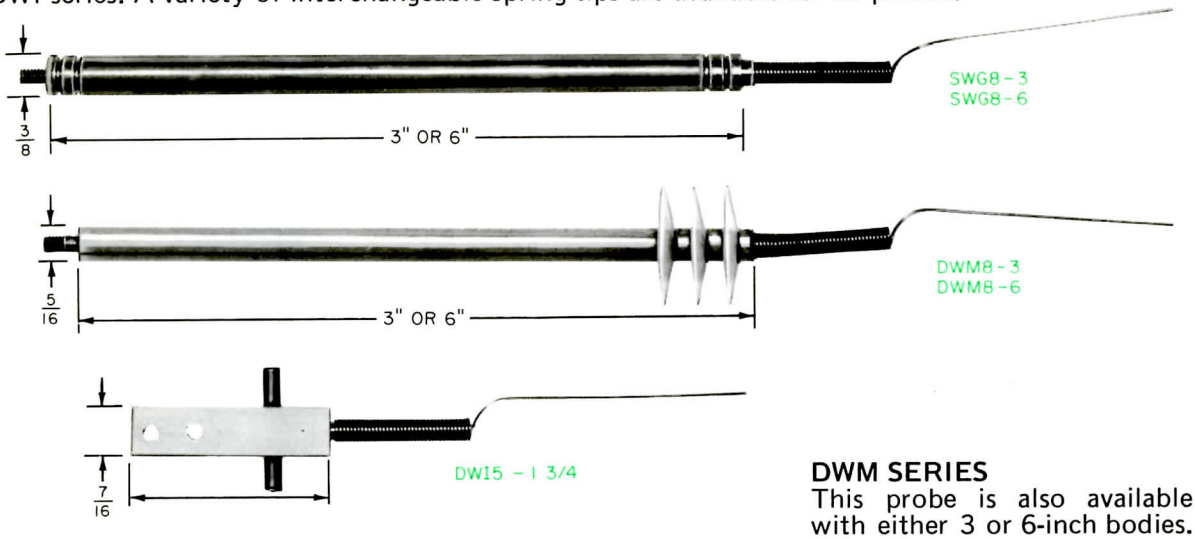
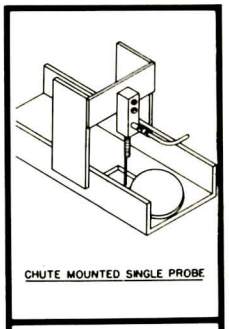
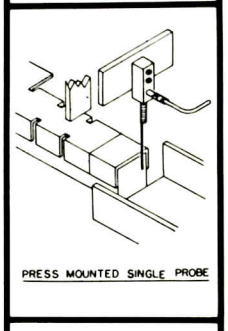
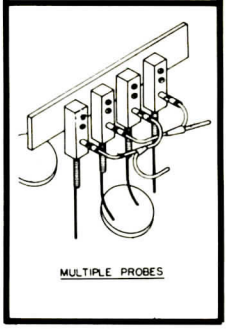
PROBES

These feeler type sensors have many diverse applications for detecting parts transfer from one station to the next on multiple station transfer presses or where small conductive parts are ejected down a narrow chute. Multiple probes can also be used to detect flying conductive parts. Three types of probes are available; the DWM, SWG and DWI series. A variety of interchangeable spring tips are available for all probes.




CHUTE MOUNTED SINGLE PROBE


PRESS MOUNTED SINGLE PROBE


MULTIPLE PROBES

SWG SERIES

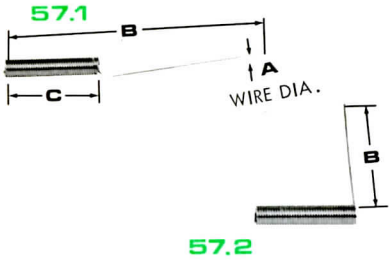
This series of switch probes is available with either 3 or 6-inch bodies. The body is gold plated and grounded to the machine frame when installed. A 1/4-inch defletion of the spring tip probe closes an internal switch which makes contact with the grounded body and sends a GO signal to the Automatic Controller. This probe has applications where the piece part cannot provide a path to ground.

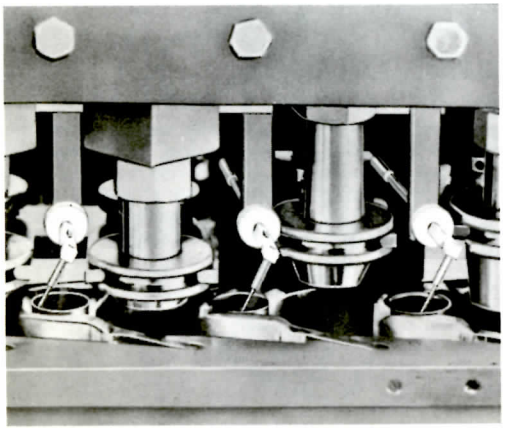
DWI SERIES

This series is similar to the DWM series except it is only available in 1 3/4-inch body lengths. The body is insulated with plastic so that the piece part provides the path to ground. It is intended for applications where very small conductive parts are ejected down a narrow grounded chute. It may be mounted directly to the chute with a bracket or may be press mounted.

