



## DSD-3 Differential Speed Detector

## TECHNICAL SPECIFICATION



## Want to monitor your conveyor belt for slippage, Automatically?

The *DSD-3 Differential Speed Detector*, by actually computing the plus or minus speed relationship of the tail to the head pulley and comparing this with percentage slip setpoints, will alarm your operator when slippage occurs.

The DSD-3 is the ultimate in conveyor loss of motion detection. A minimum percent speed feature checks for mechanical failure between the motor and the tail pulley. Each of these features has its own time delay after start-up and one common time delay to allow the DSD-3 to ignore nuisance alarms and/or shutdowns.

A unique start-up detection circuit will alarm and /or shutdown if the head pulley spins when the motor is first started. The four alarms are fed to a first out annunciator and latch-in the relay output circuit. Reset of the relay can be manual or automatic.

### **Benefits:**

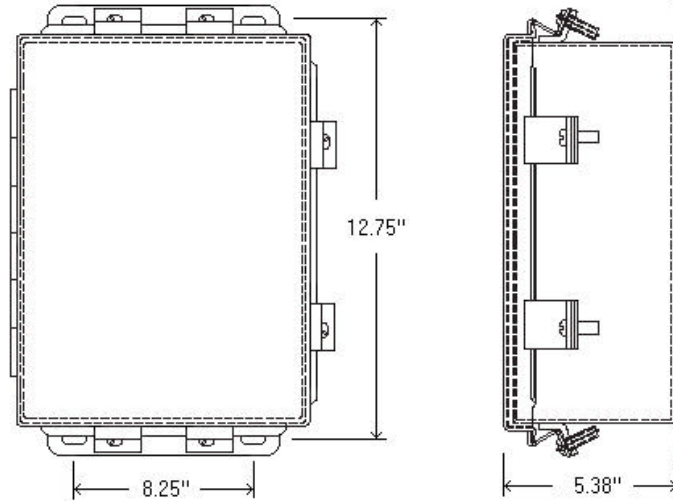
- Elimination of production loss due to faulty belts
- Reduced belt wear
- Greater ability to monitor remote or very long belt conveyors
- Earlier warning regarding dangerous conveyor conditions

### **Features:**

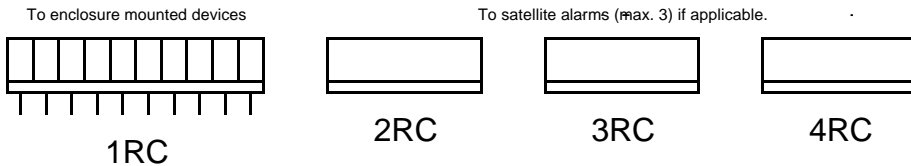
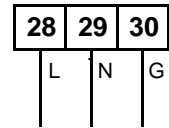
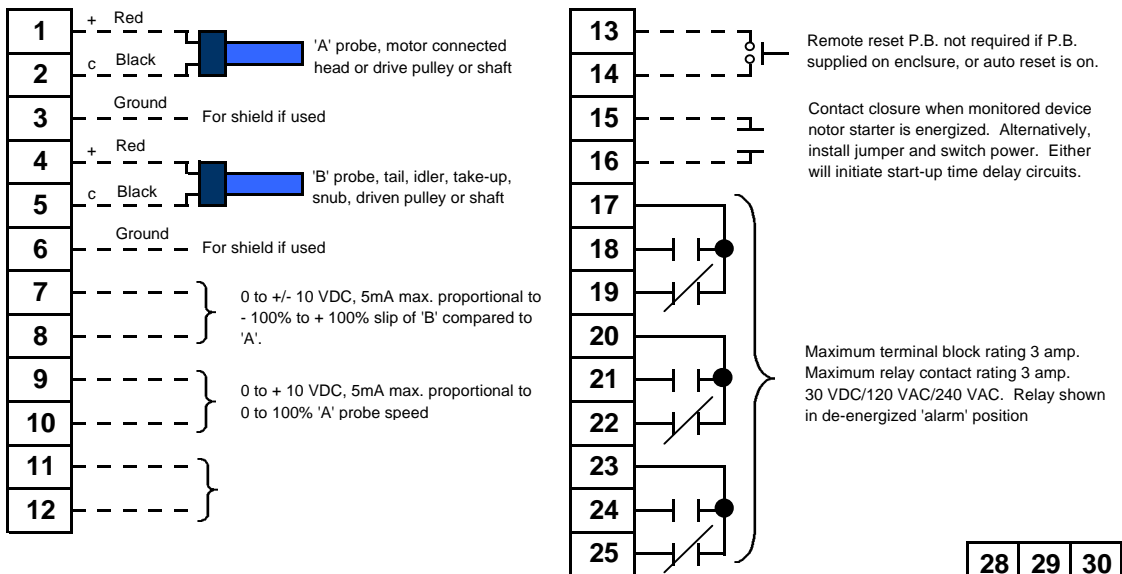
- LCD speed/slip meter with 3-position switch to monitor each sensing probe and their differential
- Reset pushbutton to switch off alarm
- Up to 6 auxiliary (3 dual point) alarms
- Up to 25,000 foot cable separation



