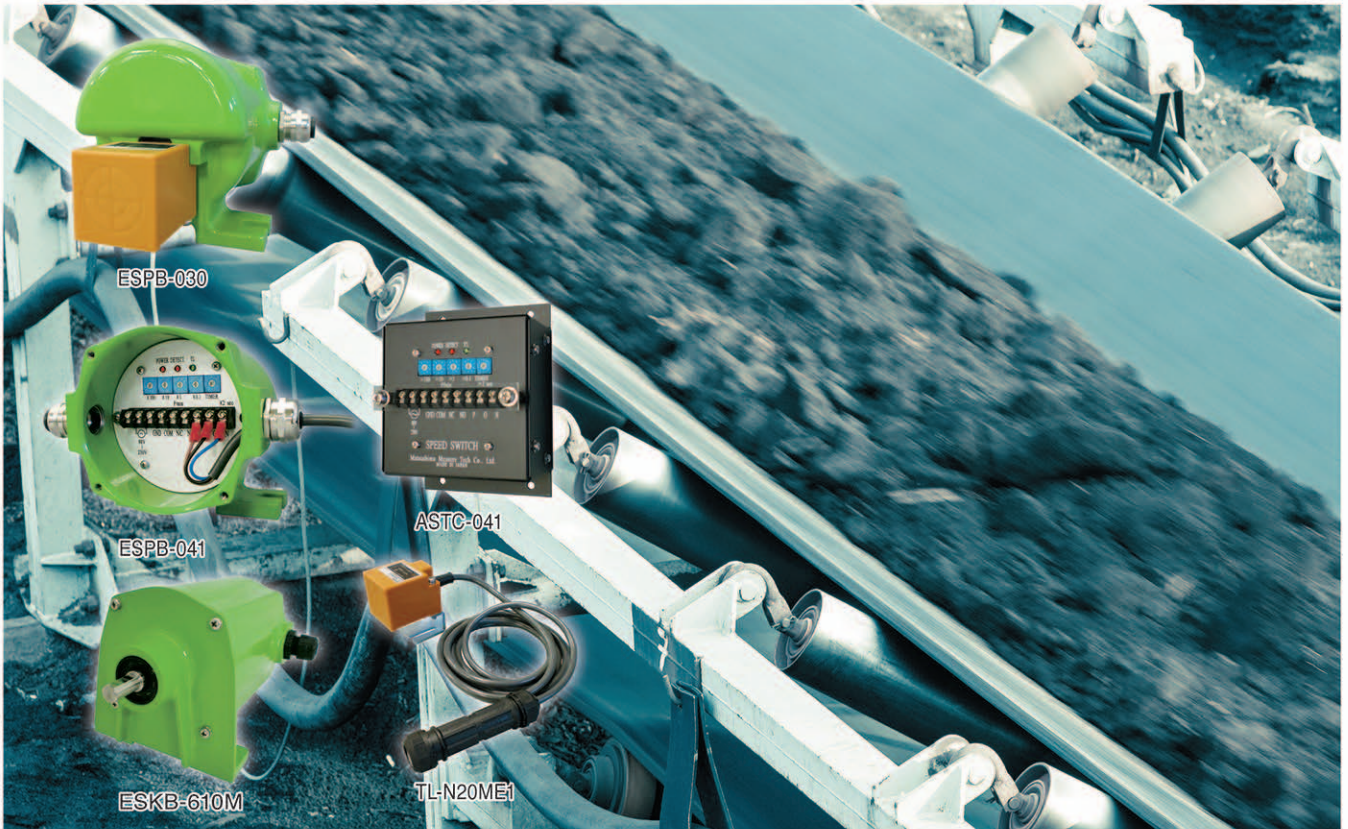


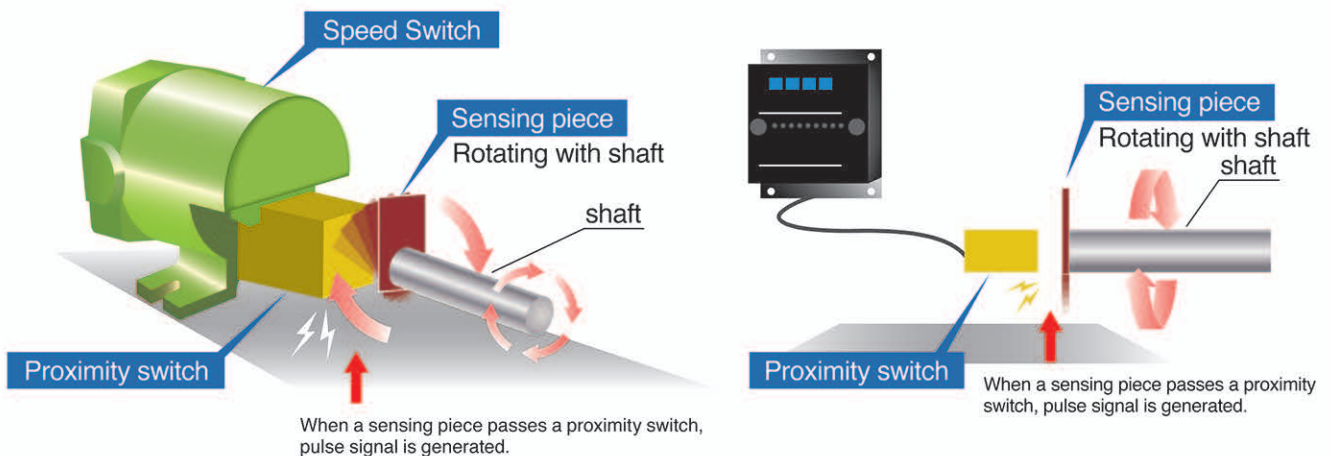
# Speed Switch

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

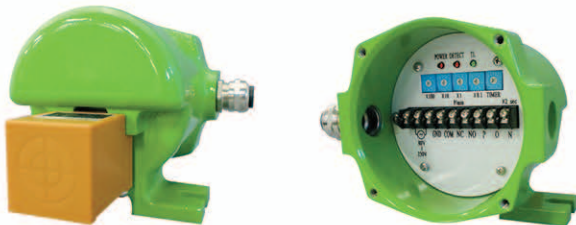


## Application

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



Outdoor type  
ESPB-030  
(Mass 1.1kg)

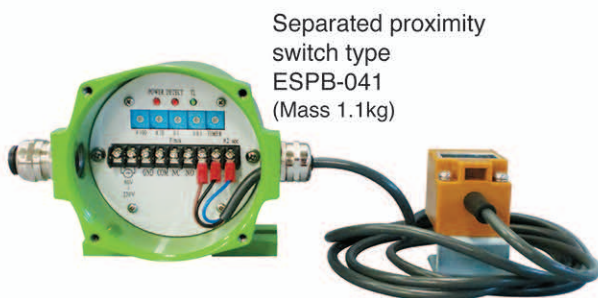
### Features / Specification

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.

#### Features

- 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

Model	ESPB-030	Timer	0~30sec
Rating	2000P/min	Detecting distance	18mm or below
Detection	2~999P/min Actual detection starts after detecting 2 pulses. Detection time = (60sec/rpm) x 2 pulses/number of detection blade	Output contact	1C contact
		Contact capacity	250V AC2A
		Allowable temperature	-10~+55°C
Detecting accuracy	±1%	Power source	AC80~135V, 160~230V 50/60Hz
Sensing piece	Magnetic substance t1×40×40mm or over	Protection	IP67
		Color	Munsell 7.5GY 6/10



Separated proximity  
switch type  
ESPB-041  
(Mass 1.1kg)

Proximity switch  
TL-N20ME1  
(Mass 250g)

### Features / Specification

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.

#### Features

- 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 40mm x 40mm x 53mm.
- 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 1.25mm<sup>2</sup> three-core shielded cable.
- Detection LED is equipped with the proximity switch, therefore, it is possible to check the pulse transmission at site.

Model	ESPB-041 (Separated Proximity Switch : TL-N20ME1)	Timer	0~30sec.
Rating	2000P/min	Detecting distance	18mm or below
Detection	2~999P/min Actual detection starts after detecting 2 pulses. Detection time = (60sec/rpm) x 2 pulses/number of detection blade	Output contact	1C contact
		Contact capacity	250V AC2A
		Allowable temperature	[Proximity switch] -25~+70°C [Main body] -10~+55°C
Detecting accuracy	±1%	Power source	AC80~135V, 160~230V 50/60Hz
Sensing piece	Magnetic substance t1×40×40mm or over	Protection	IP67
Connection cable	2m cable is included.(Standard)	Color	Munsell 7.5GY 6/10



Transducer  
ASTC-041  
(Mass 1.0kg)



Proximity switch  
TL-N20ME1  
(Mass 250g)

## Features / Specification

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.

