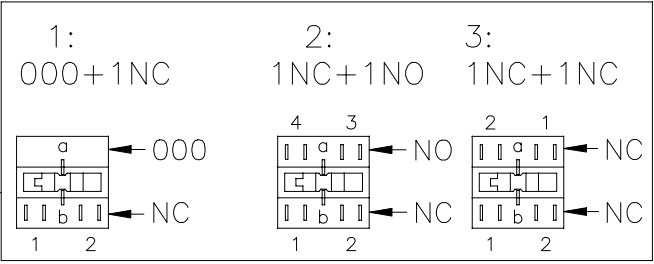


TE SMART PART NUMBER:

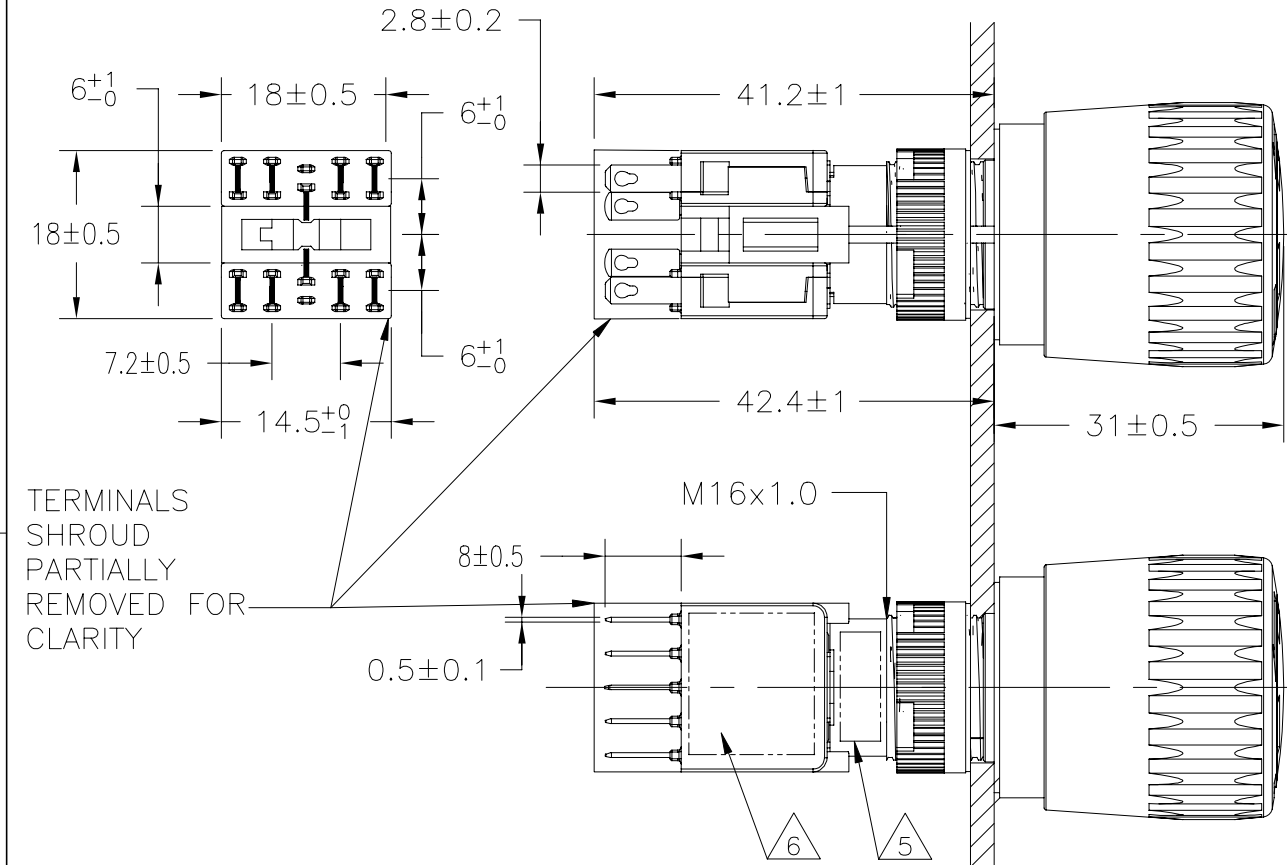
PBES16L ☐ ☐ R

LAMP: SEE TABLE,
SHEETS 4 AND 5

FUNCTION

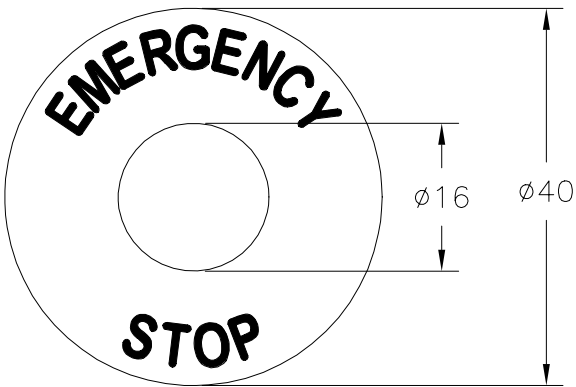
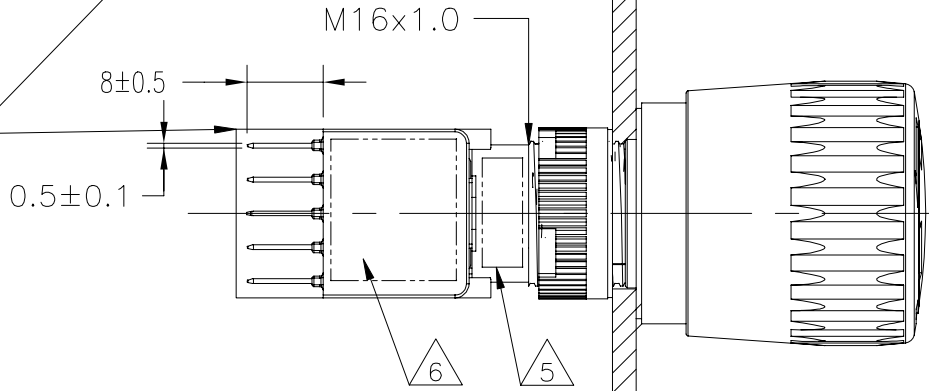


REVISIONS					
P	LTR	DESCRIPTION	DATE	DWN	APVD
	1	NEW DRAWING	24DEC2020	GSK	AS

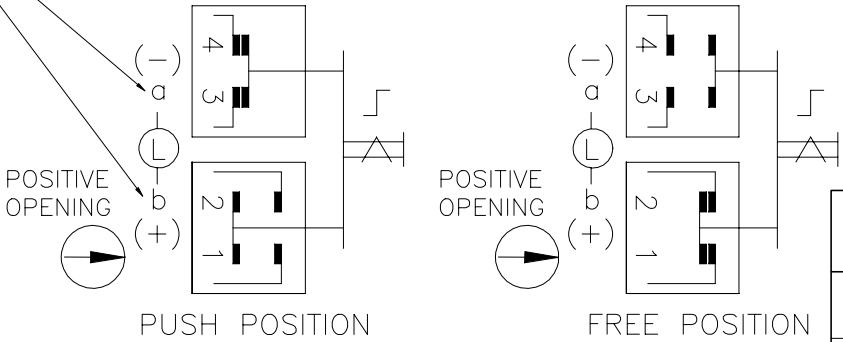


TERMINALS
SHROUD
PARTIALLY
REMOVED FOR
CLARITY

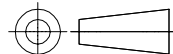
LAMP TERMINALS



IDENTIFICATION PLATE



FUNCTION DIAGRAM
FOR 2: 1NC+1NO

THIS DRAWING IS A CONTROLLED DOCUMENT.		DWN 24DEC2020 SATHISH KUMAR G		 TE Connectivity			
DIMENSIONS: mm		CHK 24DEC2020 ALEXANDER, SHARPE					
	TOLERANCES UNLESS OTHERWISE SPECIFIED: 0 PLC ± — 1 PLC ± — 2 PLC ± — 3 PLC ± — 4 PLC ± — ANGLES ± —	APVD 24DEC2020 ALEXANDER, SHARPE		NAME SWITCH, EMERGENCY STOP, PBES16L SERIES, 28MM DIAMETER WITH LAMP OPTIONS, PUSH TO LOCK, LEFT TURN TO RELEASE, 16MM PANEL DIAMETER			
		PRODUCT SPEC —					
