

GENERAL

The Binswitch Mark II is a Capacitance Sensor which detects the presence or absence of liquids and bulk granular material ie grain feeds, seeds and chemicals etc. The Binswitch Mark II is multi voltage and is supplied with a two colour L.E.D and two controls. The L.E.D indicates the presence or absence of material and the time delay sequence when material arrives and leaves. Controls are provided to set the range (sensitivity) and the time delay.

INSTALLATION

The Binswitch may be mounted horizontally or vertically. If the Binswitch must be located in the path of an abrasive material, use in conjunction with the Binswitch Abrasion Shield part no. BAS. It is important that the Binswitch is not located in the direct flow path of an abrasive material.

Three alternative assemblies are available with Binswitch units. See Fig 1A, Fig 1B and Fig 1C.

FIG 1A
CUT AND DRILL HOLES AS SHOWN INTO CONVEYOR, SILO ETC. AND ATTACH MOUNTING PLATE (SMP) USING 6 M8 x 20 (5/16 X 3/4) BOLTS, NUTS & WASHERS OR USE EXISTING LEVEL INDICATOR MOUNTING PLATE, SLIDE BINSWITCH INTO POSITION AND SECURE BY TIGHTENING MOUNTING PLATE ADAPTOR (MPA) **DO NOT OVERTIGHTEN**

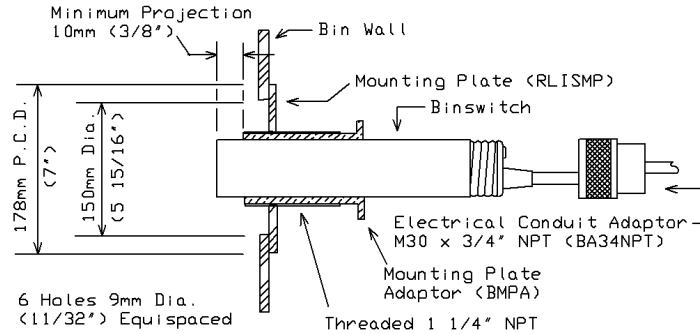


FIG 1B
CUT HOLE AS SHOWN INTO CONVEYOR, SILO ETC. ATTACH MOUNTING GLAND (PG36) USING LOCKNUT. SLIDE BINSWITCH INTO POSITION AND SECURE USING CLAMP. **DO NOT OVERTIGHTEN**

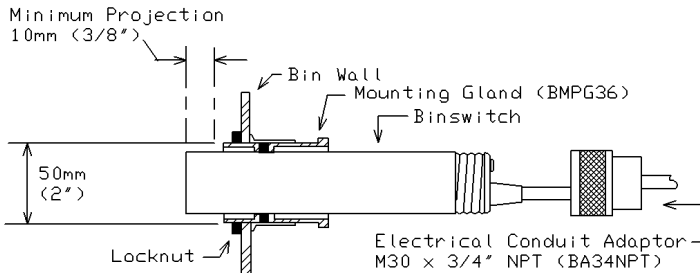
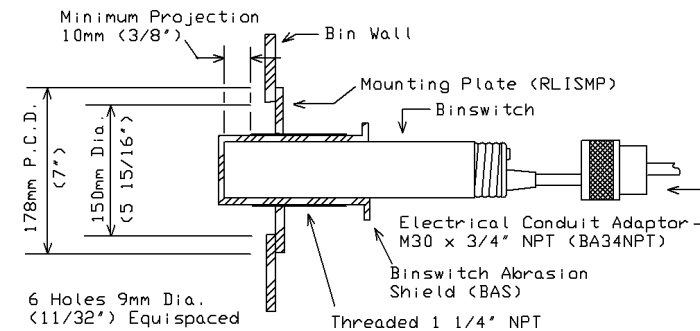
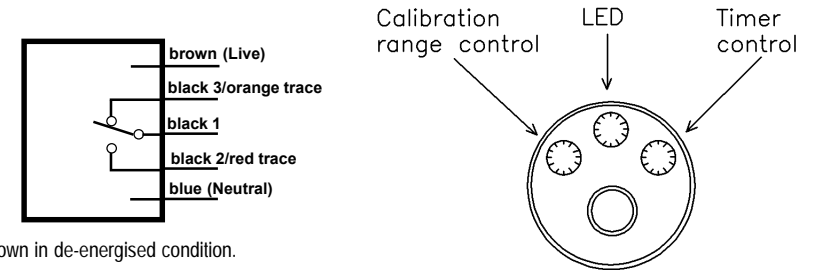


