



特点 Features

- 采用专用IC提高抗干扰能力
- 内置浪涌保护，电源反接保护电路
- 寿命长，高可靠性，操作简单，经济实惠
- 红色LED状态指示灯，易于识别运行状态
- IP65防护等级(IEC规格)
- Exclusively designed IC for improving anti-jamming capability
- Inside surge protection, reverse polarity protection
- Long use-life cycle and high reliability, easy install, enconomic price
- Red LED status indication, easy to confirm work situation
- Protection structure IP65(IEC standard)



CG Y 18 □ - D C30 D N A / □ □ □ □ - L2

① ② ③ ④ ⑤ ⑥ ⑦ ⑧ ⑨ ⑩ ⑪ ⑫ ⑬ ⑭

序号 No	项目 Item	代号 Code	说明 Description
①	分类代号 Classification code	CG	光电式 Photoelectric type
②	外形代号 Shape code	Y	塑料圆柱形 Plastic cylinder
		YM	金属圆柱形 Metal cylinder
③	尺寸代码 Size code	18	18=M18、30=M30
④	产品类别 Product category	无	标准型 Normal form
⑤	安装形式 Installation form	D	漫反射 Bloom
		R	镜面反射 Specular reflection
		T	对射 Correlation
		Y	背景抑制 Background suppression
		M	色标检测 Color code detection
⑥	检测距离 Detection distance	C30	C10=10cm、C30=30cm、C50=50cm、C100=100cm
		M1	M1=1m、M5=5m、M10=10m
⑦	工作电压 Operating voltage	A	90...250VAC
		D	10...30VDC
		E	20...60VDC
⑧	输出方式 Output mode	N	NPN
		P	PNP
		K	AC二线 2 wire
		L	DC二线 2 wire
		E	NPN/PNP
⑨	输出状态 Output state	A	NO
		B	NC
		C	NO+NC

国际认证规格 International Certification Specifications

认证规格 Certification specifications	规格 Specifications	文件No. Document
CCC	GB/T 14048.10	请咨询昌得代表处 Please consult the CNTD Representative Office
CE	EN 60947-5-2	

安全规格认证额定值 Safety Specification Certification Rating

CCC(GB/T 14048.10)

类型与额定值 Type and Rating
AC-140 24~250VAC 200mA
DC-13 10~30VDC 200mA

规格 Specifications

漫反射型 Diffuse-reflective type

型号名 Model	CGY12-DC05DNA CGY12-DC05DNB CGY12-DC05DPA CGY12-DC05DPB	CGY12-DC10DNA CGY12-DC10DNB CGY12-DC10DPA CGY12-DC10DPB	CGY18-DC10DNA CGY18-DC10DNB CGY18-DC10DNC CGY18-DC10DPA CGY18-DC10DPB CGY18-DC10DPC	CGY18-DC30DNA CGY18-DC30DNB CGY18-DC30DNC CGY18-DC30DPA CGY18-DC30DPB CGY18-DC30DPC	CGY30-DC50DNA CGY30-DC50DNB CGY30-DC50DNC CGY30-DC50DPA CGY30-DC50DPB CGY30-DC50DPC	CGY30-DC70DNA CGY30-DC70DNB CGY30-DC70DNC CGY30-DC70DPA CGY30-DC70DPB CGY30-DC70DPC
检测距离 Sensing distance	5cm	10cm (可调Adjustable)	10cm	30cm (可调Adjustable)	50cm	70cm (可调Adjustable)
应差距离 Hysteresis	3-20%					
光源 Light source	红外LED (880nm) Infrared LED (880nm)					
消耗电流 Consumption current	25mA以下					
工作电压 Working voltage	10-30VDC					
响应时间 Response time	< 8.2ms					
残留电压 Residual voltage	DC 1V以下 Max. 1V / AC 10V以下 Max. 10V					
温度的影响 Affection by Temp	在-25~+55℃温度范围内+20℃时的检测距离的±10%以内 Max. ±10% for sensing distance at ambient temperature 20℃					
控制输出 Control output	200mA以下 Max. 200mA					
绝缘阻抗 Insulation resistance	50MΩ以上(500VDC为基准) Min. 50MΩ(at 500VDC megger)					
耐电压 Dielectric strength	1500VAC 50/60Hz1分钟 1500VAC 50/60Hz for 1minute					
耐振动 Vibration	10~55Hz(周期1分钟) 振幅1mm X, Y, Z各方向2小时 1mm amplitude at frequency of 10 to 55Hz(for 1 min.) in each of X, Y, Z directions for 2 hours					
耐冲击 Shock	500m/s ² (50G) X, Y, Z 各方向3次 500m/s ² (approx. 50G) X, Y, Z directions for 3 times					
显示灯 Indicator	动作指示灯(红色LED) Operation indicator(red LED)					
使用周围温度 Ambient temperature	-15~+55℃(未结冰状态 No icing)					
储存温度 Storage temperature	-15~+55℃(未结冰状态 No icing)					
使用周围湿度 Ambient humidity	35~95%RH (未结露状态 No condensation)					
保护电路 Protection circuit	浪涌保护电路, 过流保护电路 Surge protection circuit, Overcurrent protection circuit					
材质 Material	外壳/螺母: ABS, 检测面: PMMA, 一般线缆(灰色): 聚氯乙烯(PVC), 耐油性线缆(黑色): 聚氯乙烯(耐油强化型PVC) Case/Nut: ABS, Sensing surface: PMMA, Standard cable(Gray): Polyvinyl chloride(PVC), Oil resistant cable(Black): Oil resistant Polyvinyl chloride(PVC)					
连接线缆 Cable	φ3.8, 3P, 2m		φ4.8, 2P,3P,4P 2m			
	AWG22, 芯线直径:0.1mm, 芯线数:25, 绝缘皮外径: φ1.25mm (AWG22, Core diameter: 0.1mm, Number of cores: 25, Insulator diameter: φ1.25		AWG22, 芯线直径:0.1mm, 芯线数:30, 绝缘皮外径: φ1.25mm (AWG22, Core diameter: 0.1mm, Number of cores: 30, Insulator diameter: φ1.25			
防护等级 Protection	IP65					

