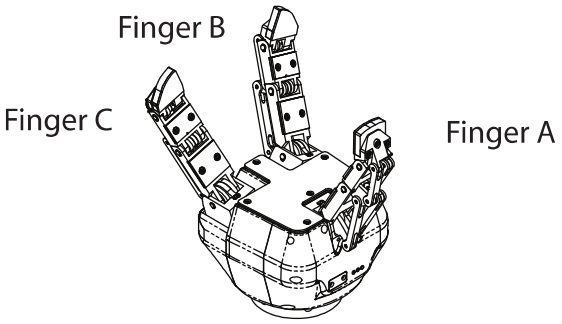
Robotiq Adaptive Gripper Cheatsheet



Status LEDs

Power	Blue	Off	Gripper not supplied
		On	Gripper supplied, control board running
Comm	Green	Off	No network detected
		On	Network detected, connection established
		Blinking	Network detected, no connection
Fault	Red	Off	No fault detected
		On	Action and/or communication fault occured
		Blinking	A major fault occured

Operation Modes

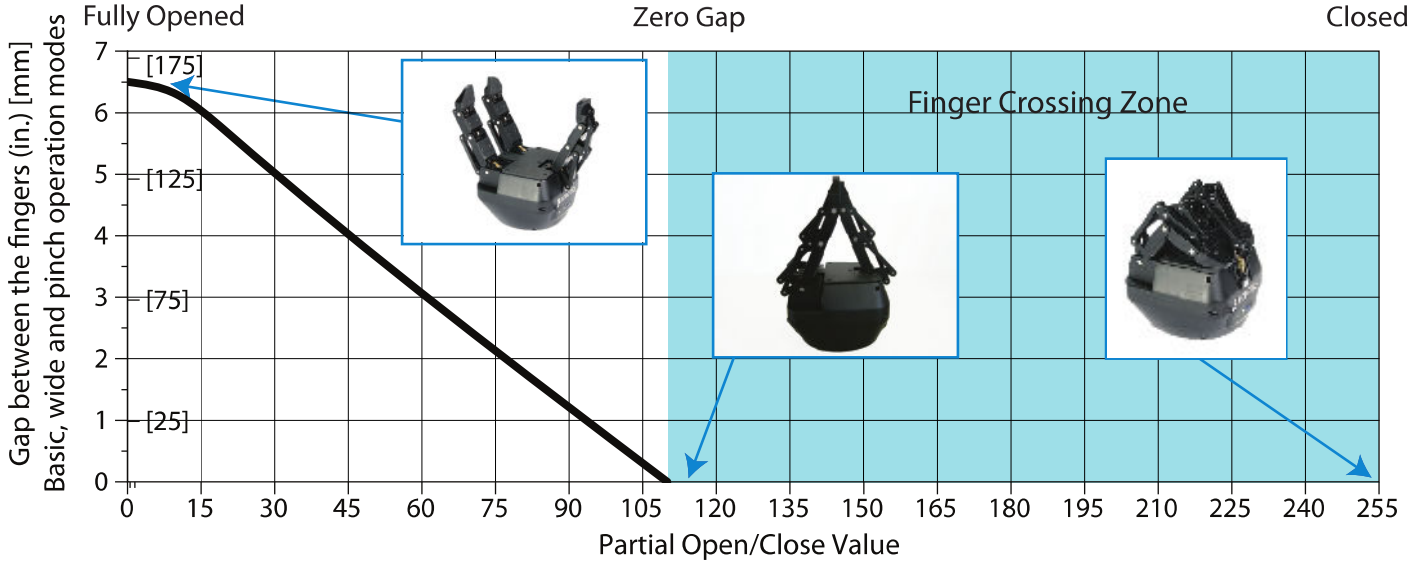
BASIC (00)

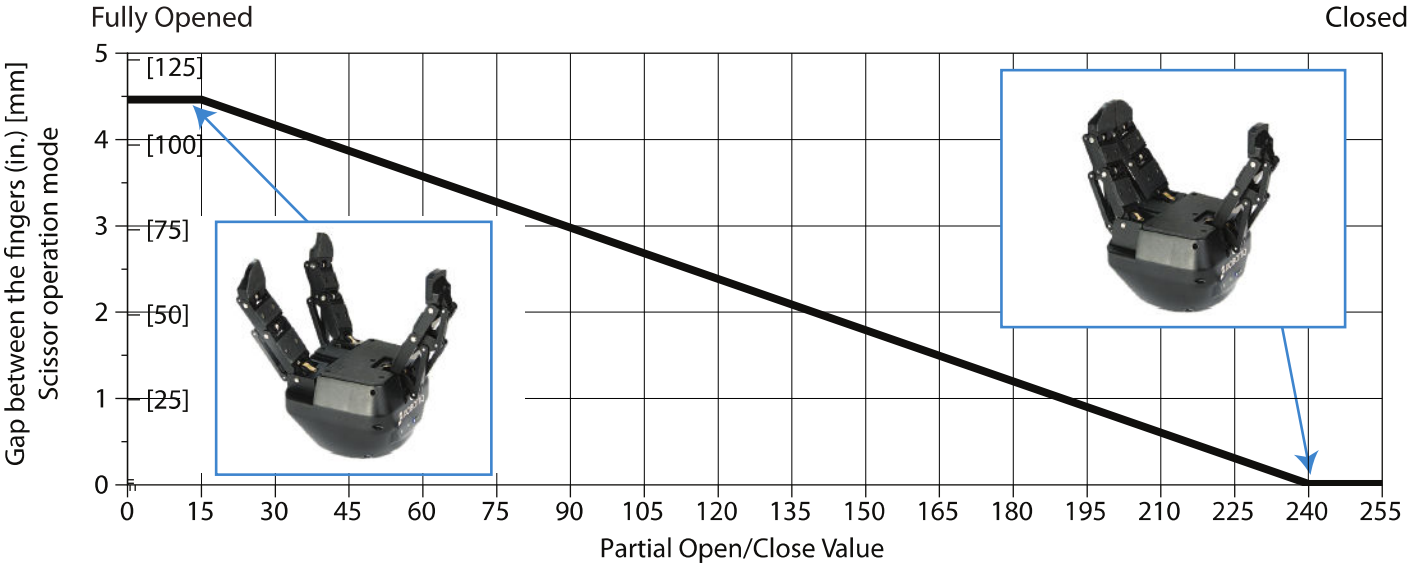
WIDE (01)