		APPLICATION SPEC —					
MATERIAL —	FINISH —	WEIGHT		SIZE A3	CAGE CODE 00779	DRAWING NO C=2381880	RESTRICTED TO —
		CUSTOMER DRAWING				SCALE NTS	SHEET 1 of 5

PRELIMINARY

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PRODUCT SPECIFICATIONS :

MECHANICAL LIFE	: > 100,000 OPERATIONS
ELECTRICAL LIFE	: > 50,000 OPERATIONS
MOTION TOLERANCE	: < 20 OPERATIONS / MINUTE (MECHANICAL AND ELECTRICAL LIFE)
DEGREE OF PROTECTION	: IP 65
PANEL THICKNESS	: 0.5 mm TO 5 mm
MOUNTING TORQUE	: 1.1 N-m
MAX. INSULATION VOLTAGE	: 1500VAC, 60Hz, 10mA, 1MINUTE
INSULATION RESISTANCE	: 100 MΩ @ 500VDC, 100mA, 1MINUTE
STORAGE TEMPERATURE	: -40°C TO +85°C
OPERATING TEMPERATURE	: -25°C TO +55°C (-25°C TO +70°C WITHOUT LAMP)
CONTACT RESISTANCE	: ≤ 50 mΩ (INITIAL)
OPERATING FORCES	: PUSH-LOCK 20 ⁺⁰ ₋₁₀ N, TURN-RESET 0.06 N-m
OPERATING TRAVEL	: PUSH-LOCK 3.6 ⁺⁰ _{-0.6} mm, TURN-RESET CCW 30°
POLLUTION DEGREE	: 3
CONDITIONAL SHORT-CIRCUIT CURRENT	: 1000A
ELECTRICAL RATINGS:	

