

(韩、德合资)R系列高品质旋转编码器!

KWANG WOO CO., LTD. (光宇公司)为韩国最著名的旋转编码器专业制造商之一。公司于1989年成立以来先后被韩国国防科学研究院,产业资源部等政府部门指定为编码器专业开发制造商,其R系列产品率先在韩国全部通过CE认证。1999年公司与德国著名的编码器专业制造商MAX STEGMANN公司合资以后更是实现了产品的高品质。该公司产品远销欧、美、日等地区。

技术参数表

型号	RIA40	RIB40	RIB50	RIB60	
外形	 φ40 × 34.5mm 内径 φ6/φ8	 φ40 × 34.5mm 轴径 φ6	 φ50 × 50.5 轴径 φ8	 φ68 × 102.5 轴径 φ15	
分辨率	100 120 200 360 500 600 1000 1024 2000 2500	100 120 200 360 500 600 1000 1024 2000 2500	10 30 60 100 200 360 500 512 600 1000 1024	1024 2048 4096	
输出相(MAX)	A、 \bar{A} 、B、 \bar{B} 、Z、 \bar{Z}	A、 \bar{A} 、B、 \bar{B} 、Z、 \bar{Z}	A、B、Z	A、 \bar{A} 、B、 \bar{B} 、Z、 \bar{Z}	
输出方式	NPN Open Collector 电压输出,长线驱动输出	NPN Open Collector 电压输出,长线驱动输出	Totem Pole 输出 (NPN Open Collector + 电压输出)	长线驱动输出	
最高响应频率	200KHZ	200KHZ	50KHZ	200KHZ	
最高允许转速	7000rpm	7000rpm	5000rpm	10000rpm	
电源电压	DC5V ± 5% DC5 ~ 28V	DC5V ± 5% DC5 ~ 28V	DC4.75 ~ 28V	DC5V	
消耗电流	200mA MAX	150mA MAX	60mA	150mA MAX	
轴允许力	径方向	2.2kg MAX	2.2kg MAX	5kg MAX	15kg MAX
	轴方向	1.0kg MAX	1.0kg MAX	3kg MAX	10kg MAX
起动力矩	100gfcm MAX at 25°C	100gfcm MAX at 25°C	30gfcm MAX at 25°C	300gfcm MAX at 25°C	
惯性力矩	10.0 × 10 ⁻⁶ kg m ² (10g cm ² Max)	10.0 × 10 ⁻⁶ kg m ² (10g cm ² Max)	20g cm ²	13gf cm ²	
抗冲击	50G 11msec	50G 11msec	50G 11msec	50G 11msec	
抗震动	50G(10 - 55HZ)/1.5mm	50(10 - 55HZ)/1.5mm	(10 - 55HZ)/0.75mm	(10 - 55HZ)/0.75mm	
使用温度范围	-10 ~ +70°C	-10 ~ +70°C	-10 ~ +50°C	-10 ~ +60°C	
保护结构	IP50	IP50	IP50	IP50	

技术参数表

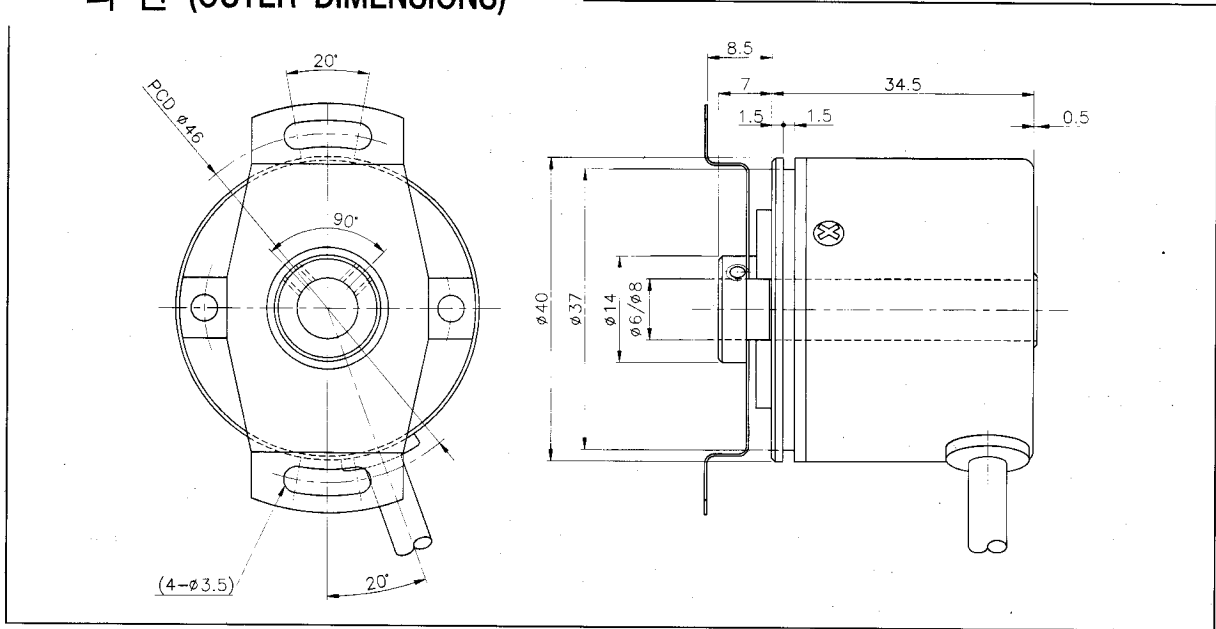
型号	RIA80	RIA90	RAA60	RIM80	
外形	 φ82 × 40.5 内径 φ18/φ30	 φ94 × 51 内径 φ30/φ42	 φ66.5 × 73 轴径 φ10	 φ60 × 50	
分辨率	500、1024	1024、4096	4 6 8 10 12 16 30 to 256	100	
输出相(MAX)	A、 \bar{A} 、B、 \bar{B} 、Z、 \bar{Z}	A、 \bar{A} 、B、 \bar{B} 、Z、 \bar{Z}	BCD CODE , GRAY CODE	A、 \bar{A} 、B、 \bar{B}	
输出方式	Totem Pole, 电压输出, Complemental, 长线驱动输出 NPN Open Collector	NPN Open Collector 长线驱动输出	NPN Open Collector PNP Open Collector	长线驱动输出 电压输出	
最高响应频率	110KHZ	150KHZ	20KHZ	5KHZ	
最高允许转速	6500rpm	3000rpm	5000rpm	600rpm	
电源电压	DC5V (长线驱动方式)	DC5V ± 5% (长线驱动方式)	DC24V	DC5V/24V	
消耗电流	150mA MAX	1400mA	90mA	150mA/60mA	
轴允许力	径方向	5kg MAX	20kg MAX	5kg MAX	1kg MAX
	轴方向	3kg MAX	10kg MAX	5kg MAX	2kg MAX
起动力矩	2.0×10^{-2} Nm(0.2kg cm ² MAX)	0.5Nm(500gcm MAX)	200gcm	0.2 ~ 0.6gcm	
惯性力矩	2.0×10^{-5} kg m ² (200g cm ² Max)		3.0×10^{-5} kg cm ²	200g 以下	
抗冲击	50G 11msec	20G 15msec	50G 11msec	50G 11msec	
抗震动	50G(10 - 55HZ)/1.5mm	4G 50HZ	5G(10 ~ 55HZ)	1.5mm(10 - 55HZ)	
使用温度范围	0 ~ +70℃	0 ~ +70℃	-10 ~ +60℃	0 ~ +60℃ (长线驱动) -10 ~ +60℃ (电压)	
保护结构	IP50	IP50	IP65	IP40	