规格 Specifications

镜面反射型 Retro-reflective type

型号名 Model		CGY12-RM1DNA CGY12-RM1DNB CGY12-RM1DPA CGY12-RM1DPB	CGY18-RM2DNA CGY18-RM2DNB CGY18-RM2DNC CGY18-RM2DPA CGY18-RM2DPB CGY18-RM2DPC	CGY30-RN4DNA CGY30-RN4DNB CGY30-RN4DNC CGY30-RN4DPA CGY30-RN4DPB CGY30-RN4DPC
检测距离 Sensing distance		1m	2m	4m
应差距离 Hysteresis		3-20%		
光源 Light source		红外LED (880nm) Infrared LED (880nm)		
消耗电流 Consumption current		25mA以下		
工作电压 Working voltage		10-30VDC		
响应时间 Response time		< 8.2ms		
反光板 Reflector	高端型 High-end type	HD08		
	标准型 Standard type	HDE08		
残留电压 Residual voltage		DC 1V以下 Max. 1V / AC 10V以下 Max. 10V		
温度的影响 Affection by Temp		在-25~+55°C温度范围内+20°C时的检测距离的±10%以内 Max. ±10% for sensing distance at ambient temperature 20°C		
控制输出 Control output		200mA以下 Max. 200mA		
绝缘阻抗 Insulation resistance		50MΩ以上(500VDC为基准) Min. 50MΩ(at 500VDC megger)		
耐电压 Dielectric strength		1500VAC 50/60Hz1分钟 1500VAC 50/60Hz for 1minute		
耐振动 Vibration		10~55Hz(周期1分钟) 振幅1mm X, Y, Z各方向2小时 1mm amplitude at frequency of 10 to 55Hz(for 1 min.) in each of X, Y, Z directions for 2 hours		
耐冲击 ShocA		500m/s ² (50G) X, Y, Z 各方向3次 500m/s ² (approx. 50G) X, Y, Z directions for 3 times		
显示灯 Indicator		动作指示灯(红色LED) Operation indicator(red LED)		
使用周围温度 Ambient temperature		-15~+55°C(未结冰状态 No icing)		
储存温度 Storage temperature		-15~+55°C(未结冰状态 No icing)		
使用周围湿度 Ambient humidity		35~95%RH (未结露状态 No condensation)		
保护电路 Protection circuit		浪涌保护电路, 过流保护电路 Surge protection circuit, Overcurrent protection circuit		
材质 Material		外壳/螺母: ABS, 垫片: 塑料, 检测面: 耐热PMMA, 一般线缆(灰色): 聚氯乙烯(PVC), 耐油性线缆(黑色): 聚氯乙烯(耐油强化型PVC) Case/Nut: ABS, Washer: Plastic, Sensing surface: PMMA, Standard cable(Gray): Polyvinyl chloride(PVC), Oil resistant cable(BlacA): Oil resistant Polyvinyl chloride(PVC)		
连接线缆 Cable		φ3.8, 3P, 2m	φ4.8, 2P,3P,4P 2m	
		AWG22, 芯线直径:0.1mm, 芯线数:25, 绝缘皮外径: φ1.25mm (AWG22, Core diameter: 0.1mm, Number of cores: 25, Insulator diameter: φ1.25	AWG22, 芯线直径:0.1mm, 芯线数:30, 绝缘皮外径: φ1.25mm (AWG22, Core diameter: 0.1mm, Number of cores: 30, Insulator diameter: φ1.25	
防护等级 Protection		IP65		

