

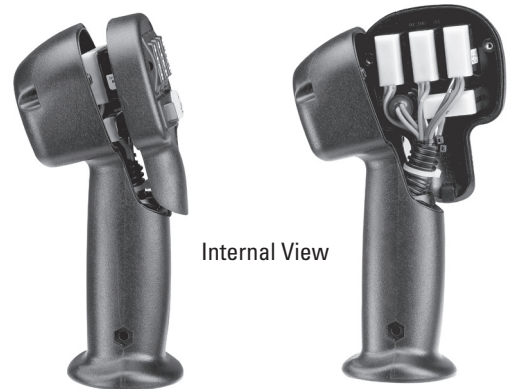
HEAVY EQUIPMENT & MATERIAL HANDLING GRIPS

The G3 Universal Grips can be customized for top-of-the-line machines requiring high switch content, or to provide only basic control functions on lower tier units. The grips are designed to be panel mounted as a fixed control grip or mounted on an OTTO JH, JHL or JHM joystick.

The OTTO G3 Universal Grips have a modular design and were developed for use with OTTO's standard pushbuttons, rockers, toggles, Hall effect switches and the JH, JHL and JHM series Hall effect joysticks. The G3 Grips are easily customized with multiple switch configurations, quickly and without tooling charges.

Features:

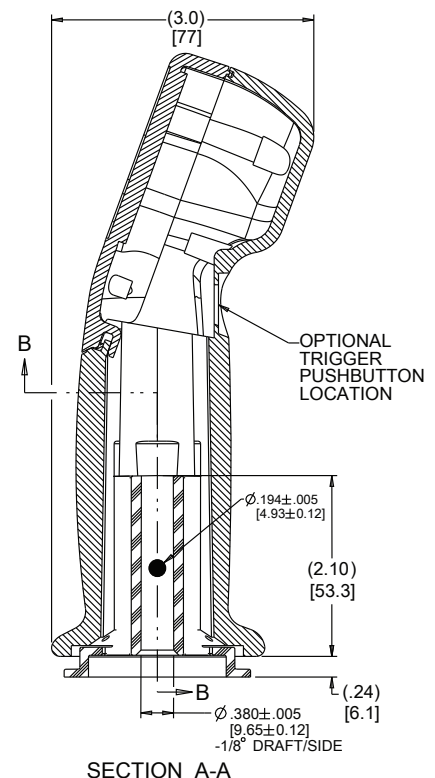
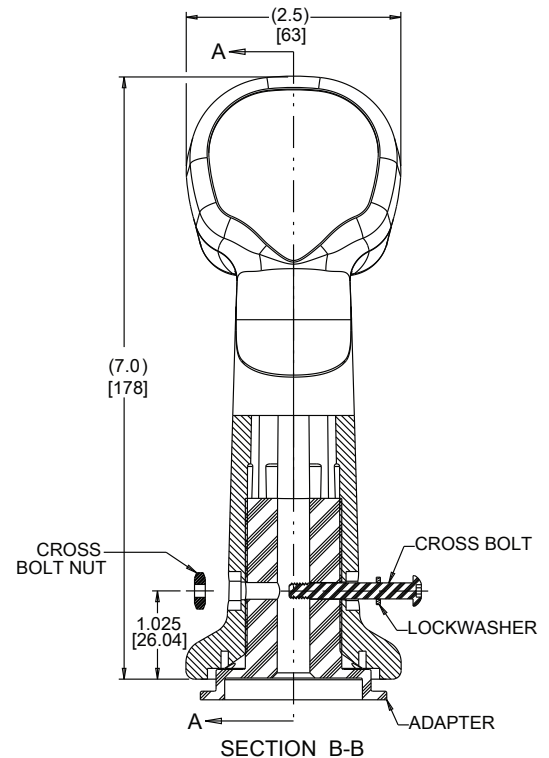
- **Compatible with the OTTO JH , JHL and JHM series Hall effect Joysticks**
- **Variety of sizes/shapes available**
- **Accommodates a full line of pushbutton, rocker, toggle, HP Hall effect & HPL proportional output series of switches**
- **Various mounting & termination options available**
- **Includes mounting adapter with boot ring (where applicable)**
- **Modular faceplate design reduces the need for tooling charges**



G3-A UNIVERSAL GRIP

Standard Characteristics/Ratings:				
ELECTRICAL RATINGS:				
K1 Switches				
Electrical Rating @ 28 VDC	16 AMP Resistive Load; 7 AMP Inductive Load			
Electrical Life	25,000 Cycles at Full Load			
P9 Switches				
Electrical Rating @ 28 VDC	5 AMP Resistive Load; 3 AMP Inductive Load			
Electrical Life	25,000 Cycles at Full Load			
MECHANICAL RATINGS				
K1 Switches				
Mechanical Life	100,000 Cycles			
P9 Switches				
Mechanical Life	1,250,000 Cycles			
ENVIRONMENTAL:				
Operating Temperature:	Units	Min	Typ	Max
	° C	-40*	20	85
K1 Switches				
Switch Seal Integrity	Watertight per IP68S (1 meter) and IP69K			
P9 Switches				
Switch Seal Integrity	Watertight per IP68S (1 meter) and IP69K			
Grip				
Seal Integrity	Unsealed			
MATERIALS:				
Handle	Thermoplastic, Glass Reinforced, Black			
Faceplate	Thermoplastic, Glass Reinforced, Black			
Mounting Hardware	#10 Crossbolt with Nut and Lockwasher			
Wires	22 AWG, UL Style 1569, (20" Long)			

* Minimum operating temperature is -30°C when a K1 Switch is installed.