RIA 40

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시리즈명 방식 축형태 외경 출력펄스수 / 분해능 출력신호 출력회로
 Series Code Shaft Type Out Diameter Output Pulse / Resolution Output Signal Output Circuit

외 관 (OUTER DIMENSIONS)



특 징 (FEATURE)

- HOLLOW SHAFT TYPE
- 소형, 컴팩트한 구조
Small, compact size
- 광범위한 적용
Wide ranging application
- 일반 계측용
Measuring Instrument
- 저가형
Low cost type
- High Resolution
- High Response Frequency

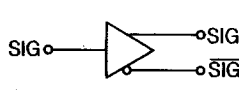
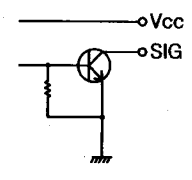
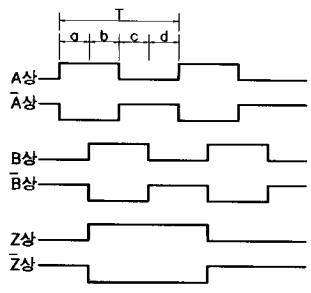
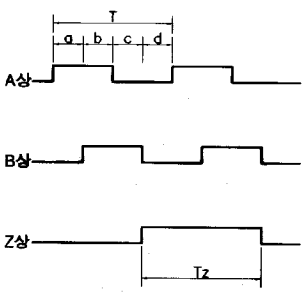
용 도 (APPLICATION)

- 산업용 Industrial use
- 섬유기계 Textile machine
- 편직기, 연사기
Weaving & Twisted thread machine
- ROBOT
- 주유기 Lubricator



■ 사양 (SPECIFICATION)

전기적 특성 Electrical Spec.		기계적 특성 Mechanical Spec.		
분해능 Resolution	100/120/200/360/500/600 1000/1024/2000/2500 P/R	최대 회전수 Maximum Rotating Speed	7,000 rpm	
전원 Supply Voltage	Line driver	DC +5V ±5%	기동 토크 Starting Torque	100gfcm MAX at 25°C
	Open collector Voltage output	DC +5~28V		관성 모멘트 Moment of Inertia
소비전류 Current Consumption	200mA MAX	허용축 하중 Allowable shaft load	반경 방향 Radial	2.2kg Max
최대 응답 주파수 Max. Response Frequency	200KHz		축 방향 Axial	1.0kg Max
상승 하강 시간 Rising/Falling Time	Line Driver	진동 Vibration Resistance	5G (10~55Hz) / 1.5mm	
	Open Collector / Voltage output	충격 Shock Resistance	50G, 11msec	
	0.2μsec	사용 온도 범위 Operating temp. range	-10°C ~ +70°C	
	3μsec	보존 온도 범위 Storage temp. range	-20°C ~ +85°C	
		BEARING LIFE	1×10 ⁴ (h)	
		PROTECTION	IP50	

출력 회로 Output Circuit	 <p>Line Driver</p>	 <p>Open - Collector</p>	<p>· 주기 비율 Duty Ratio $(a+b, c+d) = T/2 \pm T/8$ $a, b, c, d = T/4 \pm T/8$ $T_z = T \pm T/2$</p> <p>* 본 파형은 취부면에서 봤을 때 시계방향 Signal in CW on the view from the mounting</p>
출력 파형 Output Signal	 <p>Z상: $T \pm 0.5T$</p>		

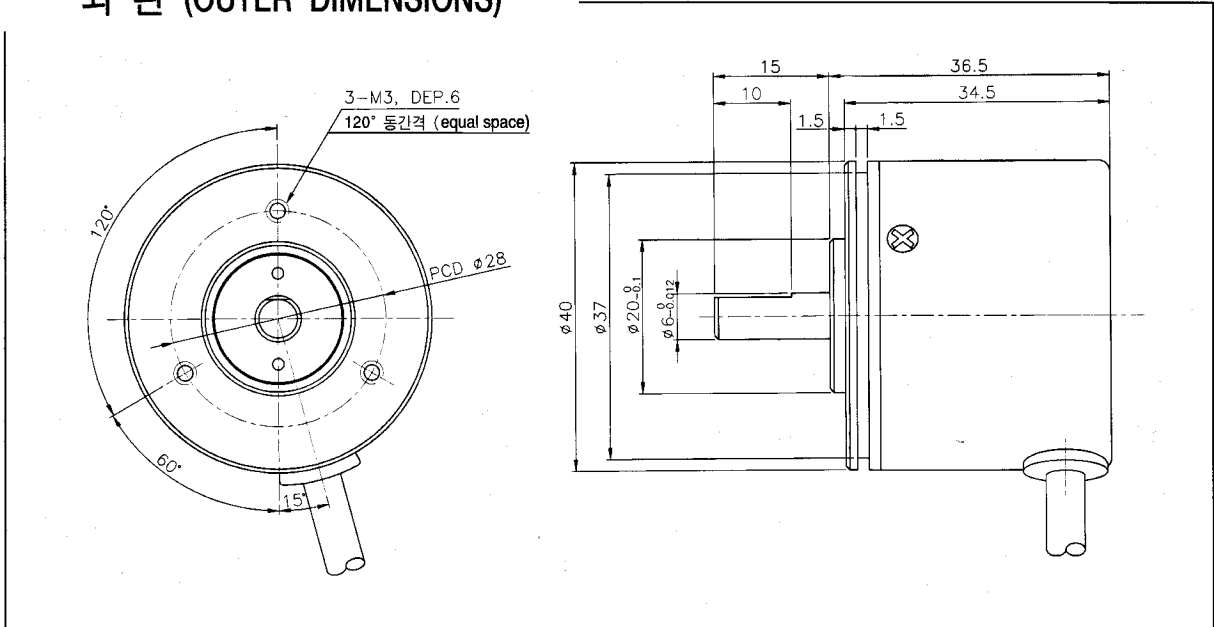
Wire color	Open collector / Voltage output	Line Driver output
RED	DC +5V ~ DC +28V	A
BLACK	0V	0V
GREEN	A	B
BLUE	-	\bar{B}
WHITE	B	DC +5V
PINK	-	\bar{A}
YELLOW	Z	Z
ORANGE	-	\bar{Z}
SHIELD	CASE GND	CASE GND

RIB 40

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시리즈명 방식 축형태 외경 출력펄스수 / 분해능 출력신호 출력회로
 Series Code Shaft Type Out Diameter Output Pulse / Resolution Output Signal Output Circuit

외 관 (OUTER DIMENSIONS)



특 징 (FEATURE)

- SHAFT TYPE
- 소형, 컴팩트한 구조
Small, compact size
- 광범위한 적용
Wide ranging application
- 일반 계측용
Measuring Instrument
- 저가형
Low cost type
- High Resolution
- High Response Frequency

