder Steps x 10
n/sec	Fraction of a second (for example, 100/sec = hundredths of a second)

UPDATE MODUS

Up+Setup	To activate the new parameters, once Upload has been performed, start Setup procedure;
Upload	New parameters are effective once Upload has been performed.

BASE PARAMETERS

TAUPROG LABEL	DESCRIPTION	UNIT	RANGE	UPDATE MODUS
Tmr Work timeout	Max working time *(max time after which the operator will stop)*	100/sec	6000-36000	Upload
Tmr Courtesy/2ch	Courtesy light activation time *(or 2nd radio channel if set as toggle relay mode)*	sec	1-900	Upload
Tmr Preflashing	Pre-flashing time	4/sec	1-100	Upload
Tmr wait runtime	Waiting time in runtime mode *(to wait for all accessories connected to the controller to be ON after stand-by)*	100/sec	1-250	Upload
Tmr CL after FOT	Quick closing after photocell *(delay to close after photocell – DIP switch # 3 must be activated)*	sec	1-240	Upload
Tmr unlock ES	Electro Lock activation time *(before the motor starts)*	10/sec	1-250	Upload
Tmr pwr on ES	Electro Lock activation time *(after motor has started)*	10/sec	1-250	Upload
Tmr Motor torque	Extra torque time at start	100/sec	1-250	Upload
Tmr ram blow	Hammer blow time	100/sec	1-250	Upload
Configure Output	Configuration of programmable outputs *(see list below)*	-	-	Upload

CONFIGURE OUTPUT

#	TAUPROG LABEL	DESCRIPTION
A 16 - 17	Gate open	**Output set as "Gate Open" indicator (default setting)**
	Traffic Light	Output set as Traffic Light
	Courtesy Light	Output set as Gate Area Lighting
	Electric Lock	Output set as Electric Lock
	Vandal-proof	Output set as Magnetic Lock
B 16 - 18	Gate open	Output set as "Gate Open" indicator
	Traffic Light	Output set as Traffic Light
	Courtesy Light	Output set as Gate Area Lighting
	Electric Lock	**Output set as Electric Lock (default setting)**
	Vandal-proof	Output set as Magnetic Lock
C 19 - 20	Gate open	Output set as "Gate Open" indicator
	Traffic Light	Output set as Traffic Light
	Courtesy Light	Output set as Gate Area Lighting
	2ch bistable	Output set as Bistable/Latching Relay
	2ch monostable	**Output set as Monostable/Toggle Relay (default setting)**
	Electric Lock	Output set as Electric Lock
	Vandal-proof	Output set as Magnetic Lock

Dipswitch 14-29	Configuration of software DIP switch *(see list below)*

Dipswitch 14-29	Configuration of software DIP switch *(see list below)*

DIPSWITCH 14-29

#	TAUPROG LABEL	DESCRIPTION	
14	Out 12 V aux hi	12 V Aux Output (Wire Terminals 11-12)	
		ON = 12 V always active	*OFF = Output goes in Standby Mode*
15	AUTO INC TA	Automatic increase of the auto-close delay time	
		ON = Increases auto-close delay time if closing is aborted	*OFF = Auto-close delay time remains fixed (*)*
16	pre flashing CL	Enables pre-flashing only before closing, if DIP Switch # 5 is set on OFF	
		ON = Pre-flashing before closing activated	*OFF = Works as set by DIP Switch # 5*
17	delay 2 motor	Disables delay of second gate leaf	
		ON = Delay disabled	*OFF = Delay enabled*
18	Wait Photo OP	If activated, photocells during opening will hold the operator in pause	
		ON = FOTI will trigger operator pause	*OFF: Normal operation*
19	Slow Reverse	Allows a soft reverse after photocells are activated (useful for long leaves)	
		ON: Slow reverse activated	*OFF: Normal operation*
20	MANUAL command	Dead man's switch	
		ON: Dead man's switch activated	*OFF: Normal operation*
21	Test Cyclic	Performs a cyclic test of the operator	
		ON: Cyclic test running (**)	*OFF: Normal operation*
22	Fototest mode	Photo-cells monitoring feature only when starting from fully closed or fully open (instead of at every start input)	
		ON = Monitoring mode activated	*OFF = Normal operation*
23	Safety Switch	Disables realignment procedure after manual release	
24	FOTE CL once	ON = Enables the automatic closing after the intervention of the external photocell OFF = Disables the automatic closing	
25	OP/CL single	ON = Enables the single OPEN and CLOSE controls: the OP/CL input becomes OPEN, the PEDESTRIAN control becomes CLOSE OFF = Disables che single OPEN and CLOSE controls	
26	TCA range	ON = Sets the range of the TCA trimmer from 0 to 12 seconds OFF = Sets the range of the TCA trimmer from 0 to 120 seconds	
27	Dis.Obst.OP	ON = Disables the obstacle detection during the OPENING phase OFF = Enables the obstacle detection during the OPENING phase	
28	not used		
29	not used		

