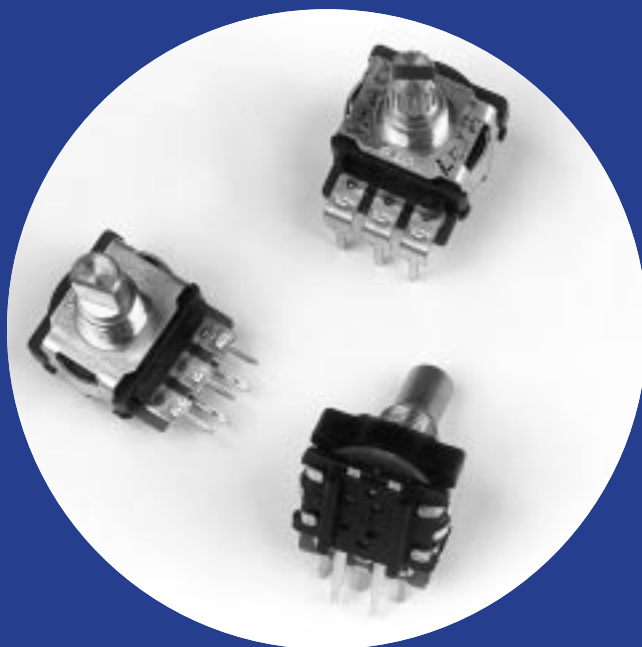


16 mm Rotary Encoder

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

100 milliwatts

Voltage Rating

Operating maximum 50 VAC

Operating Temperature

Standard: -25°C to +100°C

Contact Resistance

5,000 ohms static closed circuit maximum
1 megohm minimum open circuit

Detent Points

16 detents available
Contact CTS for special requirements

Momentary Switch Rating

16 VDC, 20 mA

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 ± 5.3 oz)

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															
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
	1	1	0	0	1	1	0	0	1	1	0	0	1	1	0	0

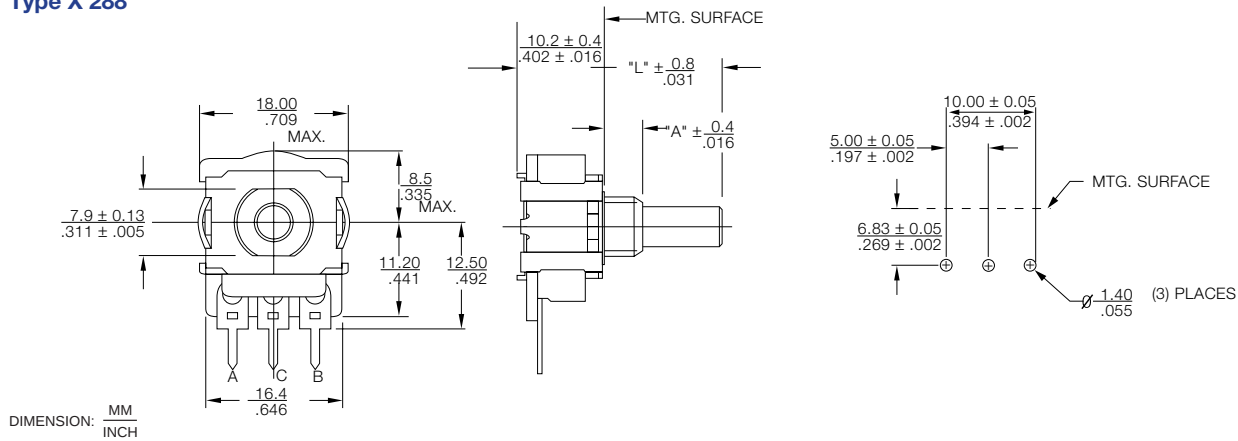
4 BIT GRAY CODE

POS NO.	DENOTES CONTACT CLOSURE TO COMMON															
	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												

