

DCC DOCUMENT

48M-

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SWITCH FUNCTION CODE	SWITCH FUNCTION DESCRIPTION	HOUSING MATERIAL CODE	HOUSING DECSRIPTION	ILLU. TYPE CODE	ILLUMINATION TYPE DESCRIPTION	LED COLOR CODE	LED COLOR	LED INLET VOLTAGE CODE		LED INLET VOLTAGE		
E	MECHANICAL,MOMENTARY,SOLDER TERMINAL	1	STAINLESS STEEL	1	CENTER SPOT ILLUMINATION	G	GREEN	NON- WIRELEADS	IF BLANK*	(SEE NOTE)		
F	MECHANICAL,MAINTAINED,SOLDER TERMINAL	2	ZINC ALLOY, CHROME PLATED	2	RING ILLUMINATION	R	RED		05	5V		
G	MECHANICAL,MOMENTARY, P.C. TERMINAL			3	POWER/STANDBY SYMBOL ILLUMINATION	A	AMBER					
H	MECHANICAL,MAINTAINED, P.C. TERMINAL					B	BLUE					
						W	WHITE					
						Y	YELLOW					
						RB	RED/BLUE					
						RG	RED/GREEN					

MECHANICAL CHARACTERISTICS:
SWITCH CIRCUITRY: SPST-NO-DB (CONTACT FORM X)
SWITCH ACTION: MOMENTARY AND MAINTAINED (PER CHART)
BUTTON TRAVEL: 2.3mm [.090inch] NOMINAL
OPERATING FORCE: 306g [3N] NOMINAL
CONTACT BOUNCE: 1ms NOMINAL
PANEL THICKNESS: 0.5 - 4.5mm [.020 - .177inch]
CONTACTS: GOLD PLATED
NUT TORQUE FORCE: MAX 11.5 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:-25°C to +85°C [-13°F to +185°F]

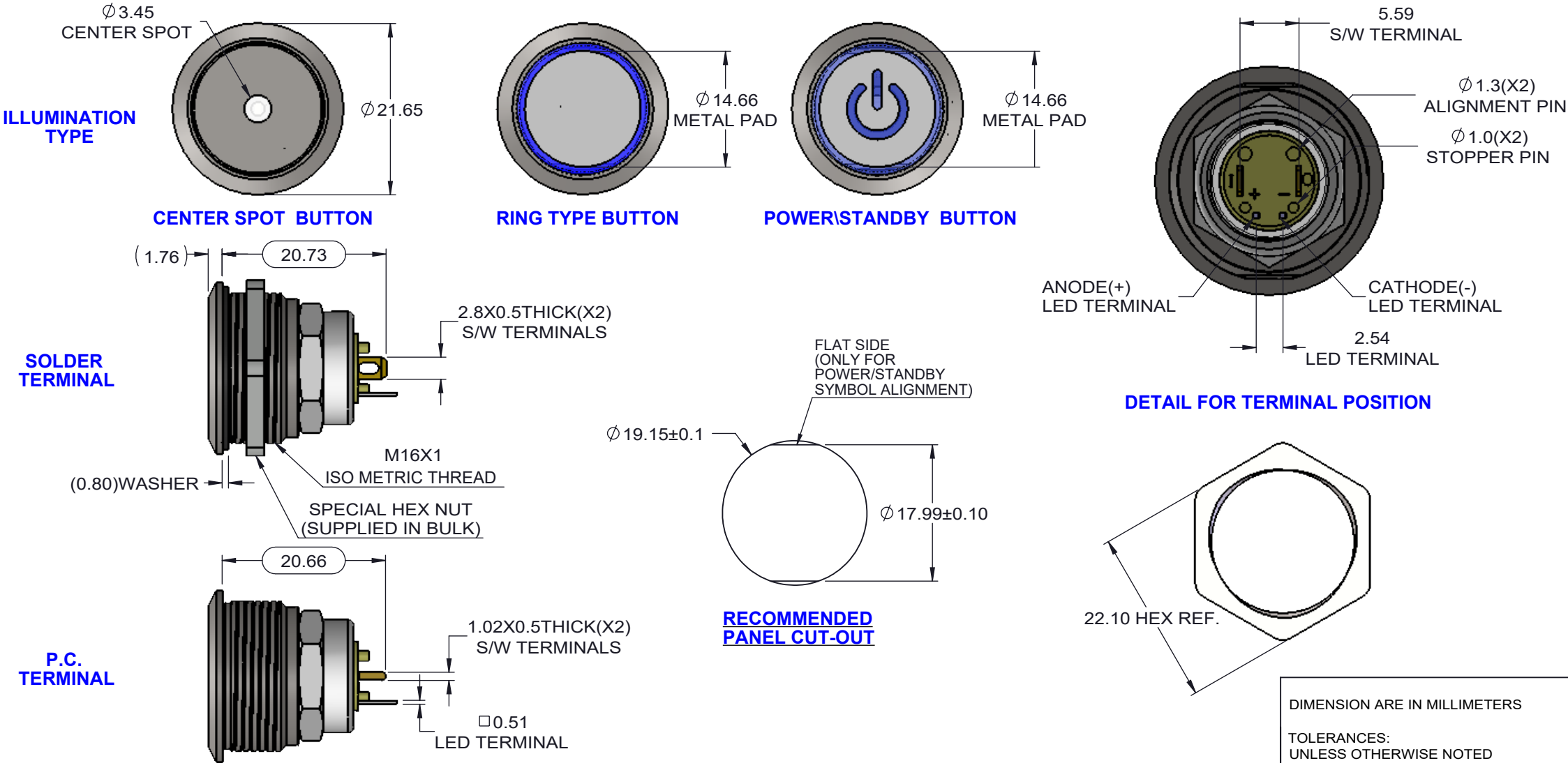
ELECTRICAL SPECIFICATIONS:
CURRENT RATING:
MOMENTARY: 250mA@12VDC, 100K cycles
150mA@28VDC, 150K cycles
10mA@12VDC, 1,000K cycles

