

S48M- X X X X XX

REVISIONS			
REV	DESCRIPTION	DATE	APPROVED
0	SALES DRAWING	03, SEP., 10'	Y.W.
2	REVISE THE SPECIFICATION, CHARACTERISTICS AND FEATURE, AND CHANGE THE PVC COVER FOR ADDED RESISTOR WIRELEADS INTO HEAT-SHRINK TUBE	07, FEB., 13'	Y.W.
3	CHANGE THE FEATURE OF BASE	17, JUN., 13'	Y.W.
4	ADD TWO STOPPER PINS ON THE BASE, AND CHANGE THE RECOMMENDED P.C. BOARD HOLE PATTERN	22, AUG., 14'	Y.W.

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	IF BLANK*	(SEE NOTE)
2	MECHANICAL, MAINTAINED, SOLDER TERMINAL	2	ZINC ALLOY, CHROME PLATED	1	CENTER SPOT ILLUMINATION	G	GREEN	05	5V
5	MECHANICAL, MOMENTARY, P.C. TERMINAL			2	RING ILLUMINATION	R	RED	IF BLANK*	(SEE NOTE)
6	MECHANICAL, MAINTAINED, P.C. TERMINAL			3	POWER/STANDBY SYMBOL ILLUMINATION	A	AMBER	05	5V
A	MACHANICAL, MOMENTARY, WIRELEADS			B	BLUE	12	12V		
B	MACHANICAL, MAINATED, WIRELEADS			W	WHITE	24	24V		
				Y	YELLOW				
					RB	RED/BLUE			
					RG	RED/GREEN			

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MECHANICAL CHARACTERISTICS:
 SWITCH CIRCUITRY: SPST-NO-DB (CONTACT FORM X)
 SWITCH ACTION: MOMENTARY AND MAINTAINED (PER CHART)
 BUTTON TRAVEL: .090 [2.3mm] NOMINAL
 OPERATING FORCE: 3N [308g] NOMINAL
 CONTACT BOUNCE: 1ms NOMINAL
 PANEL THICKNESS: .020 - .177 [0.5 - 4.5mm] Δ
 CONTACTS: SILVER PLATED Δ
 NUT TORQUE FORCE: MAX 10 LB/in [11.5 kgf/cm]

