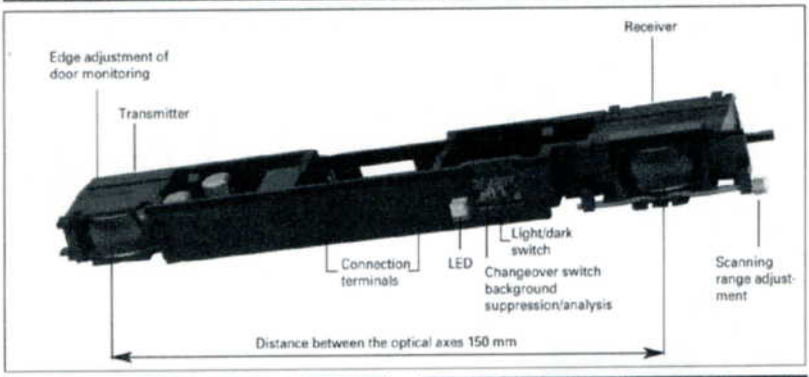
TRITON CONTROLS
TOPSCAN G2
SWING DOOR SENSOR

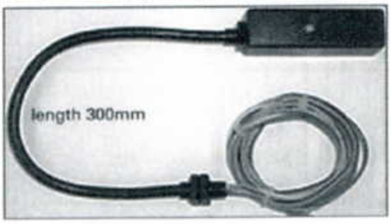
Technical details	Top*scan*	Notes
Scanning range	0–2500 mm	with background **analysis**
Scanning range	500–2500 mm	with background **suppression**
Scanning range adjustment	mech. adjustment screw 1500–2500 mm	triangulation method
Scanning field	approx. 75 x 75 mm	at scanning range 2000 mm
Type of light	IRED	pulsed alternating light 880 nm
black/white-difference (b/w)	20%	at scanning range 2000 mm
Operating voltage	17–30 V DC/18–28 V AC	
Current consumption	< 100 mA	
Signal output	relay, 1 x potential-free switchover contact max. switching voltage 48 V AC max. switching current 1 A/24 V DC max. switching capacity 24 W / 55 VA	 nominal current (ohmic load) 1A/24 V DC ohmic load
Response time	approx. 100 ms	
Fall-delay time	[1] approx. 300 ms [2] approx. 2 s	[1] at a light/dark ratio of 1:1 [2] with operating mode background suppression without object in the background, and with operating mode background analysis when the test input is activated.
Switching mode	light/dark	switchable
Operating mode	background suppression/analysis	switchable
Test input	with +UB=17–30 V DC	**only** with background **analysis**
Function indication	LED red	lights up at detection of an object
Connection	cable terminal	6 x 0.25 mm²
Protection class	IP 52	
Housing material	Alu/ABS	
Front cover	PC (black)	
Distance between optical axes	150 mm	transmitter / receiver
Operating temperature	-20° C to +60° C	
Weight	45 g	without housing
PCB dimensions	198.5 x 31 mm x 20 mm	length/width/height without housing
Housing/color	silver	
Electromagnetic compatibility	CE acc. to EMC directive	89/336 EEC

System components Top*scan*

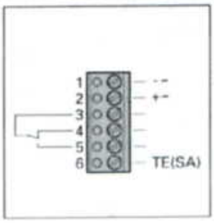


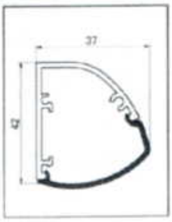
Adjustments

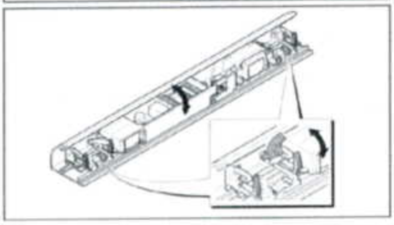
Transition cable (on demand)



Wiring scheme / cross-section







Notes concerning function/mounting

Topscan - sheer brilliance

An info sheet in colors gives the necessary information on our active infared detectors and opto-sensors, with details on method of operation and various criteria for selection. For training purposes the info sheets can be obtained separately.

Particulars on the Topscan G2

The two large-area lenses (one for the IRED transmitter and one for the two photo-pin diodes with daylight filter) have a distance between the optical axes of approx. 150 mm. This results in a cross-section of the light bundle and a detection beam of approx. 75 x 75 mm at a scanning range of 2000 mm.

The relative angle of the two lens systems is adjusted according to the triangulation method, by means of an adjustment screw. Thus, the exactly defined focussing ranges allow accurate adjustment of the scanning range up to max. 2500 mm (see technical details).

The detection beam is perfectly and easily adjusted (angle) using the screen (steps of 5°) on the opto-block 0°- 30°.