(*): Auto-close delay time will increase in any case after 5 failed aborted closing attempts

(**): Use `Tmr Courtesy/2Ch` Base Parameter to set the Cyclic test time

K126MA

Update 15.06.2017 ID=110B

PARAMETERS MOTOR 1

TAUPROG LABEL	DESCRIPTION	UNIT	RANGE	UPDATE MODUS
PWM Open	Opening speed *(max speed that the operators reaches during opening)*	PWM	0-1005	Up+Setup
PWM Close	Closing speed *(max speed that the operators reaches during closing)*	PWM	0-1005	Up+Setup
PWM setup OP	Default minimum opening speed during setup *(might be automatically increased by the controller if necessary)*	PWM	0-1005	Up+Setup
PWM start movem.	Starting speed (normal operation) *(the controller will automatically add a little acceleration when starting)*	PWM	0-1005	Up+Setup
PWM setup CL	Default minimum closing speed setting during setup *(might be automatically increased by the controller if necessary)*	PWM	0-1005	Up+Setup
End Approach OP	Soft Stop in opening *(slow approach to OPEN limit position, as a % of the total opening cycle)*	PEx10	1-100	Up+Setup
End Approach CL	Soft Stop in closing *(slow approach to CLOSE limit position, as a % of the total opening cycle)*	PEx10	1-100	Up+Setup
Limit switch OP	Limit switch in opening *Gap between OPEN Limit position (software) and mechanical stopper*	PE	0-255	Up+Setup
Acceleration OP	Soft Start Time in opening *Time to accelerate from min to max speed in opening*	100/sec	1-2000	Up+Setup
Acceleration CL	Soft Start Time in closing *Time to accelerate from min to max speed in closing*	100/sec	1-2000	Up+Setup
Deceleration OP	Soft Stop Time in opening *Time to decelerate from max to min speed in opening*	100/sec	1-2000	Up+Setup
Deceleration CL	Soft Stop Time in closing *Time to decelerate from max to min speed in closing*	100/sec	1-2000	Up+Setup
Base power OP	Obstacle detection threshold in opening *Higher value = less sensitivity; can be increased by the FR trimmer and the setup*	-	1-255	Upload
Base power CL	Obstacle detection threshold in closing *Higher value = less sensitivity; can be increased by the FR trimmer and the setup*	-	1-255	Upload
PWM Approach CL	Speed increase/decrease towards gate stopper – closing *Works as set by software DIP Switch # 17*	PWM	0-1005	Upload
PWM Approach OP	Speed increase/decrease towards gate stopper – opening *Works as set by software DIP Switch # 17*	PWM	0-1005	Upload
Tmr Approach OP	Time of push against Open Limit Switch	100/sec	0-1005	Upload
Tmr Approach CL	Time of push against Close Limit Switch	100/sec	0-1005	Upload
Limit Obstacle	Extra offset to limit obstacle detection area *Additional offset (added to the limit switches) to define obstacle detection area*	PE	0-255	Up+Setup
Pedestrian	% of total opening in case of pedestrian opening	%	1-100	Up+Setup

UNIT

PWM	Fraction of the motor power supply, 0 = 0 V, 1005 = max V
PE	Encoder Steps, usually 1 PE = approx. 1 mm
PEx10	Encoder Steps x 10
n/sec	Fraction of a second (for example, 100/sec = hundredths of a second)

UPDATE MODUS

Up+Setup	To activate the new parameters, once Upload has been performed, start Setup procedure;
Upload	New parameters are effective once Upload has been performed.

