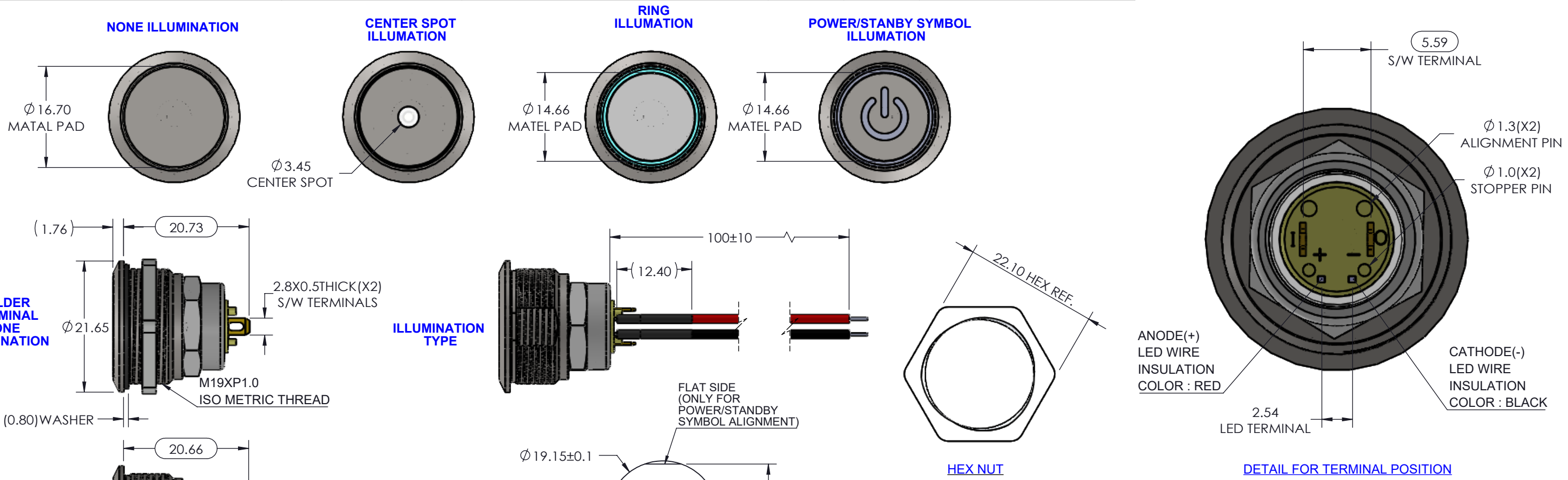


DCC DOCUMENT

48M- [X] [X] [X] [X] [XX]

SWITCH FUNCTION CODE	SWITCH FUNCTION DESCRIPTION	HOUSING MATERIAL CODE	HOUSING DESCRIPTION	ILLU. TYPE CODE	ILLUMINATION TYPE DESCRIPTION	LED COLOR CODE	LED COLOR	LED INLET VOLTAGE CODE		LED INLET VOLTAGE
1	MECHANICAL,MOMENTARY,SOLDER TERMINAL	1	STAINLESS STEEL	0	NON-ILLUMINATION	N	NONE	NON-WIRELEADS	IF BLANK*	(SEE NOTE)
2	MECHANICAL,MAINTAINED,SOLDER TERMINAL	2	ZINC ALLOY, CHROME PLATED	1	CENTER SPOT ILLUMINATION	A	AMBER		05	5V
5	MECHANICAL,MOMENTARY, P.C. TERMINAL			2	RING ILLUMINATION	R	RED	WIRELEADS	IF BLANK*	(SEE NOTE)
6	MECHANICAL,MAINTAINED, P.C. TERMINAL			3	POWER/STANDBY SYMBOL ILLUMINATION	Y	YELLOW		05	5V
A	MACHANICAL, MOMENTARY, WIRELEADS			B	BLUE	12	12V			
B	MACHANICAL, MAINATINED, WIRELEADS			G	GREEN	24	24V			
				W	WHITE					
				RB	RED/BLUE					
		RG	RED/GREEN							



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DIMENSION ARE IN MILLIMETERS
 TOLERANCES:
 UNLESS OTHERWISE NOTED
 3 PLACE DECIMAL ± 0.25
 2 PLACE DECIMAL ± 0.5
 ANGULAR 5°



