

Manufacturing Document

Quotation Package LSMKv1000

CANTROL CORPORATION

Request for Quotation

Product Type Custom Membrane Keypad/Switch

Specifications See Specifications Page

Quantities To Quote Initial Order 100

250

500 1000

Additional Orders 100

250

500

1000



Company Information

Bill To	Company Name	Cantrol Corporation	Ship To	Company Name	Cantrol Corporation
	Address	5711 Lacey Blvd SE		Address	5711 Lacey Blvd SE
		Suite 301			Suite 301
	City, State	Lacey, WA		City, State	Lacey, WA
	Country, ZIP	USA, 98503		Country, ZIP	USA, 98503
	Phone	360-943-2952		Phone	360-943-2952
	Fax	360-352-4112		Fax	360-352-4112
Contact	Purchasing	David Johnstone	cantrolcorp	@gmail.com	
	Technical	David Johnstone			



Specifications

Project LSMKv1000

Description Logicsense Membrane Keypad

Version 1.00.0

Keypad Size 1.89" X 1.677", +0.0"/-0.005"

Thickness 0.032" ± 0.002" (Total)

Switch Count 6

Operating Temperature -20°F to 140°F
Operating Humidity 5%RH to 95%RH

Enviroment Indoor
LEDs None
Embossing None
Windows None
Shielding None
Certifications None

Back Adhesive For smooth ABS plastic surface

Layers 1. Overlay 8A35 Lexan, 0.007" [0.1778mm]

2. Overlay Adhesive 3M467MP, 0.002" [0.0508mm]
3. Dome Retainer Clear PET, 0.007" [0.1778mm]
4. Spacer Layer 5. Circuit Clear PET, 0.005" [0.2286mm]
6. Back Adhesive 3M467MP, 0.002" [0.0508mm]

Overlay Material Polycarbonate

Surface Finish Velvet (Textured)
Thickness $0.007" \pm 0.001"$

Color Overlay Pantone Cool Gray 2
Graphic Pantone Neutral Black C

Circuit Type Flex

Description Shared common, Normally open

Electrical Rating 100mA 28VDC Loop Resistance $< 100\Omega$

Conductor Material Manufacturers Choice. Verfication Required

Connector Type Zif

Switch Type Metal Dome (Tactile)

Actuations 1 million+

Contact Rating See Electrical Rating
Contact Bounce <0.3ms make <0.6ms break

Metal Dome Type 4 Leg, No dimple, No hole (I.E. Snaptron U12390)

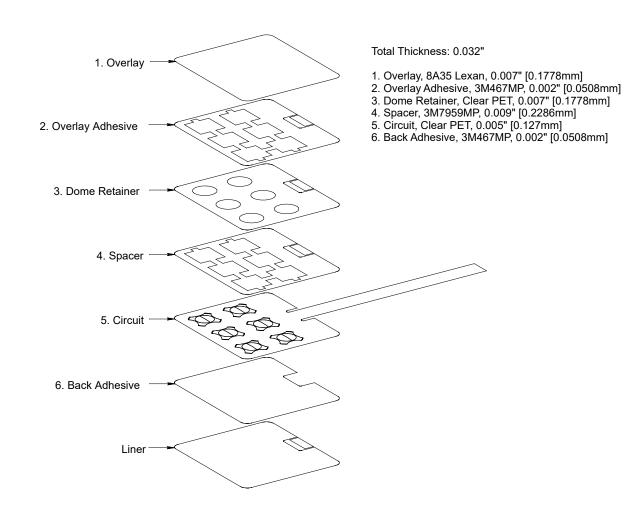
Material Stainless Steel
Diameter 12mm (0.472")
Height 0.76mm (0.030")

Trip Force Preferred 280g (Min:250g, Max:400g)

Drawings (CAD) LSMKv1000-Layers.gbr Artwork LSMKv1000-Artwork.pdf 3d Models *Provided Upon Request*



		Revisions		
AN	Rev	Description	Date	Chg'd By
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LSMK-v1000