BASE PARAMETERS

TAUPROG LABEL	DESCRIPTION	UNIT	RANGE	UPDATE MODUS
Tmr Work timeout	Max working time *(max time after which the operator will stop)*	100/sec	6000-36000	Upload
Tmr Courtesy/2ch	Courtesy light activation time *(or 2nd radio channel if set as toggle relay mode)*	sec	1-900	Upload
Tmr Preflashing	Pre-flashing time	4/sec	1-100	Upload
Tmr wait runtime	Waiting time in runtime mode *(to wait for all accessories connected to the controller to be ON after stand-by)*	100/sec	1-250	Upload
Tmr CL after FOT	Quick closing after photocell *(delay to close after photocell – DIP switch # 3 must be activated)*	sec	1-240	Upload
Tmr unlock ES	Electro Lock activation time *(before the motor starts)*	10/sec	1-250	Upload
Tmr pwr on ES	Electro Lock activation time *(after motor has started)*	10/sec	1-250	Upload
Tmr Back Jump	Time of Back Jump from CLOSE limit switch	100/sec	1-250	Upload
Tmr Motor torque	Extra torque time at start	100/sec	1-250	Upload
Configure Output	Configuration of programmable outputs *(see list below)*	-	-	Upload

CONFIGURE OUTPUT

#	TAUPROG LABEL	DESCRIPTION
A 16 - 17	Gate open	**Output set as “Gate Open” indicator (default setting)**
	Traffic Light	Output set as Traffic Light
	Courtesy Light	Output set as Gate Area Lighting
	Electric Lock	Output set as Electric Lock
	Vandal-proof	Output set as Magnetic Lock
B 16 - 18	Gate open	Output set as “Gate Open” indicator
	Traffic Light	Output set as Traffic Light
	Courtesy Light	**Output set as Gate Area Lighting (default setting)**
	Electric Lock	Output set as Electric Lock
	Vandal-proof	Output set as Magnetic Lock
C 19 - 20	Gate open	Output set as “Gate Open” indicator
	Traffic Light	Output set as Traffic Light
	Courtesy Light	Output set as Gate Area Lighting
	2ch bistable	Output set as Bistable/Latching Relay
	2ch monostable	**Output set as Monostable/Toggle Relay (default setting)**
	Electric Lock	Output set as Electric Lock
	Vandal-proof	Output set as Magnetic Lock

Dipswitch 14-29	Configuration of software DIP switch *(see list below)*

Dipswitch 14-29	Configuration of software DIP switch *(see list below)*

DIPSWITCH 14-29

#	TAUPROG LABEL	DESCRIPTION
14	Out 12 V aux hi	12 V Aux Output (Wire Terminals 11-12) *ON = 12 V always active* — *OFF = Output goes in Standby Mode*
15	AUTO INC TA	Automatic increase of the auto-close delay time *ON = Increases auto-close delay time if closing is aborted* — *OFF = Auto-close delay time remains fixed (*)*
16	pre flashing CL	Enables pre-flashing only before closing, if DIP Switch # 5 is set on OFF *ON = Pre-flashing before closing activated* — *OFF = Works as set by DIP Switch # 5*
17	Push Limit Sw	Sets out the intervention logic of parameters PWM Approach CL and PWM Approach OP *ON = Speed towards the gate stopper will be increased by the set value* — *OFF = Speed towards the stopper will be decreased by the set value*
18	Wait Photo OP	If activated, photocells during opening will hold the operator in pause *ON = FOTI will trigger operator pause* — *OFF: Normal operation*
19	Slow Reverse	Allows a soft reverse after photocells are activated (useful for long leaves) *ON: Slow reverse activated* — *OFF: Normal operation*
20	MANUAL command	Dead man's switch *ON: Dead man's switch activated* — *OFF: Normal operation*
21	Test Cyclic	Performs a cyclic test of the operator *ON: Cyclic test running (**)* — *OFF: Normal operation*
22	Fototest mode	Photo-cells monitoring feature only when starting from fully closed or fully open (instead of at every start input) *ON = Monitoring mode activated* — *OFF = Normal operation*
23	Safety Switch	Disables realignment procedure after manual release *ON = Realignment procedure disabled* — *OFF = Normal operation*
24	FOTE CL once	ON = Closes immediately after the intervention of the external photocell, without waiting for the complete opening OFF = disables such function
25	OP/CL single	ON = Enables the use of the OP/CL input only with the “OPEN” function and of the PEDE-STRIAN input only with the “CLOSE” function OFF = standard functions of the OP/CL and PEDESTRIAN inputs
26	TCA range	ON = Sets the range of the TCA trimmer from 0 to 12 seconds OFF = Sets the range of the TCA trimmer from 0 to 120 seconds
27	Dis.Obst.OP	ON = Disables the obstacle detection during the OPENING phase OFF = Enables the obstacle detection during the OPENING phase
28	not used	
29	not used	