RATED INSULATION VOLTAGE (U_i)	300V	
CONVENTIONAL ENCLOSED THERMAL CURRENT (I_{the})	5A	
RATED OPERATIONAL VOLTAGE (U_e)	125V	250V
UTILIZATION CATEGORY	RATED OPERATIONAL CURRENT (I_e)	
AC-15	3	1.5
DC-13	0.22	0.11

U_{imp} : 2.5kV

APPLICABLE STANDARDS : EN/IEC 60947-5-1, EN/IEC 60947-5-5

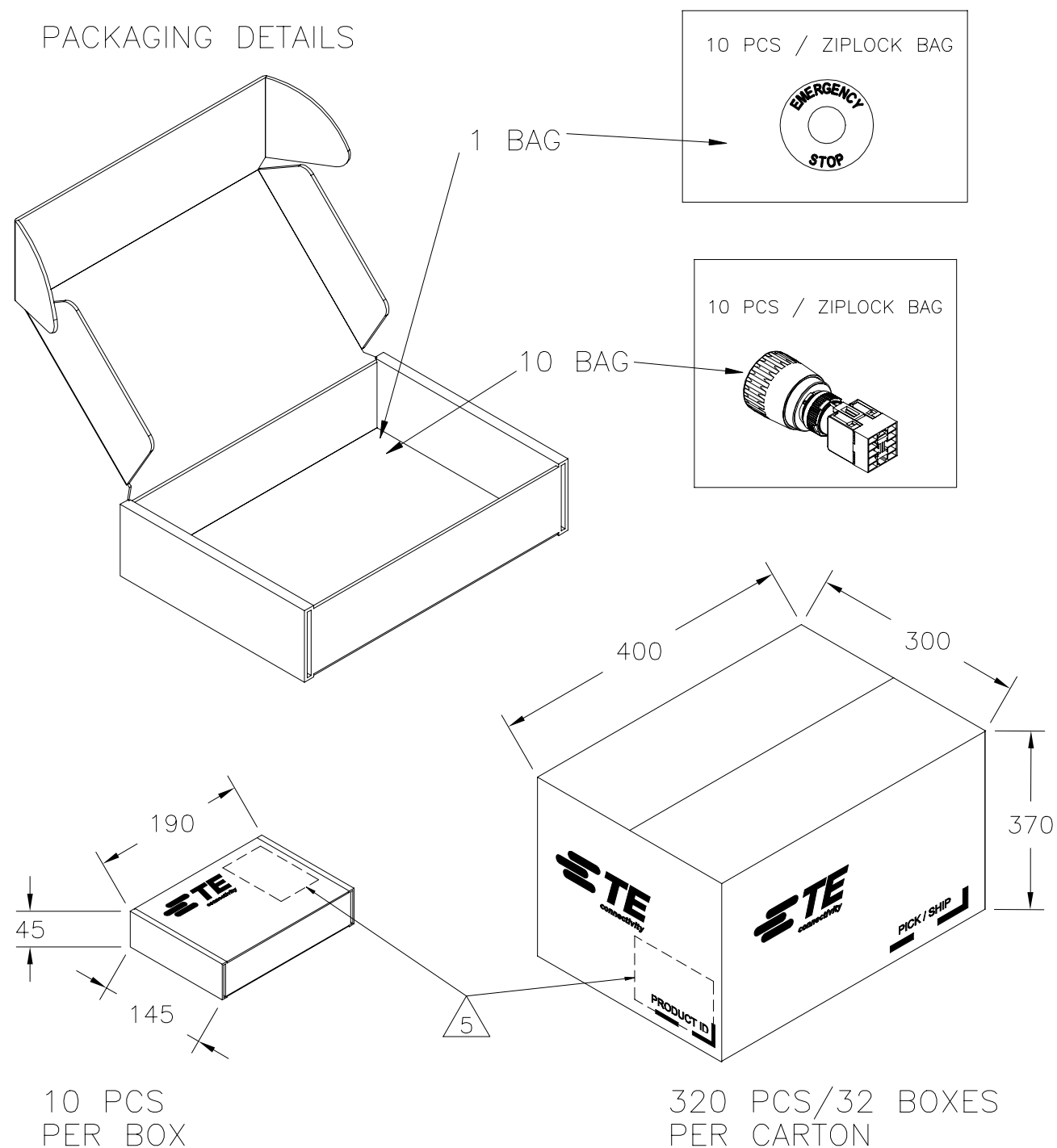
MATERIALS :

- | | |
|-------------------------|--|
| ① ACTUATOR HOUSING | : POLYPHTHALAMIDE (UL94-V0), BLACK |
| ② CONTACT BLOCK HOUSING | : POLYPHTHALAMIDE (UL94-V0)/
POLYBUTYLENE TEREPHTHALATE (UL94-V0),BLACK/WHITE |
| ③ ACTUATOR | : POLYAMIDE (UL94-V0), RED |
| ④ GASKET | : RUBBER, BLACK |
| TERMINAL / CONTACT | : COPPER ALLOY WITH SILVER ALLOY, Au PLATED |
| ⑤ MOUNTING RING | : POLYCARBONATE, PC(UL94-V0), BLACK |

REVISIONS

P	LTR	DESCRIPTION	DATE	DWN	APVD
	-	SEE SHEET 1	-	-	-

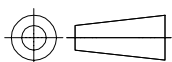
PACKAGING DETAILS



PRELIMINARY

THIS DRAWING IS A CONTROLLED DOCUMENT.

