

TECHNICAL INFORMATION

Description

The Sure Grip "LE" Series Control Grip accommodates the largest number of options available. It is designed to offer up to 8 switches in the faceplate as well as the option for a dual trigger switch, second trigger switch or operator presence switch. The expansion pod can be installed on either side of the handle, for an additional 2 buttons, 1 slider or 1 rocker module. Or a keypad can also be installed on the left or right of the handle for an additional 10 buttons. The "LE" Series handle is optimized to be installed on our JSM or JSL electronic joysticks.

The "LE" Handle is fully customizable with all Sure Grip Handle Options such as; slider modules, rocker modules, microjoystick, LED's, toggle switches and maintained switches. Accessories such as studs, sealed connectors are also available for customer's preference (Please refer to Handle Accessories on our website).

The cases are molded from a high impact plastic polymer into a comfortable shape for a rugged and lightweight control handle for extreme duty applications. The standard Sure Grip switches are covered with our patented overlay design.



Features

- ▶ Sealing up to IP67
- ▶ Rugged design
- ▶ Overlay customizable
- ▶ Switch tested to 10 million operations
- ▶ Optimized for JSM and JSL joysticks
- ▶ Multiple trigger options available
- ▶ Supports up to 2 Microjoysticks
- ▶ Supports up to 4 Slider or Rocker Modules
- ▶ Supports up to 8 faceplate switches
- ▶ Supports a 10 button keypad
- ▶ Supports Expansion Pod (i.e. Forward/Neutral/Reverse function)

TECHNICAL INFORMATION

MOMENTARY SWITCH SPECIFICATIONS

Switch Options:	Load	Voltage	Operating Temp
Unsealed Standard - IP40	3 A	30 Vdc	-25°C to +85°C
Sealed Switch - IP67	1 A	30 Vdc	-40°C to +85°C
Unsealed Gold contact - IP40	100 mA	30 Vdc	-25°C to +85°C
Sealed Gold Switch - IP67	100 mA	30 Vdc	-40°C to +85°C

MAINTAINED SWITCH SPECIFICATIONS

Switch Options:	Load	Voltage	Operating Temp
Push Button	3 A	30 Vdc	-30°C to +85°C

TOGGLE SWITCH SPECIFICATIONS

Switch Options:	Load	Voltage	Operating Temp
Toggle Switches	3 A	30 Vdc	-30°C to +85°C
Functions	On-On / On-Off-On / Mom-Off-Mom / On-Off-Mom		

LED SPECIFICATIONS

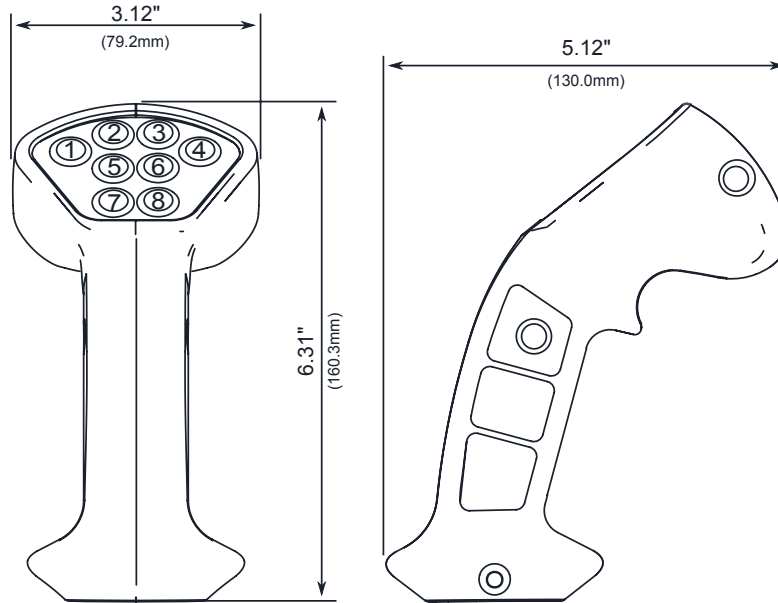
LED Options:	Load	Voltage	Operating Temp
LED	20 mA	5, 12, 24 Vdc	-40°C to +85°C
Colours Available	Red / Green / Tri-colour (R/Y/G)		