(*): Auto-close delay time will increase in any case after 5 failed aborted closing attempts

(**): Use Tmr Courtesy/2Ch Base Parameter to set the Cyclic test time

K206MA

Update 15.03.2017 ID=110D

PARAMETERS – MOTOR 1

TAUPROG LABEL	DESCRIPTION	UNIT	RANGE	UPDATE MODUS
PWM Open	Opening speed *(max speed that the operators reaches during opening)*	PWM	0-1005	Up+Setup
PWM Close	Closing speed *(max speed that the operators reaches during closing)*	PWM	0-1005	Up+Setup
PWM setup OP	Default minimum opening speed during setup *(might be automatically increased by the controller if necessary)*	PWM	0-1005	Up+Setup
PWM start movem.	Starting speed (normal operation) *(the controller will automatically add a little acceleration when starting)*	PWM	0-1005	Up+Setup
PWM setup CL	Default minimum closing speed setting during setup *(might be automatically increased by the controller if necessary)*	PWM	0-1005	Up+Setup
End Approach OP	Soft Stop in opening *(slow approach to OPEN limit position, as a % of the total opening cycle)*	%	1-100	Up+Setup
End Approach CL	Soft Stop in closing *(slow approach to CLOSE limit position, as a % of the total opening cycle)*	%	1-100	Up+Setup
Limit switch OP	Limit switch in opening *Gap between OPEN Limit position (software) and mechanical stopper*	PE	0-255	Up+Setup
Acceleration OP	Soft Start Time in opening *Time to accelerate from min to max speed in opening*	100/sec	1-2000	Up+Setup
Acceleration CL	Soft Start Time in closing *Time to accelerate from min to max speed in closing*	100/sec	1-2000	Up+Setup
Deceleration OP	Soft Stop Time in opening *Time to decelerate from max to min speed in opening*	100/sec	1-2000	Up+Setup
Deceleration CL	Soft Stop Time in closing *Time to decelerate from max to min speed in closing*	100/sec	1-2000	Up+Setup
Base power OP	Obstacle detection threshold in opening *Higher value = less sensitivity; can be increased by the FR trimmer and the setup*	-	1-255	Upload
Base power CL	Obstacle detection threshold in closing *Higher value = less sensitivity; can be increased by the FR trimmer and the setup*	-	1-255	Upload
PWM Approach CL	Speed increase/decrease towards boom stopper – closing *Works as set by software DIP Switch # 17*	PWM	0-1005	Upload
PWM Approach OP	Speed increase/decrease towards boom stopper – opening *Works as set by software DIP Switch # 17*	PWM	0-1005	Upload
Tmr Approach CL	Time of push against Close Limit Switch *(DIP switch # 7 must be set in ON)*	100/sec	0-1005	Upload
Limit Obstacle	Extra offset to limit obstacle detection area *Additional offset (added to the limit switches) to define obstacle detection area*	PE	0-255	Up+Setup

UNIT

PWM	Fraction of the motor power supply, 0 = 0 V, 1005 = max V
PE	Encoder Steps, usually 11 PE = approx. 1 degree
PEx10	Encoder Steps x 10
n/sec	Fraction of a second (for example, 100/sec = hundredths of a second)

UPDATE MODUS

Up+Setup	To activate the new parameters, once Upload has been performed, start Setup procedure;
Upload	New parameters are effective once Upload has been performed.