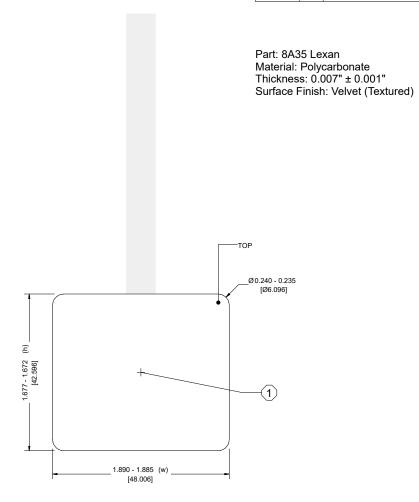
Layers Stackup

Drawn By D. Johnstone	MANTROL
Date	
05/04/2017	5711 LACEY BLVD SE SUITE 301
Do Not Scale Drawing	LACEY, WA 98503-2463

Drawing No. Size Rev AN-1493933946 Scale 1 of --

CAD File 1:1 LSMK-CADv1003.vcp

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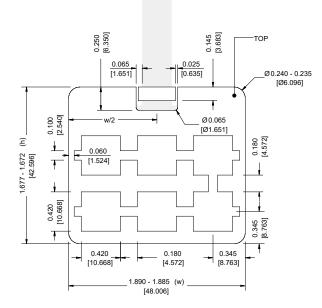
Notes
1. Overlay does not contain embossing. Overlay should contour to metal domes. See redendering for example.

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Part: 3M467MP

Thickness: 0.002" ± 0.0005"



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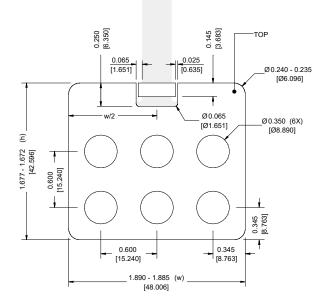
Layer 2 Overlay Adhesive

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Material: Clear PET

Thickness: 0.007" [0.1778mm]



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MK-v1000

r 3 ne Retainer

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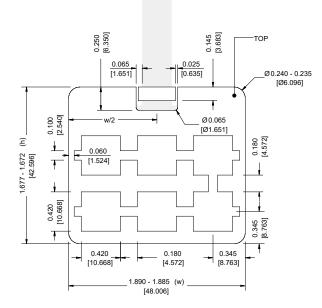
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Part: 3M7959MP

Thickness: 0.009" [0.2286mm]



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[Circuit] Type: Flex

Description: Shared common, Normally open

Electrical Rating: 100mA 28VDC Loop Resistance: < 100Ω

Conductor Material: Manufacturers Choice.

Verfication Required

[Connector] Type: Zif Conductors: 7 Pitch: 1mm Width: 8mm

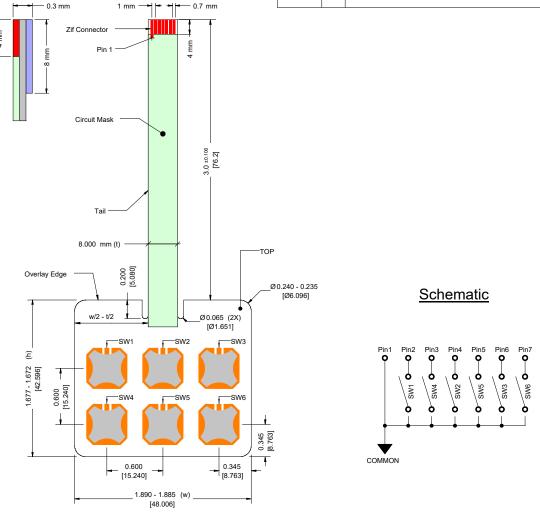
Tail Length: 3.0" ± 0.1"

[Switch]

Type: Metal Dome (Tactile)
Actuations: 1 million+

Contact Rating: See Electrical Rating Contact Bounce: <0.3ms make <0.6ms

break



Production File: LSMKv1000-Layers.gbr

Notes

- 1. Traces can be modified by manufacturer. Circuit must maintain same pinout. Verfication required.
- 2. Conductor material should be chosen by the manufacturer. Conductor must maintain provided specifications. Verfication required.