AN ILLINOIS TOOL WORKS COMPANY

DWG TITLE
 48M-MECHANICAL MOMENTARY/MAINTAIN, NONE/CENTER SPOT/
 POWER STANDBY SYMBOL ILLUMINATION

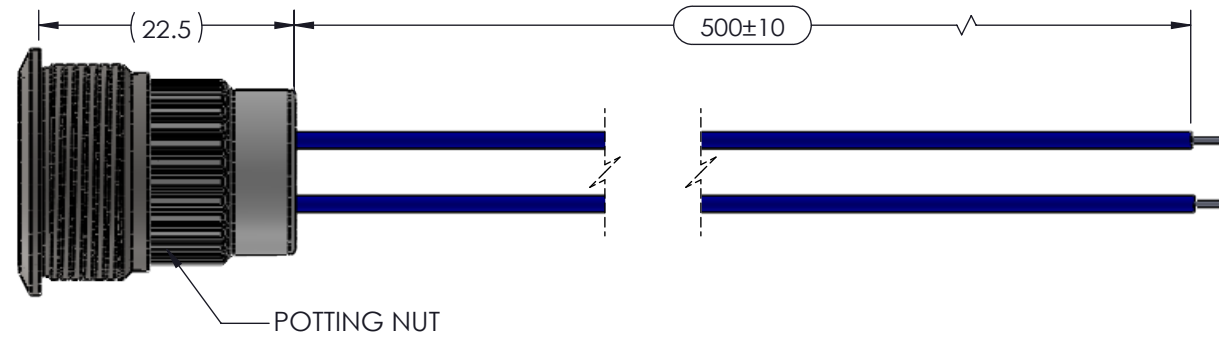
RoHS Compliant	
Yes	No
✓	

DATE 2017/8/18	REF: 48-1,2,5,6,A,B
DRAWN <i>K.Y.</i>	REVIEW
	APPROVED <i>V.W.</i>

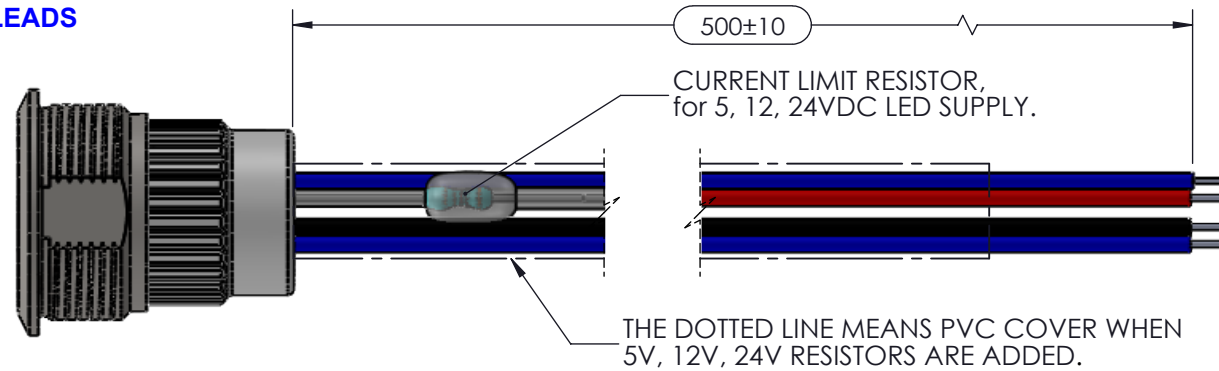
THIRD ANGLE PROJECTION	SIZE B	DWG NO. 48M-1,2,5,6,A,B	REV 6
	SCALE : 3:2		SHEET 1 OF 3

DCC DOCUMENT

NON-ILLUMINATION WIRELEADS



ILLUMINATION WIRELEADS



MECHANICAL CHARACTERISTICS:
 SWITCH CIRCUITRY: SPST-NO-DB (CONTACT FORM X)
 SWITCH ACTION: MOMENTARY AND MAINTAINED (PER CHART)
 BUTTON TRAVEL: 2.3mm [.090] NOMINAL
 OPERATING FORCE: 306g [3N] NOMINAL
 CONTACT BOUNCE: 1ms NOMINAL
 PANEL THICKNESS: 0.5 - 4.5mm [.020 - .177]
 CONTACTS: GOLD PLATED
 NUT TORQUE FORCE: MAX11.5 kgf-cm [10 LB-in]

