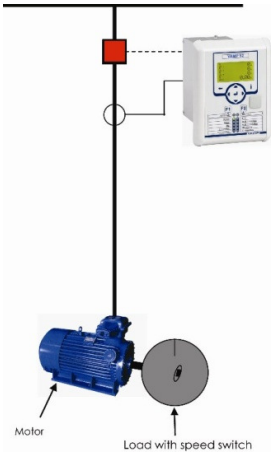
Speed switch application in VAMP relays

This application note applies to Vamp 40, Vamp 50, Vamp 200 and Vamp 300 series

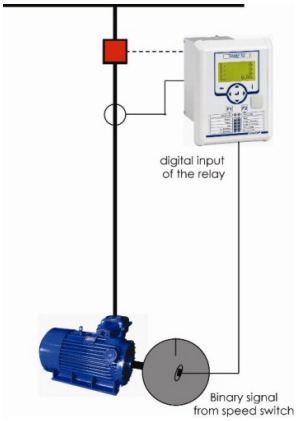


Speed switch (ANSI 14) is used in motor applications, where the motor start-up time is longer than allowed stall time.

Speed Switch is a rotation monitoring system for detecting unwanted slowdown or stoppage of process equipment.

The system is commonly applied to the following:

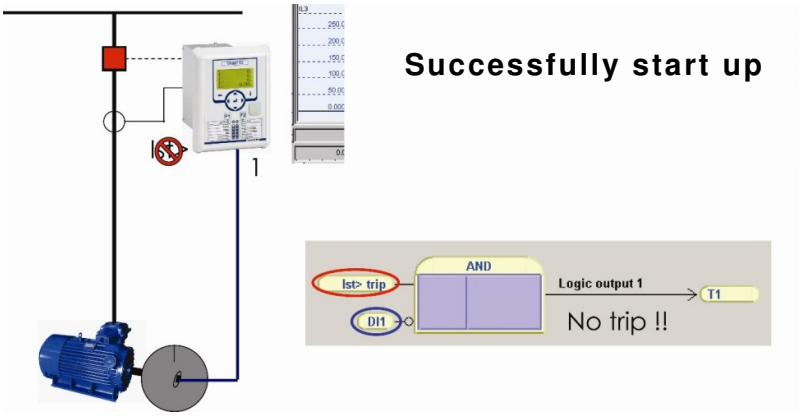
drive trains, power driven components, crushers, exhaust fans, screw conveyors, tail pulleys on belt conveyors and elevators, and much more.

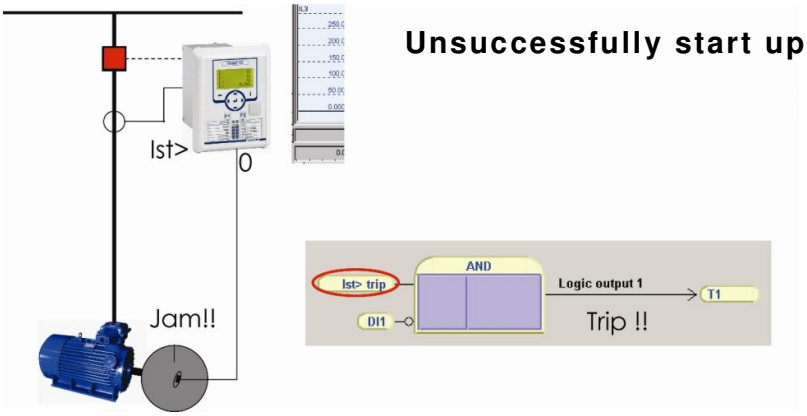


Example: Protected motor start up time (13 s) is longer than allowed stall time (10s).

Motor start-up time is set to slightly smaller than allowed stall time eg. 9.5 s.

The used speed switch is open at standstill and closed during acceleration. When the input is activated, stage Ist (48) will not be allowed to trip. If the motor does not start to accelerate, stage Ist will trip when the reference value, Is2 x ts, is exceeded. If start-up supervision is based on overcurrent protection, stage Is> will trip on expiration of the set operate time





Speed switch input can be utilized in all of VAMP relays providing motor protection.

Type of the speed switch is not an issue since the operation mode of the relays digital input can be set to normally close or normally open type of switches.

DIGITAL INPUTS

Input	State	Polarity	Delay	On Event	Off Event	Alarm display	Counters
1	0	NO	0.00 s	On	On	On	0
2	0	NC	0.00 s	On	On	On	0

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