FIG 1A
CUT AND DRILL HOLES AS SHOWN INTO CONVEYOR, SILO ETC. AND ATTACH MOUNTING PLATE (SMP) USING 6 M8 x 20 (5/16 X 3/4) BOLTS, NUTS & WASHERS OR USE EXISTING LEVEL INDICATOR MOUNTING PLATE, SLIDE BINSWITCH INTO POSITION AND SECURE BY TIGHTENING BINSWITCH ABRASION SHIELD (BAS) **DO NOT OVERTIGHTEN**



WIRING DIAGRAM/REAR CONTROLS & INDICATOR.



Contacts shown in de-energised condition.

INSTALLATION & CALIBRATION

1. Connect to power and suitable control circuit
2. Check - No material around the tip of the probe
3. Carefully turn both controls (range & timer) fully counterclockwise to stop
Note! The total movement of the control is 4 full turns. To prevent damage the screw adjuster continues to rotate after 4 full turns.
4. Check the permanent green light is illuminated
5. The unit must be installed before calibration takes place.
With no material around the probe and nothing in contact with the end of the sensor, rotate range control clockwise until light changes to red. Slowly rotate counterclockwise until light changes to green. Optimum setting can usually be obtained by rotating the control a further 10° counterclockwise.
6. The desired time delay is achieved by rotating the timer control clockwise to increase time. Note! The light will flash during timing sequence.

GENERAL SPECIFICATION

Supply - 12-240 VDC, 24-240 VAC

Fuse - Feed from fused supply rated 5 amp max

Ambient Temperature -30° C (-22° F) +70° C (+158° F)

Sensitivity - Detection range 25 mm typical

Output - 1 set of voltage free relay change over contacts rated at 3 AMPS 240 VAC non-inductive.

Fail-Safe - Relay reverts to de-energised state on power failure.

Calibration - Potentiometer (screw driver supplied). Bin must be empty when calibrating.

Indicator - Two colour L.E.D indicates presence or absence of material and timer function sequence. L.E.D flashes when timer is in operation.

Cable - Supplied with 2 metres (6 ft) 5 wire cable.

Connections - See diagram.

Enclosure - Plain body with one end threaded (M30 x 1.5 x 10 mm) to suit conduit threads available - see table.

Protection - IP 67/NEMA 6 & 6P. Dust tight and water resistant.

Timer - Programmable 0-1 or 0-5 mins (on make or break).

ELECTRICAL ADAPTORS & FITTINGS

PART REF	INSTALL
SMP	SIDE MOUNTING PLATE
TMP	TOP MOUNTING PLATE
BMPA	MOUNTING PLATE ADAPTOR
BAS	BINSWITCH ABRASION SHIELD
BMPG36	GLAND MOUNT ASSEMBLY
A34NPT	CONDUIT ADAPTOR M30 TO 3/4NPT

WARRANTY INFORMATION

1. EXCLUSIVE WRITTEN LIMITED WARRANTY

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Please read in its entirety and understand the literature accompanying the product before you place the product into service. Please read the safety precautions carefully before operating the product. With each product you purchase from 4B, there are some basic but important safety considerations you must follow to be sure your purchase is permitted to perform its design function and operate properly and safely, giving you many years of reliable service. Please read and understand the Customer Safety Responsibilities listed below. Failure to follow this safety directive and the Operation Manuals and other material furnished or referenced, may result in serious injury or death.