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Decimal .X ±0.1 .XX ±0.01 .XXX ±0.005 Angular ± 0°30'

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Layer 5
Circuit

Size

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Sheet 1 of --

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D. Johnstone

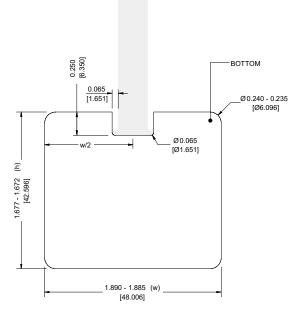
Date 05/04/2017

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Part: 3M467MP Thickness: 0.002" ± 0.0005"



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Dimensions in Inches [mm]

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Tolerances Fractional 1/200 PERMISSION OF CANTROL IS PROHIBITED. Drawn By D. Johnstone Date

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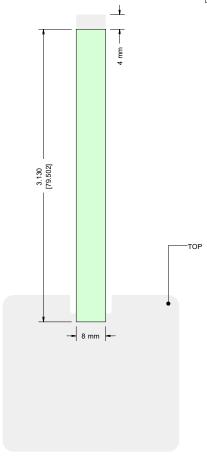
Size

Layer 6 Back Adhesive

LSMK-v1000

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Circuit Mask Dimensions

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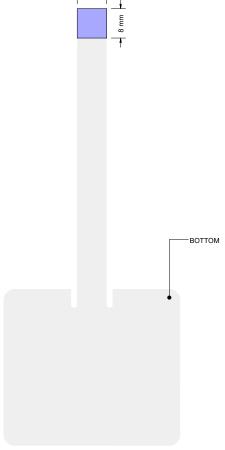
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Stiffener **Dimensions**

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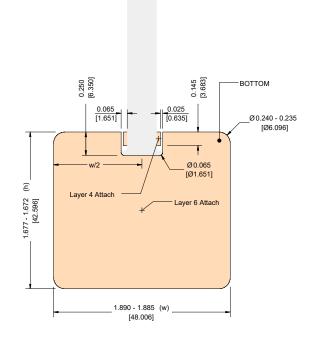
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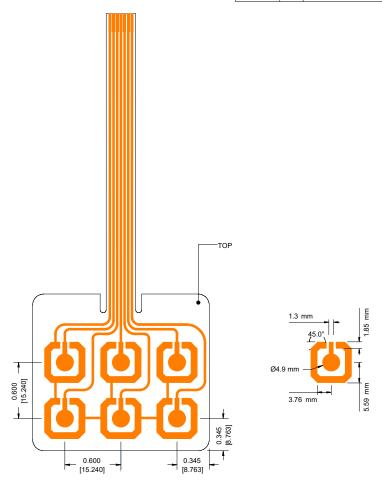
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Traces
Dimensions

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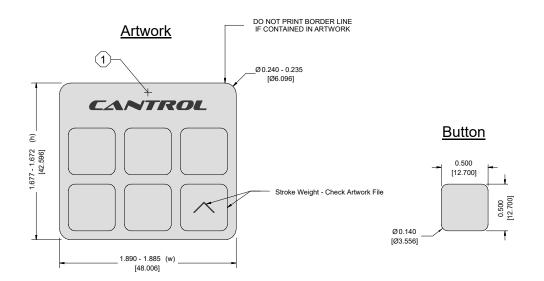
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Pantone Cool Gray 2

Pantone Neutral Black C



Artwork File: LSMKv1000-Artwork.pdf

- 1. DO NOT use included colors OR included graphic for production. Use specified artwork file for final design.
- 2. Logo and/or logo size may change. Use specified artwork file for final design.

Dimensions in Inches [mm] Tolerances Fractional 1/200 Decimal .X ±0.1 .XX ±0.01 .XXX ±0.005 Angular ± 0°30' Printed Graphic ±0.01

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LSMK-v1000

Artwork **Dimensions**

Size Α AN-1493933946

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Scale **CAD File** 1:1 LSMK-CADv1003.vcp

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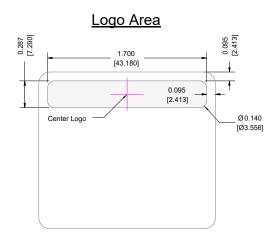
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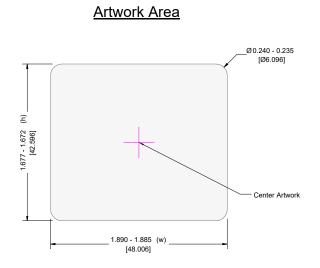
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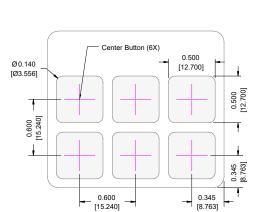
D. Johnstone

05/04/2017

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Button Area

Notes

1. Disregard Logo/Button area if seperate Logo/Button artwork not supplied.

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Artwork Areas Dimensions

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