CABLE SPECIFICATIONS

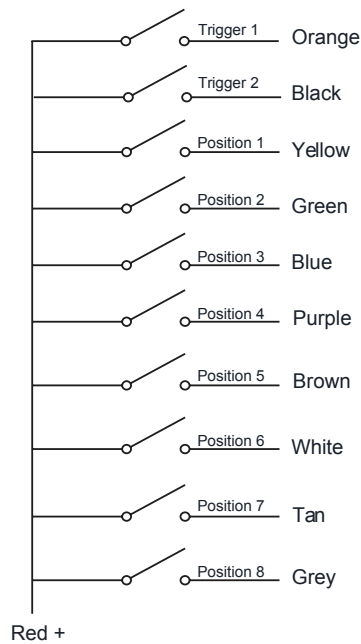
Cable Options:	WR-09B	WR-10B	WR-13B	WR-15B
Conductor	9	10	13	15
Material	Tinned Copper	Tinned Copper	Tinned Copper	Tinned Copper
Strand	19 Twisted	7 Twisted	19 Twisted	7 Twisted
AWG	20	22	22	22
Insulation	SR-PVC	SR-PVC	SR-PVC	SR-PVC
Outer Jacket	PVC FT4	PVC FT4	PVC FT4	PVC FT4
Operating Temperature	-40°C to +105°C	-40°C to +105°C	-40°C to +105°C	-40°C to +105°C

TECHNICAL INFORMATION

Dimensions



Typical Wiring



ORDERING GUIDE

Order Instructions:

- Each box has a color and number, which corresponds to handle options below. Please review each option, as this will help you with choosing your part number. (Refer to our technical guides for more information on product options)
- If a desired handle option is not available contact a sales representative to discuss if there are alternative solutions for your application.
- Enter your configured part number in the empty boxes provided below and contact a friendly Sure Grip sales representative to place your order.

Your configured part number:

LE - - - - - - - - - - - - - - - - - - - -




1 2 3 4 4 4 4 4 4 4 4 4 4 4 4 5 6 7 8 8

Example: LE - B - B - NN - A M J F Z Z A A N N - N - N - 000 - D - E

P1 P2 P3 P4 P5 P6 P7 P8 P9 P10

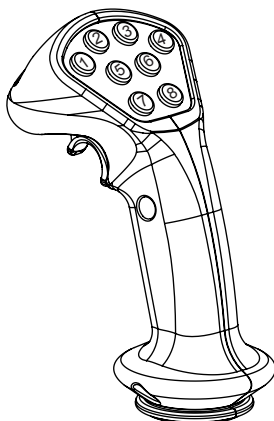
*Faceplate Location Reference

1. Handle Color
B - Black G - Grey
2. Switch Style
N - No Switch A - UnSealed 3Amp Switch B - Sealed 1Amp Switch C - Unsealed 100mA Switch D - Sealed 100mA Switch
3. Trigger Options
NN - None SN - Single DN - Double PN - Proportional NO - OP (Operator Presence) SL - Single and Lower SO - Single and OP DL - Double and Lower DO - Double and OP PL - Proportional and Lower PO - Proportional and OP

4. Function Types	
N - None	
1 Position	
A - Mo Switch *B - Ma Switch *C - Toggle 2Ma *D - Toggle 3Ma *E - Toggle 3Mo *F - LED Red *G - LED Green *H - LED Bi-Colour (R/G)	Mo - Momentary Ma - Maintained F - Friction
	Slider
	Rocker
	Micro Joystick
2 Positions	J - Slider Module 3Mo K - Slider Module 3Ma L - Slider Module F U - Slider Module 1Mo M - Switched Rocker 3Mo P - Switched Rocker 2Ma Q - Switched Rocker 3Ma R - Switched Rocker 3MaMo S - Proportional Rocker 3Mo T - Proportional Rocker 3Ma
4 Positions	V - Micro Joystick Z - Multi position designator (See example below)
*Refer to handle options on website for more information	

5. Side Options
N - None R - Right Handed Keypad L - Left Handed Keypad A - Right Handed Enclosure *(P9 & P10) B - Left Handed Enclosure *(P9 & P10) <i>*specify up to 2 functions from Function Types for positions 9 & 10</i>
6. Mounting Studs
N - None R - 12mm x 1.25 S - 12mm x 1.75 T - 12mm x 1.75, Bent Stud @ 28 degrees
7. Wire Length Options
xxx Inches
8. Electronics #1 and #2
N - None A - Dual Danfoss DA2 B - Caterpillar Interface DA2C2 C - Diode - Diverter Protection DPd D - Power Supply PS5 5VDC E - Single Driver Board SDB <i>*Refer to Control Electronics on website for more information</i>

