

# Accessories - Wiring Diagrams and Signals

## Hall Effect Monitor

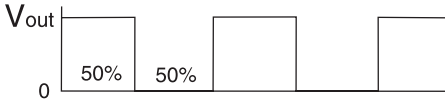
Selected ebm blowers ordered with this option monitor the speed of the blower with a device consisting of a magnet and solid state switch built into the motor. The output signal is a low voltage DC pulse train that can be incorporated into the end product to trigger an audible or visual alarm or to initiate an orderly system shutdown. This device is suited for telecommunications, computer, peripheral and copier applications, or others as required.

## Hall Effect Monitor for AC Models



Input = 4.5 to 16 VDC;  $T = 60/\text{RPM}$ ;  $V_{out} = V_{in}$   
Output Impedance = 4.7 K nominal.

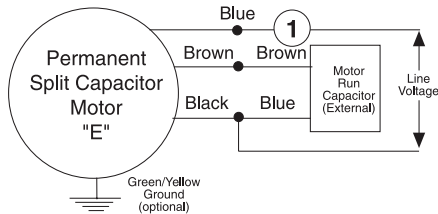
## Hall Effect Monitor for Brushless DC Models



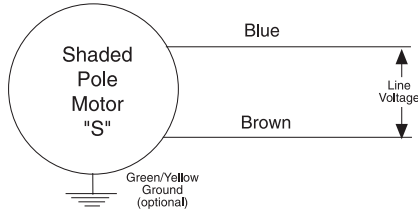
2 pulse / revolution  $\ominus V_{out} = 5v$ ; Output current = 5mA max.

## MOTOR WIRING DIAGRAMS

### A. PSC "Type E" Motor

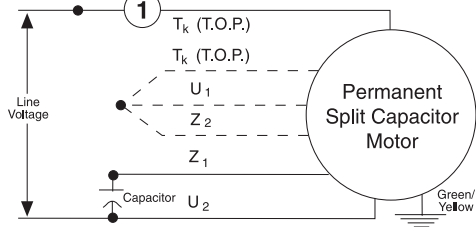


### B. Shaded Pole Motor

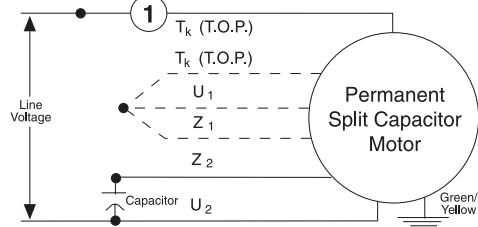


① An extra capacitor can be connected in series to yield lower RPM for multi-speed requirements

### C. PSC Motor



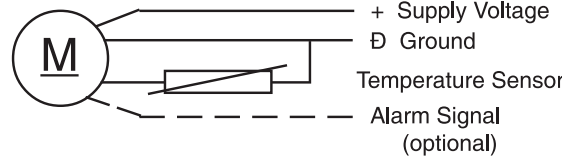
### D. PSC Motor



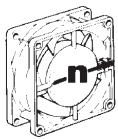
Dotted lines not supplied on all designs

# Accessories - Wiring Diagrams and Signals

## VarioFans have Temperature Dependent Speed Control

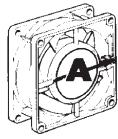


## Alarms & Connectors for ebm/Papst Tubeaxial Fans



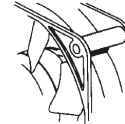
S /2 /12

**Speed Sensor**  
DC Fan with integrated sensor for externally speed monitoring



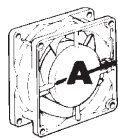
/5 /17

**Alarm Circuit**  
DC Fan with integrated alarm circuit for speed monitoring



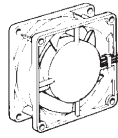
D

**Housing Reinforcement**  
Fan housing with stiffening ribs. For mounting over both flanges



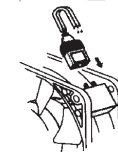
/10

**Alarm Signal**  
DC Fan with integrated fan failure sensor



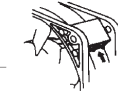
W

**Connection Leads**  
Electrical connection via 2 leads AWG 22, 310 mm long



**Connector Design**

Type 6 = 2,8 x 0,8 mm 6  
Type 8 = 2,8 x 0,5 mm 8



Type 7 = 2,8 x 0,8 mm 7  
Type 9 = 2,8 x 0,5 mm 9

## Characteristics of Fan Signals and Operation with different Alarm Signals

**Speed Sensor Type: S, /2, /12**  
These fans produce speed-proportional square-wave signals via an integrated sensor. This 'electronic' tachometer is used to monitor the fan speed.

**Alarm Signal Type: /10**  
These fans produce a continuous signal output when operating interference-free. When fan speed falls below 75 - 85% of the nominal speed, short low impulses are generated. The greater the fall below the alarm speed, the greater the low impulse width becomes. At rest there is a continuous low signal.

**Alarm Switching Signal Type: /5, /17**  
These fans produce speed-dependent, directly usable high/low square-wave signals via integrated alarm switching circuits.  
/5 models: Switching circuit is galvanically separated with a separate current supply.  
/17: Direct current supply via motor; the switching circuit is not separate.

