

SPEED SWITCH



ESPB-030

ESPB-041

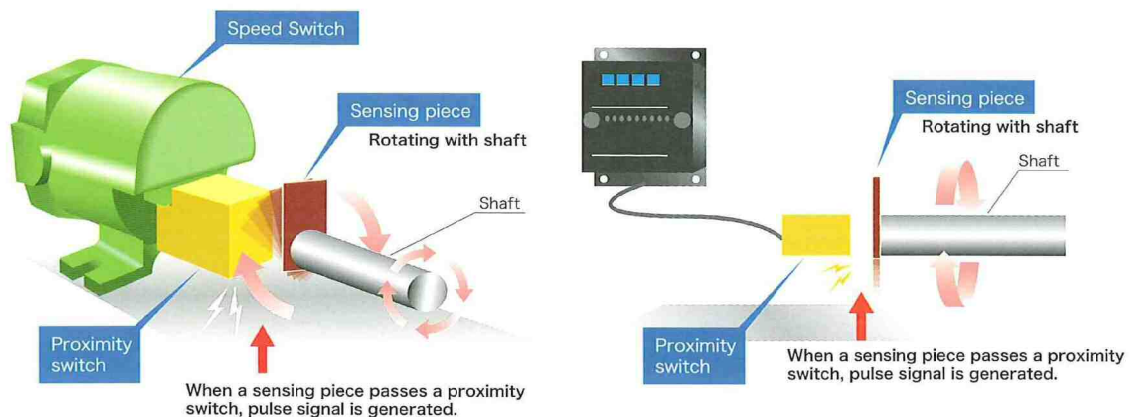
TL-N20ME1
ASTC-041

ESKB-610M

Speed Switch is a motion sensor which detects the shaft speed of machinery.





Application

Speed Switch detects the magnetic material attached to the shaft without contact and makes an electric signal. The magnetic material rotates along with the shaft and generates the pulse signal. Since the cycle of pulse signal varies according to the shaft rotating speed, the Speed Switch detects the rotating speed from such cycle.







