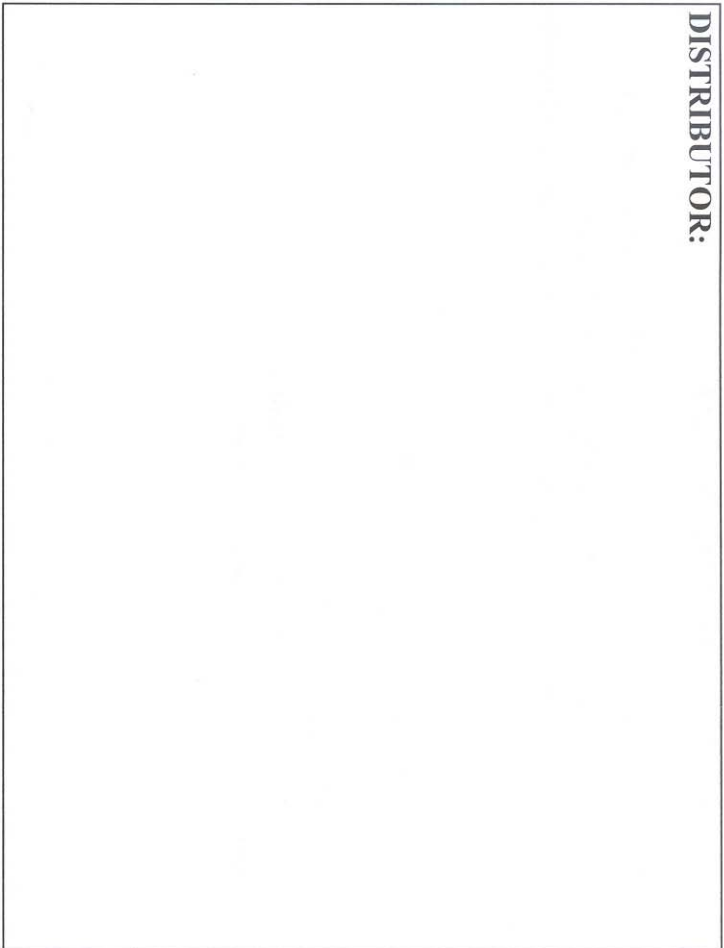


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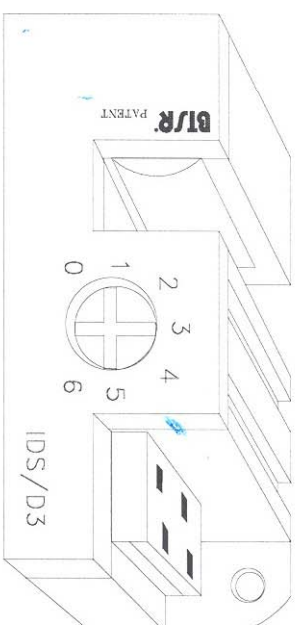
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# ***IDS***

## ***IMAGE DEVICE SENSOR***



**B TSR** ® PATENT

ENGLISH

# INDEX

<b>INTRODUCTION</b>	page	A
-Description of IDS		
-Technical characteristics	page	B-C-D
-Description of IDS device	page	E
-Graph demonstrating reaction time of IDS device	page	F
-Graph demonstrating sensitivity range of IDS device	page	G
-How to use ENABLE signal	page	H
-How to use STOP signal	page	I

# HOW TO UTILIZE THE STOP SIGNAL.

The IDS unit has a transistorized stop output NPN in open collector. Fig. 1 shows transistor "off" with yarn running no fault indicated. Fig. 2 shows transistor "on" with yarn not running or missing and therefore yarn fault indicated.