# DRAWINGS



# INTERCONNECTION



Supply voltage  
115 VAC 50/60 Hz.  
or optional  
220 VAC 50/60 Hz.  
Both 25 VA

## TECHNICAL SPECIFICATIONS

### Linearity:

- 0.4% of full scale from 4% to 100%
- Slip, 1.0% of full scale

### Outputs:

- 3 Form C Contacts (3PDT) rated at 3A 120/240 VAC, Resistive
- Tail Pulley Speed, 0 - 10 VDC
- Head Pulley Speed, 0 - 10 VDC
- % Slip, -10 to 0 to +10 VDC

### Power Requirements:

- 115 VAC, 50/60 Hz, 20 VA
- 230 VAC, 50/60 Hz, 20 VA

### Start-up Time Delay

- Minimum Tail Belt Speed, 0 - 100 seconds
- Percent Slip, 0 - 20 seconds
- Percent Over-slip, 0 - 20 seconds

### Span:

- Each Adjustable from 0 - 8 to 0 - 7200 PPM for 0 - 100% speed

### Setpoints:

- Each Adjustable from 0 - 8 to 0 - 7200 PPM
- Minimum Tail Belt Speed, 0 - 100%
- Percent Slip, 0 - 20%
- Percent Over-slip, 0 - 20%

### Alarm Delay:

- 0 - 20 seconds, common to all signals but Start - Spin

### Temperature Ranges:

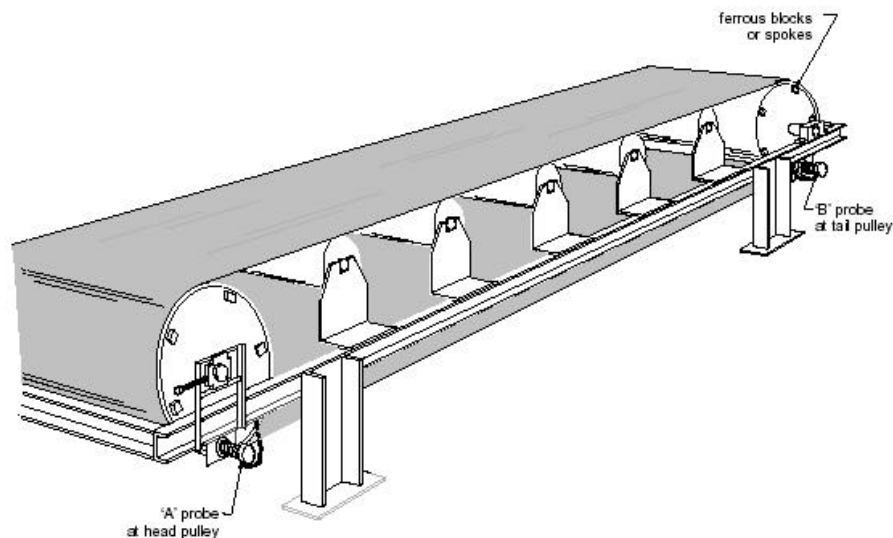
- DSD-3 Electronics -40 to 140 degrees F
- Remote Amp Board -40 to 140 degrees F
- LCD Meter -14 to 140 degrees F
- Dual Alarm Card -40 to 140 degrees F

## COMMON APPLICATIONS AND INDUSTRIES SERVED

### INDUSTRIES SERVED

Cement, Mining, Power, Milling, Food & Beverage, etc.