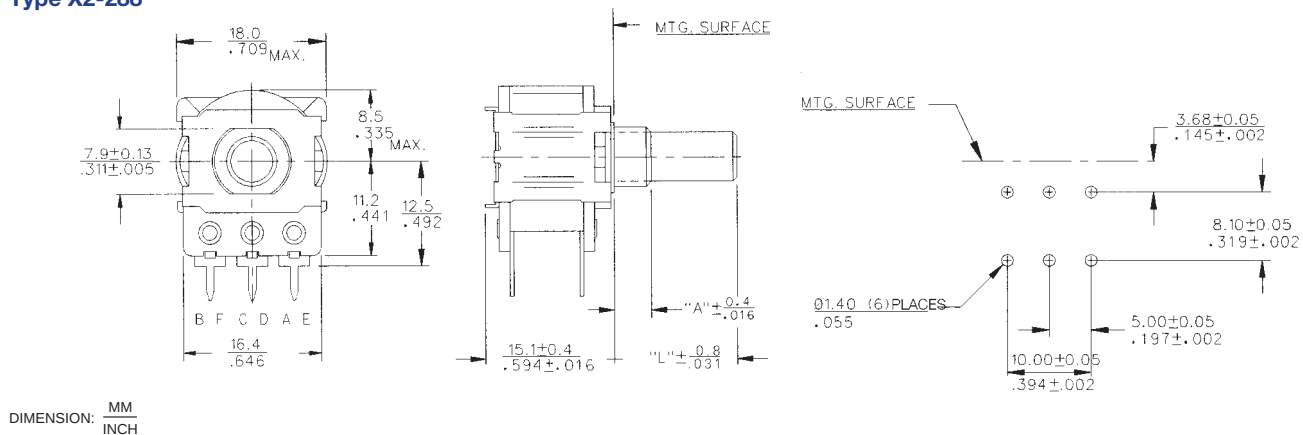
4 BIT HEXIDECIMAL

POS NO.	DENOTES CONTACT CLOSURE TO COMMON															
	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												