BASE PARAMETERS

TAUPROG LABEL	DESCRIPTION	UNIT	RANGE	UPDATE MODUS

Tmr Work timeout	Max working time *(max time after which the operator will stop)*	100/sec	6000-36000	Upload
Tmr Courtesy/2ch	Courtesy light activation time *(or 2nd radio channel if set as toggle relay mode)*	sec	1-900	Upload
Tmr Preflashing	Pre-flashing time	4/sec	1-100	Upload
Tmr wait runtime	Waiting time in runtime mode *(to wait for all accessories connected to the controller to be ON after stand-by)*	100/sec	1-250	Upload
Tmr CL after FOT	Quick closing after photocell *(delay to close after photocell – DIP switch # 3 must be activated)*	sec	1-240	Upload
Tmr Motor torque	Extra torque time at start	100/sec	1-250	Upload
Tmr unlock ES	Electro Lock activation time *(before the motor starts)*	10/sec	1-250	Upload
Tmr pwr on ES	Electro Lock activation time *(after motor has started)*	10/sec	1-250	Upload
Configure Output	Configuration of programmable outputs *(see list below)*	-	-	Upload

CONFIGURE OUTPUT

#	TAUPROG LABEL	DESCRIPTION
A 16 - 17	Gate open	Output set as “Gate Open” indicator
	Traffic Light	Output set as Traffic Light
	Courtesy Light	Output set as Gate Area Lighting
	Vandal-proof	**Output set as Magnetic Lock (default setting)**
	Led Bar Traf.l	“Traffic light led bar” function (RED). When the automation is closed, leds flash. During manoeuvres, the flash is synchronized with the flashing light function. When the automation is OPEN, the exit is OFF
B 16 - 18	LED Bar Flash	**Output set as Boom LED Flashing (default setting)**
	LED Bar Fix	Output set as Boom LED Fixed
	Vandal-proof	Output set as Magnetic Lock
C 19 - 20	Gate open	Output set as “Gate Open” indicator
	Traffic Light	Output set as Traffic Light
	Courtesy Light	Output set as Gate Area Lighting
	2ch bistable	Output set as Bistable/Latching Relay
	2ch monostable	**Output set as Monostable/Toggle Relay (default setting)**
	Electric Lock	“Electrick lock ” function. Activated at the beginning of a manoeuvre of the automation, previously closed. It can be set through standard parameters “Tmr unlock ES” and “Tmr pwr on ES”. NA contact, max 1A
	Vandal-proof	Output set as Magnetic Lock
	Led Bar Traf.l	“Traffic light led bar” Function (GREEN). If the automation is OPEN, the exit is ON. It is OFF in all other cases.

Dipswitch 14-21	Configuration of software DIP switch *(see list below)*

Dipswitch 14-21	Configuration of software DIP switch *(see list below)*

DIPSWITCH 14-21

#	TAUPROG LABEL	DESCRIPTION	
14	Out 12 V aux hi	12 V Aux Output (Wire Terminals 11-12)	
		ON = 12 V always active	*OFF = Output goes in Standby Mode*
15	AUTO INC TA	Automatic increase of the auto-close delay time	
		ON = Increases auto-close delay time if closing is aborted	*OFF = Auto-close delay time re-mains fixed (*)*
16	pre flashing CL	Enables pre-flashing only before closing, if DIP Switch # 5 is set on OFF	
		ON = Pre-flashing before closing activated	*OFF = Works as set by DIP Switch # 5*
17	Push Limit Sw	Sets out the intervention logic of parameters PWM Approach CL and PWM Approach OP	
		ON = Speed towards the boom stopper will be increased by the set value	*OFF = Speed towards the stopper will be decreased by the set value*
18	Fototest mode	Photo-cells monitoring feature only when starting from fully closed or fully open (instead of at every start input)	
		ON = Monitoring mode activated	*OFF = Normal operation*
19	Slow Reverse	Allows a soft reverse after photocells are activated (useful for long leaves)	
		ON: Slow reverse activated	*OFF: Normal operation*
20	Safety Switch	Disables realignment procedure after manual release	
		ON = Realignment procedure disabled	*OFF = Normal operation*
21	Test Cyclic	Performs a cyclic test of the operator	
		ON: Cyclic test running (**)	*OFF: Normal operation*
22 23 24 25			
26	TCA range	ON = Sets the range of the TCA trimmer from 0 to 12 seconds OFF = Sets the range of the TCA trimmer from 0 to 120 seconds	
27	Dis.Obst.OP	ON = Disables the obstacle detection during the OPENING phase OFF = Enables the obstacle detection during the OPENING phase	
28 29			

(*): Auto-close delay time will increase in any case after 5 failed aborted closing attempts
(**): Use Tmr Courtesy/2Ch Base Parameter to set the Cyclic test time