ENVIROMENTAL SPECIFICATIONS:
 ACTUATOR INGRESS PROTECTION: IP67

OPERATING TEMPERATURE:
 NON-ILLUMINATION TYPE: -40°C to +85°C [-40°F to +185°F]
 ILLUMINATION TYPE: -40°C to +85°C [-40°F to +185°F]

ELECTRICAL SPECIFICATIONS:
 CURRENT RATING:
 MOMENTARY: 250mA@12VDC, 100K cycles
 150mA@28VDC, 150K cycles
 10mA@12VDC, 1,000K cycles

MAINTAINED : 50,000 CYCLES NOMINAL

DIELECTRIC STRENGTH: 1,000VAC
 INSULATION RESISTANCE: 1G OHM
 CONTACT RESISTANCE:
 50m/250m OHMS MAX INITIAL(NON-WIRELEADS/WIRELEADS)

LED SPECIFICATIONS:
 SEE LED SPECIFICATION(PAGE 2)

NOTE
 1. CURRENT LIMITING RESISTOR IS REQUIRED TO LIMIT LED FORWARD CURRENT TO 20mA
 2. SUPPLY HEX NUT AND SEALING WASHER BULK PACKED

LED SPECIFICATION						
LED CODE	LED		CIRCUITRY	Vf(VDC)		If (mA)
	Color 1	Color 2		Color 1	Color 2	
A	AMBER	-		1.6 ~ 2.0	-	20
R	RED	-		1.6 ~ 2.0	-	20
Y	YELLOW	-		1.6 ~ 2.0	-	20
B	BLUE	-		2.8 ~ 3.4	-	20
G	GREEN	-		2.8 ~ 3.4	-	20
W	WHITE	-		2.8 ~ 3.4	-	20
RB	RED	BLUE			1.6 ~ 2.0	2.8 ~ 3.4
RG	RED	GREEN	1.6 ~ 2.0		2.8 ~ 3.4	20

