

NT 6

Contrast Sensors



0.4 in (9 mm)
sensing distance



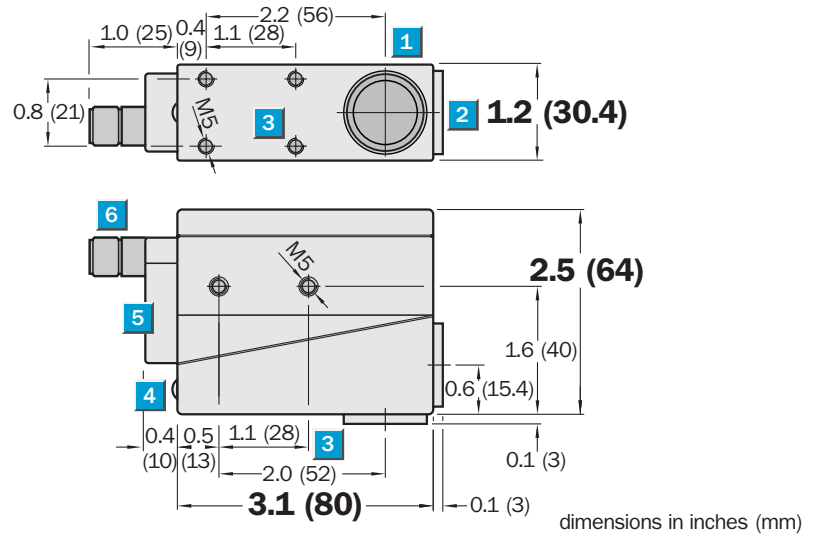
Highlights

- LED light source with two switchable ranges (red/green)
- Changeable lens position
- Selectable light or dark switching
- Status indicator
- Switching frequency up to 10 kHz
- Analog output
- Semi-automatic switching threshold adjustment

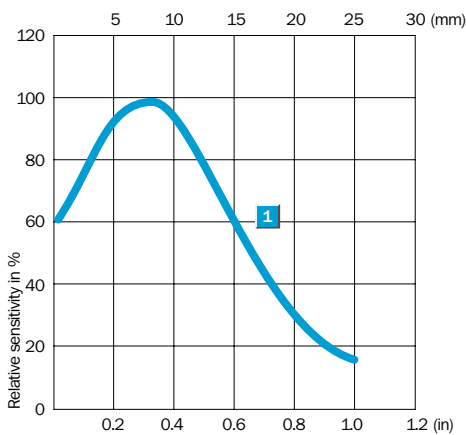
NT 6



Dimensional Drawing



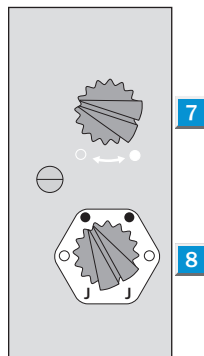
Relative Sensitivity



1 Sensing distance 9 mm

Adjustments

All types



- 1** Blind screw can be replaced by Item **2**
- 2** Lens can be replaced by Item **1**
- 3** M5 threaded mounting hole, 5.5 mm deep
- 4** Output indicator
- 5** Cover for adjuster
- 6** M12 plug,
or 2 m cable with T3104/1 plug,
or 2 m cable
- 7** Control for switching threshold
- 8** Mode selector
- Light switching
- Dark switching

Order Information

Type	Part no.
NT 6-03012	1 005 821
NT 6-03022	1 005 822
NT 6-03018	1 006 367
NT 6-13012	1 005 823
NT 6-13022	1 005 824
NT 6-04012	1 006 474
NT 6-04022	1 006 475
NT 6-04018	1 007 478

Accessories

Accessories	page
Cables and connectors	912
Lens	946

Technical Data		NT 6-	03012	03022	03018	13012	13022	04012	04022	04018
Sensing range from front edge of lens	0.4 in ±0.08 in (9 mm ±2 mm)									
Light type/light spot dimension	Green/0.06 x 0.2 in (1.5 x 5 mm) Red/0.06 x 0.2 in (1.5 x 4 mm)									
Light source³⁾, light type	LED, red, green selectable									
Light spot orientation	Longitudinal Transverse									
Supply voltage V_S	10...30 V DC ²⁾									
Ripple ³⁾	< 5 V									
Current consumption ⁴⁾	< 80 mA									
Switching outputs	Light/dark switching, selectable via switch B: HIGH = V _S - < 2 V/LOW = < 2 V PNP: HIGH = V _S - < 2 V/LOW = 0 V									
Output current I _A max.	200 mA									
Response time ⁵⁾	50 µs									
Max. switching frequency ⁶⁾	To 10 kHz									
Analog output Q_A	0.15...6 V (no reflection to total reflection)									
Connection types	Cable ⁷⁾ with T 3104/1 plug Cable ⁷⁾ without plug Plug, M12 4-pin									
VDE protection class⁸⁾	<input type="checkbox"/>									
Enclosure rating	IP 67/NEMA 6									
Circuit protection⁹⁾	A, B, C									
Ambient temperature T_A	Operation 32...122°F (0...50°C) Storage -13...167°F (-25...75°C)									
Shock/vibration	To IEC 68									
Approximate weight	19 oz (540 g)									
Housing material	Cast metal									

- 1) Average service life 100,000 h at T_A = 25°C
- 2) Limit values
- 3) May not exceed or fall short of V_S tolerances

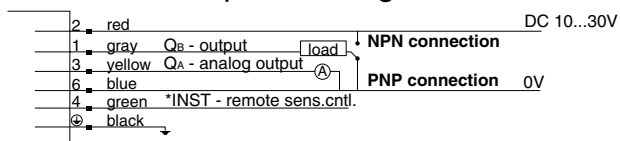
- 4) Without load
- 5) Signal transit time with resistive load
- 6) With light/dark ratio 1:1
- 7) Reference voltage 50 V DC

- 8) A = V_S connections reverse-polarity protected
B = Output Q short-circuit protected
C = Interference pulse suppression

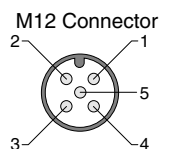
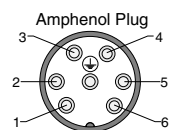
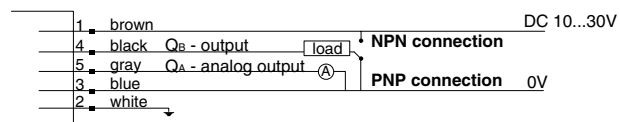
- 9) Part no. 1 004 936
- 10) Part no. 2 009 266

Connection Diagram

Cable and Amphenol Plug Models



M12 Connector Models



*remote sensitivity control available on special models only

wire colors refer to standard cable, not included