## CHARACTERISTICS OF TRANSISTOR.

- 60V VCC = max usable voltage
- 300 MA IC = max continual current usable
- 500 MA IC = max peak current usable

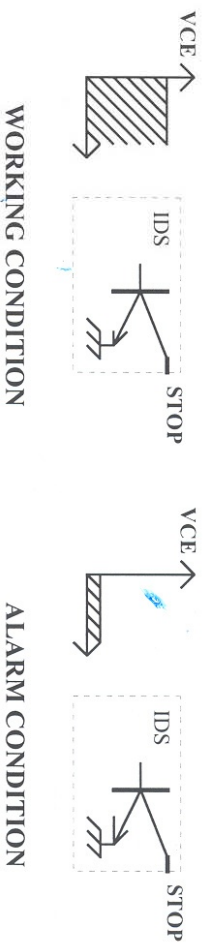


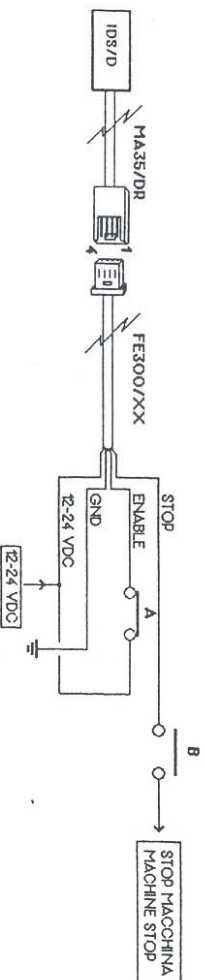
FIG. 1

FIG. 2

If it is necessary to use stop output with PNP transistor instead of NPN BTSR can supply a conversion cable to convert signal to PNP. (E.g. MA35/PN = 35 cm. cable with PNP transistor).

## HOW TO UTILIZE THE ENABLE SIGNAL AND HOW TO EXCLUDE THE STOP SIGNAL.

- A) (**ENABLE**) Contact which at the moment that the machine is stopped sends the positive of power supply to the **ENABLE** signal, memorizing the sensors condition at the moment the machine was stopped.
- B) (**STOP**) Switch fitted on IDS support bracket which interrupts the stop signal or power supply of IDS device (in case of needing to "switch off" IDS units).



## INTRODUCTION

### -TECHNOLOGY.

Thank you for purchasing a BTSR product.  
In doing so you have brought a unique product able to offer many advantages in your production control

The IDS "Image Device Sensor" is an electronic sensor which, due to its sophisticated and patented control system, is able to detect the **IMAGE VARIATION** of a moving yarn without any actual physical contact and such can monitor any yarn, indicating with absolute certainty whether or not the yarn is moving or stopped.

### -NO CONTACT.

The new IDS sensor opens new horizons in yarn movement control on textile machinery and if fact the **IMAGE VARIATION** technique requires no physical contact with the yarn and as such will not have any adverse effect on the yarns characteristics such as tension of the yarn.

### -RELIABILITY.

The IDS is extremely reliable in fact the **IMAGE VARIATION** technique sets new standards for electronic monitoring of yarn movement by eliminating many of the technical problems associated with other types of sensor which may be sensitive to atmospheric conditions like, humidity, (capacitive or electrostatic sensors) vibration an noise, (piezoelectric sensor) or yarn dust build up (photo cell type sensors), which can all have a limiting effect on their suitable application.

### -APPLICATION.

The IDS sensor can be used to control all types of yarn from the heaviest to the lightest (less than 10 denier) and can be fitted to any type of textile machine.

For any technical or commercial problems please contact your local BTSR agent or distributor otherwise contact us directly and we will be happy to assist you.

All BTSR products are patented and utilize exclusive and original advantages by their use of high technology.



## TECHNICAL CHARACTERISTICS.

The external dimensions of IDS sensors considering the high complexity of it's internal circuitry, is very small (12x15x30) which allows them to be fitted in many otherwise inaccessible places.

## TECHNICAL CHARACTERISTICS OF SENSORS IDS/D, IDS/B, IDS/T, and IDS/N.

### IDS/D

Electronic yarn movement sensor for sewing machinery.  
Response time 50 msecs.  
Sensitivity 0/10.  
Adjustment 0=2, 1=2,5, 2=3, 3=4, 4=5, 5=10, 6=40.  
Power supply 12-24VDC.  
Consumption 12 mA.  
Output O.C. 300 mA.

