

1. General Description

The MDT75C273 is an OTP Encoder using CMOS technology. It has a maximum of 20 bits addressing code providing up to one million codes. It can reduce any code collision and unauthorized code scanning possibilities.

2. Features

- CMOS technology.
- Low standby current : 1.0 μ A.
- Wide range of Operating Voltage : Vdd = 3.0V ~ 12V.
- Up to 4 data pins.
- Total 1048576 address codes.
- Built-in RC oscillator with single external resistor.
- Available in DIP and SOP package.
- Automatically enter sleep mode if press button over 6 ~ 10 sec

3. Pin Assignment

MDT75C273P / 75C273S

8 pin DIP / SOP

OSCR	1	8	K3
Vdd	2	7	K2
Vss	3	6	K1
TXD	4	5	K0

4. Pin Function Description

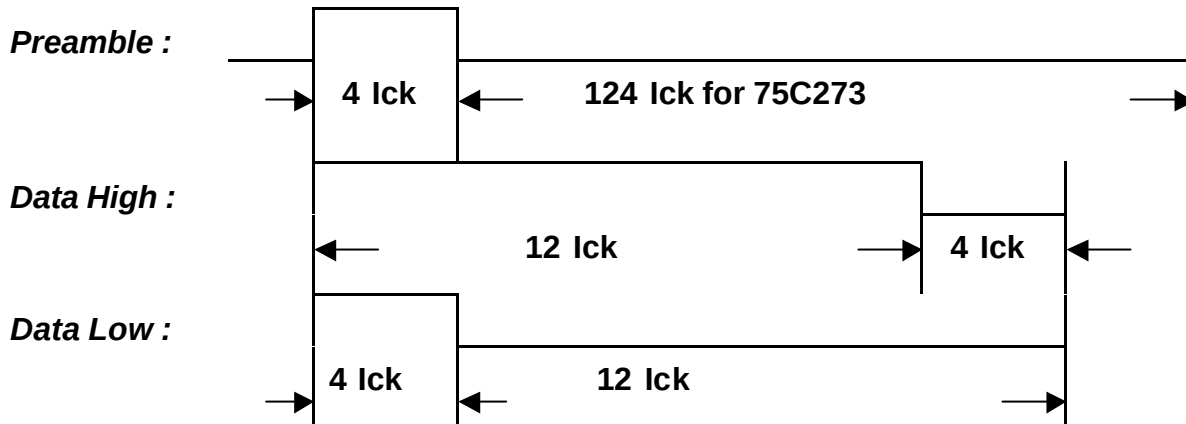
Symbol	I/O	Function Description
OSCR	I	Connect a resistor to Vdd to adjust internal RC freq.
Vdd		Positive power supply 3.0V ~ 12 V.
Vss		Ground.
TXD	O	Data output pin.
K0	I	Data input with pull low Resistor.
K1	I	Data input with pull low Resistor.
K2	I	Data input with pull low Resistor.
K3	I	Data input with pull low Resistor.

This specification is subject to be changed without notice. Please visit our web site for the most updated information.

5. Output Data Reporting

Output data frame

Preamble	C0 ~ C19 (1048576 address codes)	D0	D1	D2	D3
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Note : 1 lck = 8 OSC clocks

6. Key 0 ~ 3 combination table

K3	K2	K1	K0	D3	D2	D1	D0
0	0	0	1	0	0	0	1
0	0	1	0	0	0	1	1
0	0	1	1	0	0	1	0
0	1	0	0	1	1	0	0
0	1	0	1	1	1	0	1
0	1	1	0	1	1	1	1
0	1	1	1	1	1	1	0
1	0	0	0	1	1	1	1