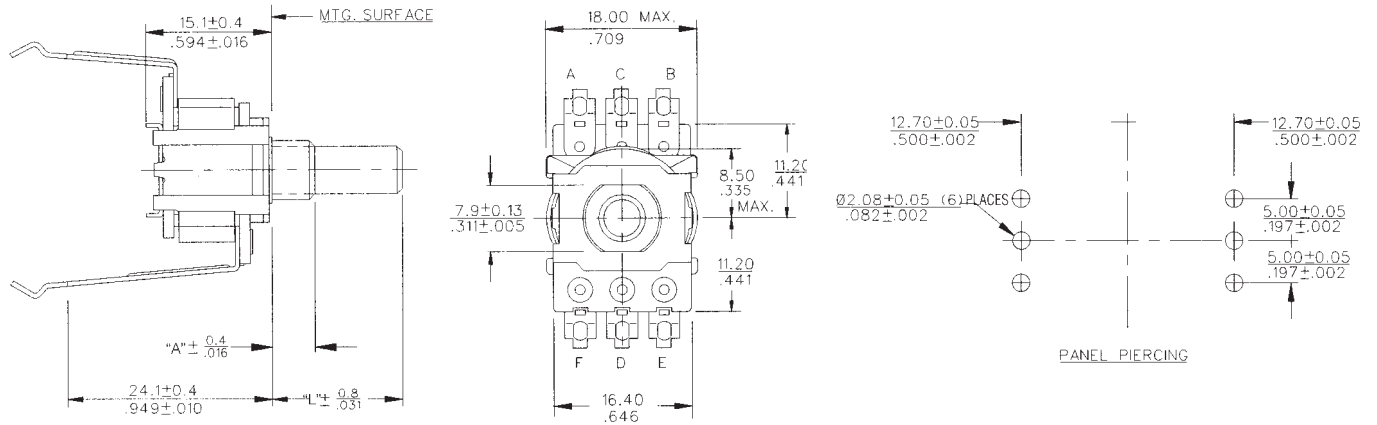
Type X 288



Type X2-288



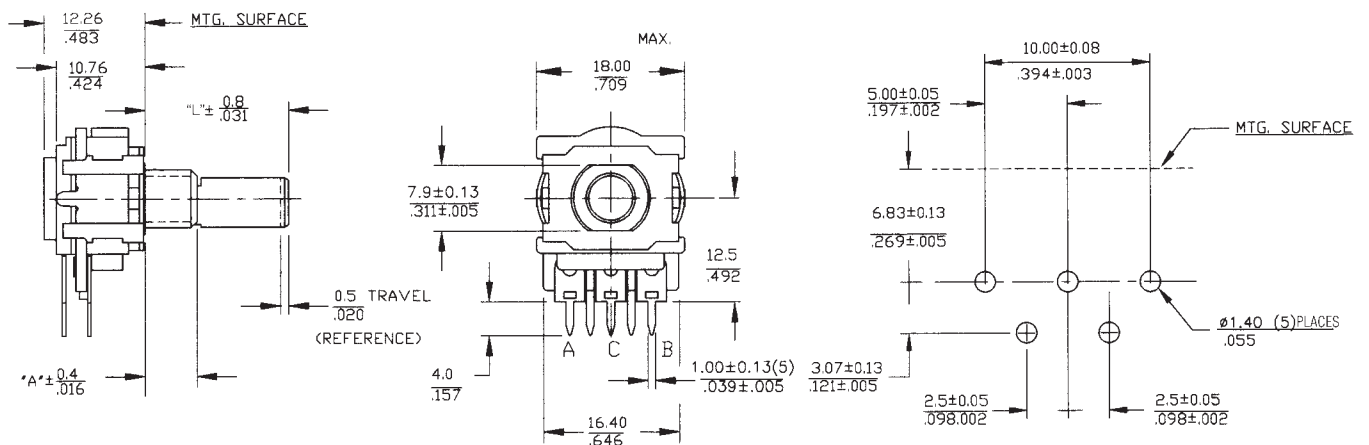
Type ZV2-288



DIMENSION: MM
INCH

X288 with switch

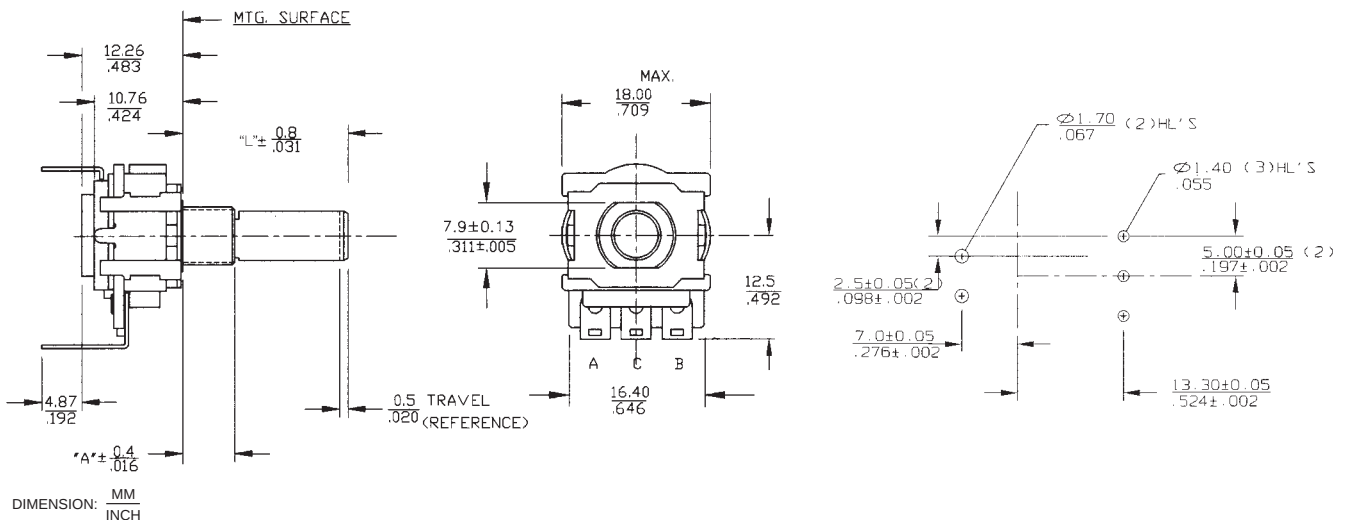
Typical 2-Bit Encoder Parallel
to P.C. Board



