MEDIUM SIZE ERGONOMIC GRIP

G3-M CONTROL GRIP

G3-M grip with G2 style faceplate

G3-M grip with J2 style faceplate customized with Large FNR K1S

G3-M grip with G2 style faceplate customized with HWTS

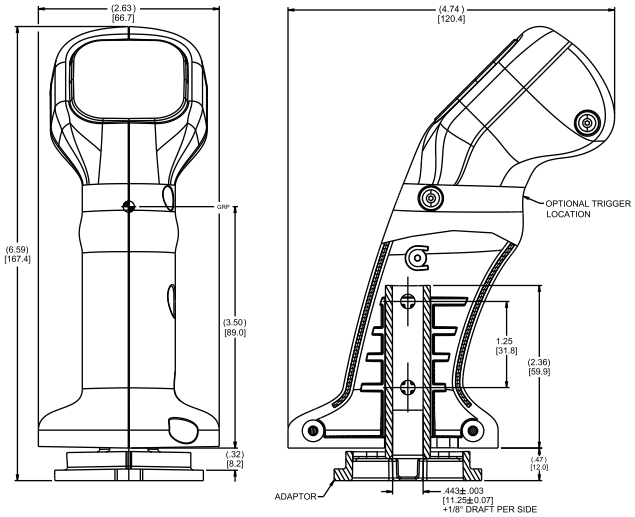
The G3-M is a medium sized, ergonomic, modular and customizable grip handle. This handle offers comfort, flexibility, and robust-ness for a multitude of operator control applications. The design of the G3-M is slightly smaller than the G3-C and offers ruggedness, while providing essential control solutions, in a smaller package. The feel of the new design accommodates operators with or without gloves without sacrificing comfort. The G3-M also incorporates a large offering of standard faceplates that can be oriented from 0, 90 and 180 degrees. These faceplates utilize a variety of OTTO's push-buttons, rockers and Hall effect products. The faceplate can also be custom configured with various OTTO switches based on the application requirements. In addition, the G3-M offers an optional trigger integrated in the grip handle.

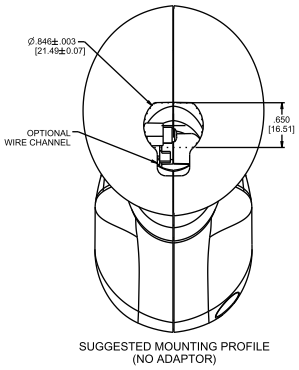
The G3-M can be panel mounted as a fixed control grip or it can be mounted on an OTTO JH, JHL and JHM joystick. Combining the grip handle with a full featured OTTO joystick base results in an integrated, rugged, and reliable operator control solution. When combined with the JHL joystick, we also offer a bent shaft option to angle the grip 0, 5, 10 or 15 degrees from vertical.

Features:

- **High performance grip in a smaller package**
- **Can be used with either the left or right hand**
- **Numerous standard faceplate design options**
- **Custom faceplate designs available**
- **Available with or without trigger**
- **Various mounting and termination styles available**
- **Modular design provides high level of customization and reduces the need for tooling charges**
- **Compatible with OTTO JH, JHL and JHM series Hall effect Joysticks**
- **Accommodates a wide variety of OTTO pushbutton, rockers, toggles, and Hall effect switches**

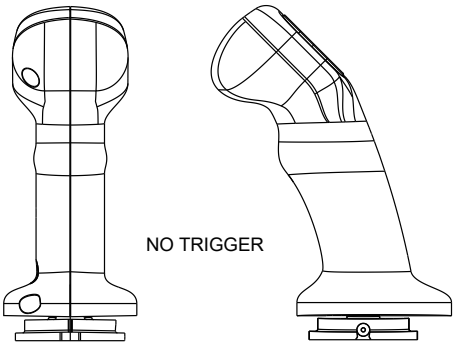
G3-M DRAWINGS

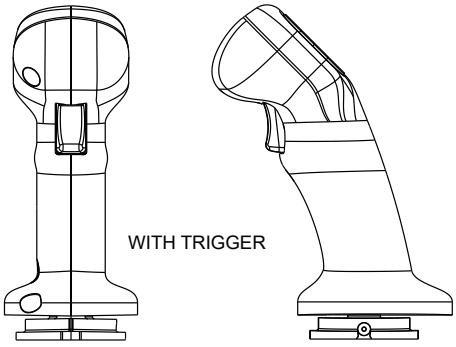




SUGGESTED MOUNTING PROFILE
(NO ADAPTOR)