Detection beam

The detection beam can be extended like a telescope up to max. 2500 mm and reacts upon any object within the scanning range practically independent of the color and structure of its surface. Reflecting surfaces outside the set maximum scanning range are not recognized even with a high degree of reflection, e.g. corrugated alu sheet or marble floors (with background suppression).

The scanning fields of the individual devices can overlap without any interference.

Operating mode

Background suppression or background analysis switchable using the jumper.

Background suppression

In principle the Topscan G2 can always be mounted either ride-along or static for simple monitoring and triggering functions. The background is «perceived», but not evaluated (ignored). For the switching signal a reflex signal is required from an object within the set scanning range.

- Benefits - Background suppression
- ideal anti-collision protection in rotating or moving direction when mounted ride-along
- no background required
- independent of reflectance value of the background

- Drawbacks - Background suppression
- no detection at close range
- no transmitter failure message
- no possibility of testing

Background analysis

The Topscan G2 belongs to the latest generation of active infrared detectors which can be applied as non-contact safety system with testing possibility.

The transmitter continuously communicates with the receiver via the background (floor). Testing is done by switching off the transmitter with +UB.

The background is used as a reflector. When the light beam is interrupted by an object this triggers a switching signal.

- Benefits - Background analysis
- possibility of testing
- transmitter failure message
- scanning range from 0 mm - therefore ideally suited e.g. for safety sluices
- registers also mirror-like objects (vehicles)

- Drawbacks - Background analysis
- cannot be mounted ride-along
- background is required
- is dependent upon reflectance value of the background. With black, wet and mirror-like backgrounds false signals are possible.

Ordering information

Standard versions

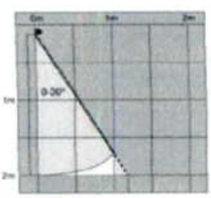
Art. No.	Designation	Color	Length
51820	Topscan G2 1/31 with 1 detector	silver	330 mm
51821	Topscan G2 2/31 with 2 detectors	silver	750 mm
51822	Topscan G2 3/31 with 3 detectors	silver	900 mm

Art. No.	Designation	Color	Length
51823	Topscan G2 1/31 with 1 detector	silver	1000 mm
51824	Topscan G2 2/31 with 2 detectors	silver	1500 mm
51825	Topscan G2 3/31 with 3 detectors	silver	1800 mm

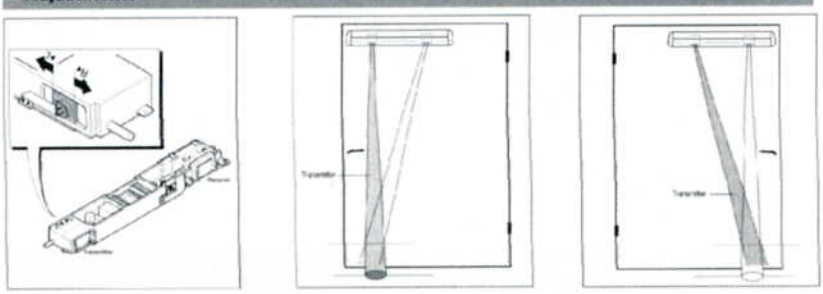
- Special lengths, can be cut to desired length.

Possible scanning ranges

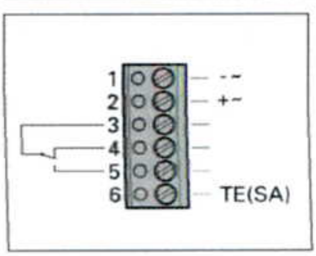
- Mounting height 2 m
- Angle setting 0-30°

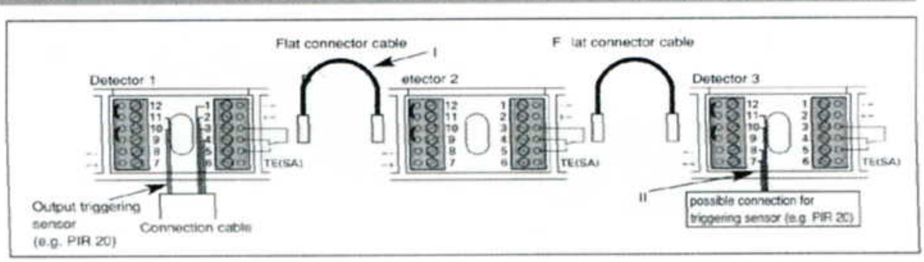


Adjustments



Wiring schemes





IN CONTROL

TRITON CONTROLS LTD, 2 RANDOLPH INDUSTRIAL ESTATE, EVENWOOD, BISHOP AUCKLAND, CO. DURHAM DL14 9SJ

TEL 01388 833000 FAX 01388 833680

WEB. www.tritoncontrols.co.uk e-mail info@tritoncontrols.co.uk