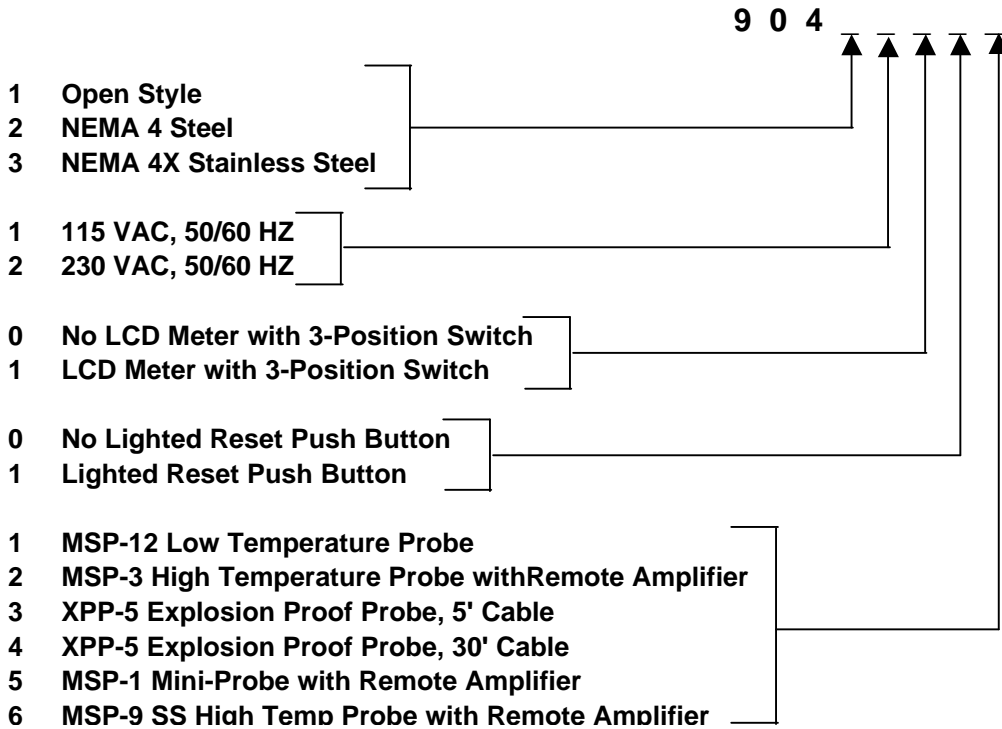
## TYPICAL EQUIPMENT INSTALLATION



## ORDERING INFORMATION

*DSD-3*

### Differential Speed Detector



## SPARE PARTS

Mother Board, 115 VAC	51009291
Mother Board, 230 VAC	51009292
Daughter Board	51009281
LCD Meter	51007611
Remote Mounted Preamp	51012461
Dual Alarm Card	51007421
Fuse, Box of 5, 1/10 Amp (for 230 VAC)	22550055
Fuse, Box of 5, 4/10 Amp (for 115 VAC)	22550067
Extra Manual	IM-4

## COMMERCIAL TERMS AND CONDITIONS

- Net 30 Days with approved credit
- FOB Factory, Watauga, Texas, USA
- All freight, insurance, taxes, duty, brokerage and other charges occurring as the result of this transaction will be paid by the purchaser.
- Shipment will normally occur 1 - 2 weeks after release for shipment
- Start-up assistance and training is available at \$960 per day in the USA and \$1200 per day outside the USA plus expenses at cost.
- Warranty: Westec warrants equipment of its own manufacture to be free of defects caused by defective workmanship or faulty parts. Westec will, at its option, exchange or repair those defective parts free of charge for a period of 12 months from shipment date.
- Governing Terms: Any contract or sale made hereunder shall be governed by the laws of the State of Texas, USA.

Your Representative:



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