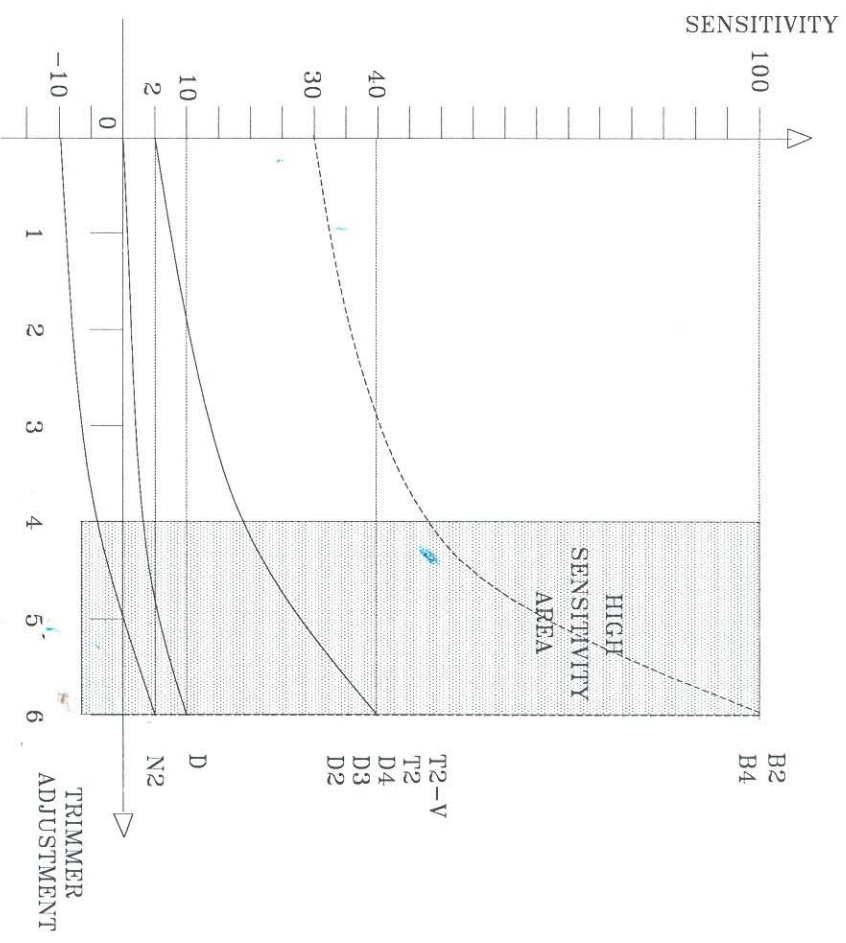
### IDS/D2

Electronic yarn movement sensor for winding, spinning, texturing, twisting machines etc.  
Response time 50 msecs.  
Sensitivity 2/40.  
Adjustment 0=2, 1=2,5, 2=3, 3=4, 4=5, 5=10, 6=40.  
Power supply 12-24VDC.  
Consumption 12 mA.  
Output O.C. 300 mA.