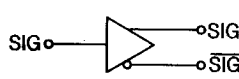
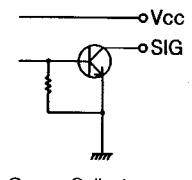
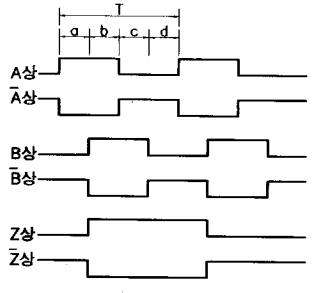
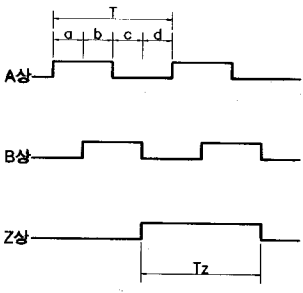
용 도 (APPLICATION)

- 산업용 Industrial use
- 섬유기계 Textile machine
- 편직기, 연사기
Weaving & Twisted thread machine
- ROBOT



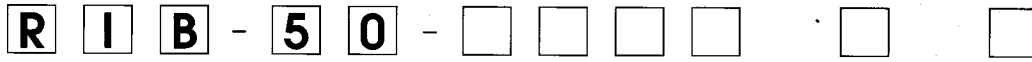
■ 사양 (SPECIFICATION)

전기적 특성 Electrical Spec.		기계적 특성 Mechanical Spec.	
분해능 Resolution	100/120/200/360/500/600 1000/1024/2000/2500 P/R	최대 회전수 Maximum Rotating Speed	7,000 rpm
전원 Supply Voltage	Line driver DC + 5V ± 5%	기동 토크 Starting Torque	100gfcm MAX at 25°C
	Opencollector Voltage output DC + 5V ~ 28V	관성 모멘트 Moment of Inertia	10.0 × 10 ⁻⁶ kg m ² (10gcm ² Max)
소비전류 Current Consumption	150 mA MAX	허용축 하중 Allowable shaft load	반경 방향 Radial 2.2kg Max 축 방향 Axial 1.0kg Max
최대 응답 주파수 Max. Response Frequency	200kHz	진동 Vibration Resistance	5G(10~55Hz) / 1.5mm
상승 하강 시간 Rising/Falling Time	Line Driver 0.2μsec	충격 Shock Resistance	50G, 11msec
	Open Collector / Voltage output 3μsec	사용 온도 범위 Operating temp. range	-10°C ~ +70°C
		보존 온도 범위 Storage temp. range	-20°C ~ +85°C
		BEARING LIFE	1 × 10 ⁴ (h)
		PROTECTION	IP50

출력 회로 Output Circuit	 <p>Line Driver</p>	 <p>Open - Collector</p>	<p>· 주기 비율 Duty Ratio $(a+b, c+d) = T/2 \pm T/8$ $a, b, c, d = T/4 \pm T/8$ $T_z = T \pm T/2$</p> <p>※ 본 파형은 취부면에서 봤을 때 시계방향 Signal in CW on the view from the mounting</p>
출력 파형 Output Signal	 <p>Z상: T ± 0.5T</p>		

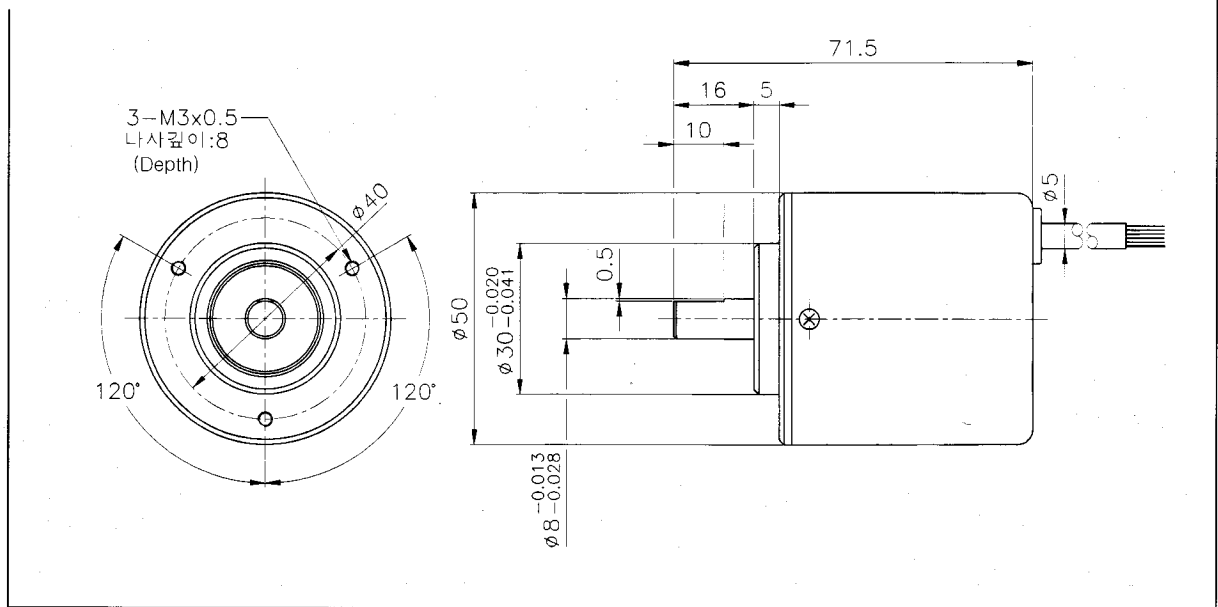
Wire color	Open collector / Voltage output	Line Driver output
RED	DC + 5V ~ DC + 28V	A
BLACK	0V	0V
GREEN	A	B
BLUE	-	\bar{B}
WHITE	B	DC + 5V
PINK	-	\bar{A}
YELLOW	Z	Z
ORANGE	-	\bar{Z}
SHIELD	CASE GND	CASE GND

RIB 50



시리즈명	방식	축형태	외경	출력펄스수 / 분해능	출력신호	출력회로
Series	Code	Shaft Type	Out Diameter	Output Pulse / Resolution	Output Signal	Output Circuit

외 관 (OUTER DIMENSIONS)



특징 (FEATURE)

- 일반 계측기기 용
Measuring Instruments
- 광범위한 적용
Wide ranging application
- 저가형
Low cost type
- 소형
Small type

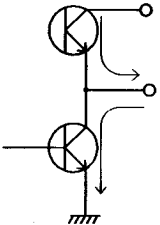
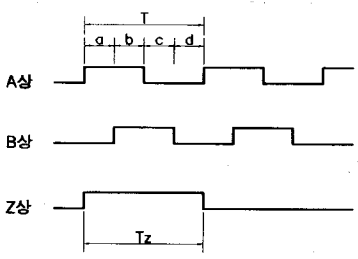
용도 (APPLICATION)

- 컨베이어 라인 Conveyor line
- 산업용 Industrial use
- 섬유기계 Textile machine
- ROBOT
- 사출기 Injection machine



■ 사양 (SPECIFICATION)

전기적 특성 Electrical Spec.		기계적 특성 Mechanical Spec.	
분해능 Resolution	10/30/60/100/200/360/500 512/600/1000/1024 P/R	최대 회전수 Maximum Rotating Speed	5,000 rpm
전원 Supply Voltage	DC 4.75 ~ 28V	기동 토크 Starting Torque	30gfcM MAX at 25°C
소비전류 Current Consumption	60 mA	관성 모멘트 Moment of Inertia	20gcm ²
최대 응답 주파수 Max. Response Frequency	50KHz	허용축 하중 Allowable shaft load	반경 방향 Radial 5kg Max
상승 하강 시간 Rising/Falling Time	3μsec		축 방향 Axial 3kg Max
		진동 Vibration Resistance	(10~55Hz) / 0.75mm
		충격 Shock Resistance	50G, 11msec
		사용 온도 범위 Operating temp. range	-10°C ~ +50°C
		보존 온도 범위 Storage temp. range	-25°C ~ +85°C
		BEARING LIFE	1 × 10 ⁴ (h)
		PROTECTION	IP50