DIMENSIONS:
mm



MATERIAL

TOLERANCES UNLESS
OTHERWISE SPECIFIED:

0 PLC	± -
1 PLC	± -
2 PLC	± -
3 PLC	± -
4 PLC	± -
ANGLES	± -

FINISH

DWN 24DEC2020

CHK SATHISH KUMAR G

24DEC2020

ALEXANDER, SHARPE

APVD 24DEC2020

ALEXANDER, SHARPE

PRODUCT SPEC

APPLICATION SPEC

WEIGHT

CUSTOMER DRAWING



TE Connectivity

NAME
SWITCH, EMERGENCY STOP, PBES16L SERIES, 28MM DIAMETER
WITH LAMP OPTIONS, PUSH TO LOCK, LEFT TURN TO RELEASE,
16MM PANEL DIAMETER

SIZE CAGE CODE DRAWING NO RESTRICTED TO

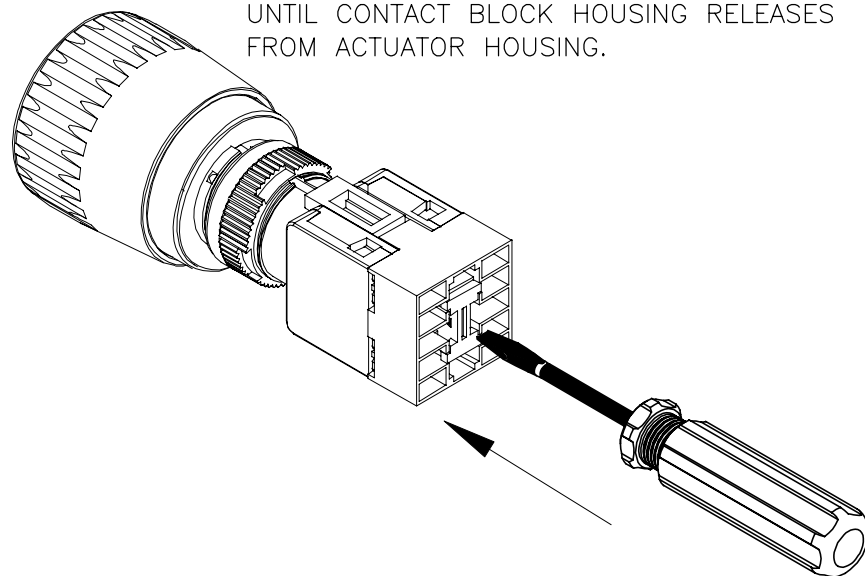
A3 00779 C-2381880

SCALE NTS

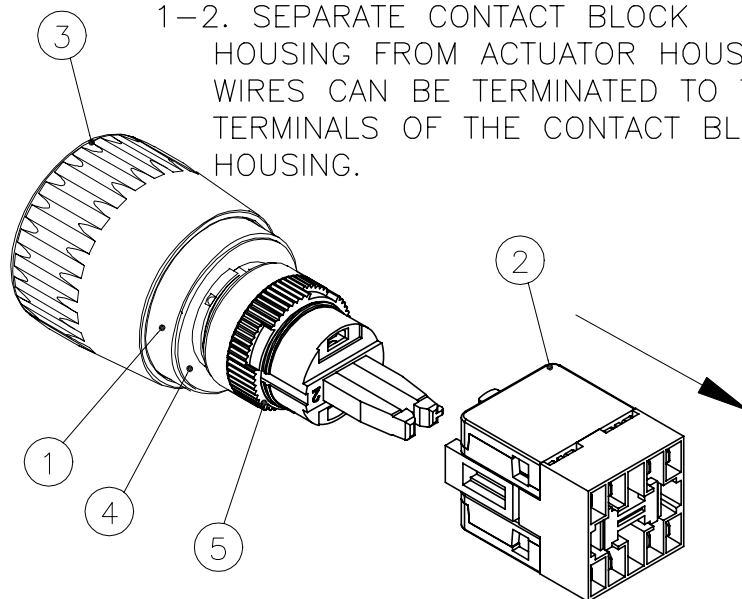
SHEET 2 of 5

REV 1

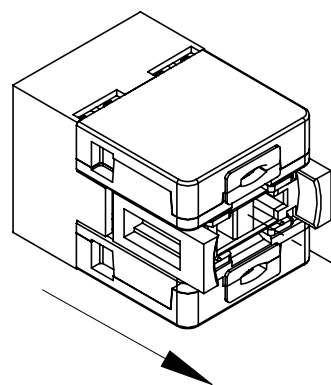
1-1. DEPRESS RELEASE TAB WITH SCREWDRIVER UNTIL CONTACT BLOCK HOUSING RELEASES FROM ACTUATOR HOUSING.