Speed Switch

Features and Specification

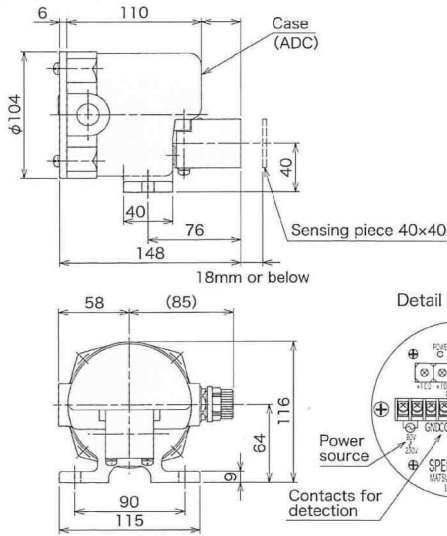
Model	Features / Specification																												
Outdoor type ESPB-030 Mass 1.1kg	<p>Speed Switch makes a detection with the integrated output relay when the shaft speed of machine reduces below the setting speed. Speed Switch is a non-contact type motion sensor which can be used even in severe outdoor environment without any problems and can detect the speed without connecting it to the machine with a coupling,etc.</p> <p>Features</p> <ul style="list-style-type: none"> ○With the built-in digital switch,the actuating speed is adjustable at site. ○Not affected by vibration of machines, since the distance between the sensor and the sensing piece is allowed up to 18mm. ○Simple control circuit, as the starting compensation timer is built in. ○Free power source does not cause a mistake in connection to 100V or 200V. ○Compact, light weight and high performance series. ○IP67 protection allows the use in bad environment. ○Aluminum housing and strong against corrosion. <table border="1" style="width: 100%;"> <tr><td>Model</td><td>ESPB-030</td></tr> <tr><td>Rating</td><td>2000P/min</td></tr> <tr><td>Detection</td><td>2~999P/min Actual detection starts after detecting 2 pulses. Detection time = (60sec/rpm)x 2 pulses/number of detection blade</td></tr> <tr><td>Detecting accuracy</td><td>±1%</td></tr> <tr><td>Sensing piece</td><td>Magnetic substance t1×40×40mm or over</td></tr> <tr><td>Timer</td><td>0~30sec.</td></tr> <tr><td>Detecting distance</td><td>18mm or below</td></tr> <tr><td>Output contact</td><td>1C contact</td></tr> <tr><td>Contact capacity</td><td>250V AC2A</td></tr> <tr><td>Allowable temperature</td><td>-10~+55°C</td></tr> <tr><td>Power source</td><td>AC80~135V, 160~230V 50/60HZ</td></tr> <tr><td>Protection</td><td>IP67</td></tr> <tr><td>Color</td><td>Munsell 7.5GY 6/10</td></tr> </table> <div style="text-align: right;">   ESPB-030 </div>	Model	ESPB-030	Rating	2000P/min	Detection	2~999P/min Actual detection starts after detecting 2 pulses. Detection time = (60sec/rpm)x 2 pulses/number of detection blade	Detecting accuracy	±1%	Sensing piece	Magnetic substance t1×40×40mm or over	Timer	0~30sec.	Detecting distance	18mm or below	Output contact	1C contact	Contact capacity	250V AC2A	Allowable temperature	-10~+55°C	Power source	AC80~135V, 160~230V 50/60HZ	Protection	IP67	Color	Munsell 7.5GY 6/10		
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Separated proximity switch type ESPB-041 Mass 1.1kg Proximity switch TL-N20ME1 Mass 250g	<p>This type can be installed with the proximity switch and the main body separated when it is hard to install the main body as the mounting space is narrow. It also can be installed at such place as the main body can not be installed since the place is in relatively high temperature (up to +70°C) or the place is hard to be accessed due to height. This type can set the rotating number at the site apart from the place where detection is made.</p> <p>Features</p> <ul style="list-style-type: none"> ○It has the same function as that of an outdoor type speed switch ○Space saving installation. Required space for installation at site is for the proximity switch with 40mmx40mmx53mm. ○The distance up to the sensing piece is allowed to 18mm at maximum. ○The proximity switch is connected to the main body with a 2m cable. ○Wiring is possible to be extended up to 1km by using 1.25mm² three-core shielded cable. ○Detection LED is equipped with the proximity switch, therefore, it is possible to check the pulse transmission at site. <table border="1" style="width: 100%;"> <tr><td>Model</td><td>ESPB-041 (Separated Proximity Switch : TL-N20ME1)</td></tr> <tr><td>Rating</td><td>2000P/min</td></tr> <tr><td>Detection</td><td>2~999P/min Actual detection starts after detecting 2 pulses. Detection time = (60sec/rpm)x 2 pulses/number of detection blade</td></tr> <tr><td>Detecting accuracy</td><td>±1%</td></tr> <tr><td>Sensing piece</td><td>Magnetic substance t1×40×40mm以上</td></tr> <tr><td>Timer</td><td>0~30sec.</td></tr> <tr><td>Detecting distance</td><td>18mm or below</td></tr> <tr><td>Connection cable</td><td>2m cable is included. (Standard)</td></tr> <tr><td>Output contact</td><td>1C contact</td></tr> <tr><td>Contact capacity</td><td>250V AC2A</td></tr> <tr><td>Allowable temperature</td><td>[Proximity switch] -25~+70°C [Main body] -10~+55°C</td></tr> <tr><td>Power source</td><td>AC80~135V, 160~230V 50/60HZ</td></tr> <tr><td>Protection</td><td>IP67</td></tr> <tr><td>Color</td><td>Munsell 7.5GY 6/10</td></tr> </table> <div style="text-align: right;">  ESPB-041  TL-N20ME1 </div>	Model	ESPB-041 (Separated Proximity Switch : TL-N20ME1)	Rating	2000P/min	Detection	2~999P/min Actual detection starts after detecting 2 pulses. Detection time = (60sec/rpm)x 2 pulses/number of detection blade	Detecting accuracy	±1%	Sensing piece	Magnetic substance t1×40×40mm以上	Timer	0~30sec.	Detecting distance	18mm or below	Connection cable	2m cable is included. (Standard)	Output contact	1C contact	Contact capacity	250V AC2A	Allowable temperature	[Proximity switch] -25~+70°C [Main body] -10~+55°C	Power source	AC80~135V, 160~230V 50/60HZ	Protection	IP67	Color	Munsell 7.5GY 6/10
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Features and Specification

