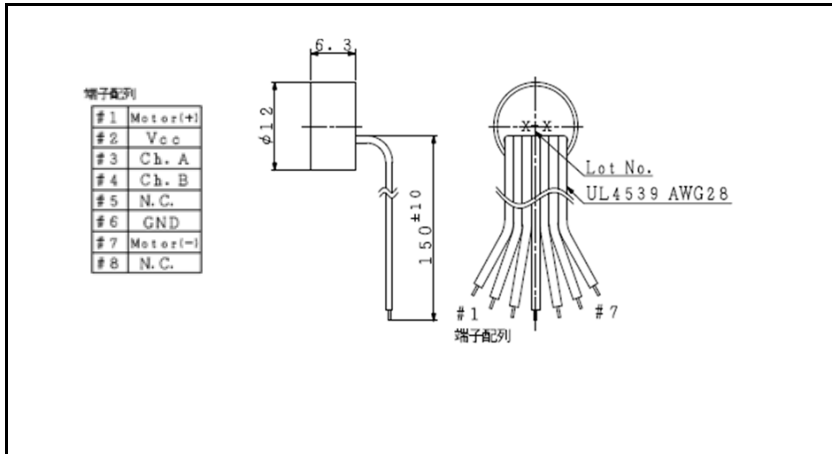


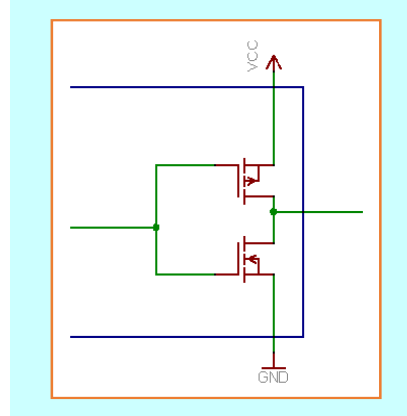
ETD12-2C/D/E

2 Channels optical incremental encoder

Preliminary Specification



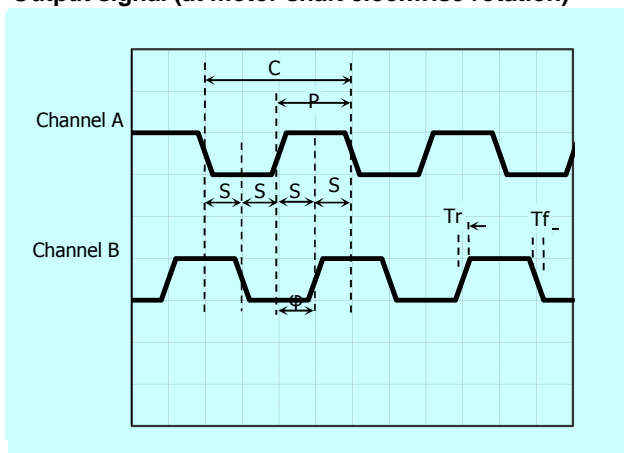
Output circuit



Specification at 25°C

	ETD12-2C	ETD12-2D	ETD12-2E	
1 Sensor	Optical			
2 Encoder Type	Incremental			
3 Output Signal	CMOS/TTL compatible			
4 Number of Channels	2			channel
5 Resolution (Max. speed = 50,000 rpm)	128	256	512	pulse/rev
6 Max. Frequency Response	55	110	220	kHz
7 Supply Voltage, Vcc	4.5 . . . 5.5			V
8 Supply Current, typical	20			mA
9 Output Voltage "H"	≥ 2.4 (Max. Vcc)			V
10 Output Voltage "L"	≤ 0.4			V
11 Output current per channel	1.5			mA
12 Rise and fall time (RL = 2.7 kΩ and CL = 25 pF), typical	Tr = 100, Tf = 100			ns
13 Inertia	TBD			gmm ²
14 Operating Temperature	-20 . . . +85			°C
15 Storage Temperature	-20 . . . +85			°C

Output signal (at motor shaft clockwise rotation)



V01

Output signal information

Cycle C	360	° e
Pulse P	180	° e
A to B channel phase shift, φ	90±45	° e
Logic state width, S	90±45	° e

*Maximal error (±° e) indicated above.

Electrical connections

#1	(MOTOR+)	(Motor winding)
#2	Vcc	DC4.5...5.5V
#3	Ch.A	CMOS/TTL compatible
#4	Ch.B	CMOS/TTL compatible
#5	—	NC
#6	GND	
#7	(MOTOR-)	(Motor winding)
#8	—	NC