ENVIRONMENTAL SPECIFICATIONS:
 ACTUATOR INGRESS PROTECTION: IP67

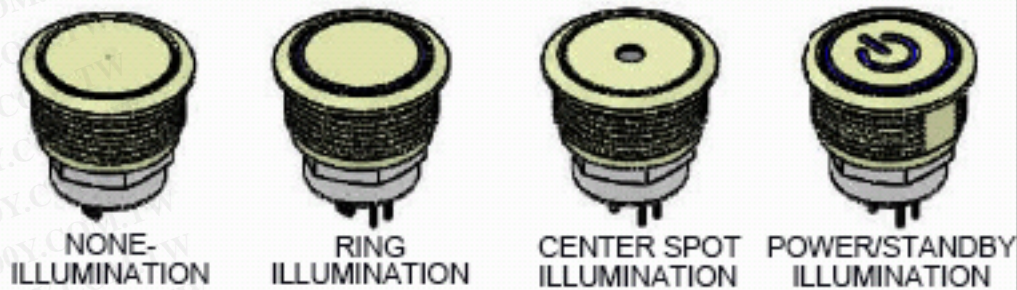
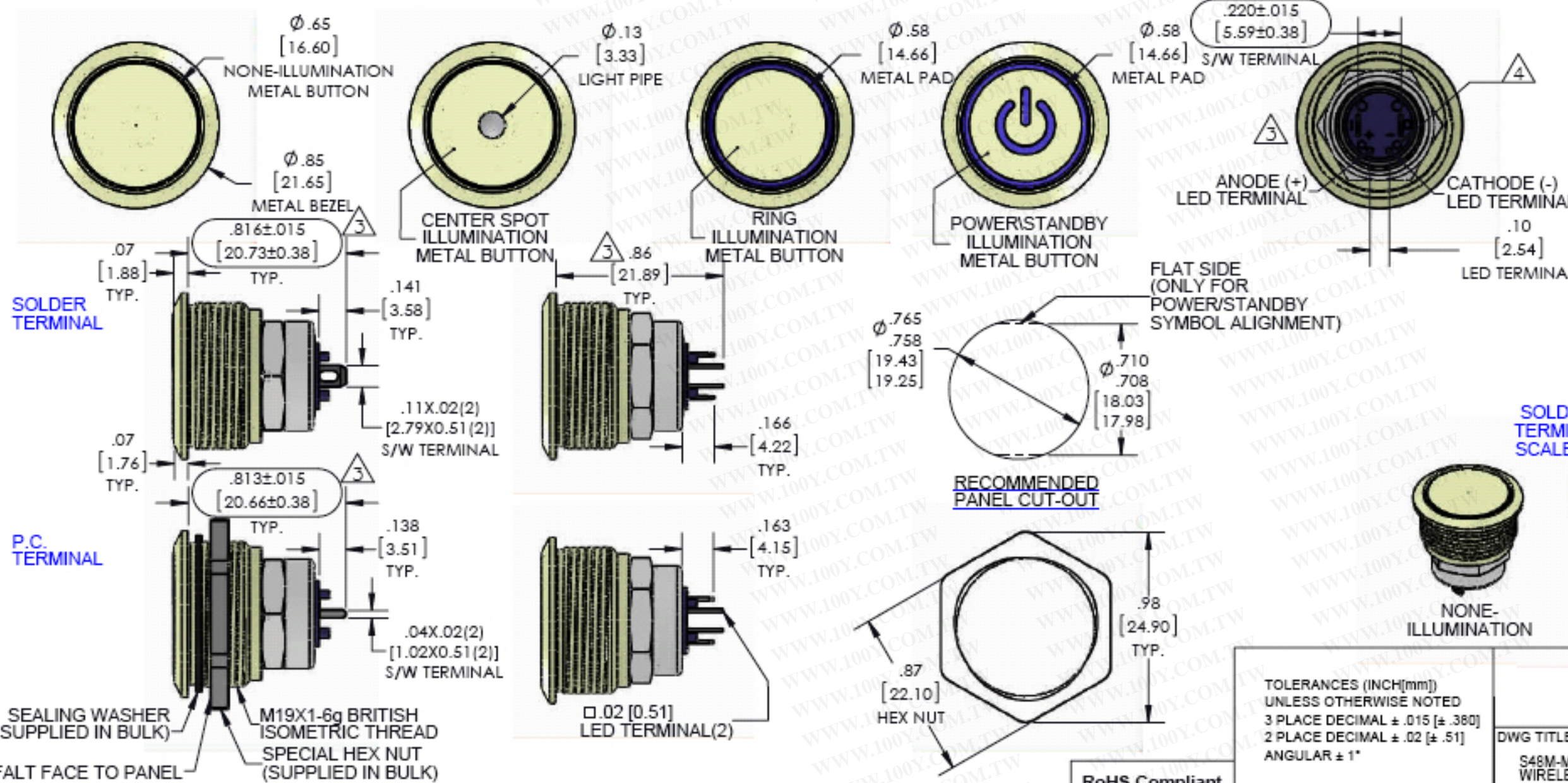
OPERATING TEMPERATURE:
 NON-ILLUMINATION TYPE: -40°F to +185°F [-40°C to +85°C]
 ILLUMINATION TYPE: -40°F to +185°F [-40°C to +85°C]
 MOMENTARY: -40°F to +185°F [-40°C to +85°C] Δ
 MAINTAINED: -40°F to +149°F [-40°C to +85°C] Δ

ELECTRICAL SPECIFICATIONS:
 CURRENT RATING:
 MOMENTARY: 10mA@12VDC, 100K CYCLES
 MAINTAINED: 20K 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



TOLERANCES (INCH[mm])
 UNLESS OTHERWISE NOTED
 3 PLACE DECIMAL $\pm .015$ [$\pm .380$]
 2 PLACE DECIMAL $\pm .02$ [$\pm .51$]
 ANGULAR $\pm 1^\circ$