출력 회로 Output Circuit	 <p>Totempole Out current : Max 10mA In current : Max 30mA</p>	<p>· 주기 비율 Duty Ratio $(a+b, c+d) = T/2 \pm T/8$ $a, b, c, d = T/4 \pm T/8$ $T_z = T \pm T/2$</p> <p>* 본 파형은 취부면에서 봤을 때 시계반대방향 Signal in CCW on the view from the mounting</p>
출력 파형CCW Output Signal		

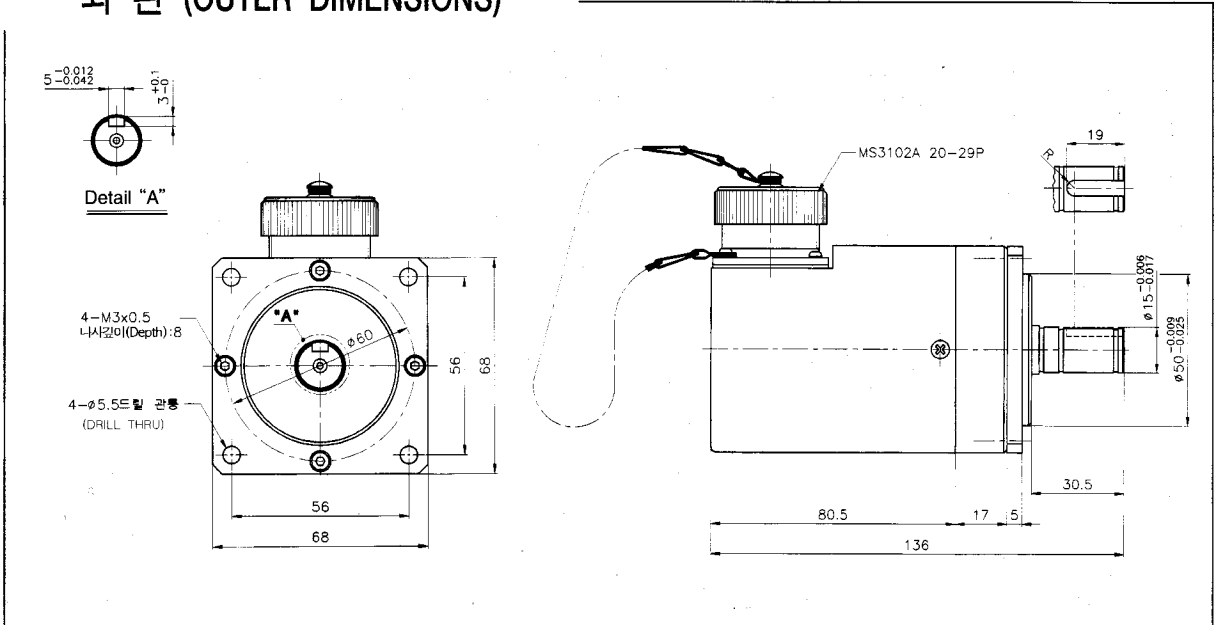
Wire color	Open collector / Totempole
GREEN	A
WHITE	B
YELLOW	Z
RED	Vcc
BLACK	0V

RIB 60

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시리즈명 방식 축형태 외경 출력펄스수 / 분해능 출력신호 출력회로
 Series Code Shaft Type Out Diameter Output Pulse / Resolution Output Signal Output Circuit

외 관 (OUTER DIMENSIONS)



특징 (FEATURE)

- 견고성 (Shaft $\phi 15$)
Heavy duty type
- 고속 응답성
High response frequency
- 장거리 전송
Transmittable for a long distance
- 내환경성
Rigid type

용도 (APPLICATION)

- NC 공작 기계 NC Machine
- 계측 기계 Measuring Instrument
- ROBOT
- 산업용 Industrial use

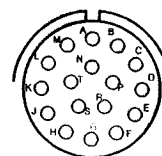


■ 사양 (SPECIFICATION)

전기적 특성 Electrical Spec.		기계적 특성 Mechanical Spec.	
분해능 Resolution	1024/2048/4096 P/R	최대 회전수 Maximum Rotating Speed	10,000 rpm
전원 Supply Voltage	DC 5V	기동 토크 Starting Torque	300g _{cm} MAX at 25°C
소비전류 Current Consumption	150 mA MAX	관성 모멘트 Moment of Inertia	13g _{cm} ²
최대 응답 주파수 Max. Response Frequency	200kHz	허용축 하중 Allowable shaft load	반경 방향 Radial 15kg Max 축 방향 Axial 10kg Max
상승 하강 시간 Rising/Falling Time	0.3μsec	진동 Vibration Resistance	(10~55Hz) / 0.75mm
		충격 Shock Resistance	50G, 11msec
		사용 온도 범위 Operating temp. range	-10°C ~ +60°C
		보존 온도 범위 Storage temp. range	-20°C ~ +80°C
		BEARING LIFE	1 × 10 ⁴ (h)
		PROTECTION	IP50

출력 회로 Output Circuit	<p style="text-align: center;">Line Driver</p>	<p>· 주기 비율 Duty Ratio</p> $(a+b, c+d) = T/2 \pm T/8$ $a, b, c, d = T/4 \pm T/8$ $T_z = T \pm T/2$ <p>※ 본 파형은 취부면에서 봤을 때 시계방향 Signal in CW on the view from the mounting</p>
출력 파형 Output Signal	<p style="text-align: right;">Z상: T±0.5T</p>	

Connector Pin	Signal	Connector Pin	Signal
A	A	R	B̄
B	Z	P	Z̄
C	B	H	DC +5V
N	Ā	K	0V
E	SHIELD		