规格 Specifications

对射型 Through-bethod type

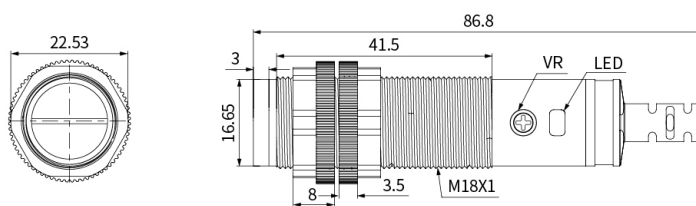
型号名 Model	CGY12-TM3DNA CGY12-TM3DNB CGY12-TM3DPA CGY12-TM3DPB	CGY18-TM5DNA CGY18-TM5DNB CGY18-TM5DNC CGY18-TM5DPA CGY18-TM5DPB CGY18-TM5DPC	CGY18-TM10DNA CGY18-TM10DNB CGY18-TM10DNC CGY18-TM10DPA CGY18-TM10DPB CGY18-TM10DPC	CGY30-TM10DNA CGY30-TM10DNB CGY30-TM10DNC CGY30-TM10DPA CGY30-TM10DPB CGY30-TM10DPC	CGY30-TM15DNA CGY30-TM15DNB CGY30-TM15DNC CGY30-TM15DPA CGY30-TM15DPB CGY30-TM15DPC
检测距离 Sensing distance	3m	5m	10m	10m	15m
应差距离 Hysteresis	3-20%				
光源 Light source	红外LED (880nm) Infrared LED (880nm)				
消耗电流 Consumption current	40mA以下				
工作电压 Working voltage	10-30VDC				
响应时间 Response time	< 8.2ms				
残留电压 Residual voltage	DC 1V以下 Max. 1V / AC 10V以下 Max. 10V				
温度的影响 Affection by Temp	在-25~+55℃温度范围内+20℃时的检测距离的±10%以内 Max. ±10% for sensing distance at ambient temperature 20℃				
控制输出 Control output	200mA以下 Max. 200mA				
绝缘阻抗 Insulation resistance	50MΩ以上(500VDC为基准) Min. 50MΩ(at 500VDC megger)				
耐电压 Dielectric strength	1500VAC 50/60Hz1分钟 1500VAC 50/60Hz for 1minute				
耐振动 Vibration	10~55Hz(周期1分钟) 振幅1mm X, Y, Z各方向2小时 1mm amplitude at frequency of 10 to 55Hz(for 1 min.) in each of X, Y, Z directions for 2 hours				
耐冲击 Shock	500m/s ² (50G) X, Y, Z 各方向3次 500m/s ² (approx. 50G) X, Y, Z directions for 3 times				
显示灯 Indicator	动作指示灯(红色LED) Operation indicator(red LED)				
使用周围温度 Ambient temperature	-15~+55℃(未结冰状态 No icing)				
储存温度 Storage temperature	-15~+55℃(未结冰状态 No icing)				
使用周围湿度 Ambient humidity	35~95%RH (未结露状态 No condensation)				
保护电路 Protection circuit	浪涌保护电路, 过流保护电路 Surge protection circuit, Overcurrent protection circuit				
材质 Material	外壳/螺母: ABS, 检测面: 耐热PMMA, 一般线缆(灰色): 聚氯乙烯(PVC), 耐油性线缆(黑色): 聚氯乙烯(耐油强化型PVC) Case/Nut: ABS, Sensing surface: PMMA, Standard cable(Gray): Polyvinyl chloride(PVC), Oil resistant cable(Black): Oil resistant Polyvinyl chloride(PVC)				
连接线缆 Cable	φ3.8, 3P, 2m	φ4.8, 2P,3P,4P 2m			
	AWG22, 芯线直径:0.1mm, 芯线数:25, 绝缘皮外径: φ1.25mm (AWG22, Core diameter: 0.1mm, Number of cores: 25, Insulator diameter: φ1.25	AWG22, 芯线直径:0.1mm, 芯线数:30, 绝缘皮外径: φ1.25mm (AWG22, Core diameter: 0.1mm, Number of cores: 30, Insulator diameter: φ1.25			
防护等级 Protection	IP65				