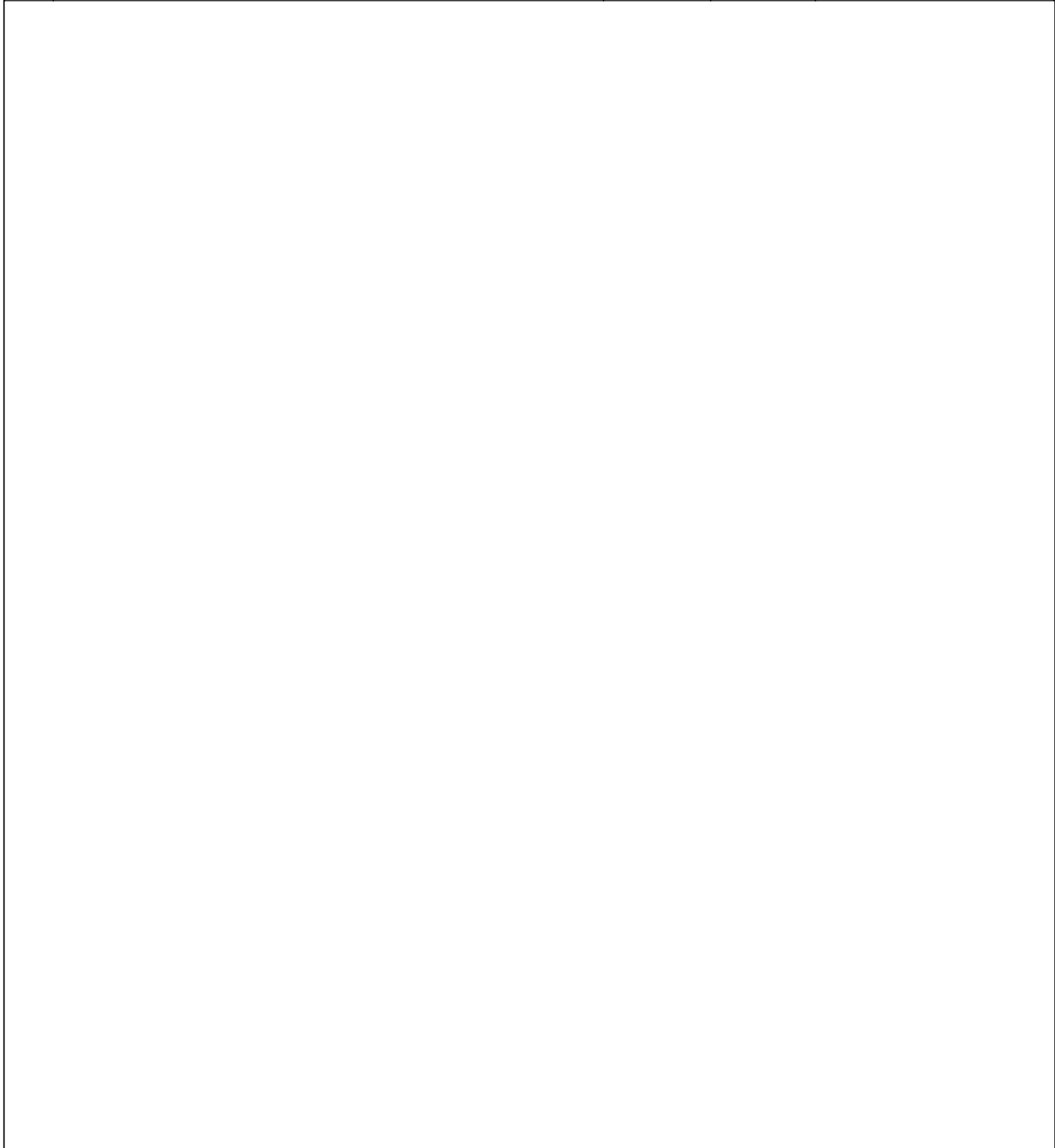
Notes:
 1.) Lead Soldering Temperature (4mm above from Body) : 280°C for 5 seconds
 2.) Hand Soldering Temperature (4mm above from Body) : 320°C for 3 seconds


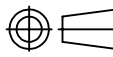
WIRELEADS SPECIFICATION								
SWITCH TYPE	CABLE SPECIFICATION	SW TERMINALS		LED				48M SW P/N
		I	O	COLOR 1	COLOR 2	+	-	
ILLUMINATION	AWG26/UL1007	BLUE	BLUE	RED	BLACK	BLACK	RED	48M-XX1XXX 48M-XX2XXX 48M-XX3XXX
NON-ILLUMINATION		BLUE	BLUE	---	---	---	---	48M-XX0N

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RoHS Compliant		DATE: 2017/8/18		REF: 48-1,2,5,6,A,B				
Yes	No	DRAWN: K.Y.	REVIEW:	APPROVED: V.W.		SIZE B	DWG NO. 48M-1,2,5,6,A,B	REV 6
						SCALE : 3:2		SHEET 2 OF 3

DCC DOCUMENT		REVISION		
REV	DESCRIPTION	DATE	DRAWN	DOCUMENT NO.
1	SALES DRAWING	22.JUL,10'	A.H.	
6	1. REDRAWN 2. PER EC201700002 REPLACING THE HEX POTTING NUT TO ROUND	28.DEC,17'	K.Y.	DCN-201700091



RoHS Compliant		DIMENSION ARE IN MILLIMETERS TOLERANCES: UNLESS OTHERWISE NOTED 3 PLACE DECIMAL ±0.25 2 PLACE DECIMAL ±0.5 ANGULAR 5°		 AN ILLINOIS TOOL WORKS COMPANY	
Yes ✓	No	DATE 2010/7/22	REF: 48-1,2,5,6,A,B	DWG TITLE 48M-MECHANICAL MOMENTARY/MAINTAIN. NONE/CENTER SPOT/ POWER STANDBY SYMBOL ILLUMINATION	
		DRAWN <i>K.Y.</i>	REVIEW	APPROVED <i>V.W.</i>	SIZE A4 DWG NO. 48M-1,2,5,6,A,B SCALE : -
		 THIRD ANGLE PROJECTION		REV 6 SHEET 3 OF 3	