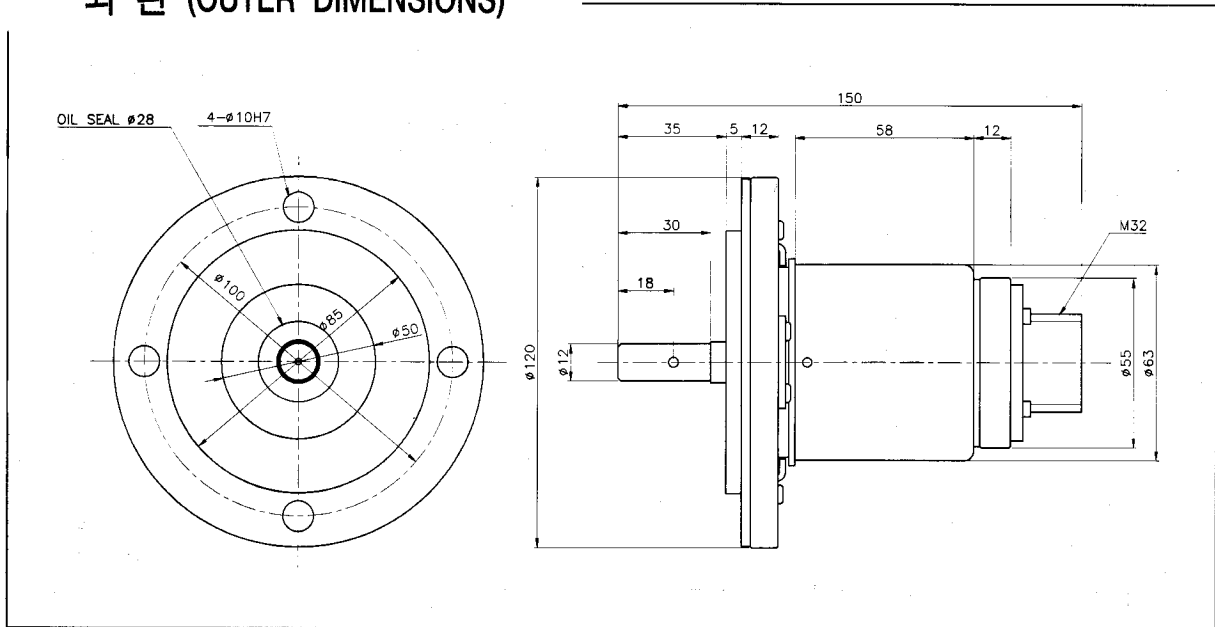
Connector : MS 3102A 20-29P

RIB 60

R **I** **B** - **6** **0** - **C**

시리즈명 방식 축형태 외경 출력펄스수 / 분해능 출력신호 출력회로 주문생산
 Series Code Shaft Type Out Diameter Output Pulse / Resolution Output Signal Output Circuit Customized Product

외 관 (OUTER DIMENSIONS)

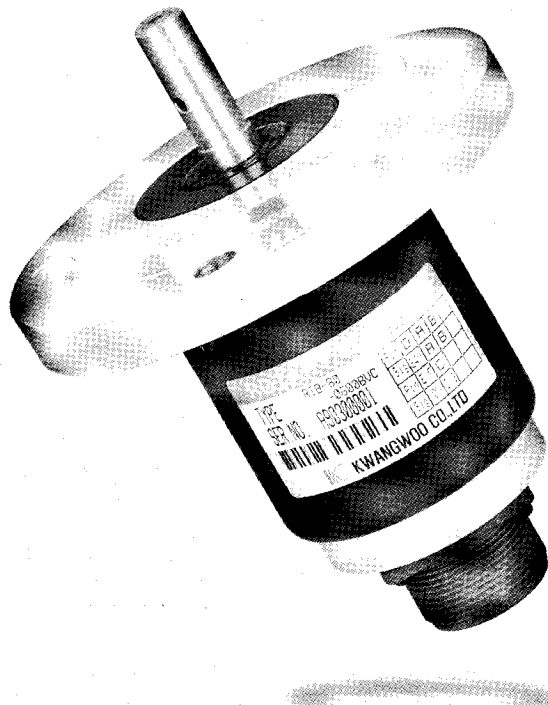


특 징 (FEATURE)

- 환경 강화형
Ultra rugged model
- 고 신뢰성
High reliability
- 내 진동에 강한 구조
Vibration-proof design

용 도 (APPLICATION)

- 제철 생산 Line의 위치 조절용
Iron & steel production line
- 일반계측
Measuring Instrument



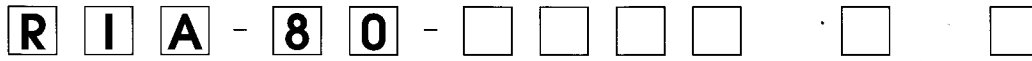
■ 사양 (SPECIFICATION)

전기적 특성 Electrical Spec.		기계적 특성 Mechanical Spec.	
분해능 Resolution	25/300/600/900 P/R	최대 회전수 Maximum Rotating Speed	3,000 rpm
전원 Supply Voltage	DC +24V	기동 토크 Starting Torque	2kg m
소비전류 Current Consumption	300 mA MAX	관성 모멘트 Moment of Inertia	5.0×10^{-6} kg m ² (500cm ² Max)
최대 응답 주파수 Max. Response Frequency	20KHz MAX	허용축 하중 Allowable shaft load	반경 방향 Radial 40kg
상승 하강 시간 Rising/Falling Time	5μsec		축 방향 Axial 5kg
		진동 Vibration Resistance	10G, 10~55Hz
		충격 Shock Resistance	100G, 980msec
		사용 온도 범위 Operating temp. range	-10°C ~ +60°C
		보존 온도 범위 Storage temp. range	-20°C ~ +85°C
		BEARING LIFE	1×10^4 (h)
		PROTECTION	IP67

출력 파형CCW Output Signal	<p>출력회로 : 주문형 (Output circuit : Custom mode)</p>	<p>· 주기 비율 Duty Ratio (a+b, c+d) = T/2 ± T/10 a, b, c, d = T/4 ± T/10</p> <p>※ 본 파형은 취부면에서 봤을 때 시계반대방향 Signal in CCW on the view from the mounting</p>
	<p>CCW →</p>	

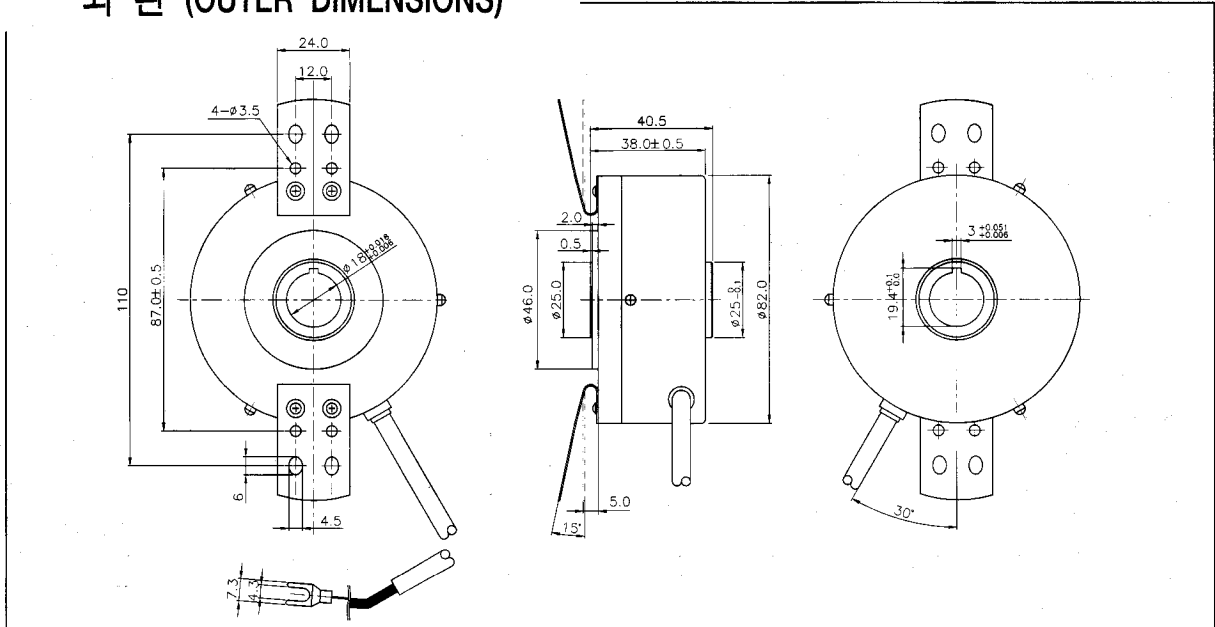
Connector Pin	Function
A	SIG A
B	SIG B
C	CASE GND
D	DC +24V
E	0V
F	0V