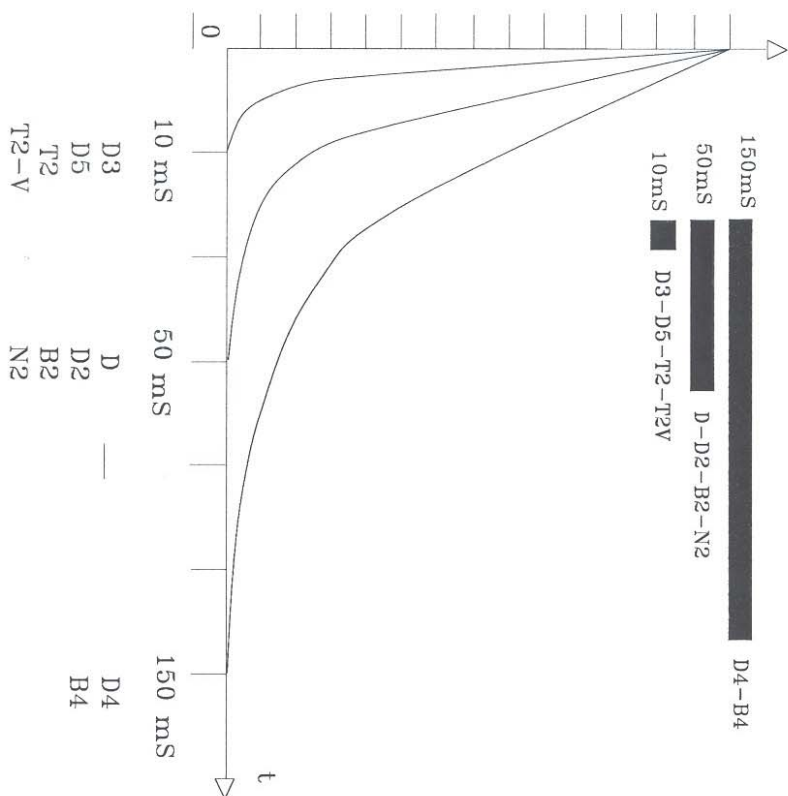
### IDS/D3 - IDS/D5

Electronic yarn movement sensor for winding, spinning, texturing, twisting machines etc.  
Response time 10 msecs.  
Sensitivity 2/40.  
Adjustment 0=2, 1=2,5, 2=3, 3=4, 4=5, 5=10, 6=40.  
Power supply 12-24VDC.  
Consumption 12 mA.  
Output O.C. 300 mA.

## GRAPH DEMONSTRATING SENSITIVITY RANGE OF IDS DEVICE.



GRAPH DEMONSTRATING REACTION TIME OF IDS DEVICE.



**IDS/D4**

Electronic yarn movement sensor for ladies hosiery machine.

Response time 150 msecs.

Sensitivity 2/40.

Adjustment 0=2, 1=2.5, 2=3, 3=4, 4=5, 5=10, 6=40.

Power supply 12-24VDC.

Consumption 12 mA.

Output O.C. 300 mA.

**IDS/B2**

Electronic yarn movement sensor for tensioned Lycra for winding, spinning, texturing, twisting machines etc. (high sensitivity).

Response Time 50 msecs.

Sensitivity 30/100.

Adjustment 0=30, 1=35, 2=40, 3=47, 4=55, 5=70, 6=100.

Power supply 12-24VDC

Consumption 12 mA.

Output O.C. 300 mA.

**IDS/B4**

Electronic yarn movement sensor for tensioned Lycra for uses with memminger IRO units (high sensitivity).

Response Time 150 msecs.

Sensitivity 30/100.

Adjustment 0=30, 1=35, 2=40, 3=47, 4=55, 5=70, 6=100.

Power supply 12-24VDC

Consumption 12 mA.

Output O.C. 300 mA.

**IDS/T2**

Electronic yarn movement sensor for double yarn.

Response time 10 msecs.

Sensitivity 2/39

Adjustment 0=2, 1=2.5, 2=3, 3=4, 4=5, 5=10, 6=39.

Power supply 12-24VDC

Consumption 12 mA max.

Output O.C. 300 mA.

## IDS/T2V

Electronic yarn movement sensor for double yarn with external sensitivity adjustment.

Response time 10 msecs.

Sensitivity 2/39

Adjustment 0=2, 1=25, 2=3, 3=4, 4=5, 5=10, 6=39.

Power supply 12-24VDC

Consumption 12 mA max.

Output O.C. 300 mA.

## IDS/N2

Electronic "Knot" sensor.

Response time 50 msecs.

Sensitivity -10/2.

Adjustment 0=-10, 1=-9, 2=-8, 3=-7, 4=-5, 5=1, 6=2.

Power supply 12-24VDC.

Consumption 12 mA.

Output O.C. 300 mA.

**ERROR INDICATION:** Red led to indicate yarn stopped or missing  
**ENABLE SIGNAL:** "Memory" to show which sensor determined the error.  
**SENSITIVITY:** Adjustable by a trimmer.

## DESCRIPTION OF IDS DEVICE.

