



DAVIS DERBY

Digital Sequence and Slip Roller

Safety in Automation

Davis Derby manufactures two types of conveyor sequence and belt slip roller. They can be used to provide a simple means of conveyor sequence control and also for belt slip detection. One version is a cantilever type for mounting under the top belt such that it operates when the belt is fully loaded. The other version is a bottom belt type and 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 purchase 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. The cantilever type has a sealed self-aligning bearing at the drive end of the shaft, whilst the shaft of the bottom belt type is supported by sealed self-aligning bearings at each 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.

Certification

The Conveyor Sequence and Slip Roller unit is deemed intrinsically safe to the ATEX standard EN 60079-11:2012 Explosive Atmospheres-Part 11:Equipment protection by intrinsic safety "i" section 5.7 'Simple Apparatus'. The switch contacts can be used to switch an intrinsically safe circuit with the following characteristics:
Ui max = 50 volts; li max = 100ma.

ORDERING DETAILS

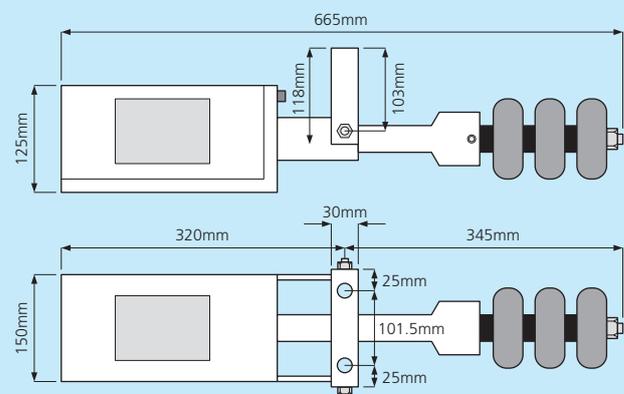
Version	Description	Code Number
Cantilever Standard	Digital Seq. & Slip Roller	B11100109FP

SWITCH CONTACT RATINGS

Max AC Voltage	AC			DC	
	Make	Break	Continuous Carrying Current	Max DC Voltage	Amps
120	30	3.0	5.0	115 - 125	0.12
240	15	1.5	5.0	230 - 250	0.08
480	7.5	0.75	5.0		
600	6	0.06	5.0		

Note: When ordering please state the normal speed of the conveyor and in the case of the bottom belt type only, the width of the conveyor and the height from the fulcrum.

DIMENSIONS



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MINEWATCH

Chequers Lane · Derby · England · DE21 6AW
Telephone +44 (0)1332 227500 · E-mail: minewatch@davisderby.com

www.minewatch.co.uk