SAFETY NOTICE TO OUR CUSTOMERS

- A. In order to maximize efficiency and safety, selecting the right equipment for each operation is vital. The proper installation of the equipment, and regular maintenance and inspection is equally important in continuing the proper operation and safety of the product. The proper installation and maintenance of all our products is the responsibility of the user unless you have asked 4B to perform these tasks.
- B. All installation and wiring must be in accordance with Local and National Electrical Codes and other standards applicable to your industry. (Please see the article "Hazard Monitoring Equipment Selection, Installation and Maintenance" at www.go4b.com.) The installation of the wiring should be undertaken by an experienced and qualified professional electrician. Failure to correctly wire any product and/or machinery can result in the product or machine failing to operate as intended, and can defeat its design function.
- C. Periodic inspection by a qualified person will help assure your 4B product is performing properly. 4B recommends a documented inspection at least annually and more frequently under high use conditions.
- D. Please see the last page of this manual for all warranty information regarding this product.

CUSTOMER SAFETY RESPONSIBILITIES

1. READ ALL LITERATURE PROVIDED WITH YOUR PRODUCT

Please read all user, instruction and safety manuals to ensure that you understand your product operation and are able to safely and effectively use this product.

2. YOU BEST UNDERSTAND YOUR NEEDS

Every customer and operation is unique, and only you best know the specific needs and capabilities of your operation. Please call the 24-hour hotline at 309-698-5611 for assistance with any questions about the performance of products purchased from 4B. 4B is happy to discuss product performance with you at any time.

3. SELECT A QUALIFIED AND COMPETENT INSTALLER

Correct installation of the product is important for safety and performance. If you have not asked 4B to perform the installation of the unit on your behalf, it is critical for the safety of your operation and those who may perform work on your operation that you select a qualified and competent electrical installer to undertake the installation. The product must be installed properly to perform its designed functions. The installer should be qualified, trained, and competent to perform the installation in accordance with Local and National Electrical Codes, all relevant OSHA Regulations, as well as any of your own standards and preventive maintenance requirements, and other product installation information supplied with the product. You should be prepared to provide the installer with all necessary installation information to assist in the installation.

4. ESTABLISH AND FOLLOW A REGULAR MAINTENANCE AND INSPECTION SCHEDULE FOR YOUR 4B PRODUCTS

You should develop a proper maintenance and inspection program to confirm that your system is in good working order at all times. You will be in the best position to determine the appropriate frequency for inspection. Many different factors known to the user will assist you in deciding the frequency of inspection. These factors may include but are not limited to weather conditions; construction work at the facility; hours of operation; animal or insect infestation; and the real-world experience of knowing how your employees perform their jobs. The personnel or person you select to install, operate, maintain, inspect or perform any work whatsoever, should be trained and qualified to perform these important functions. Complete and accurate records of the maintenance and inspection process should be created and retained by you at all times.

5. RETAIN AND REFER TO THE OPERATION MANUAL FOR 4B'S SUGGESTED MAINTENANCE AND INSPECTION RECOMMENDATIONS

As all operations are different, please understand that your specific operation may require additional adjustments in the maintenance and inspection process essential to permit the monitoring device to perform its intended function. Retain the Operation Manual and other important maintenance and service documents provided by 4B and have them readily available for people servicing your 4B equipment. Should you have any questions, please call the 4B location who supplied the product or the 24-hour hotline number in the USA -309-698-5611.

6. SERVICE REQUEST AND ONLINE PRODUCT REGISTRATION

If you have questions or comments about the operation of your unit or require the unit to be serviced please contact the 4B location who supplied the product or send your request via fax (309-698-5615), email (4b-usa@go4b.com), or call us via our 24-hour hotline number in the USA - 309-698-5611. Please have available product part numbers, serial numbers, and approximate date of

