

OmniAccum

Accumulation Controller for Brushless Motorized Roller Conveyor

Product Description

Industry trends are showing an increase in brushless motorized roller conveyor systems and applications. The system factors driving these trends are 24Vdc low voltage for increased safety, reduced audible noise, reduced energy consumption, system modularity, and simplified maintenance.

However, what controls solution should be used on these type of systems containing numerous components? A traditional PLC would create cumbersome installation, and would not yield a modular system design. Similarly, a field mountable programmable I/O device utilizing a device level network could be used to control accumulation conveyor, but this will increase the cost of the system and is not necessary for simple accumulation control. The ideal control solution is a cost effective control device which utilizes a device level network and is designed specifically for brushless motorized roller accumulation conveyor. The answer is the OmniAccum.



Benefits

Cost effective solution for straight accumulation sections of MDR conveyor

Status LEDs for inputs and outputs allow visual verification and troubleshooting

Open collector outputs with maximum switching current of 0.5amps at 24 Vdc

Communication via DeviceNet protocol, supports Polling - I/O Slave Messaging Connections.

Standalone device, no PC-host required

Preprogrammed for zero pressure accumulation conveyor operation

Controllers can be configured through bundled software application

Small size allows controllers to mounted in most conveyor channels

Rotary switches for MAC ID

Individual power source for each input promotes efficient photoelectric sensor wiring

Omni Automation, Inc. designed the OmniAccum specifically for brushless motorized roller accumulation conveyor control. The OmniAccum is equipped with 8 sourcing signal inputs and 8 open collector outputs. The inputs are provided with individual power sources which promote efficient photoelectric sensor wiring and maintenance. The outputs have a maximum switching current of 0.5 amps and are protected from back EMF. The physical design of the device enables it to be mounted in most conveyor channels.

The OmniAccum is preprogrammed with a configurable accumulation program. The configuration software is bundled with the OmniAccum device and allows many parameters to be adjusted. The software enables timers to be adjusted for each zone giving flexibility in zone and product sizes for individual systems.

The OmniAccum communicates via the open DeviceNet protocol. The devices use peer-to-peer messaging to pass product from one device to another. This feature allows the OmniAccum to be a standalone device and it is not necessary to have a host PC on the network. The OmniAccum supports DeviceNet polled messaging connections between itself and a DeviceNet master device. The master device can poll the I/O status, for use in off-the-shelf HMI software.

In areas of a system where more intelligence is required, the OmniCon and OmniCon-LP models is a ladder logic programmable device designed for diverts, merges, and other unique applications.

Specifications

Product Type	Digital I/O field device
Type	Accumulation controller for brushless motorized roller conveyor
Network	DeviceNet
Voltage Range	Module : 12-30 Vdc; Network 12-30 Vdc
Current Consumption	Module: 210 mA Max @ 24Volts, excluding motor and photo-eye current; Network: 40 mA max.
Operating Temperature Range	-30 °C to 70 °C [-22 °F to 158 °F]
Storage Temperature Range	-55 °C to 85 °C [-67 °F to 185 °F]
Humidity	95% RH, non-condensing
Standards	Pending
Shock	10 g
Vibration	2 G, 10 to 500 Hz
Dimensions	1" x 2 3/16" x 9 1/4"
Housing Material	Steel Mounting Plate
Weight	0.5 lbs..
Mounting	#10-32 hex head machine screws
Function	Low voltage accumulation control for motorized roller conveyor
Inputs	8 normally open, SOURCING sensors required; 12 - 24 Vdc
Input Signal Current	0.1 mA nominal
Sensor Input Power	Powered from module, sharing common power. Module Input current limited to 1.25A
Outputs	8 independent control outputs (common ground)
Output Type	NPN open collector outputs
Output Voltage Drop	0.06 Vdc @ 100 mA, 0.35Vdc @ 500 mA
Max. Output Current	500 mA maximum
Output Leakage Current	10 μ A maximum
Wire Size (Recommended)	20 to 24 AWG stranded or solid
I/O Connectors	Screw terminals with quick disconnect

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