RIA 80



시리즈명 방식 축형태 외경 출력펄스수 / 분해능 출력신호 출력회로
 Series Code Shaft Type Out Diameter Output Pulse / Resolution Output Signal Output Circuit

외 관 (OUTER DIMENSIONS)

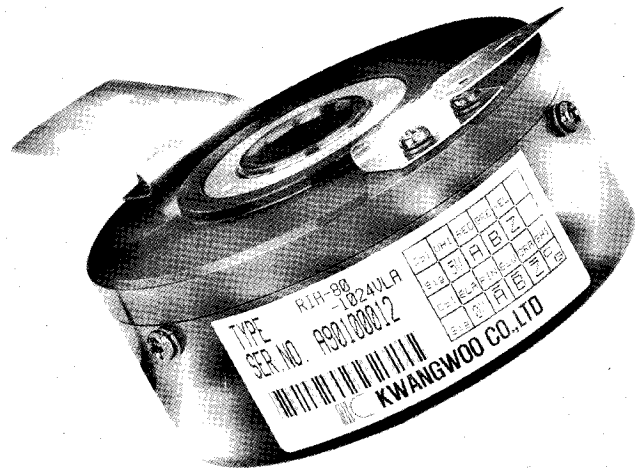


특 징 (FEATURE)

- DC Servo motor control
- 모터에 취부가 용이
Easy mounting for motors
- 우수한 내환경성
Rigid type
- 고 신뢰성
High reliability

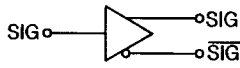
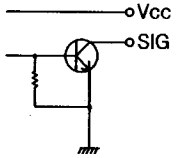
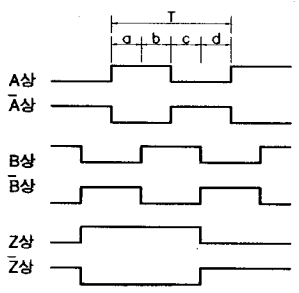
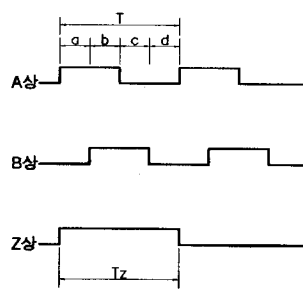
용 도 (APPLICATION)

- 주차 설비
Parking system
- DC-Servo motor
- 일반 산업 기계
Industrial Machine



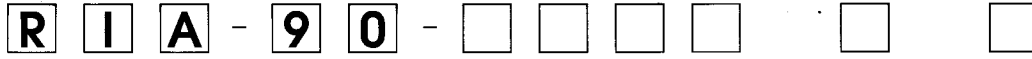
■ 사양 (SPECIFICATION)

전기적 특성 Electrical Spec		기계적 특성 Mechanical Spec.	
분해능 Resolution	500/1024	최대 회전수 Maximum Rotating Speed	6,500 rpm
전원 Supply Voltage	Line driver DC +5V	기동 토크 Starting Torque	$2.0 \times 10^{-2} \text{ N}\cdot\text{m}$ (0.2kg cmMax)
소비전류 Current Consumption	150 mA MAX	관성 모멘트 Moment of Inertia	$2.0 \times 10^{-5} \text{ kg}\cdot\text{cm}^2$ (200g cm ² Max)
최대 응답 주파수 Max. Response Frequency	110kHz MAX	허용축 하중 Allowable shaft load	반경 방향 Radial ^{49N} 5kg Max 축 방향 Axial ^{29.4N} 3kg Max
상승 하강 시간 Rising/Falling Time	Line Driver 0.2μsec	진동 Vibration Resistance	5G(10~55Hz) / 1.5mm
	Open Collector 3μsec	충격 Shock Resistance	50G, 11msec
		사용 온도 범위 Operating temp. range	0°C ~ +70°C
		보존 온도 범위 Storage temp. range	-20°C ~ +85°C
		BEARING LIFE	1×10^4 (h)
		PROTECTION	IP50

출력 회로 Output Circuit	 <p>Line Driver</p>	 <p>Open-Collector</p>	<p>주기 비율 Duty Ratio $(a+b, c+d) = T/2 \pm T/8$ $a, b, c, d = T/4 \pm T/8$ $T_z = T \pm T/2$</p> <p>※ 본 파형은 취부면에서 봤을 때 시계방향 Signal in CW ... the view from the mounting</p>
출력 파형 Output Signal	 <p>Z상: $T \pm 0.5T$</p>		

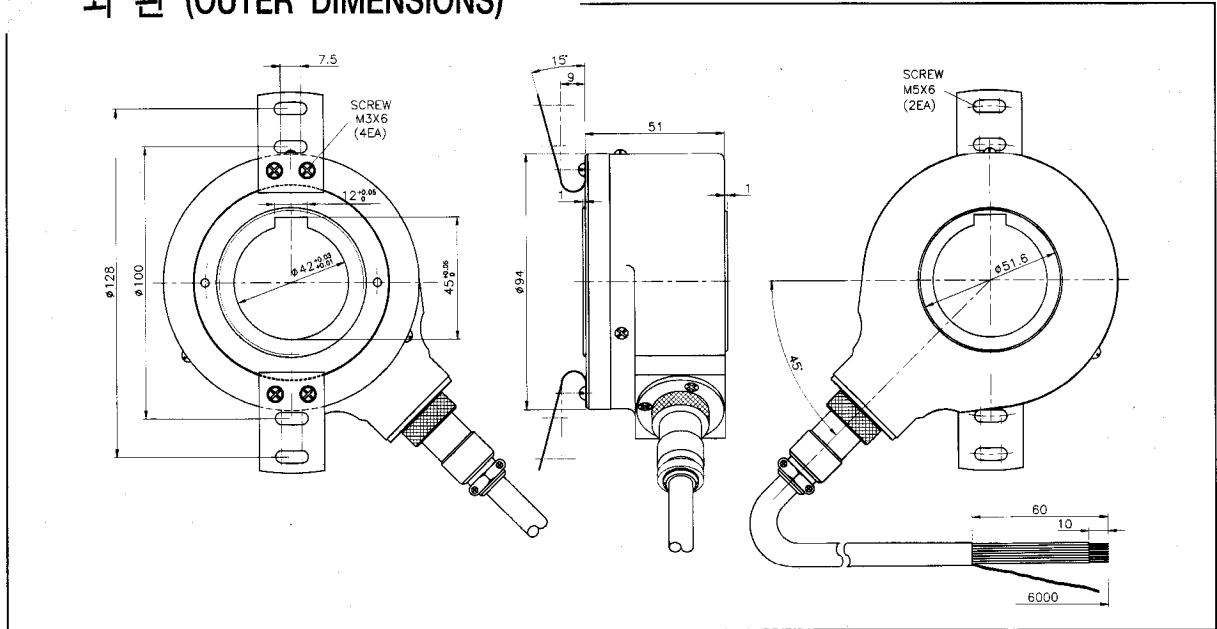
Wire color	Open collector / Voltage output	Line Driver output
RED	DC +5V ~ DC +28V	A
BLACK	0V	0V
GREEN	A	B
BLUE	-	\bar{B}
WHITE	B	DC +5V
PINK	-	\bar{A}
YELLOW	Z	Z
ORANGE	-	\bar{Z}
SHIELD	CASE GND	CASE GND

