

# Sequence and Slip Roller



## Description

The conveyor sequence and belt slip roller can be used to provide a simple means of conveyor sequence control and belt slip detection, preventing belt spillages and even potential belt fires.

The unit is designed to fit adjacent to the conveyor structure such that the three drive rollers are in contact with the flat underside of the conveyor belt. This unit can be installed to replace a conventional belt roller and should be installed to give maximum clearance between the conveyor belt and the drive rollers.

## Construction

The unit incorporates a magnetically coupled switch enclosed in a robust steel case with a removable cover. This provides ease of access for installation of the incoming cables and the speed adjustment setting which determines the speed at which the contacts operate. It has a sealed self aligning bearing at the drive end of the shaft.

## Operating Principles

When the conveyor is in motion, a magnetic induction linkage is operated to activate the internal switch via a coupling. There are two sets of switch contacts, one for each direction and at a pre-determined speed, set by the adjusters inside the unit, one of the sets of contacts operates depending on the direction of travel.

## Cable entries

The unit is supplied with one CM 20 20mm cable gland and one 20mm tapped blanked off entry.

## Switch Contact Ratings

Max ac Voltage	ac					dc	
	Amps		Continuous Carrying Current	Volt Amperes		Max Voltage	Amps
	Make	Break		Make	Break		
120	30	3.0	5.0	3600	360	115-125	0.12
240	15	1.5	5.0	3600	360	230-250	0.08
480	7.5	0.75	5.0	3600	360		
600	6.0	0.06	5.0	3600	360		

## Installation in Hazardous Atmospheres

When installing in GpI hazardous atmospheres (methane in coal mines) this equipment is considered as "simple apparatus" as defined in EN60079-11 and must only be supplied with electrical power from an appropriately certified Intrinsically Safe source.

## Ordering Details

Type	Code Number	Dimensions (mm)			Weight (kg)
		L	W	H	
Cantilever (Standard)	B11100109/FP	560	145	> 120	15

Note: When ordering please state the normal speed of the conveyor.



#### **Davis Derby Limited**

Davis Derby is a long established designer and manufacturer of intrinsically safe electronics and explosion-proof electrical equipment. All our equipment is designed for use in underground coalmining and other hazardous or demanding atmospheres. Davis Derby is also a leading provider of off-road vehicle driver access control and fleet management information systems. Our products are in service across the world in a variety of mining and arduous environments.

Davis Derby Limited comprises of 4 core strategic business units:



#### **StedFAST™**

Mines, quarries, steelworks, power stations and processing plants are demanding environments. Hazards are many and varied and nowhere more so than where bulk materials are being conveyed in the presence of personnel. Incidents involving product spillage, misaligned or torn conveyor belts and other mechanical malfunctions can cause injury to staff as well as costly downtime, damage to machinery and loss of revenue.



#### **MineWATCH™**

Mine productivity and personal safety have been priorities at Davis Derby for more than two decades. In this time we have led the way in product development, harnessing cutting-edge technologies and the potential of microprocessor based outstations.

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