DWM SERIES

This probe is also available with either 3 or 6-inch bodies. It is covered with a plastic sheath containing three circular plastic deflection barriers. These barriers deflect water based lubricants to prevent accidental shorting of the probe. The plastic sheath insulates the probe from the machine frame which allows the piece part to provide the path to ground when it contacts the spring tip. This probe has applications where metallic piece parts slide down a grounded chute or similar grounded device.





SPRING TIPS

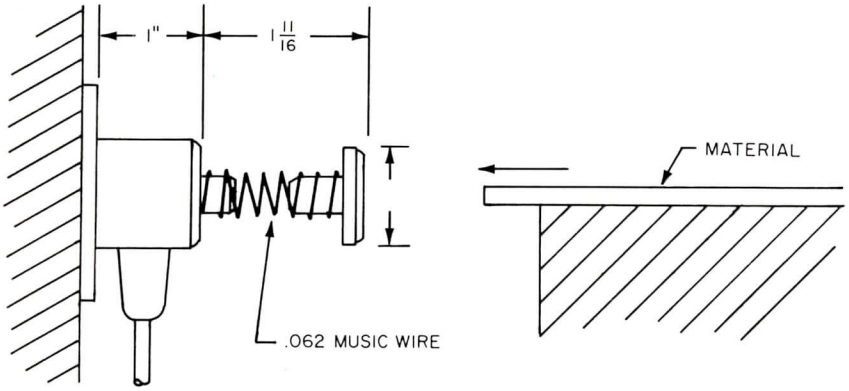
Two styles of spring feeler tips are available for all probes. The 57.1 style has a straight spring tip and the 57.2 style has a right angle spring tip. All tips are fabricated from music wire. Unless otherwise specified, probes are shipped with the 57.1 STAN tip installed. This is a straight tip with an overall length of 3 1/4-inches, a coil length of 1 1/4-inches with a 0.156" ID and is made from .031" O.D. right hand wound music wire. Six other 57.1 styles and eight 57.2 styles are available as indicated below.

57.1 STYLE				57.2 STYLE		
No.	A	B	C	No.	A	B
57.1N	.016	3 1/4	1 1/4	57.2H	.016	2 5/16
57.1A	.026	3 1/4	1 1/4	57.2C	.026	2 5/16
57.1P	.026	4 1/2	1 1/4	57.2D	.026	3 7/8
57.1U	.031	2 1/2	13/16	57.2A	.031	2 5/16
57.1STAN	.031	3 1/4	1 1/4	57.2E	.031	2 5/8
57.1W	.041	3 1/4	1 1/4	57.2B	.031	3 7/8
57.1E	.041	12	1 1/4	57.2G	.031	6
				57.2F	.041	2 5/16

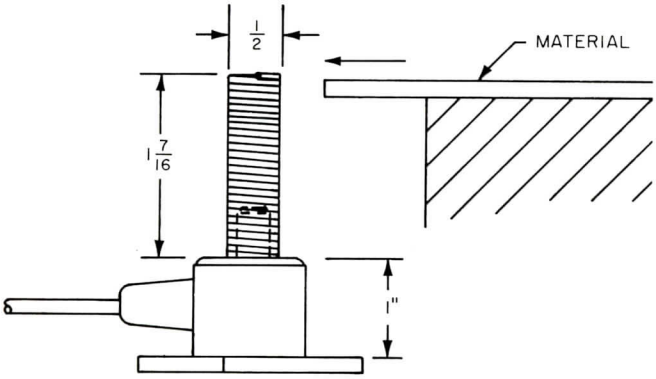
FEED CONTROL SENSORS

These sensors detect events which are independent of the press cycle but if they do occur could cause damage to the press or die. In normal operation, they provide a static output, either a continuously closed circuit to ground or a continuously open circuit from ground. Four types of sensors are available; Short Feed Sensor DB/M05, End of Material Sensor DF05, Buckling Sensor DMO(2)5-1A and Misfeed Control Sensor DN08A.

