

INDUCTIVE SPEED DETECTORS

Feature

The speed detector is a self contained device incorporating an impulse generator for the detection of rotational speed.

No additional external amplifier or control device is required. The speed monitor gives noncontact rotational speed detection on the principle of an inductive proximity switch and monitors the speed to check that it does not fall below a minimum preset value. This minimum value is adjustable.

The unit contains a fixed time duration override circuit for the start up period,as well as an indicator to show the output state.

When the supply voltage is switched on, the output circuit is on for the start up override period.

If the desired set speed is reached by the end of the start up period then the circuit remains on.

If the set minimum speed is not reached by the end of the start up override period,or if the speed subsequently falls below the set minimum value,then the output is switched off.

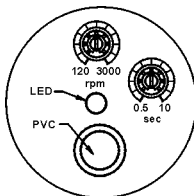
Cancellation of this state is achieved by disconnecting the supply voltage.

Application

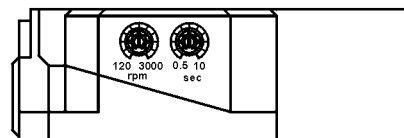
Typical applications include under speed,locked rotor and zero speed detection for shaft,belt or web breakage,sequential motor starting or runout detection.

■ Panel Face

- CULINDER M30



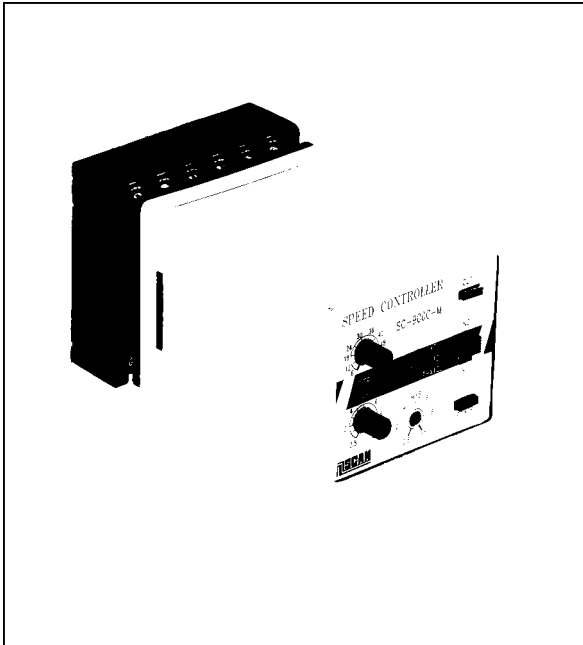
- 5 WAY ROTATIONAL HEAD



■ Functional Instruction and Adjustment

Front Diagram	Condition	Functional Instruction and Adjustment
	The green LED on the front turns on.	Turn the potentiometer to the point required the speed range is 120 rpm to 3000 rpm.
		The time delay is 0.5 sec to 10 sec, turn the potentiometer to the point required.

SPEED CONTROLLER/SC-900C

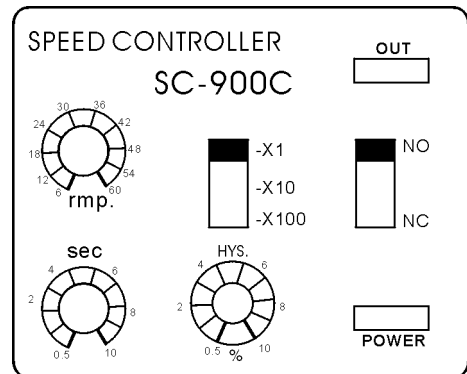


Feature

The speed control SC-900C contains a transformer, a DC stabilizer, an electronic evaluator and an output relay. It is a complete electronic unit, suitable for connection to the sensors, including inductive and capacitive proximity switch. The input signals (>0.5ms) pass through a level-regulator to a frequency-cross-over before going to differentiating unit. If the speed is too high, then the relay closes and the green LED lights up and vice versa.

Flutter from the rotating devices, can be compensated by altering the hysteresis, using the potentiometer meter mounted on the front. The unit requires a warming up time of 10 seconds for the motor, but this can be varied from 0.5 to 10 seconds by an internal potentiometer.

Panel face



Technical Data

Items	Model	SC-900C
Supply voltage		110V/220V $\pm$ 10%, 50/60 HZ
power consumption		less than 8 VA
Input		PNP or NPN
Hysteresis		0.5% to 10% via potentiometer adjustable
Start-up delay		0.5 to 10 sec. via potentiometer adjustable
Speed range		3 ranges can be selected 6-60 rpm, 60-600rpm, 600-6000rpm
Output		Relay contact SPDT 3A resistive at 250 VAC
Ambient temperature/humidity		0°C to 60°C
Insulating resistance		More than 10 M Ω (500VDC, insulation resistance tester) between AC(input) and DC(output) terminals
Dielectric resistance		1500 VAC, 50/60HZ for 1 minute between AC(inout)and DC(output) terminals
Net weight		Approx. 430 g
Accessories		Socket with terminals. Fixing clamps