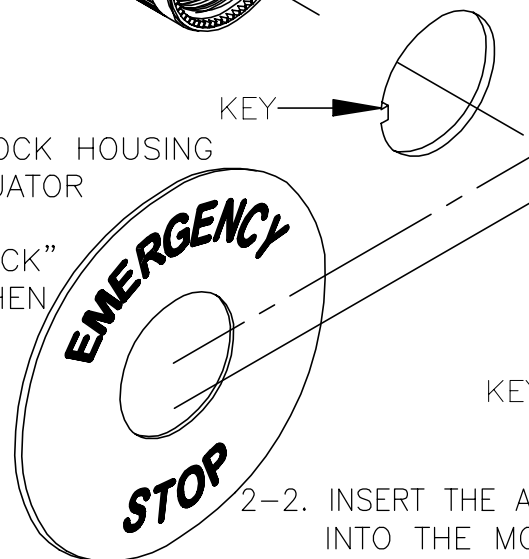
1-2. SEPARATE CONTACT BLOCK HOUSING FROM ACTUATOR HOUSING. WIRES CAN BE TERMINATED TO THE TERMINALS OF THE CONTACT BLOCK HOUSING.



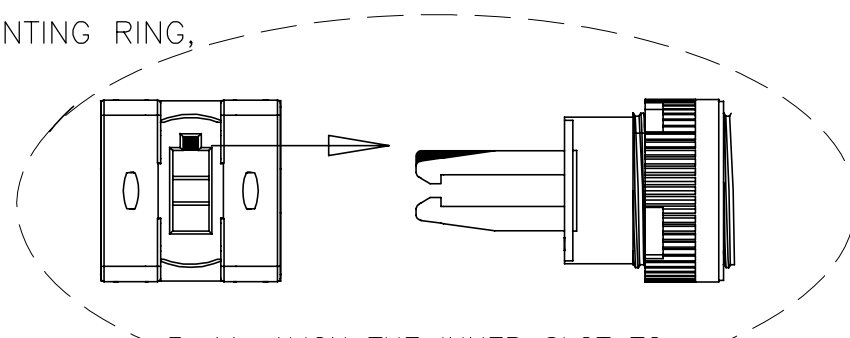
2-3. TIGHTEN THE MOUNTING RING, TORQUE 1.1 N-m.



3-1. INSTALL THE CONTACT BLOCK HOUSING TO THE ACTUATOR HOUSING. AUDIBLE "CLICK" SOUNDED WHEN SEATED.



3-1A. ALIGN THE INNER SLOT TO THE RIB ON THE PLASTIC HOOK WHILE ASSEMBLING THE CONTACT BLOCK HOUSING WITH THE ACTUATOR HOUSING.



2-2. INSERT THE ACTUATOR HOUSING INTO THE MOUNTING HOLE.

2-1. POSITION IDENTIFICATION PLATE OVER THE MOUNTING HOLE.



PRELIMINARY

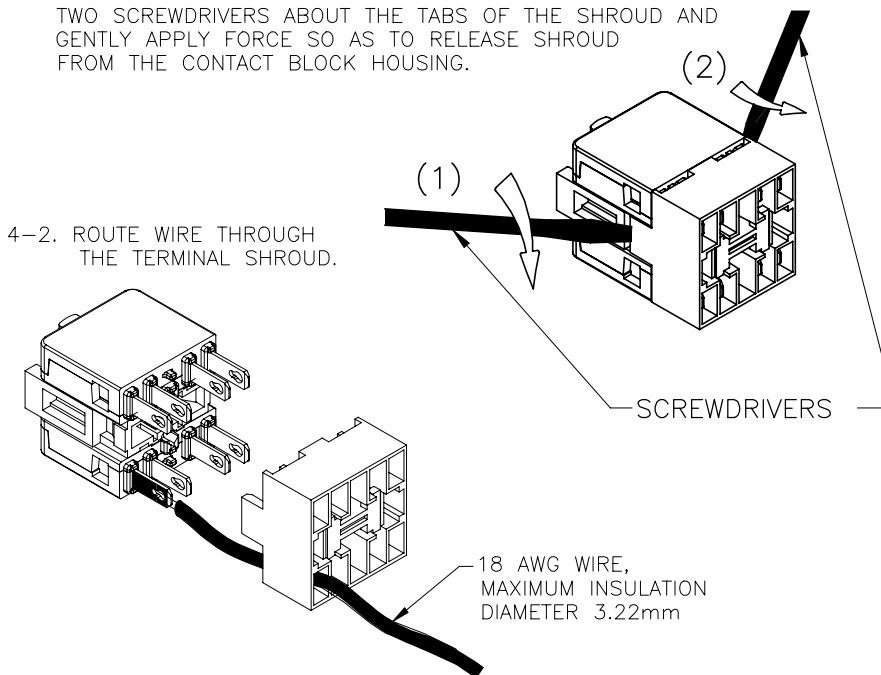
REVISIONS

P	LTR	DESCRIPTION	DATE	DWN	APVD
	-	SEE SHEET 1	-	-	-

SOLDER TERMINATIONS:

4-1. REMOVE TERMINAL SHROUD-AFFIX TWO SCREWDRIVERS ABOUT THE TABS OF THE SHROUD AND GENTLY APPLY FORCE SO AS TO RELEASE SHROUD FROM THE CONTACT BLOCK HOUSING.