DIMENSION: MM
INCH

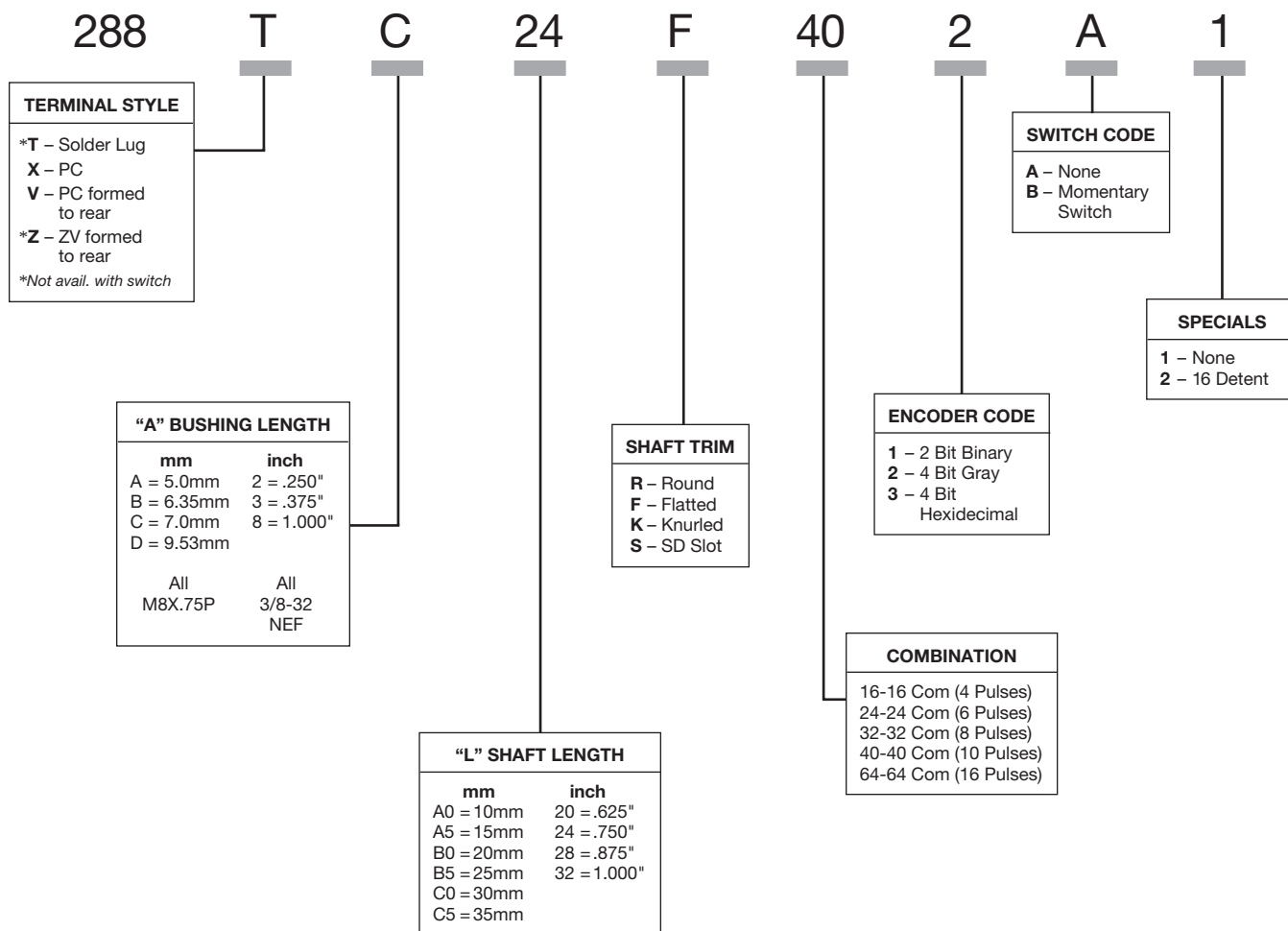
V288 with switch

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



DIMENSION: MM
INCH

Ordering Information



Order From:

CTS CORPORATION, ELECTROCOMPONENTS / 1601 Mishawaka Street / Elkhart, Indiana 46514

(219) 296-6700 / FAX: (219) 293-1240 <http://www.ctscorp.com>

CTS COMPONENTS TAIWAN, LTD. / 7, Central 6th Road (Chung Liu Road) / P.O. Box 26-20

Kaohsiung Export Processing Zone / Kaohsiung, Taiwan, Rep. of China

(07) 8216145 / FAX: (07) 8417642.8110040