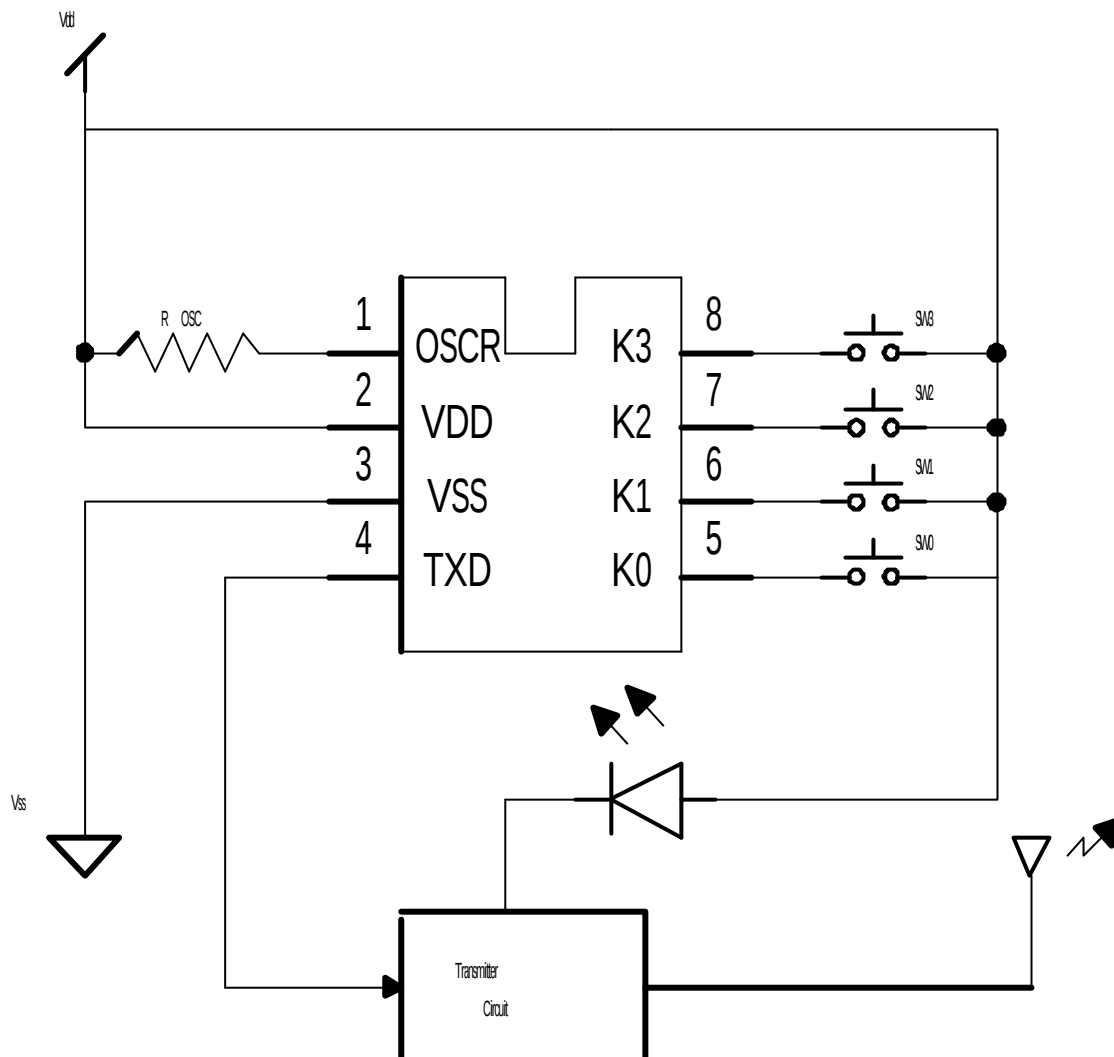
7. Absolute Maximum Rating

Symbol	Parameter	Conditions	Rating	Unit
Vdd	Supply Voltage		-0.3 ~ 13	V
Vi	Input Voltage		-0.3 ~ Vdd+0.3	V
Vo	Output Voltage		-0.3 ~ Vdd+0.3	V
Tst	Storage Temp.		-40 ~ 125	
Top	Operating Temp.		-20 ~ 70	
Pdis	Max. Power dissipation	Vdd = 12V	300	mW

8. DC Electrical Characteristics ($T_A=0$ to 70)

Symbol	Parameters	Conditions	Min.	Typ.	Max.	Unit
Vdd	Operating Voltage		3.0	5	12	V
I _{sb}	Stand by current	Vdd = 12V, OSC stop K0 ~ K3 = Low Output Unloaded		1.0	3.0	uA
I _{op}	Operating current	Vdd =12V		0.5	1.0	mA
I _{oh}	Source current	Vdd =12V, Voh = 6V	4.5			mA
I _{ol}	Sink Current	Vdd =12V, Vol = 6V	4.5			mA
F _{op}	Operating Freq	Vdd=11V, Rosc=360K ~ 470K ohm		80K		HZ

9. Application circuit



10. External oscillator resistor selection table (Vdd=11V)

Rosc (ohm)	Freq. (Hz)	Operating Current
510 K	70.0 K	443 μ A
470 K	74.0 K	444 μ A
430 K	78.7 K	445 μ A
390 K	84.6 K	447 μ A
360 K	88.9 K	449 μ A
330 K	97.4 K	451 μ A