Note: All dimensions are for reference only.

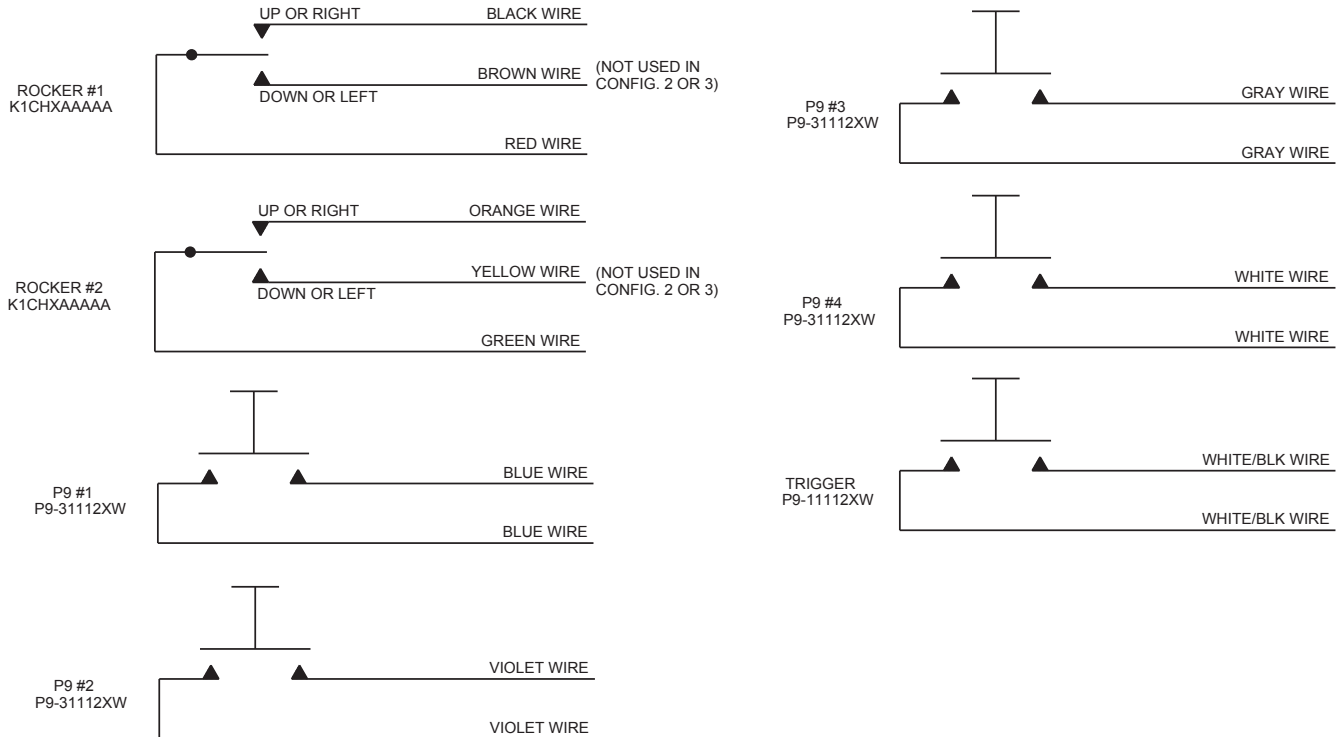
HEAVY EQUIPMENT & MATERIAL HANDLING GRIPS

G3-A UNIVERSAL GRIP PART NUMBER CODE

G3-A	X	XX	X	X	X	X	X	X	X
Configuration	Switches	Trigger Pushbutton in Handle	K1 Rocker #1 Style - Black *	K1 Rocker #2 Style - Black *	P9 Button #1 Color	P9 Button #2 Color	P9 Button #3 Color	P9 Button #4 Color	
1. Grip With Adapter	See Configuration Sheet on next page	1. None 2. Black 3. Red	1. None 2. On-Off 3. (On)-Off 4. On-Off-(On) 5. (On)-Off-(On)	1. None 2. On-Off 3. (On)-Off 4. On-Off-(On) 5. (On)-Off-(On)	1. Red 2. Black 3. Orange 4. Yellow 5. Green 6. Blue 7. Violet 8. Gray 9. White N. None	1. Red 2. Black 3. Orange 4. Yellow 5. Green 6. Blue 7. Violet 8. Gray 9. White N. None	1. Red 2. Black 3. Orange 4. Yellow 5. Green 6. Blue 7. Violet 8. Gray 9. White N. None	1. Red 2. Black 3. Orange 4. Yellow 5. Green 6. Blue 7. Violet 8. Gray 9. White N. None	

