



DF-G1 Expert™ Dual-Display Fiber Amplifier

The DF-G1 Series has a simple user interface to ensure easy sensor set-up and programming via displays and switches/buttons, remote input teach wire or IO-Link.

- Easy-to-read dual digital displays shows signal level and threshold simultaneously
- Expert TEACH and SET methods available
- End user has full control over operating parameters, including Light/Dark Operate, output timing functions, gain level and response speed
- Cross talk avoidance algorithm allows multiple sensors to operate in close proximity
- Visible red LED sensing beam for easy alignment
- Light receiver models detect light emission from a wide variety of sources.

DF-G1, 10-30 V DC

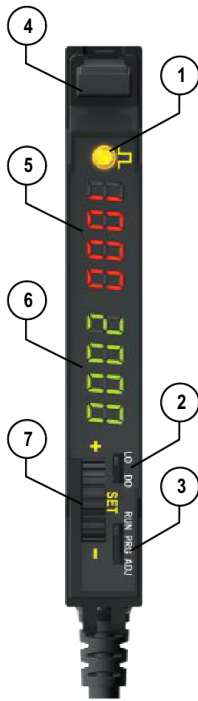
Sensing Mode	Connection	Range	Output	Model
<p>PLASTIC FIBER</p>	2 m	Range varies by Speed Selection used and with fiber optics used. See fibers section on page 274 or reference website for range information.	NPN	DF-G1-NS-2M
	Integral M8 Pico connector		PNP	DF-G1-PS-2M
			NPN	DF-G1-NS-Q7
			PNP	DF-G1-PS-Q7

DF-G1 with IO-Link, 18-30 V DC

Sensing Mode	Connection	Range	Output	Model	
<p>PLASTIC FIBER</p>	2 m	Range varies by Speed Selection used and with fiber optics used. See fibers section on page 274 or reference website for range information.		DF-G1-KS-2M	
	150 mm PVC pigtail, M12 Euro connector		Dual complementary outputs: - 1 push-pull (IO-Link) - 1 PNP		DF-G1-KS-Q5
	Integral M8 Pico connector				DF-G1-KS-Q7

DF-G1 Light Receiver, 10-30 V DC

Sensing Mode	Connection	Range	Output	Model
<p>PLASTIC FIBER</p>	Integral M8 Pico connector	Range varies by response speed used, gain setting, target light source intensity, ambient light level and with fiber optics used. See fibers section on page 274 or reference website for range information.	NPN	DF-G1-NR-2M
			PNP	DF-G1-PR-2M
			NPN	DF-G1-NR-Q7
			PNP	DF-G1-PR-Q7



- 1 Output LED
- 2 LO/DO Switch
- 3 RUN/PRG/ADJ Mode Switch
- 4 Lever Action Fiber Clamp
- 5 Red Signal Level
- 6 Green Threshold
- 7 +/-Set/- Rocker Button

For more specifications see page 255.







Connection options: A model with a QD requires a mating cordset (see page 255).

For 9 m cable, change the suffix 2M to **9M** in the 2 m model number (example, **DF-G1-NS-9M**).
 For M8 Pico pigtail change the suffix 2M to **Q3** in the 2 m model number (example, **DF-G1-NS-Q3**).
 For M12 Euro pigtail change the suffix 2M to **Q5** in the 2 m model number (example, **DF-G1-NS-Q5**).

Cordsets







Euro QD (for Q5 models)


See page 906

Length	Threaded 4-Pin	
	Straight	Right-Angle
1.83 m	 MQDC-406	 MQDC-406RA
4.57 m	 MQDC-415	 MQDC-415RA
9.14 m	 MQDC-430	 MQDC-430RA

Pico QD (for Q3 models)

See page 904

Length	Threaded 4-Pin	
	Straight	Right-Angle
2.00 m	 PKG4M-2	 PKW4M-2
5.00 m	 PKG4M-5	 PKW4M-5
9.00 m	 PKG4M-9	 PKW4M-9

 Additional cordset information available.
See page 902.


Brackets

DF-G1

See page 860

See page 860

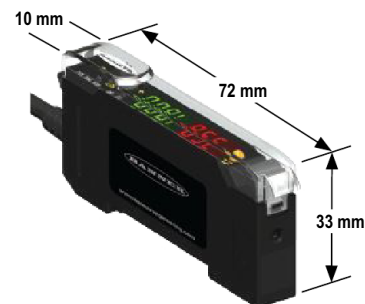
DIN-35..	SA-DIN-BRACKET
	

 Additional bracket information available.
See page 852.

Clamps

DF-G1

SA-DIN-CLAMP



DF-G1 Specifications

Supply Voltage and Current	NPN/PNP Models: 10 to 30 V dc (10% max ripple) Standard Mode: 960 mW, Current consumption < 40 mA @ 24 V dc	IO-Link Models: 18 to 30 V dc (10% max ripple) ECO Display Mode: 720 mW, Current consumption < 30 mA @ 24 V dc
Supply Protection Circuitry	Protected against reverse polarity, over voltage, and transient voltages	
Output Configuration	NPN/PNP Models: 1 current sourcing (PNP) or 1 current sinking (NPN) output, depending on model IO-Link Models: 1 push-pull and 1 PNP (complementary outputs)	
Output Rating	100 mA max. load (derate 1 mA per ° C above 30° C) OFF-state leakage current: NPN/PNP: < 5 µA at 30 V dc IO-Link: < 50 µA at 30 V dc ON-state saturation voltage: NPN: < 1.5 V PNP: < 2 V IO-Link: < 2 V	
Output Protection Circuitry	Protected against output short-circuit, continuous overload, transient over-voltages, and false pulse on power up	
Output Response Time	High Speed: 200 us Standard: 500 us Long Range: 2 ms Extra Long Range: 5 ms Light receiver models: 50 ms, 150 ms	
Delay at Power-up	500 milliseconds max.; outputs do not conduct during this time	
Adjustments	3-way RUN/PRG/ADJ Mode Switch 2-way LO/DO Switch 3-way +/SET/- Rocker Button See datasheet for detailed information	
Indicators	Red 4-digit Display: Signal Level Green 4-digit Display: Threshold Yellow LED: Output conducting (In Program Mode, Red and Green displays are used for programming menus)	
Construction	Black ABS/polycarbonate alloy (UL94 V-0 rated) housing, clear polycarbonate cover	
Environmental Rating	IEC IP50, NEMA 1	
Connections	PVC-jacketed 2 or 9 m 4-wire integral cable, integral 4-pin Pico-style QD, Pico-style QD or Euro QD. See page 255.	
Operating Conditions	Temperature: -10° to +55° C	Storage: -20° to +85° C Relative Humidity: 90% @ 60° C (non-condensing)
Certifications	