TRIGGER CONFIGURATIONS





G3-M CONTROL GRIP

MEDIUM SIZE ERGONOMIC GRIP

Standard Characteristics/Ratings:				
ELECTRICAL RATINGS				
HTLT4 Switches				
Rated at Vcc = 5V @ 20°C LOAD = 1ma (4.7KΩ)	**Units**	**Min**	**Typ**	**Max**
Supply Voltage	VDC	4.50	5.00	5.50
Output Voltage, +Y, -Y, +X, -X; 0° Deflection	VDC @5V Vcc	2.25	2.50	2.75
Output At Full Travel -X, -Y Direction	VDC @5V Vcc	0.25	0.50	0.75
Output At Full Travel +X, +Y Direction	VDC @5V Vcc	4.25	4.50	4.75
Supply Current B=0, Vcc=5v, Iout=0	mA	NA	10	12
Output Impedance	Ω	NA	1.0	NA
HTWM Switches				
Rated at Vcc = 5V @ 25°C LOAD = 1ma (4.7KΩ)	**Units**	**Min**	**Typ**	**Max**
Supply Voltage	VDC	4.50	5.00	5.50
Output Voltage at Center	VDC @5V Vcc	2.25	2.50	2.75
Output Voltage Full Travel Direction 1 (+ Travel)	VDC @5V Vcc	4.25	4.50	4.55
Output Voltage Full Travel Direction 1 (- Travel)	VDC @5V Vcc	0.45	0.50	0.75
Supply Current B=0, Vcc=5v, Iout=0	mA	NA	NA	10
HTWS Switches				
Rated at Vcc = 5V @ 25°C LOAD = 1ma (4.7KΩ)	**Units**	**Min**	**Typ**	**Max**
Supply Voltage	VDC	4.50	5.00	5.50
Output Voltage at Center	VDC @5V Vcc	2.25	2.50	2.75
Output Voltage Full Travel Direction 1 (+ Travel)	VDC @5V Vcc	4.25	4.50	4.75
Output Voltage Full Travel Direction 1 (- Travel)	VDC @5V Vcc	0.25	0.50	0.75
Supply Current B=0, Vcc=5v, Iout=0	mA	NA	NA	20
K1S Switches				
Electrical Rating	Logic Level, 10 mA @ 5VDC max (logic level ratings void if logic level load(s) exceeded at any time.)			
Electrical Life	1,000,000 Cycles			
P9 Switches & Trigger				
Electrical Rating	5 AMP Resistive Load @ 28 VDC 2 AMP Inductive Load @ 28 VDC		10 mA Resistive Load @ 5 VDC	
Electrical Life	25,000 Cycles		1,250,000 Cycles	

Standard Characteristics/Ratings:				
MECHANICAL RATINGS				
HTLT4 Switches*				
Mechanical Life - Return to Center; Full Forward To Full Back	3,000,000 Cycles			
HTWM Switches*				
Mechanical Life - Return to Center; Full Forward To Full Back	3,000,000 Cycles			
HTWS Switches*				
Mechanical Life - Full Forward To Full Back	3,000,000 Cycles			
Maximum Allowable Radial Load	LBS	NA	NA	15
K1S Switches				
Mechanical Life	1,000,000 Cycles			
P9 Switches & Trigger				
Mechanical Life	1,250,000 Cycles			
ENVIRONMENTAL	**Units**	**Min**	**Typ**	**Max**
Operating Temperature	°C	-40	20	85
HTLT4 Switches				
Electronic Enclosure Design	ISO 20653, IP6K8S - Dusttight, continuous immersion, 1 meter for 31 minutes, stationary during test(s)			
HTWM Switches				
Electronic Enclosure Design	ISO 20653, IP6K8S - Dusttight, continuous immersion, 1 meter for 31 minutes, stationary during test(s)			
HTWS Switches				
Electronic Enclosure Design	ISO 20653, IP6K8S - Dusttight, continuous immersion, 1 meter for 31 minutes, stationary during test(s)			
K1S Switches				
Electronic Enclosure Design	ISO 20653, IP66/IPK8S - Dusttight, continuous immersion, 1 meter for 31 minutes, stationary during test(s)			
P9 Switches & Trigger				
Switch Seal Integrity	ISO 20653, IP6K8S, IP69K - Dusttight, continuous immersion, 1 meter for 31 minutes, stationary during test(s)			
Grip				
Seal Integrity	Unsealed			
MATERIAL				
Handle	Thermoplastic, Glass Reinforced, Black			
Faceplate	Thermoplastic, Glass Reinforced, Black			
Adaptor	Thermoplastic, Glass Reinforced, Black			
Wires	22AWG, UL style 1569, (20" long)			