4-2. ROUTE WIRE THROUGH THE TERMINAL SHROUD.



4-3. SOLDER WIRES TO TERMINALS. SOLDERING TEMPERATURE IS 360°C FOR 3 SECONDS.

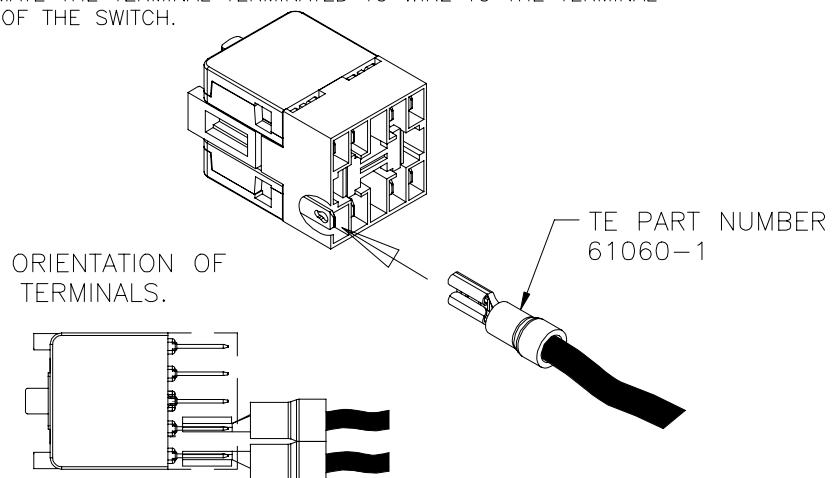
FASTON TERMINAL TERMINATION:

NOTED LAMP TERMINALS ARE LABELED A- AND B+

4-1. CRIMP TE FASTON RECEPTACLE 110 SERIES TERMINAL PART NUMBER 61060-1 TO 18 AWG WIRE, MAXIMUM INSULATION DIAMETER 2.54MM

4-2. MATE THE TERMINAL TERMINATED TO WIRE TO THE TERMINAL OF THE SWITCH.

4-3. ORIENTATION OF TERMINALS.



THIS DRAWING IS A CONTROLLED DOCUMENT.

DIMENSIONS:	TOLERANCES UNLESS OTHERWISE SPECIFIED:
mm	
	0 PLC ± -
	1 PLC ± -
	2 PLC ± -
	3 PLC ± -
	4 PLC ± -
	ANGLES ± -
MATERIAL	FINISH
-	-

DWN	24DEC2020
CHK	SATHISH KUMAR G
	24DEC2020
APVD	ALEXANDER, SHARPE
	24DEC2020
PRODUCT SPEC	
APPLICATION SPEC	
WEIGHT	
CUSTOMER DRAWING	



TE Connectivity

NAME			
SWITCH, EMERGENCY STOP, PBES16L SERIES, 28MM DIAMETER WITH LAMP OPTIONS, PUSH TO LOCK, LEFT TURN TO RELEASE, 16MM PANEL DIAMETER			
SIZE	CAGE CODE	DRAWING NO	RESTRICTED TO
A3	00779	C-2381880	-
SCALE		SHEET	REV
NTS		3 of 5	1