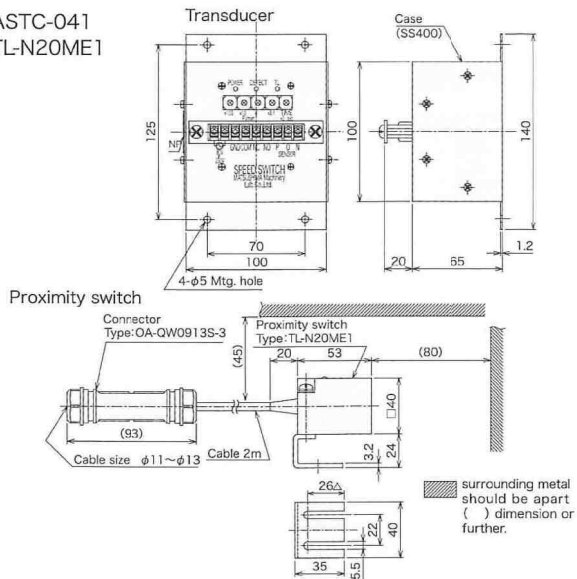
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<p>Transducer in-panel mounting type</p> <p>Transducer ASTC-041 Mass 1.0kg</p> <p>Proximity switch TL-N20ME1 Mass 250g</p>	<p>This is a space-saving type motion sensor which consists of a transducer to be mounted in the panel and a separated proximity switch to be mounted at the place where detection is conducted. It is possible to conduct speed control in the control room apart from the place where detection is conducted and to conduct collectively a integrated control by mounting side by side transducers from each place where detection is conducted.</p> <p>Features</p> <ul style="list-style-type: none"> ○It has the same function as that of an outdoor type speed switch. ○Space saving installation. Required space for installation at site is for the proximity switch with 40mmx40mmx53mm ○Wiring is possible to be extended up to 1km by using 1.25mm² three-core shielded cable. ○The distance up to the sensing piece is allowed to 18mm at maximum. ○Easy extension of wiring by shielded cable with the attached water-proof type Connector type terminal base. <table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="background-color: #fff2cc;">Model</td> <td>[Proximity switch] TL-N20ME1 [Transducer] ASTC-041</td> </tr> <tr> <td style="background-color: #fff2cc;">Rating</td> <td>2000P/min</td> </tr> <tr> <td style="background-color: #fff2cc;">Detection</td> <td>2~999P/min Actual detection starts after detecting 2 pulses. Detection time = (60sec/rpm) x 2 pulses/number of detection blade</td> </tr> <tr> <td style="background-color: #fff2cc;">Detecting accuracy</td> <td>±1%</td> </tr> <tr> <td style="background-color: #fff2cc;">Sensing piece</td> <td>Magnetic substance t1x40x40mm以上</td> </tr> <tr> <td style="background-color: #fff2cc;">Detecting distance</td> <td>18mm or below</td> </tr> <tr> <td style="background-color: #fff2cc;">Timer</td> <td>0~30sec.</td> </tr> <tr> <td style="background-color: #fff2cc;">Output contact</td> <td>1C contact</td> </tr> <tr> <td style="background-color: #fff2cc;">Contact capacity</td> <td>250V AC2A</td> </tr> <tr> <td style="background-color: #fff2cc;">Allowable temperature</td> <td>[Proximity switch] -25~+70°C [Transducer] -10~+55°C</td> </tr> <tr> <td style="background-color: #fff2cc;">Power source</td> <td>AC80~135V, 160~230V 50/60HZ</td> </tr> <tr> <td style="background-color: #fff2cc;">Protection</td> <td>[Proximity switch] IP67 [Transducer] IP40</td> </tr> <tr> <td style="background-color: #fff2cc;">Color</td> <td>Munsell N1.5</td> </tr> </table> <div style="text-align: right; margin-top: 20px;">  <p>ASTC-041</p>  <p>TL-N20ME1</p> </div>	Model	[Proximity switch] TL-N20ME1 [Transducer] ASTC-041	Rating	2000P/min	Detection	2~999P/min Actual detection starts after detecting 2 pulses. Detection time = (60sec/rpm) x 2 pulses/number of detection blade	Detecting accuracy	±1%	Sensing piece	Magnetic substance t1x40x40mm以上	Detecting distance	18mm or below	Timer	0~30sec.	Output contact	1C contact	Contact capacity	250V AC2A	Allowable temperature	[Proximity switch] -25~+70°C [Transducer] -10~+55°C	Power source	AC80~135V, 160~230V 50/60HZ	Protection	[Proximity switch] IP67 [Transducer] IP40	Color	Munsell N1.5
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<p>Superlow speed type</p> <p>ESKB-610M Mass 1.1kg</p>	<p>The superlow speed type is a rotary motion sensor which can detect very low shaft speed from 0.1rpm up to 99.9rpm and can be used to check whether the very low speed shaft such as feed roller of heating furnace, low-speed agitator, thickener etc. is rotated at normal speed. Coupling for connection to shaft is available as option.</p> <p>Features</p> <ul style="list-style-type: none"> ○Speed drop of low speed shaft due to breakage of chain or shearing pin is directly detected. ○With its digital control system, it allows less setting error and high accuracy detection. ○Quick response speed, time lag of output signal is below 3sec. even when it detects the speed of 0.1rpm. ○High accuracy as encoder is adopted in detecting portion. <table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="background-color: #fff2cc;">Model</td> <td>ESKB-610M</td> </tr> <tr> <td style="background-color: #fff2cc;">Rating</td> <td>179rpm</td> </tr> <tr> <td style="background-color: #fff2cc;">Detection</td> <td>0.1~99.9rpm Actual detection starts after detecting 2 pulses. Detection time = (60sec/rpm) x 2 pulses/200</td> </tr> <tr> <td style="background-color: #fff2cc;">Accuracy</td> <td>±1%</td> </tr> <tr> <td style="background-color: #fff2cc;">Detecting pulse</td> <td>200P/rev</td> </tr> <tr> <td style="background-color: #fff2cc;">Timer</td> <td>0~99sec.</td> </tr> <tr> <td style="background-color: #fff2cc;">Output contact</td> <td>1C contact</td> </tr> <tr> <td style="background-color: #fff2cc;">Contact capacity</td> <td>250V AC2A</td> </tr> <tr> <td style="background-color: #fff2cc;">Allowable temperature</td> <td>-10~+55°C</td> </tr> <tr> <td style="background-color: #fff2cc;">Power source</td> <td>AC80~135V, 160~230V 50/60HZ</td> </tr> <tr> <td style="background-color: #fff2cc;">Protection</td> <td>IP67</td> </tr> <tr> <td style="background-color: #fff2cc;">Color</td> <td>Munsell 7.5GY 6/10</td> </tr> </table> <div style="text-align: right; margin-top: 20px;">   <p>ESKB-610M</p> </div>	Model	ESKB-610M	Rating	179rpm	Detection	0.1~99.9rpm Actual detection starts after detecting 2 pulses. Detection time = (60sec/rpm) x 2 pulses/200	Accuracy	±1%	Detecting pulse	200P/rev	Timer	0~99sec.	Output contact	1C contact	Contact capacity	250V AC2A	Allowable temperature	-10~+55°C	Power source	AC80~135V, 160~230V 50/60HZ	Protection	IP67	Color	Munsell 7.5GY 6/10		
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Dimension