** Positive travel is up or to the right. Contact factory for additional options.*

G3-M PART NUMBER CODE

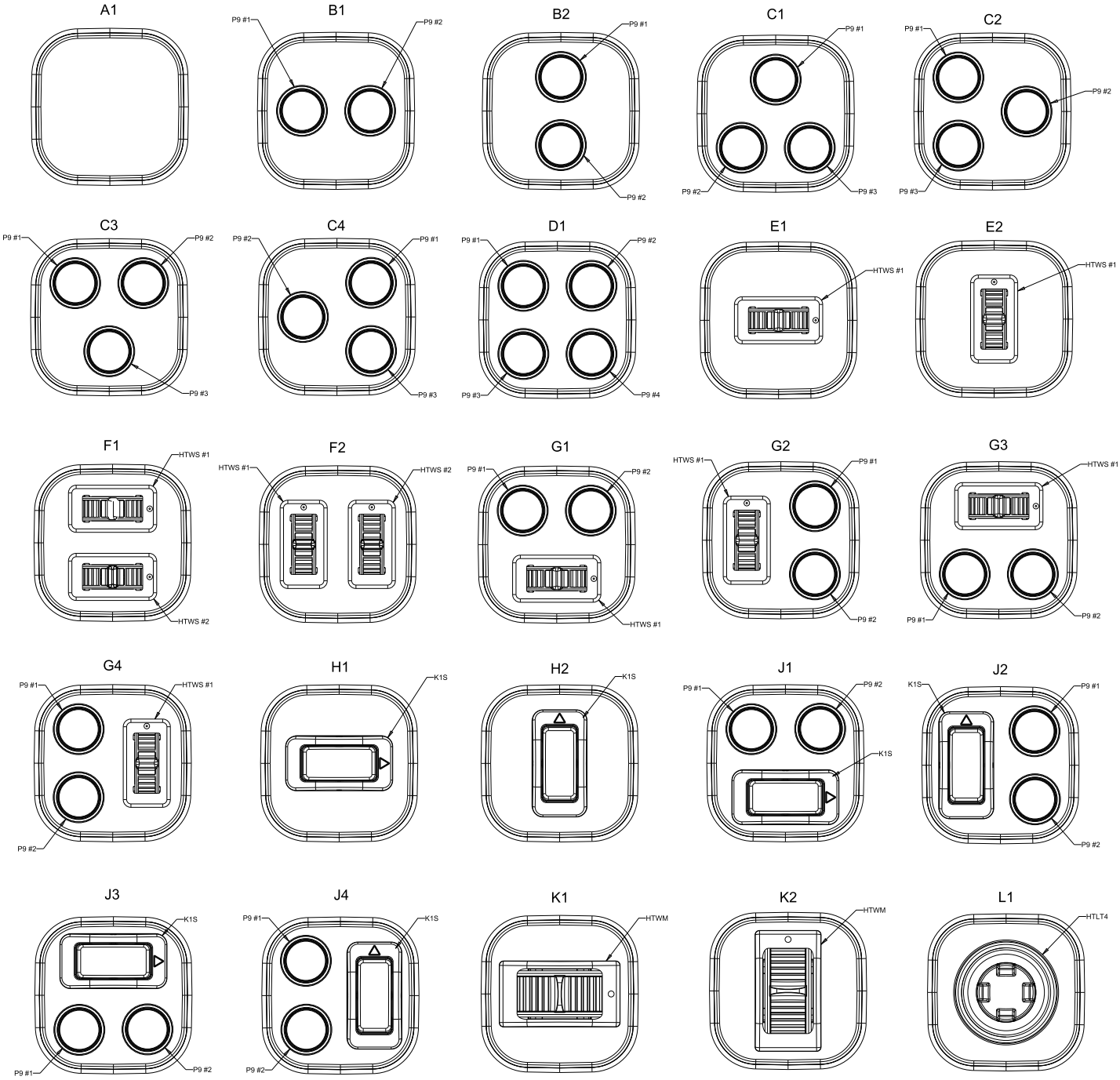
G3-M **X** **XX** **X** **X** **X** **X** **X** **X**

