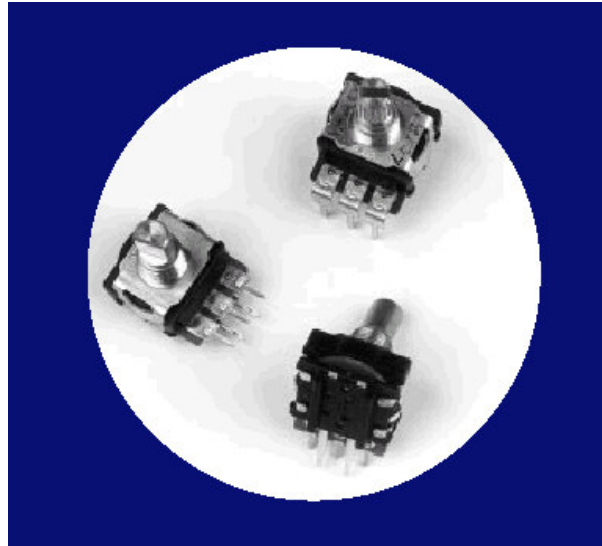


16 mm Rotary Encoder

Features

- ✧ Low cost, robust design
- ✧ Miniature 16mm style
- ✧ Bushing mounted
- ✧ PC terminals, with shaft parallel or perpendicular to PC board
- ✧ 2 bit, 4 bit Gray and 4 bit Hexidecimal codes available
- ✧ Continuous rotation
- ✧ Available with 16 detents
- ✧ Optional momentary switch



Electrical and Mechanical Specifications

Power Rating

0.5 mA 5VDC

Current Rating

5 mA max

Voltage Rating

Operating maximum 20 VDC

Operating Temperature

Standard: -25°C to +100°C

Contact Resistance

10 ohms static closed circuit maximum

Detent Points

16 detents available
Contact CTS for special requirements

Momentary Switch Rating

16 VDC, 20 mA

Rotational life

50,000 cycles

Switch Life

15,000 actuations

Switch Contact Resistance

Initial cycle - 100 milliohms MAX
After life cycle - 200 milliohms MAX

Switch Operation Force

350±150 g force (12.3 oz± 5.3oz)

Switch Bounce

5 milliseconds MAX

Switch Travel Length

0.5 mm / .020"

Pull and Thrust on Shaft

Withstand a pushing force and pulling force of 8 kg static load applied to axial direction for 10 ± 1 second without physical damage or electrical degradation

TRUTH TABLE 2 BIT BINARY

DENOTES CONTACT CLOSURE TO COMMON	B	0	0	1	1	0	0	1	1	0	0	1	1	0	0	1	1
A	0	1	1	0	0	1	1	0	0	1	1	0	0	1	1	0	0
POS. NO.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	

0	1	1	0	0	1	1	0	0	1	1	0	0	1	1	0	0	1	1
1	1	0	0	1	1	0	0	1	1	0	0	1	1	0	0	1	1	0
46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64

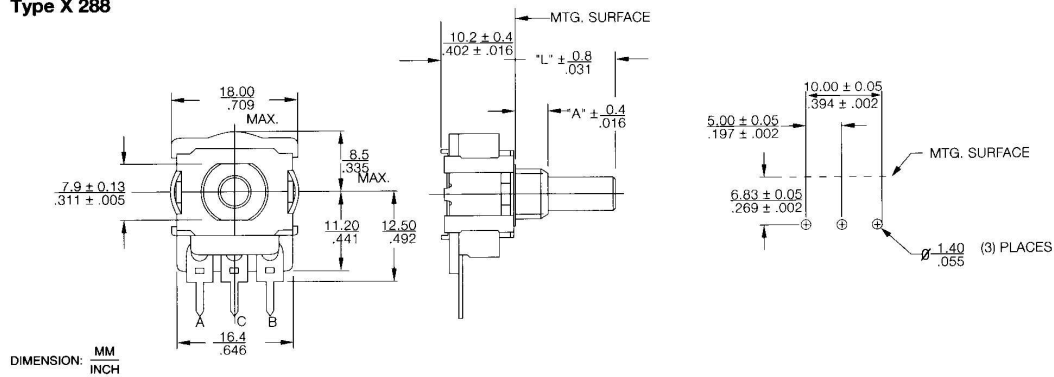
4 BIT GRAY CODE

POS NO.	A	B	E	F				
1	0	0	0	0				
2	0	0	1	0				
3	0	0	1	1				
4	0	0	0	1				
5	0	1	0	1				
6	0	1	1	1				
7	1	1	1	1				
8	1	1	0	1				
9	1	0	0	1				
10	1	0	1	1				
11	1	0	1	0				
12	1	0	0	0				
13	1	1	0	0				
14	1	1	1	0				
15	0	1	1	0				
16	0	1	0	0				