RIA 90



시리즈명 방식 축형태 외경 출력펄스수 / 분해능 출력신호 출력회로
 Series Code Shaft Type Out Diameter Output Pulse / Resolution Output Signal Output Circuit

외 관 (OUTER DIMENSIONS)

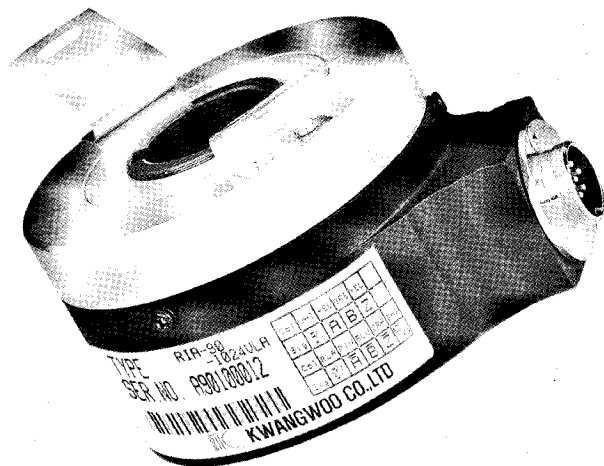


특징 (FEATURE)

- 고 신뢰성
High reliability
- 고속응답성
High response frequency
- 고분해능
High resolution

용도 (APPLICATION)

- Elevator 구동 motor
정지위치 / 속도 검출
Detection for speed & position
of elevator motor
- 대형 MOTOR, 기계
Suitable for big machine, motors



■ 사양 (SPECIFICATION)

전기적 특성 Electrical Spec.		기계적 특성 Mechanical Spec.	
분해능 Resolution	1024/4096 P/R	최대 회전수 Max. Rotating Speed	3,000 rpm
전원 Supply Voltage	DC +5V ±5%	기동 토크 Starting Torque	0.5 N·m (500gcm Max)
소비전류 Current Consumption	140 mA	허용축 하중 Allowable shaft load	반경 방향 Radial ^{196N} 20kg Max
최대 응답 주파수 Max. Response Frequency	150kHz MAX		축 방향 Axial ^{98N} 10kg Max
상승 하강 시간 Rising/Falling Time	0.3μsec	진동 Vibration Resistance	4G, 50Hz
		충격 Shock Resistance	20G, 15msec
		사용 온도 범위 Operating temp. range	0°C ~ +70°C
		보존 온도 범위 Storage temp. range	-20°C ~ +80°C
		BEARING LIFE	1 × 10 ⁴ (h)
		PROTECTION	IP50

출력 회로 Output Circuit	<p style="text-align: center;">Line Driver</p>	<p>주기 비율 Duty Ratio $(a+b, c+d) = T/4 \pm T/8$ $a, b, c, d = T \pm T/2$ $T_z = T/4$</p>
출력 파형 Output Signal	<p style="text-align: center;">$T_z = T/4$</p>	<p>* 본 파형은 취부면에서 봤을 때 시계방향 Signal in CW on the view from the mounting</p> <p>© Cable length : 5m/6m</p>

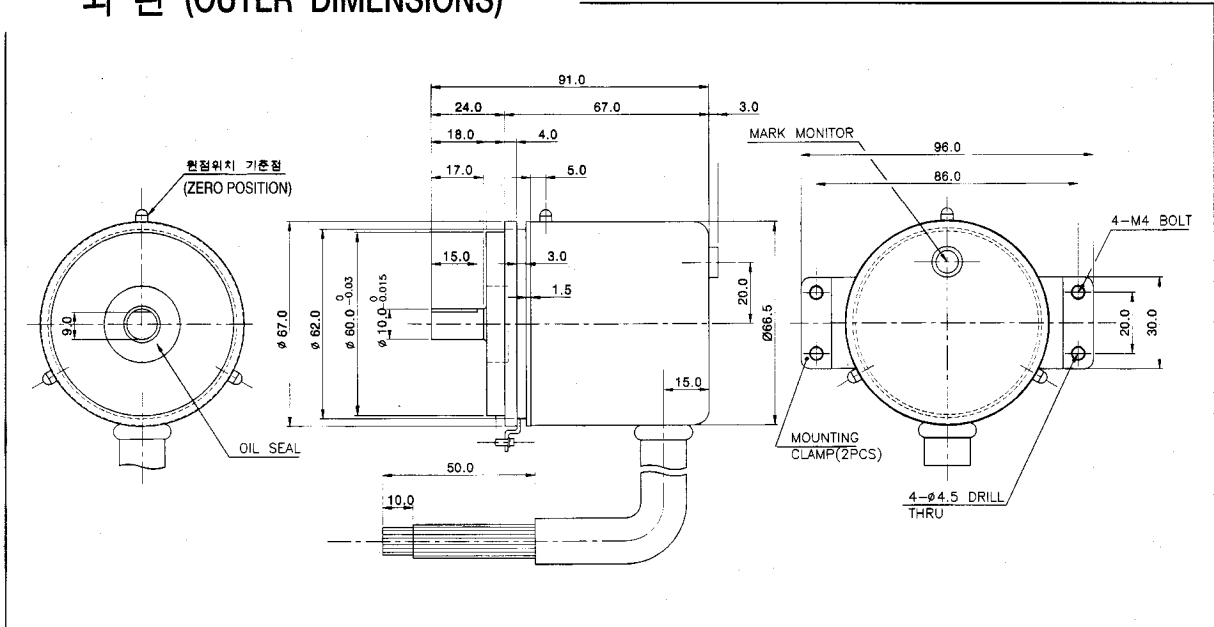
Wire color	Pin No.	Line driver
BROWN	1	A
RED	2	\bar{A}
GREEN	3	B
GRAY	4	\bar{B}
YELLOW	5	Z
ORANGE	6	\bar{Z}
BLACK	7	OV
SHIELD	8	CG, GND
WHITE	9	DC +5V

RAA 60

R A A - 6 0 -

시리즈명 방식 축형태 외경 출력펄스수 / 분해능 출력신호 출력회로
 Series Code Shaft Type Out Diameter Output Pulse / Resolution Output Signal Output Circuit

외 관 (OUTER DIMENSIONS)



특 징 (FEATURE)

- 특수분해
Specially divided
- B.C.D Code로 구성
B.C.D Code

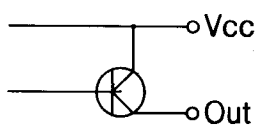
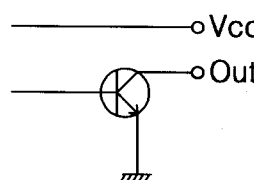
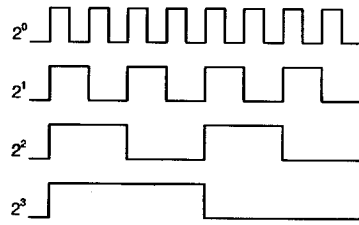
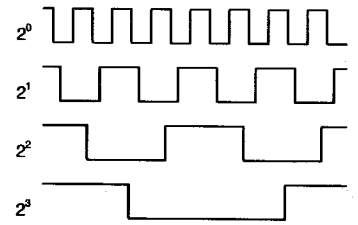
용 도 (APPLICATION)

- NC 공작 기계
NC Machine (Tool changer)