*Faceplate Location Reference

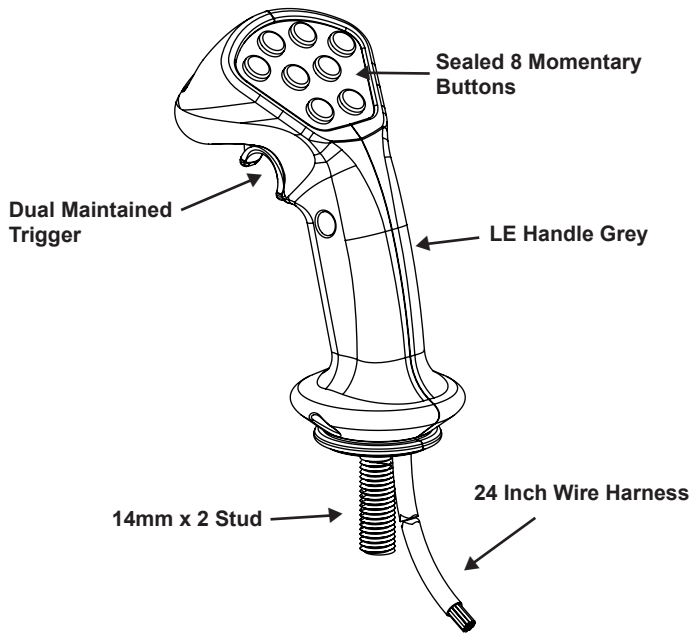


Comment Section

EXAMPLE GUIDE

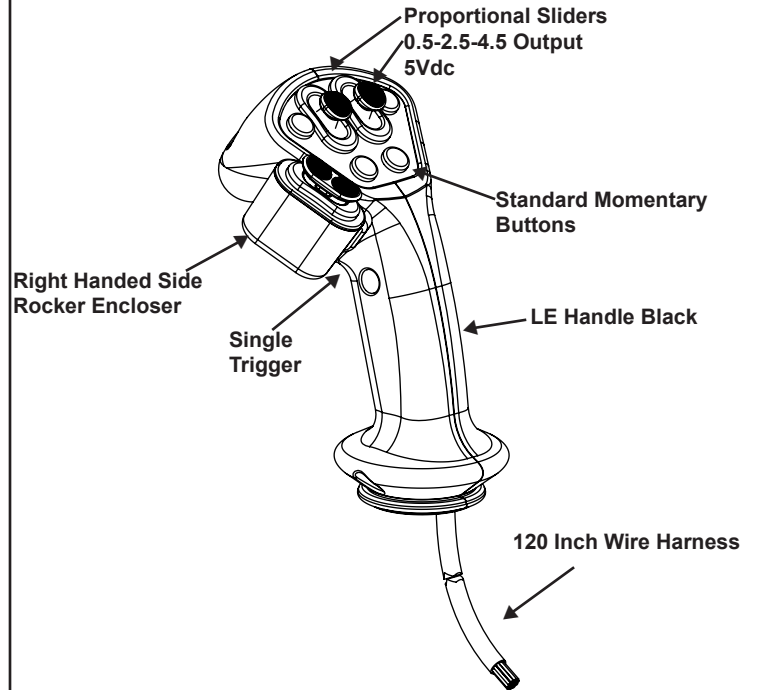
LE Example 1

LE-G-B-DN-AAAAAAAAANN-N-U-024-N-N



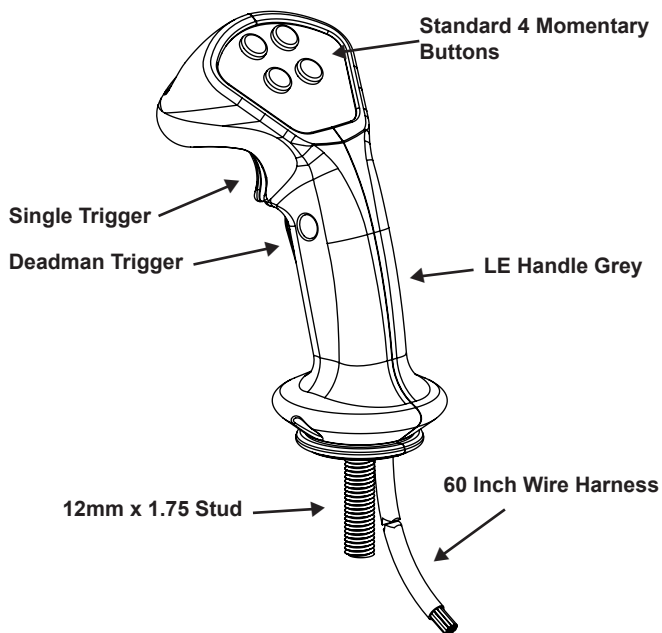
LE Example 2

LE-B-A-JN-AJJAZZAAQZ-A-N-120-N-N



LE Example 3

LE-G-C-SO-NAANAANNNN-N-S-060-N-N



LE Example 4

LE-B-D-PN-AAAAAAAAANNNN-R-S-144-N-N