SHORT FEED

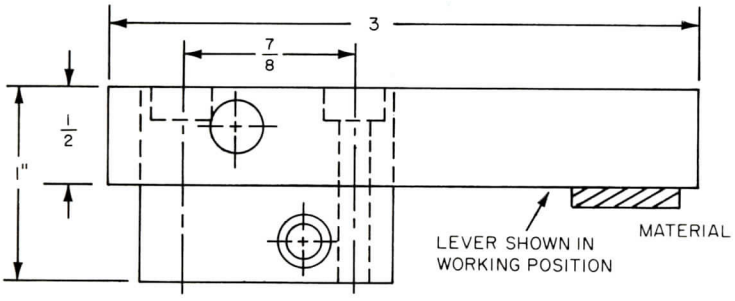


DB/M05

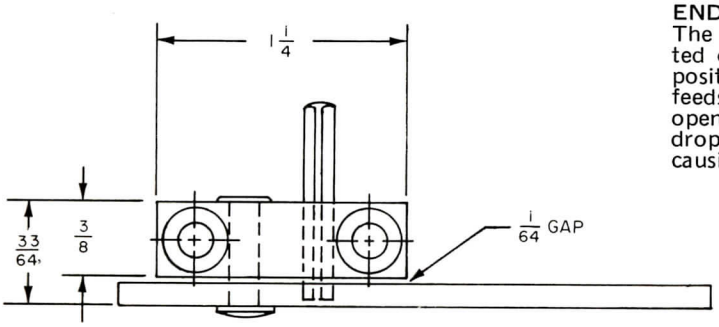


SHORT FEED DB/M05
This is a very rugged spring-type sensor intended for contact with heavy material. Normally it is placed in front of or to the side of the material feed path so that the material just contacts the sensor during normal feed. Continuous contact of this type provides a constant closure to ground (Red Signal) which is applied to the IC-200 Red/Yellow Module in the Automatic Controller as a Feed Control Signal. An alternative application would be for shearing operations where the material makes contact with the Short Feed Sensor and is then sheared off the raw stock. In this case, a momentary closure to ground would occur. This signal would be sent to the IC-400 GO module as a GO signal. A mounting plate and 12-feet of No. 12 AWG wire attached to the sensor are supplied. Two different springs are also supplied for vertical or horizontal operation as shown. They are easily separated from the sensor housing by twisting and pulling off.

END OF MATERIAL



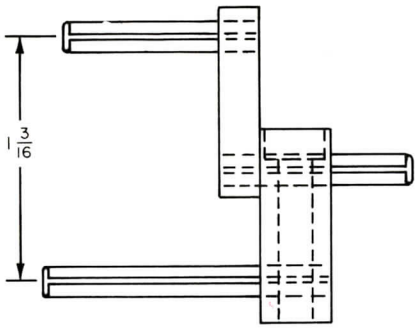
DF05

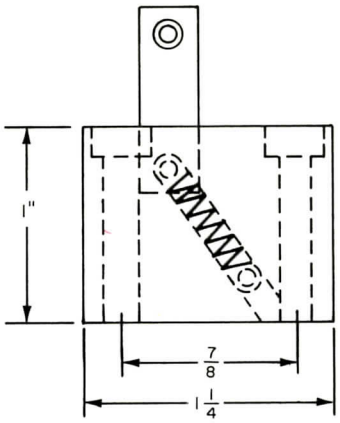


END OF MATERIAL DF05
The block holding the pendulous arm of this sensor is normally mounted on a bracket connected to the press frame ground. The sensor is positioned so that the pendulous arm rides on top of the material as it feeds the press. In this normal, horizontal position, the arm creates an open circuit to ground. When the end of material is reached, the arm drops. This sends a ground signal to the IC-200 Red/Yellow Module causing the press to shut down.

BUCKLING SENSOR

DMO(2)5-1A





BUCKLING SENSOR DMO(2)5-1A

This sensor is located before the die after the feed rollers at the point most likely to buckle. The insulated block is positioned such that the material passes mid-way between the two arms under ideal feed conditions. The top, moveable arm allows adjustment to compensate for normal material movement with an upper limit of approximately 1 3/16-inches. Without material buckling, an open circuit from ground is present at the output of the sensor continuously. If the material buckles enough to touch either the upper or lower arm, a ground signal is sent to the IC-200 Module to stop the press.

MISFEED CONTROL

DN08A

PILOT ACTUATOR DN08A

Applications of this Pilot Actuator sensor include those cases where it is not possible to use Short Feed Sensor DB/M05 to verify proper feed. The Pilot Actuator is threaded into the ram or upper die set as shown. It is driven by a pilot punch which can be purchased from a local supply house. In the application shown below, the stock is moving from right to left and the hole punch creates a pilot hole in the skeleton on each stroke. If the material is being fed properly, on the next stroke the pilot punch passes through the pilot hole with no interference while simultaneously the hole punch creates another hole in the skeleton. This operation continues as long as the material is fed properly. An open circuit from ground is present continuously at the output of the Misfeed Control. If the material skews or for any reason misfeeds, on the next stroke the pilot punch hits the skeleton. This drives it back up into the upper die set contacting the Pilot Actuator which sends a ground signal to the IC-200 module to stop the press.

An alternative application would be to allow the pilot punch to pass through the hole remaining in the stock after a normal punching or stamping operation although punching a pilot hole in the skeleton is usually a more reliable method. Displacement or compression of the pilot punch by as little as .080 inches actuates the Misfeed Control to stop the press.