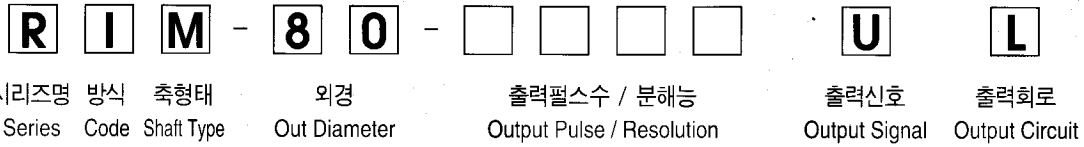
■ 사양 (SPECIFICATION)

전기적 특성 Electrical Spec.		기계적 특성 Mechanical Spec.	
분해능 Resolution	4/6/8/10/12/16/30 Up to 256	최대 회전수 Maximum Rotating Speed	5,000 rpm
전원 Supply Voltage	DC +24V	기동 토크 Starting Torque	200g fcm
소비전류 Current Consumption	90 mA	관성 모멘트 Moment of Inertia	$3.0 \times 10^{-5} \text{kg} \cdot \text{cm}^2$
최대 응답 주파수 Max. Response Frequency	20kHz	허용축 하중 Allowable shaft load	반경 방향 Radial 5kg Max 축 방향 Axial 5kg Max
상승 하강 시간 Rising/Falling Time	PNP	진동 Vibration Resistance	5G (10~55Hz)
	NPN	충격 Shock Resistance	50G, 11msec
		사용 온도 범위 Operating temp. range	-10°C ~ +60°C
		보존 온도 범위 Storage temp. range	-20°C ~ +85°C
		BEARING LIFE	$1 \times 10^4(\text{h})$
		PROTECTION	IP65

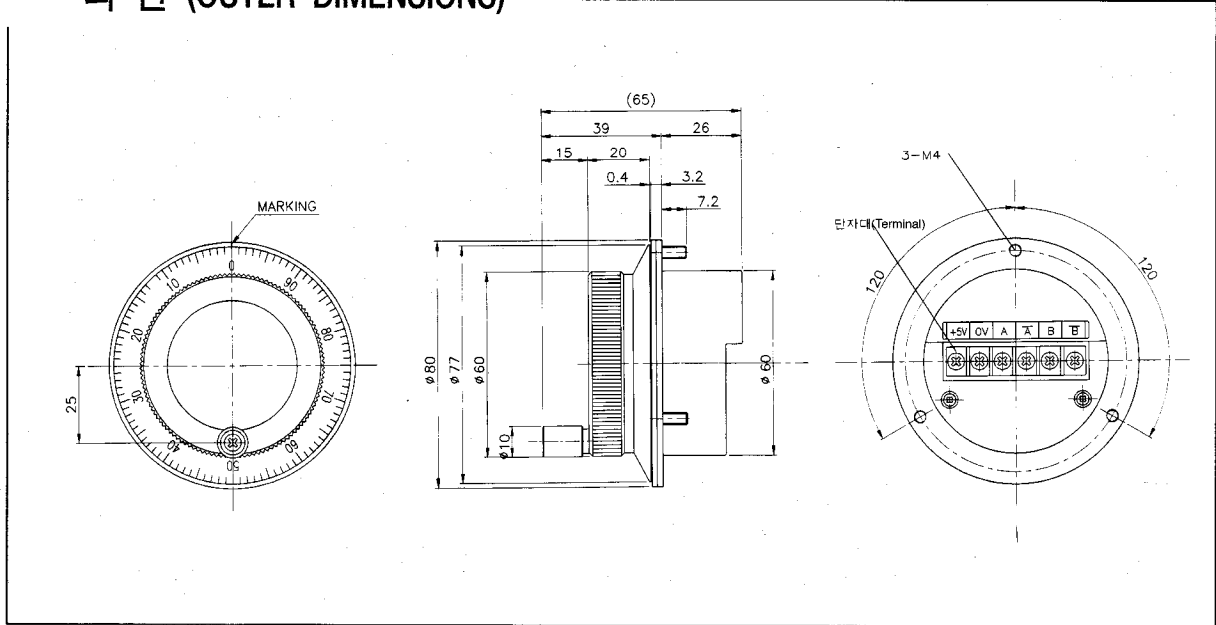
출력 회로 Output Circuit	 <p>PNP Open-Collector</p>	 <p>NPN Open-Collector</p>
출력 파형 Output Signal	 <p>BCD CODE</p>	 <p>GRAY CODE</p>

Wire color	Signal	Wire color	Signal
VIOLET	DC + 24V	RED	2 ⁰
WHITE	0V	ORANGE	2 ¹
BLUE	TP ₁	YELLOW	2 ²
BROWN	$\overline{\text{TP}}_1$	GREEN	2 ³
GRAY	$\overline{\text{TP}}_2$	BLACK	EP

RIM 80



외 관 (OUTER DIMENSIONS)

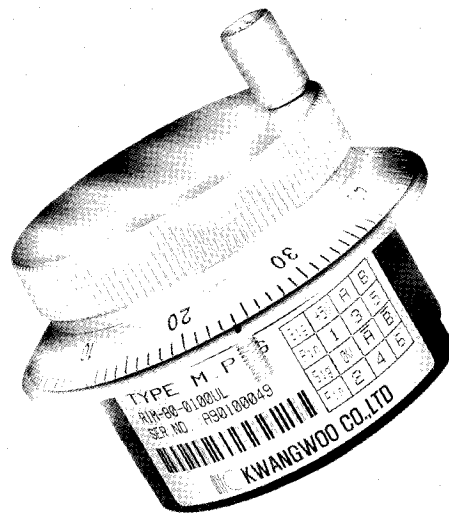


특 징 (FEATURE)

- 반영구적 수명
Long life
- 고 신뢰성
High reliability
- 주문자 Logo 부착 가능
Customized Logo can be attached

용 도 (APPLICATION)

- NC 공작 기계
NC Machine
- NC 밀링기
NC milling machine
- 기타 산업용
Industrial use



■ 사양 (SPECIFICATION)

전기적 특성 Electrical Spec.		기계적 특성 Mechanical Spec.	
분해능 Resolution	100 P/R	최대 회전수 Maximum Rotating Speed	600 rpm
전원 Supply Voltage	DC +5V / +24V	기동 토크 Starting Torque	0.2 ~ 0.6gfcm
소비전류 Current Consumption	2 Type	관성 모멘트 Moment of Inertia	200g 이하
	60mA	허용축 하중 Allowable shaft load	반경 방향 Radial 1kg Max 축 방향 Axial 2kg Max
출력전압 Output Voltage	H	진동 Vibration Resistance	1.5mm (10~55Hz)
	L	충격 Shock Resistance	50G, 11msec
최대 응답 주파수 Max. Response Frequency	5KHz	사용 온도 범위 Operating temp. range	2 Type -10°C ~ +60°C 2D Type 0°C ~ +60°C
출력방식 Output Circuit	Voltage	보존 온도 범위 Storage temp. range	-30°C ~ +80°C
	Line Driver	BEARING LIFE	3 × 10 ⁵ (h)
		PROTECTION	IP40

	2 TYPE	2D TYPE
출력 회로 Output Circuit	<p>Voltage Output</p>	<p>Line Driver</p>
출력 파형 Output Signal	<p>a, b, c, d = T/4 ± T/8</p>	<p>a, b, c, d = T/4 ± T/8</p>

CABLE CONFIGURATION

2 TYPE	2D TYPE
<p>Vcc 0V A B</p>	<p>Vcc 0V A A-bar B B-bar</p>

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