Configuration	**Faceplate**	**Trigger**	**K1S Rocker Style-Black***	**P9 Button #1 Color**	**P9 Button #2 Color**	**P9 Button #3 Color**	**P9 Button #4 Color**
1. Grip with Adaptor	See Switch Configuration on next page	**1.** None	**1.** None	**1.** Red	**1.** Red	**1.** Red	**1.** Red
2. Grip without Adaptor		**2.** Yes	**2.** ON-OFF	**2.** Black	**2.** Black	**2.** Black	**2.** Black
			3. (ON)-OFF	**3.** Orange	**3.** Orange	**3.** Orange	**3.** Orange
			4. ON-OFF-ON	**4.** Yellow	**4.** Yellow	**4.** Yellow	**4.** Yellow
			5. (ON)-OFF-(ON)	**5.** Green	**5.** Green	**5.** Green	**5.** Green
			6. ON-ON-ON	**6.** Blue	**6.** Blue	**6.** Blue	**6.** Blue
				7. Violet	**7.** Violet	**7.** Violet	**7.** Violet
				8. Gray	**8.** Gray	**8.** Gray	**8.** Gray
				9. White	**9.** White	**9.** White	**9.** White
				N. None	**N.** None	**N.** None	**N.** None

* ( ) Denotes Momentary Action. ON Position or Momentary Position is up or to the right.

MEDIUM SIZE ERGONOMIC GRIP

SWITCH CONFIGURATIONS



G3-M CONTROL GRIP

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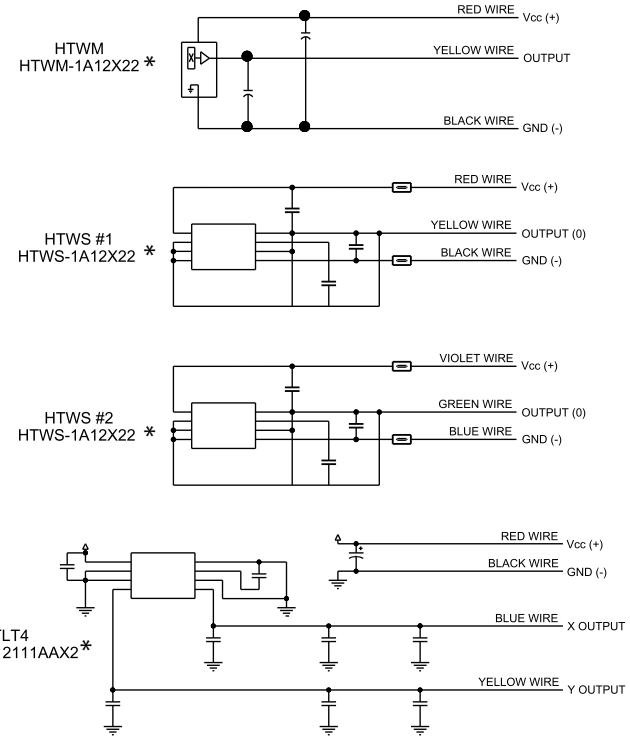
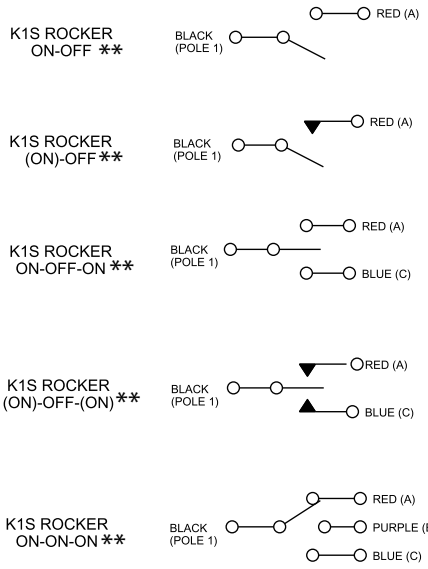
G3-M SCHEMATICS



*POSITIVE TRAVEL IS UP OR TO THE RIGHT. CONTACT FACTORY FOR ADDITIONAL OPTIONS.



**ON POSITION OR MOMENTARY POSITION IS UP OR TO THE RIGHT.