P	LTR	DESCRIPTION	DATE	DWN	APVD
	—	SEE SHEET 1	—	—	—

FUNCTION	LAMP RATING	LAMP TYPE	DESCRIPTION	TE SMART PART NUMBER	TE PART NUMBER 
000 + 1NC	6VAC/DC 40mA	INCANDESCENT	PBES16 28 INCA 6V AC/DC 40mA 000 1NC	PBES16L1NR	2381880-1
	6V AC/DC 200mA	INCANDESCENT	PBES16 28 INCA 6V AC/DC 200mA 000 1NC	PBES16L1HR	2381880-2
	14V AC/DC 40mA	INCANDESCENT	PBES16 28 INCA 14V AC/DC 40mA 000 1NC	PBES16L1OR	2381880-3
	14 V AC/DC 80mA	INCANDESCENT	PBES16 28 INCA 14 V AC/DC 80mA 000 1NC	PBES16L1IR	2381880-4
	28V AC/DC 40mA	INCANDESCENT	PBES16 28 INCA 28V AC/DC 40mA 000 1NC	PBES16L1JR	2381880-5
	33V AC/DC 35mA	INCANDESCENT	PBES16 28 INCA 33V AC/DC 35mA 000 1NC	PBES16L1MR	2381880-6
	48V AC/DC 25mA	INCANDESCENT	PBES16 28 INCA 48V AC/DC 25mA 000 1NC	PBES16L1KR	2381880-7
	60V AC/DC 20mA	INCANDESCENT	PBES16 28 INCA 60V AC/DC 20 mA 000 1NC	PBES16L1LR	2381880-8
	6V DC 28mA	LED	PBES16 28 LED 6V DC 28mA 000 1NC	PBES16L1AR	2381880-9
	12V DC 19mA	LED	PBES16 28 LED 12V DC 19mA 000 1NC	PBES16L1BR	1-2381880-0
	12 to 24V AC/DC 11mA	LED	PBES16 28 LED 12 TO 24V AC/DC 11mA 000 1NC	PBES16L1DR	1-2381880-1
	24V DC 12mA	LED	PBES16 28 LED 24V DC 12 mA 000 1NC	PBES16L1CR	1-2381880-2
	120V AC 7mA	LED	PBES16 28 LED 120V AC 7mA 000 1NC	PBES16L1ER	1-2381880-3
	110V AC 1.3mA	NEON	PBES16 28 NEON 110V AC 000 1NC	PBES16L1FR	1-2381880-4
	220V AC 1.3mA	NEON	PBES16 28 NEON 220V AC 000 1NC	PBES16L1GR	1-2381880-5
1NC + 1NO	6VAC/DC 40mA	INCANDESCENT	PBES16 28 INCA 6VAC/DC 40mA 1NC 1NO	PBES16L2NR	1-2381880-6
	6V AC/DC 200mA	INCANDESCENT	PBES16 28 INCA 6V AC/DC 200mA 1NC 1NO	PBES16L2HR	1-2381880-7
	14V AC/DC 40mA	INCANDESCENT	PBES16 28 INCA 14V AC/DC 40mA 1NC 1NO	PBES16L2OR	1-2381880-8
	14 V AC/DC 80mA	INCANDESCENT	PBES16 28 INCA 14 V AC/DC 80mA 1NC 1NO	PBES16L2IR	1-2381880-9
	28V AC/DC 40mA	INCANDESCENT	PBES16 28 INCA 28V AC/DC 40mA 1NC 1NO	PBES16L2JR	2-2381880-0
	33V AC/DC 35mA	INCANDESCENT	PBES16 28 INCA 33V AC/DC 35mA 1NC 1NO	PBES16L2MR	2-2381880-1
	48V AC/DC 25mA	INCANDESCENT	PBES16 28 INCA 48V AC/DC 25mA 1NC 1NO	PBES16L2KR	2-2381880-2
	60V AC/DC 20mA	INCANDESCENT	PBES16 28 INCA 60V AC/DC 20 mA 1NC 1NO	PBES16L2LR	2-2381880-3
	6V DC 28mA	LED	PBES16 28 LED 6V DC 28mA 1NC 1NO	PBES16L2AR	2-2381880-4
	12V DC 19mA	LED	PBES16 28 LED 12V DC 19mA 1NC 1NO	PBES16L2BR	2-2381880-5
	12 to 24V AC/DC 11mA	LED	PBES16 28 LED 12 TO 24V AC/DC 11mA 1NC 1NO	PBES16L2DR	2-2381880-6
	24V DC 12mA	LED	PBES16 28 LED 24V DC 12 mA 1NC 1NO	PBES16L2CR	2-2381880-7
	120V AC 7mA	LED	PBES16 28 LED 120V AC 7mA 1NC 1NO	PBES16L2ER	2-2381880-8
	110V AC 1.3mA	NEON	PBES16 28 NEON 110V AC 1NC 1NO	PBES16L2FR	2-2381880-9
	220V AC 1.3mA	NEON	PBES16 28 NEON 220V AC 1NC 1NO	PBES16L2GR	3-2381880-0

PRELIMINARY

THIS DRAWING IS A CONTROLLED DOCUMENT.		DWN 24DEC2020 SATHISH KUMAR G		 TE Connectivity	
		CHK 24DEC2020 ALEXANDER, SHARPE			
DIMENSIONS: mm		TOLERANCES UNLESS OTHERWISE SPECIFIED:		NAME SWITCH, EMERGENCY STOP, PBES16L SERIES, 28MM DIAMETER WITH LAMP OPTIONS, PUSH TO LOCK, LEFT TURN TO RELEASE, 16MM PANEL DIAMETER	
		0 PLC ± - 1 PLC ± - 2 PLC ± - 3 PLC ± - 4 PLC ± - ANGLES ± -			
MATERIAL -		FINISH -		SIZE A3	
		WEIGHT		CAGE CODE 00779	
				DRAWING NO C-2381880	
				RESTRICTED TO -	
CUSTOMER DRAWING				SCALE NTS	SHEET 4 OF 5
				REV 1	

