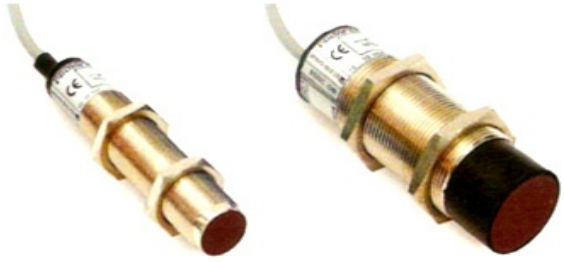
DIFFUSED BEAM SENSOR

WORKING PRINCIPLE :

This device consist of a transmitter and a receiver together. This look alike Inductive Proximity Sensor and hence also known as IR Proximity Sensor. The emitter emits Infra red rays which are reflected on the receiver through the object to be registered. In the use of these sensors, it is important to bear in mind the colour of the object. Light colour corresponds to the maximum distance and vice versa. In case of shiny object; the effect of surface of object is more important than the colour.

Type	Ø (mm)	L (mm)	Sn
DBT - 100	18	90	100 mm
DBT - 200	18	90	200 mm
DBT - 500	30	90	500 mm
DBT - 1K	30	90	1 meter



ADVANTAGES :

- Transmitter and receiver are housed in the same housing.
- As the self reflection of an object is used for detection; Dark & Light marks can be distinguished.

FIELD OF APPLICATION :

These Sensors are particularly used for position sensing and counting of non metallic objects. It is also used for Bottle sensing, Level sensing, Height sensing, Plastic film sensing, Edge detection of paper or sheet metal etc.

TECHNICAL CHARACTERISTICS :

Response Time	:	5 msec
Switching Frequency	:	100 Hz
Operating Voltage	:	10-30 VDC
Maximum Load Current	:	100 mA
Output	:	NPN or PNP
Maximum Current consumption	:	24 mA (OFF)
@ 24V DC (No Load)		34 mA (ON)
Voltage Drop	:	1 V Max
Short Circuit Protection	:	Provided
LED Indicator	:	Provided
Temperature Limit	:	0 - 55° C
Cable	:	2 Mtrs (std.)

CORRECTION FACTOR FOR SENSING DISTANCE

MATERIAL	CORRECTION FACTOR
Standard Paper White	1
Metal Polished	1.2----2.0
Polysterene, White	1.0----1.2
PVC, Grey	0.4----0.8
Wood (rough)	0.5----0.8
Cotton Cloth White	0.5----0.7
Cardboard Black	0.1----0.4

Effective Sensing Range = Sn X Correction Factor

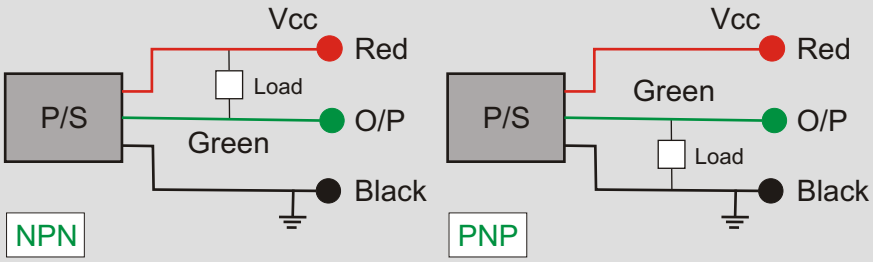
ORDERING CODE		
A Type	B Load Technique	C Load Logic
DBT - 100	P - PNP	O - NO
DBT - 200	N - NPN	C - NC
DBT - 500		
DBT - 1K		

EXAMPLE :

DBT - 100 - P -O

Diffused Beam Sensor, Sensing range 100 mm, PNP, Normally open

CONNECTION DIAGRAMS



Sensor can be used to drive 12 VDC/ 24 VDC Relay, can be coupled to PLC, Digital Counter, RPM indicator etc.

PROXIMON
We Command and Control
ISO 9001 CERTIFIED COMPANY

PROXIMON CONTROLS PVT. LTD.
202, Krishna, Laxmi Industrial Complex,
Pokharan Road No. 1, Vartak Nagar, Thane-400 606, INDIA
Tel.: 91-22-2588 9244 / 45, 2585 4287
Fax: 91-22-2588 9246
e-mail: info@proximon.com Website: www.proximon.com