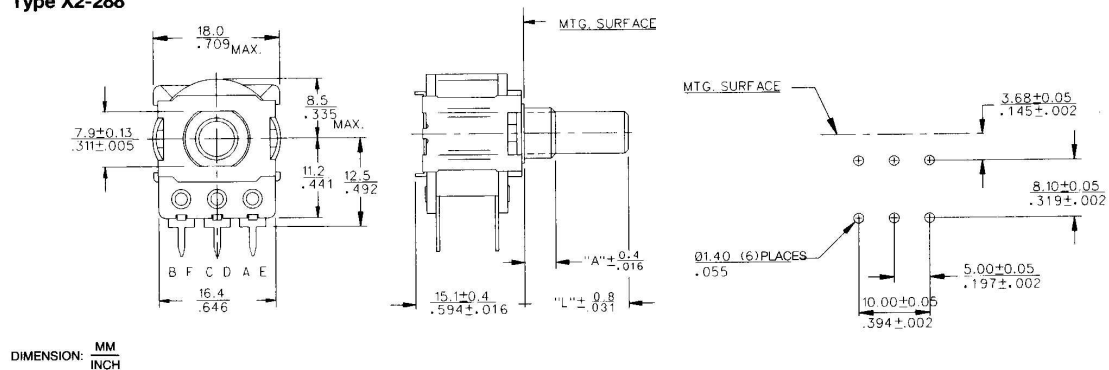
4 BIT HEXIDECIMAL

POS NO.	A	B	E	F				
1	0	0	0	0				
2	1	0	0	0				
3	0	1	0	0				
4	1	1	0	0				
5	0	0	1	0				
6	1	0	1	0				
7	0	1	1	0				
8	1	1	1	0				
9	0	0	0	1				
10	1	0	0	1				
11	0	1	0	1				
12	1	1	0	1				
13	0	0	1	1				
14	1	0	1	1				
15	0	1	1	1				
16	1	1	1	1				

Type X 288

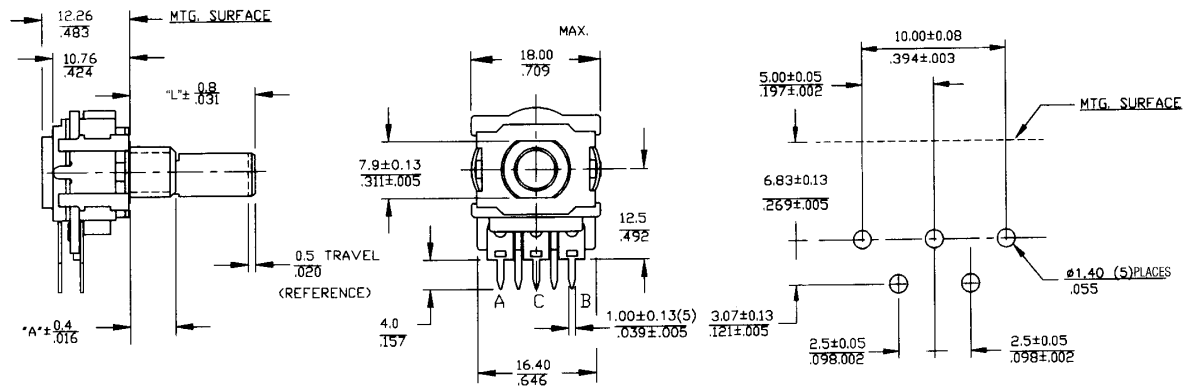


Type X2-288



X288 with switch

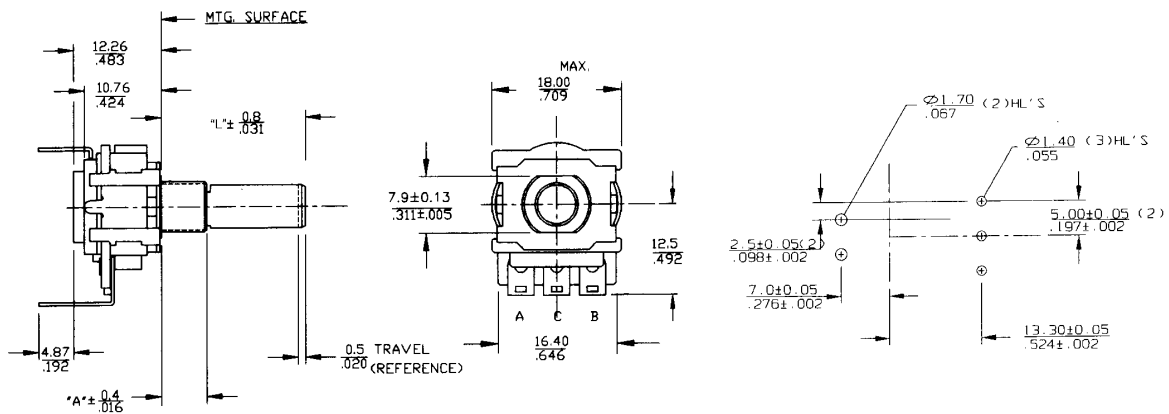
Typical 2-Bit Encoder Parallel
to P.C. Board