外观和尺寸 Appearance and Dimension

CGY18-D

漫反射型

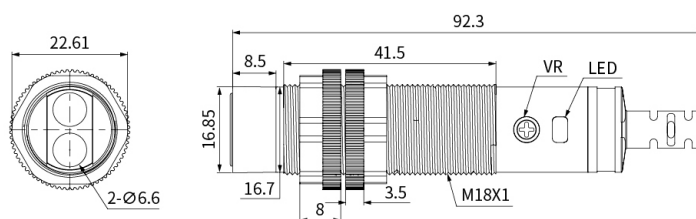
Diffuse-reflective type



CGY18-R

镜面反射型

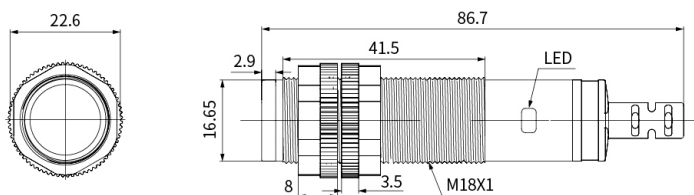
Retro-reflective type



CGY18-T

对射型

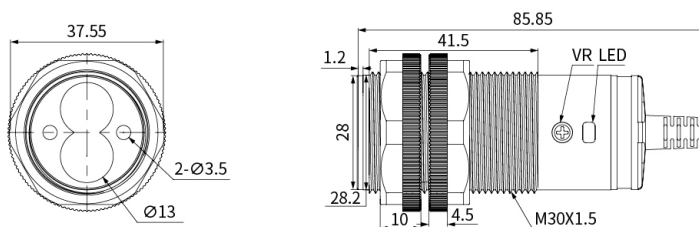
Through-bethod type



CGY30-D

漫反射型

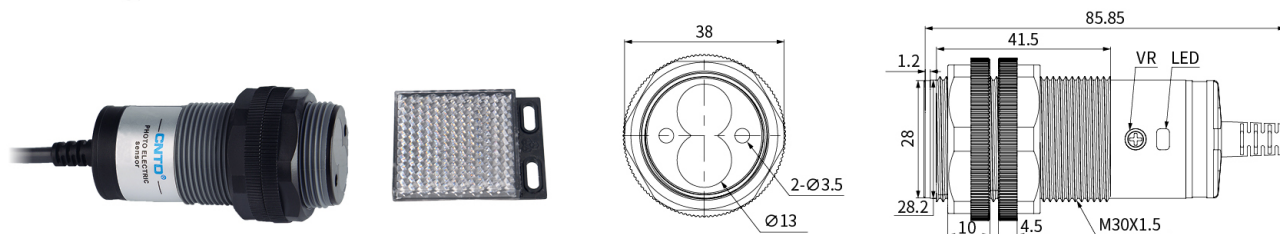
Diffuse-reflective type



外观和尺寸 Appearance and Dimension

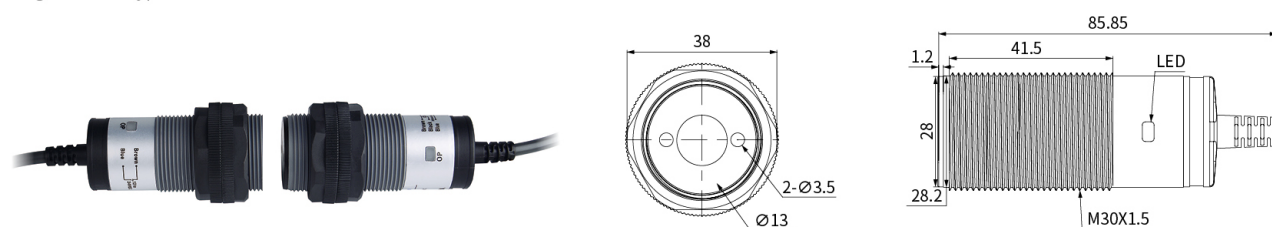
CGY30-R

镜面反射型
Retro-reflective type



CGY30-T

对射型
Through-bethod type



使用注意事项 Using Precautions

本公司产品是作为工业产品而设计生产，严格遵守工业产品标准。我司明确声明，除非经过特殊设计并得到我司明确书面确认，我司产品不适用于以下应用场合：

- 要求极高可靠性的应用场合，包括核能、燃气、电力等要求长期稳定运行的系统。
- 要求极高安全性的应用场合，涉及人身安全与财产的情况。
- 苛刻条件、严酷环境的应用场合，包括室外、存在化学污染、电磁、振动或冲击影响的环境。
- 有火灾或爆炸风险的应用场合，包括存在易燃易爆性气体、强酸强碱化学品等物质的环境。
- 涉及军工用途、航天航空项目的应用场合。

The company's products are designed and produced as industrial products, in strict compliance with industrial product standards. We expressly declare that, unless specifically designed and expressly confirmed by us in writing, our products are not intended for the following applications:

- Applications that require high reliability, including nuclear, gas, electric and other systems that require long-term stable operation.
- Applications requiring very high security, situations involving personal safety and property.
- Applications in harsh conditions, harsh environments, including outdoor, chemical contamination, electromagnetic, vibration or shock effects.
- Applications where there is a risk of fire or explosion, including environments where flammable and explosive gases, strong acids and alkali chemicals are present.
- Applications involving military use and aerospace projects.