RoHS Compliant

DATE REF: 48M-1, 2, 5, 6, A, B
DRAWN CHK APP'D SUPV

SCALE: 1.5:1

ITW Switches

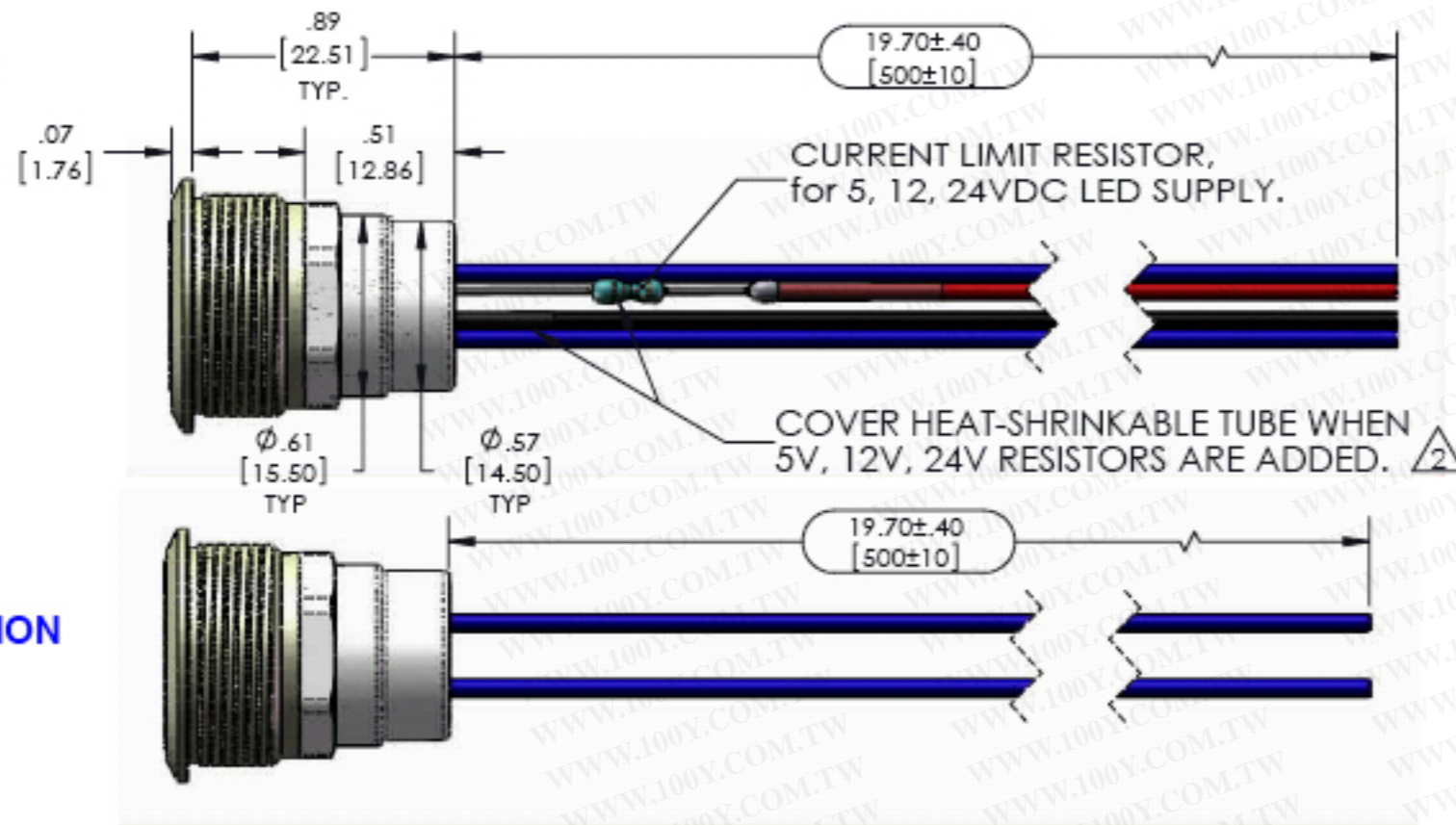
DWG TITLE
 S48M-MECHANICAL MOMENTARY/MAINTAINED, SOLD./P.C. TERMINAL WIRELEADS, NONE/CENTER SPOT/RING/POWER-STANDBY ILLUMINATION

SIZE B DWG NO. S48M-1, 2, 5, 6, A, B REV 4

SHEET 1 OF 2

SEALING WASHER (SUPPLIED IN BULK)
 M19X1-6g BRITISH ISOMETRIC THREAD SPECIAL HEX NUT (SUPPLIED IN BULK)
 FALT FACE TO PANEL