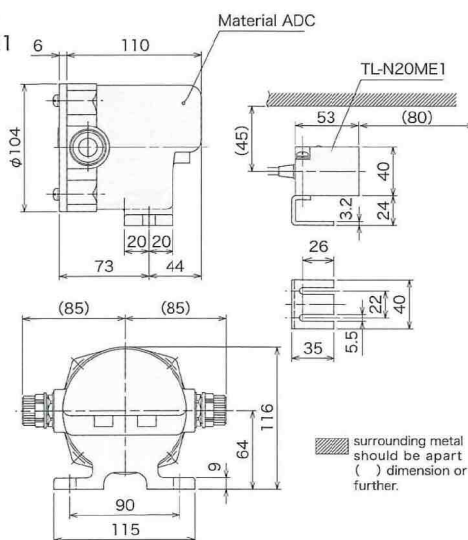
ESPB-030



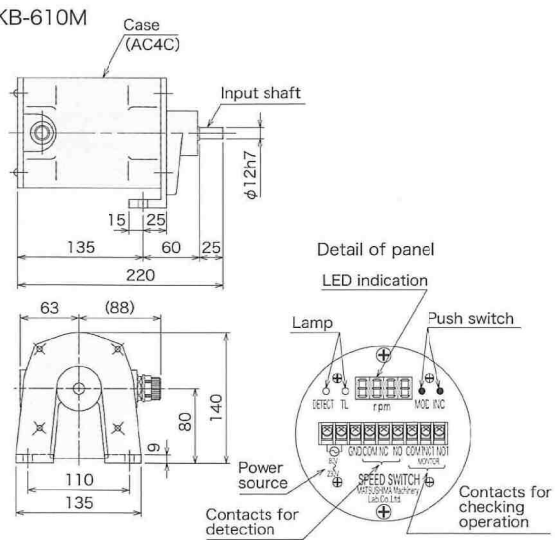
ASTC-041
TL-N20ME1



ESPB-041
TL-N20ME1

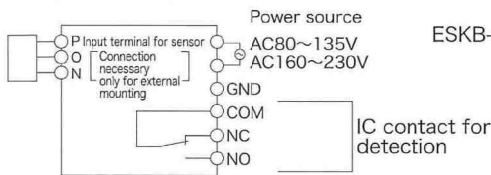


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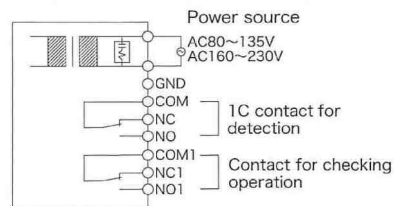


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ESPB-030
ESPB-041
ASTC-041
Common



ESKB-610M



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