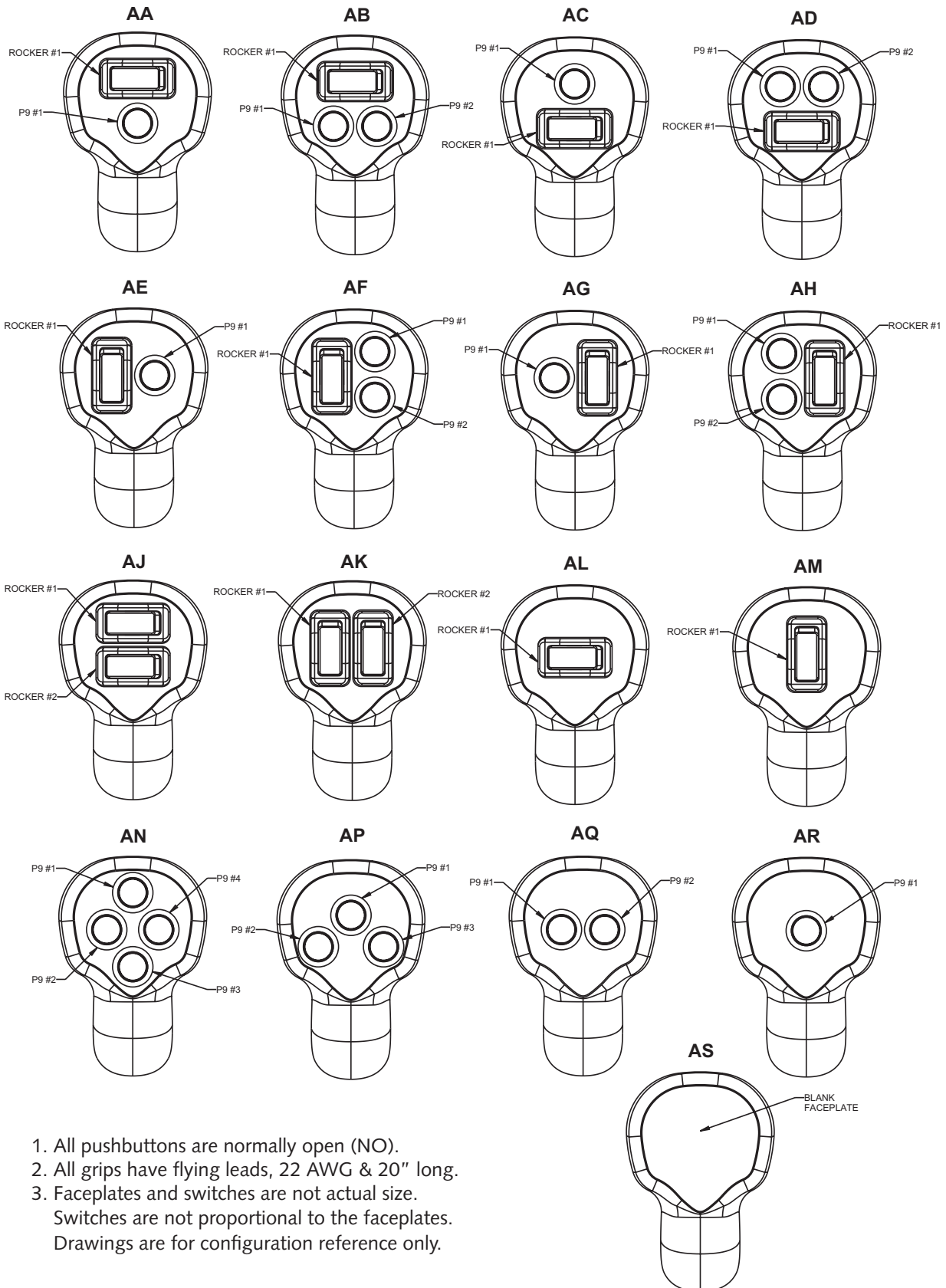
* () denotes momentary. On position or momentary position is up or to the right. Contact factory for rocker legends and additional color options.

G3-A UNIVERSAL GRIP SCHEMATICS



HEAVY EQUIPMENT AND MATERIAL HANDLING GRIPS

G3-A UNIVERSAL GRIP SWITCH CONFIGURATIONS



1. All pushbuttons are normally open (NO).
2. All grips have flying leads, 22 AWG & 20" long.
3. Faceplates and switches are not actual size.
Switches are not proportional to the faceplates.
Drawings are for configuration reference only.