DIMENSION: MM
INCH

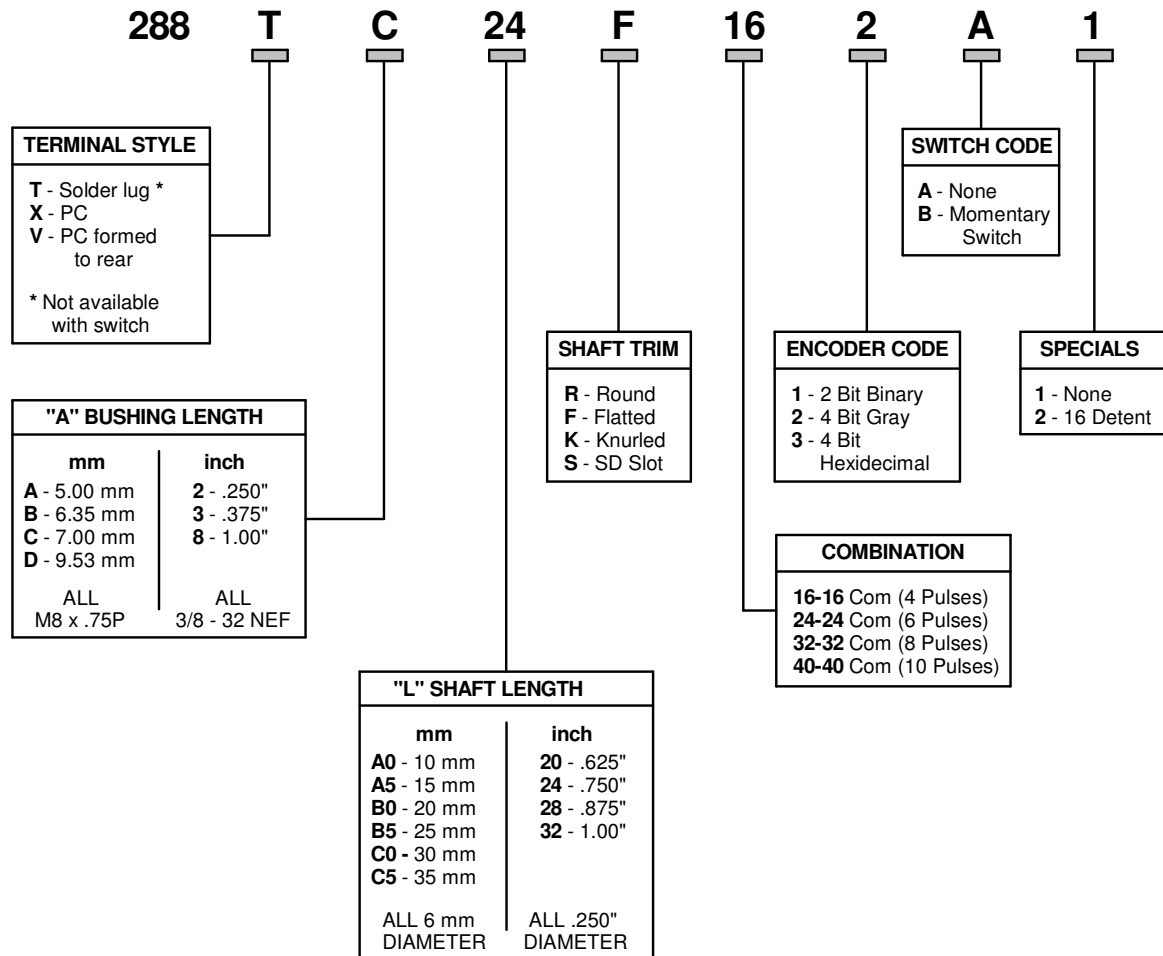
V288 with switch

Typical 2-Bit Encoder Perpendicular
to P.C. Board



DIMENSION: MM
INCH

Ordering Information



Order From:

CTS Resistor / Electrocomponents, 406 Parr Road, Berne IN 46711
Telephone: (260)589-3111

CTS COMPONENTS TAIWAN, LTD. / 7, Central 6th (Chung Liu Road) / P.O. Box 26-20
Kaohsiung Export Processing Zone / Kaohsiung, Rep. Of China
(07)8216145 / FAX: (07)8110040