SEQUENCE OF OPERATION

Material Flow Conditions

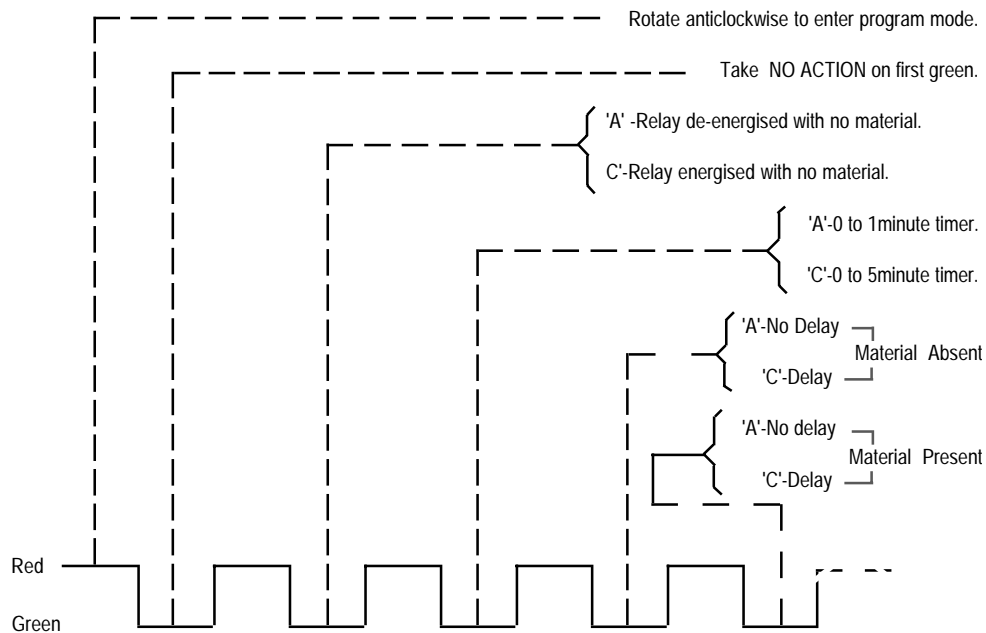
	L.E.D Status
No Material	Permanent Green Light
Material Arrives	Flashing 'Red' light
Material present after timing sequence has lapsed	Permanent 'Red' light
Material leaves	Flashing 'Green' light.
Material absent after timing sequence has lapsed	Permanent 'Green' Light

PROGRAMME SEQUENCE

The unit is factory set as follows (unless ordered specially):- a) 0-5 min. timer. b) Delay on make & break. c) Relay energised with no material. Alternative features can be selected by programming the unit as follows:- To enter program mode rotate time control fully clockwise, apply power and rotate time control fully counterclockwise before the LED changes from red to green. (This takes approximately 3 to 4 seconds)

The unit will step from red to green 5 or 6 times at 0.5s intervals. At each transition to green a separate function may be selected by altering the time control from fully clockwise to fully counterclockwise (or leave in the clockwise position) to select the required function as per the chart below.

'A'=Turn control counterclockwise 'C'= Turn control clockwise.



4B COMPONENTS

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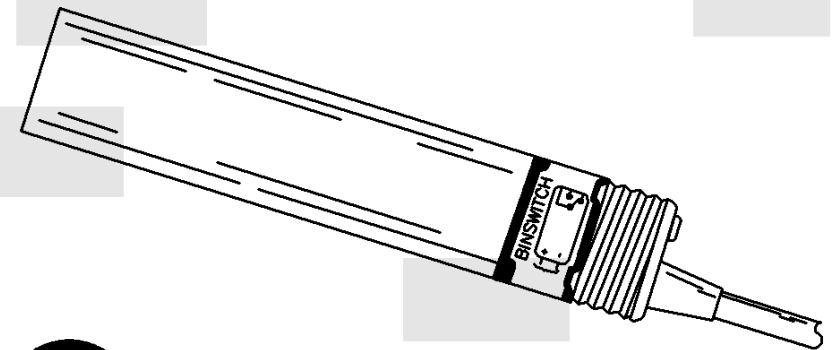
4B BRAIME ELEVATOR COMPONENTS

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BINSWITCH



INSTALLATION INSTRUCTIONS

TECHNICAL INFORMATION

BINSWITCH - PROGRAMMABLE MODEL PART No. BP1V10FC