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File E190355  
Project 98NK6967

September 28, 1998

REPORT

on

PROCESS CONTROL EQUIPMENT  
FOR USE IN HAZARDOUS LOCATIONS

Baran Advanced Technologies  
Omer, Israel

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#### DESCRIPTION

##### PRODUCT COVERED:

Class I, Groups A, B, C and D Hazardous Locations.

Model SMA Piezoelectric Switch, Intrinsically safe when installed in accordance with Baran Control Drawing No. 531-100.

##### GENERAL:

The product covered by this Report is an intrinsically safe piezoelectric switch. The piezoelectric switch is intended for connection to barriers.

##### ENTITY PARAMETERS:

The device has the following entity parameters:

Vmax = 24 V dc  
Imax = 200 mA dc  
Pmax = 1 W  
Ci = 5 nF  
Li = 10 uH

##### MARKINGS:

The marking is provided on a adhesive-backed label and is affixed to the leads of the Piezoelectric Switch. See ILL. 1.

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## DOCUMENTATION:

The device is constructed in accordance with the following drawings:

<u>Title</u>	<u>Drawing No.</u>	<u>Ver.</u>	<u>ILL.</u>
Label	-	-	1
Control Drawing Model SMA Piezoelectric Switch Board	153-001	1	2
Schematic Model SMA Piezoelectric Switch Board		1	3
Assembly Model SMA Piezoelectric Switch Board	152-520	1	4
Bill of Materials Model SMA Piezoelectric Switch Board			5

## CONSTRUCTION DETAILS:

The devices are constructed in accordance with the following Figs., ILLs and descriptive pages. Dimensions are approximate unless specifically indicated otherwise.

Circuit Boards - Circuit boards are R/C-Printed Wiring Material (ZPMV2), manufactured by one of the manufacturer's listed in the R/C Directory. Soldering times and temperatures not to exceed those specified.

Spacings - Spacings have been evaluated and found to be in accordance with Table 8.1 of UL 913, Fifth Edition.

Encapsulation - The entire board is encapsulated and secured in the enclosure by the hard setting encapsulant, manufactured by Polymer G'vulot, Part No. Epusil U 105 rated at least 130°C.

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MODEL SMA PIEZOELECTRIC SWITCH BOARD - FIG. 1

General - Stainless steel with overall dimensions of 3/4 in. in height by 1 in. diameter.

1. Piezoelectric Crystal - Manufactured by Polymer G'vulot, Part No. Epusil U 105 secured against removal by encapsulant.

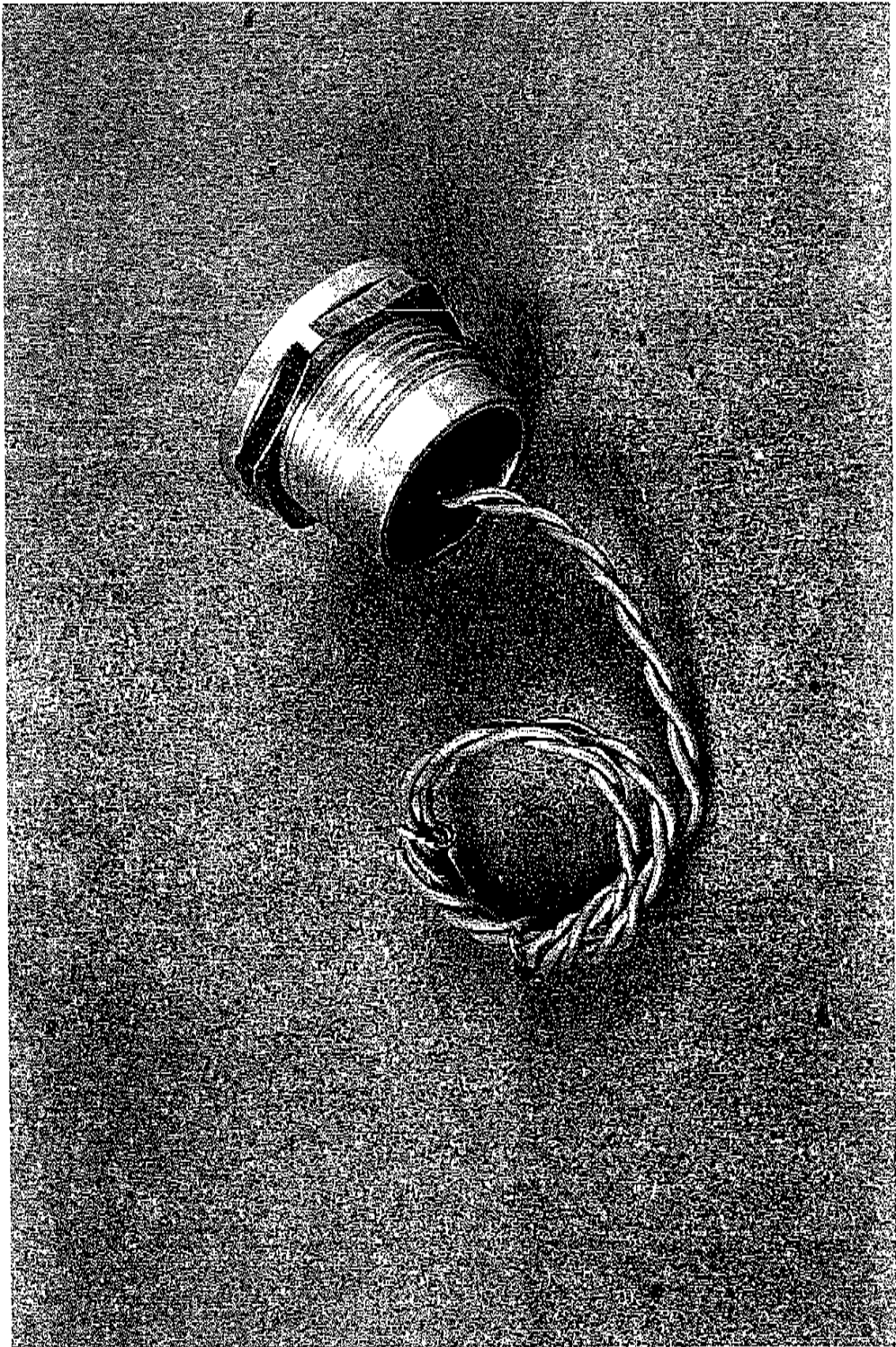
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Fig. 1

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