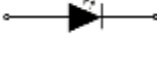
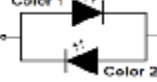
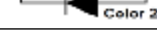
MAINTAINED : 50,000 CYCLES NOMINAL

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

LED SPECIFICATIONS:
SEE LED SPECIFICATION

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	20
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

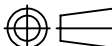
2.) Hand Soldering Temperature (4mm above from Body) : 320°C for 3 seconds

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	Concept Drawing		Engineering Drawing	V	Sales Drawing
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		DIMENSION ARE IN MILLIMETERS			ITWSwitches AN ILLINOIS TOOL WORKS COMPANY					
		TOLERANCES: UNLESS OTHERWISE NOTED 3 PLACE DECIMAL ± 0.25 2 PLACE DECIMAL ± 0.5 ANGULAR 5°			DWG TITLE 48M-MECHANICAL MOMENTARY/MAINTAIN, NONE/CENTER SPOT/ POWER STANDBY SYMBOL ILLUMINATION					
RoHS Compliant		DATE 2005/4/15		REF: 48M-1,2,5,6,A,B				SIZE B	DWG NO. 48M-E,F,G,H	REV 2
Yes ✓	No	DRAWN Y.W.	REVIEW J.W.	APPROVED B.C.		THIRD ANGLE PROJECTION		SCALE : 3:2		SHEET 1 OF 2

DCC DOCUMENT <i>REVISION RECORD</i>				
REV.	DESCRIPTION	DATE	DRAWN BY	EIP DOCUMENT NO.
1	FOR SALES DRAWING PER ECN-28496	2012/09/21	Y.W.	
2	REDRAWN AND REVIEW THE SPECIFICATION	2017/11/17	K.Y.	DCN-201700091

RoHS Compliant Yes ✓ No		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			
		DATE 2012/9/21			REF: 48M-1,2,5,6,A,B			
		DRAWN <i>y.w.</i>	REVIEW <i>J.W.</i>	APPROVED <i>B.C.</i>		SIZE A4	DWG NO. 48M-E,F,G,H	REV 2
					THIRD ANGLE PROJECTION		SCALE : -	SHEET 2 OF 2