PINCH (10)

SCISSOR (11)

Partial Open/Close Graphs





Functionnalities registers

Register		Functionality	Bit	Description
Byte 0	**ACTION REQUEST**	**Initialization**	0	0 – Reset Gripper
				1 – Initialize Gripper (Must stay on after initialization is completed)
		Operation Mode	**1 & 2**	**00** – Go to **Basic** Mode
				10 – Go to **Pinch** Mode
				01 – Go to **Wide** Mode
				11 – Go to **Scissor** Mode
		Action	**3 & 4**	**00 – Stop**
				10 – Open
				01 – Close
				11 – Stop
		Part. Open State	5	0 – Set opening displacement to maximal opening
				1 – Set opening displacement up to requested position
		Part. Close State	6	0 – Set closing displacement to maximal closing
				1 – Set closing displacement up to requested position
		Reserved	7	Reserved
Byte 1	**SAFETY SHUTDOWN** (Modbus RS232 only)		0 – 3	Reserved
			4 – 7	Timeout between successive requests before shutdown
Byte 2	**SPEED**	**Grasing speed**	0 – 7	Set Grasping Speed
Byte 3	**FORCE**	**Grasing Force**	0 – 7	Set Grasping Force
Byte 4	**PARTIAL CLOSE**	**Part. close pos.**	0 – 7	Set position for partial closing
Byte 5	**PARTIAL OPEN**	**Part. open pos.**	0 – 7	Set position for partial opening

Status registers

Register		Status	Bit	Description
Byte 0	**GRIPPER STATUS**	**Initialization status**	**0**	0 – Gripper Resetted
				1 – Initialization completed
		Operation Mode status	**1 & 2**	**00 – Basic Mode**
				10 – Pinch Mode
				01 – Wide Mode
				11 – Scissor Mode
		Action status	3 & 4	00 – Stop
				10 – Open
				01 – Close
				11 – Mode Change, Initialization
		Gripper status	**5 & 6**	00 – Requested action has faulted (see Register FAULT STATUS)
				10 – Requested action is in progress
				01 – Illegal/Undefined
				11 – Requested action was successfully completed
		Reserved	7	Reserved. Set to 1
Byte 1	**OBJECT STATUS**	**Obj. det. Status**	0 & 1	00 – No part detected
				10 – One finger detected a part (Illegal for Scissor mode)
				01 – Two fingers detected a part (Illegal for Scissor mode)
				11 – All fingers (or Scissor fingers in Scissor modes) detected a part
		Fing. A obj. det. status	2	0 – No part was detected by the Finger A
				1 – A part was detected by the Finger A
		Fing. B obj. det. status	3	0 – No part was detected by the Finger B
				1 – A part was detected by the Finger B
		Fing. C obj. det. status	4	0 – No part was detected by Finger C
				1 – A part was detected by Finger C
		Sciss. obj. det. status	5	0 – No part was detected by the Scissor
				1 – A part was detected by the Scissor
		Reserved	6 & 7	Reserved. Set to 0
Byte 2	Reserved			Reserved. Set to 0
Byte 3	**FAULT STATUS**		0 – 7	0x00 – No fault
				0x1* – Priority fault
				0x2* – Communication fault
				0x3* – Action fault
				0x4* – Major Fault, Reset is required
Byte 4	**POSITIONS**	**Finger A**	0 – 7	Position of Finger A. 0x00 (Fully opened) to 0xFF (Fully closed)
Byte 5		**Finger B**	0 – 7	Position of Finger B. 0x00 (Fully opened) to 0xFF (Fully closed)
Byte 6		**Finger C**	0 – 7	Position of Finger C. 0x00 (Fully opened) to 0xFF (Fully closed)
Byte 7		**Scissor**	0 – 7	Position of Scissor. 0x00 (Fully opened) to 0xFF (Fully closed)
Byte 8	**MOTOR CURRENTS**	**Finger A**	0 – 7	Current of Finger A. 0.1 * Current (in mA)
Byte 9		**Finger B**	0 – 7	Current of Finger B. 0.1 * Current (in mA)
Byte 10		**Finger C**	0 – 7	Current of Finger C. 0.1 * Current (in mA)
Byte 11		**Scissor**	0 – 7	Current of Scissor. 0.1 * Current (in mA)