

Electrical Spec.

Output type	Open Collector	Voltage Output	Totem Pole	Line Driver
Power Supply	DC +5[V], +15[V] Ripple p-p : less than 5%	DC +5[V], +15[V] Ripple p-p : less than 5%	DC +5[V] ~ 24[V] Ripple p-p : less than 5%	DC +5[V] Ripple p-p : less than 5%
Consuming Current (In case of no load)	70mA Max	70mA Max	150mA Max	150mA Max
Maximum Response Frequency	150 KHz (100 ~ 2048 P/R)			
Output voltage	Less than $V_s/0.5[V]$ / More than $V_s/2.5[V]$ (in case of inverting +5V) / More than $V_s/10[V]$ (in case of inverting +15V) / More than $V_s/18[V]$ (in case of inverting +24V)			
Output current	Less than 20mA	Less than 20mA	Less than 10mA	Less than 20mA
Rising, decline time	Less than 3 μ s	Less than 3 μ s	Less than 1 μ s	Less than 0.1 μ s
Common conditions	In case that the cable length of output side is 1[M] and load resistance is less than 1[k Ω]			

Mechanical Spec.

Starting Torque	800g - cm Max
Maximum number of revolution	8000 rpm
Bearing lifetime	100,000[hr](in case of rotating by 6000rpm)
Allowable Shaft Load	Radial : 5kg Max Axial : 5kg Max
Position deflection of allowable shaft	Radial : Less than 0.05 mm Axial : Less than 0.2mm
Connection Table	MS3102A20-29P
weight	720g

Rigid Spec.

Operating Temp. Range	-10°C ~ +70°C (No freezing)
Preserving temp	-20°C ~ +85°C
Using humidity	35% ~ +85% RH
Preserving Humidity	35% ~ +95% RH
Internal Vibration	5G
Internal Shock	50G
Degree of Protection	IP 54

Output Phase Shift

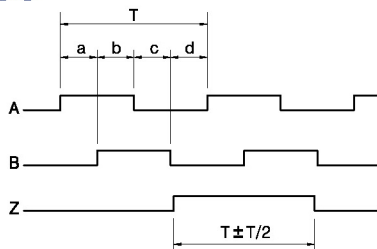
CW → Clockwise viewed from shaft end

$a + b, c + d = T/2 \pm T/10$

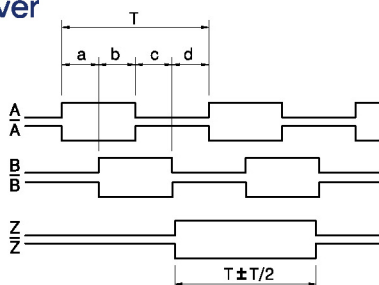
$a, b, c, d = T/4 \pm T/10$



Open Collector, Voltage Output
Totem Pole



Line Driver



Connection Table

Cable's Color	Connection Table	
	Open Collector Voltage Output Totem Pole	Line Driver
H	Vcc	Vcc
K,M	GND	GND
A	A Sig	A Sig
N	-	\bar{A} Sig
C	B Sig	B Sig
R	-	\bar{B} Sig
B	Z Sig	Z Sig
P	-	\bar{Z} Sig
T	CASE Shield	CASE Shield