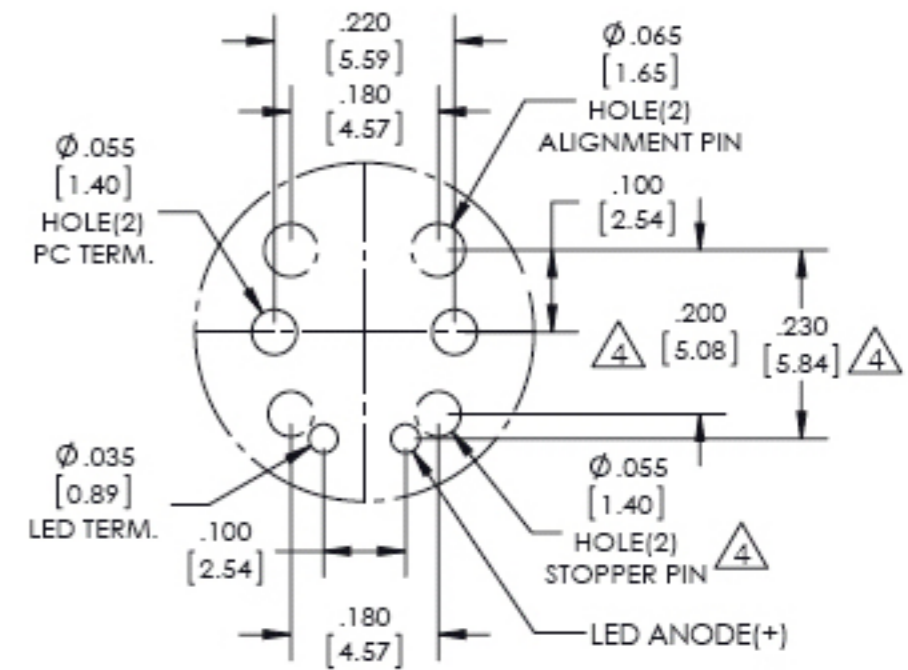
WIRELEADS



ILLUMINATION

NON-ILLUMINATION

REVISIONS			
REV	DESCRIPTION	DATE	APPROVED
0	SALES DRAWING	03, SEP., 10'	Y.W.
2	REVISE THE SPECIFICATION CHARACTERISTICS AND FEATURE, AND CHANGE THE PVC COVER FOR ADDED RESISTOR WIRELEADS INTO HEAT-SHRINK TUBE	7, FEB., 13'	Y.W.
3	CHANGE THE FEATURE OF BASE	17, JUN., 13'	Y.W.
4	ADD TWO STOPPER PINS ON THE BASE, AND CHANGE THE RECOMMENDED P.C. BOARD HOLE PATTERN	22, AUG., 14'	Y.W.



RECOMMENDED P.C. BOARD HOLE PATTERN (FOR PC TERMINAL) COMPONENT SIDE

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

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TABLE- WIRELEADS DESCRIPTION

SWITCH TYPE	WIRELEADS SPECIFICATION	SW TERMINALS		LED				S48M SW P/IN
		I	O	COLOR 1	COLOR 2	COLOR 1	COLOR 2	
ILLUMINATION	AWG26/UL1007	BLUE	BLUE	RED	BLACK	BLACK	RED	S48M-XX1XXX S48M-XX2XXX S48M-XX3XXX
NON-ILLUMINATION		BLUE	BLUE	--	--	--	--	S48M-XX0N

TOLERANCES (INCH[mm])
 UNLESS OTHERWISE NOTED
 3 PLACE DECIMAL ± .015 [± .380]
 2 PLACE DECIMAL ± .02 [± .51]
 ANGULAR ± 1°

TW Switches

DWG TITLE
 S48M-MECHANICAL MOMENTARY/MAINTAINED, SOLD./P.C. TERMINAL, WIRELEADS, NONE/CENTER SPOT/RING/POWER-STANDBY ILLUMINATION

DATE	REF:	SIZE	DWG NO.	S48M-1, 2, 5, 6, A, B	REV
	48M-1, 2, 5, 6, A, B	B			4

SCALE : 1.5:1 SHEET 2 OF 2

RoHS Compliant	
Yes	No
✓	