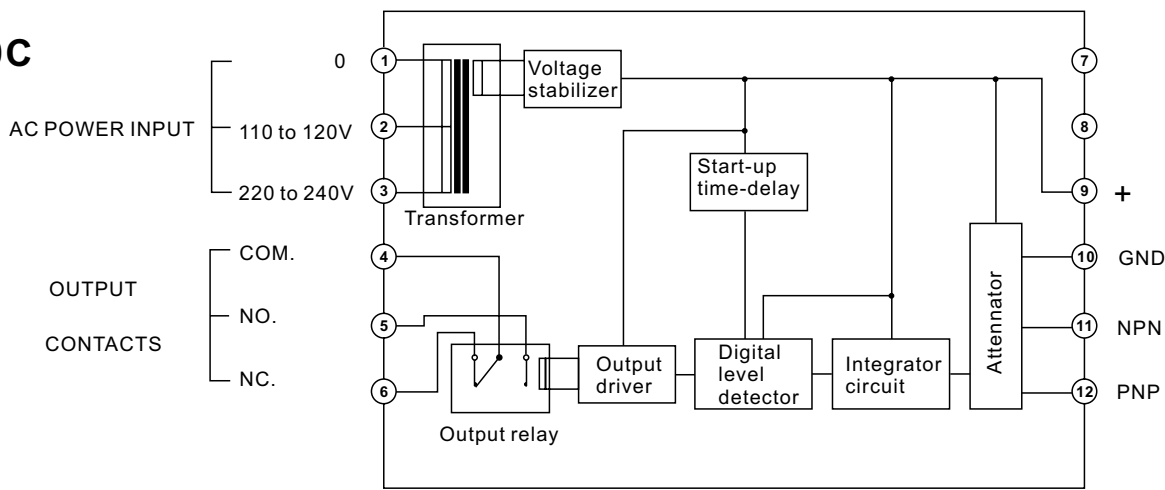
Function Instruction and Adjustment

Front Diagram	Condition	Function Instruction and Adjustment
	The position of the slide switch depend upon the requirement	NO: normally open NC: normally closed
		Hysteresis indicates the percent of difference between speed increasing values and speed decreasing values. Suitable for controlling speed of devices with moment of inertia.
	The slide switch is set, the Hys. Potentiometer is regulated.	-X1: speed range from 6-60 rpm. -X10: speed range from 60-600rpm. -X100: speed range from 600-6000 rpm.
		Turn the potentiometer to the speed values required
		The start-up time delay inhibits the function of speed controller during system start-up. Only after the preset start-up time period has elapsed, does speed controller become operative.
		The green LED indicates the status of output.
		The red LED indicates power on.

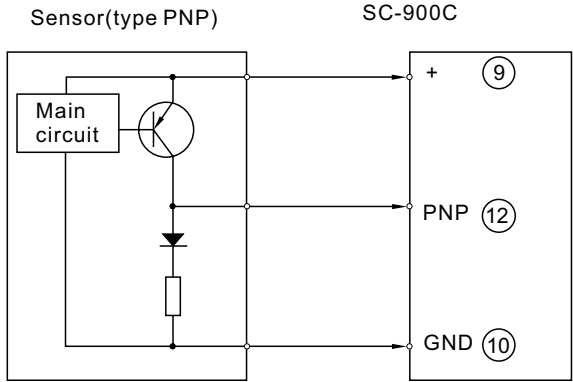
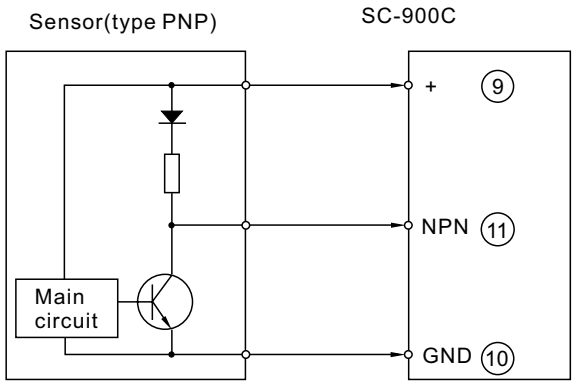
SPEED CONTROLLER/SC-900C

Functional Diagram

SC-900C



Connection instruction

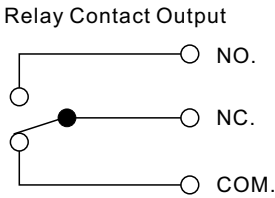


Wiring Guidelines

Distance between proximity switches (inductive and capacitive) and this control unit is 3000 ft (max.). If the electrical parameters of the cable are unknown, the values below may be used. Based on a survey of manufacture s data.

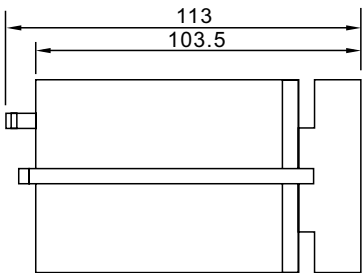
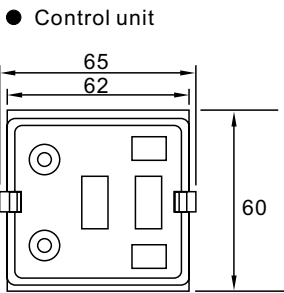
Capacitance: 60 PF/ft. Inductance: 0.20uH/ft.

OUTPUT CIRCUIT

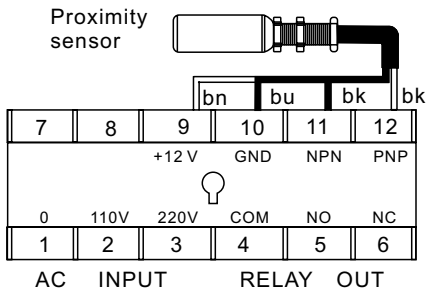


Contact capacity: 3A resistive at 250VAC

Dimensions



Wiring



● Socket with terminals