P	LTR	DESCRIPTION	DATE	DWN	APVD
	—	SEE SHEET 1	—	—	—

FUNCTION	LAMP RATING	LAMP TYPE	DESCRIPTION	TE SMART PART NUMBER	TE PART NUMBER ⁵
1NC + 1NC	6VAC/DC 40mA	INCANDESCENT	PBES16 28 INCA 6VAC/DC 40mA 1NC 1NC	PBES16L3NR	3-2381880-1
	6V AC/DC 200mA	INCANDESCENT	PBES16 28 INCA 6V AC/DC 200mA 1NC 1NC	PBES16L3HR	3-2381880-2
	14V AC/DC 40mA	INCANDESCENT	PBES16 28 INCA 14V AC/DC 40mA 1NC 1NC	PBES16L3OR	3-2381880-3
	14 V AC/DC 80mA	INCANDESCENT	PBES16 28 INCA 14 V AC/DC 80mA 1NC 1NC	PBES16L3IR	3-2381880-4
	28V AC/DC 40mA	INCANDESCENT	PBES16 28 INCA 28V AC/DC 40mA 1NC 1NC	PBES16L3JR	3-2381880-5
	33V AC/DC 35mA	INCANDESCENT	PBES16 28 INCA 33V AC/DC 35mA 1NC 1NC	PBES16L3MR	3-2381880-6
	48V AC/DC 25mA	INCANDESCENT	PBES16 28 INCA 48V AC/DC 25mA 1NC 1NC	PBES16L3KR	3-2381880-7
	60V AC/DC 20mA	INCANDESCENT	PBES16 28 INCA 60V AC/DC 20 mA 1NC 1NC	PBES16L3LR	3-2381880-8
	6V DC 28mA	LED	PBES16 28 LED 6V DC 28mA 1NC 1NC	PBES16L3AR	3-2381880-9
	12V DC 19mA	LED	PBES16 28 LED 12V DC 19mA 1NC 1NC	PBES16L3BR	4-2381880-0
	12 to 24V AC/DC 11mA	LED	PBES16 28 LED 12 TO 24V AC/DC 11mA 1NC 1NC	PBES16L3DR	4-2381880-1
	24V DC 12mA	LED	PBES16 28 LED 24V DC 12 mA 1NC 1NC	PBES16L3CR	4-2381880-2
	120V AC 7mA	LED	PBES16 28 LED 120V AC 7mA 1NC 1NC	PBES16L3ER	4-2381880-3
	110V AC 1.3mA	NEON	PBES16 28 NEON 110V AC 1NC 1NC	PBES16L3FR	4-2381880-4
	220V AC 1.3mA	NEON	PBES16 28 NEON 220V AC 1NC 1NC	PBES16L3GR	4-2381880-5
000 + 1NC	NO LAMP	NO LAMP	PBES16 28 NO LAMP 000 1NC	PBES16L10R	4-2381880-6
1NC + 1NO	NO LAMP	NO LAMP	PBES16 28 NO LAMP 1NC 1NO	PBES16L20R	4-2381880-7
1NC + 1NC	NO LAMP	NO LAMP	PBES16 28 NO LAMP 1NC 1NC	PBES16L30R	4-2381880-8

⁶ PART MARKING:
FUNCTION TERMINAL BLOCK 000 FUNCTION TERMINAL BLOCK NC FUNCTION TERMINAL BLOCK NO

NOTES:

- 1. COMPLIANCE: THE CURRENT STATEMENT OF COMPLIANCE IS AVAILABLE AT TE.COM.
- 2. NAME PLATE IS PACKAGED SEPARATELY FROM THE SWITCH.
- 3. AGENCY CONFORMANCE – UL AND TUV,

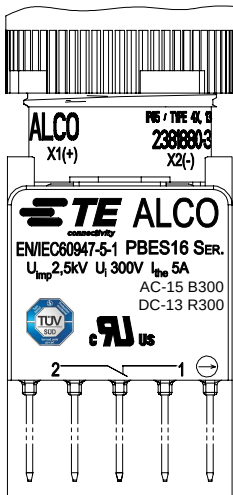
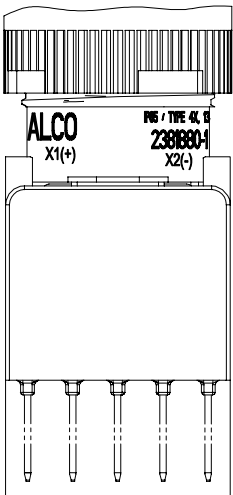
⁴ REFERENCE TE PACKAGING LABELS FOR AGENCY INFORMATION.

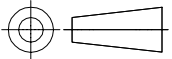
⁵ PART MARKING:
ACTUATOR LABEL MARKING:

ALCO IP65/TYPE 4X.13 
X1(+) □-2381880-□ X2(-)

↑
TE PART NUMBER,
SEE TABLE, SHEETS 4 OF 5 AND 5 OF 5

PRELIMINARY



THIS DRAWING IS A CONTROLLED DOCUMENT.		DWN 24DEC2020 SATHISH KUMAR G		 TE Connectivity	
CHK 24DEC2020 ALEXANDER, SHARPE		APVD 24DEC2020 ALEXANDER, SHARPE			
DIMENSIONS: mm		TOLERANCES UNLESS OTHERWISE SPECIFIED:		NAME SWITCH, EMERGENCY STOP, PBES16L SERIES, 28MM DIAMETER WITH LAMP OPTIONS, PUSH TO LOCK, LEFT TURN TO RELEASE, 16MM PANEL DIAMETER	
		0 PLC ± – 1 PLC ± – 2 PLC ± – 3 PLC ± – 4 PLC ± – ANGLES ± –		SIZE A3	
MATERIAL —		FINISH —		CAGE CODE 00779	
				DRAWING NO C-2381880	
				RESTRICTED TO —	
				SCALE NTS	
				SHEET 5 of 5	
				REV 1	
CUSTOMER DRAWING					