### Features

- 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 40mm x 40mm x 53mm.
- Wiring is possible to be extended up to 1km by using 1.25mm<sup>2</sup> 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.

Model	[Proximity switch] TL-N20ME1 [Transducer] ASTC-041	Timer	0~30sec.
Rating	2000P/min	Detecting distance	18mm or bellow
Detection	2~999P/min Actual detection starts after detecting 2 pulses. Detection time = (60sec/rpm) x 2 pulses/number of detection blade	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
Detecting accuracy	±1%	Protection	[Proximty switch] IP67 [Transducer] IP40
Sensing piece	Magnetic substance t1x40x40mm or over	Color	Munsell N1.5



Superlow speed type  
ESKB-610M  
(Mass 1.1kg)

## Features / Specification

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.

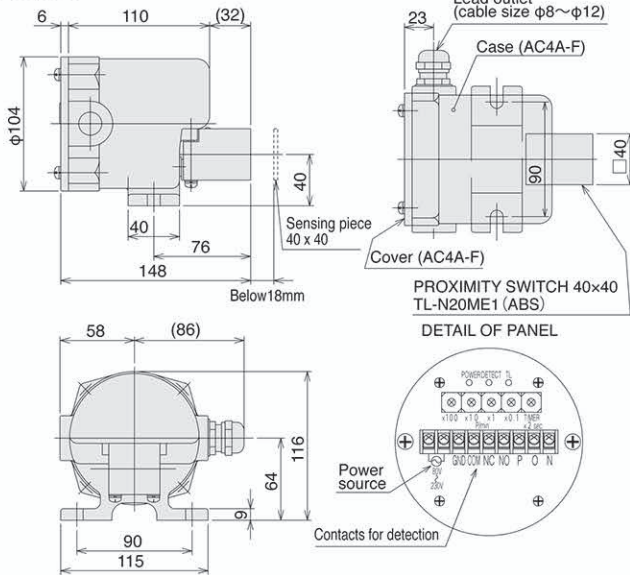
### Features

- 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.

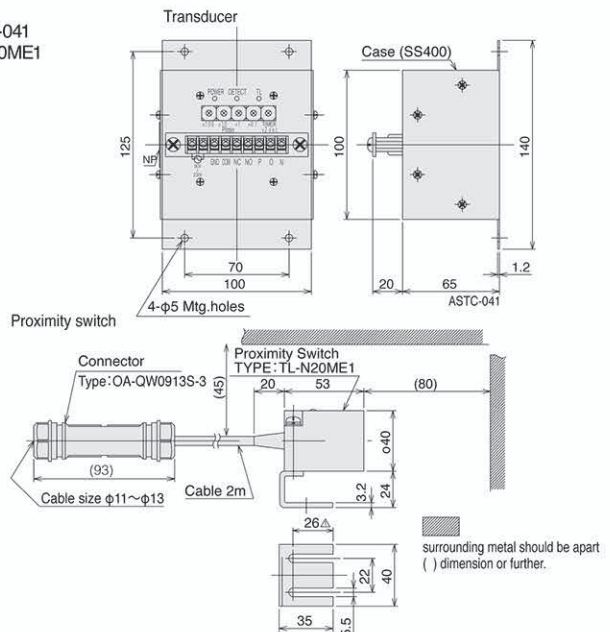
Model	ESKB-610M	Timer	0~99sec.
Rating	179rpm	Output contact	1C contact
Detection	0.1~99.9rpm Actual detection starts after detecting 2 pulses. Detection time = (60sec/rpm) x 2 pulses/200	Contact capacity	250V AC2A
		Allowable temperature	-10~+55°C
		Power source	AC80~135V, 160~230V 50/60Hz
Detecting accuracy	±1%	Protection	IP67
Detecting pulse	200P/rev	Color	Munsell 7.5GY 6/10

## Specifications

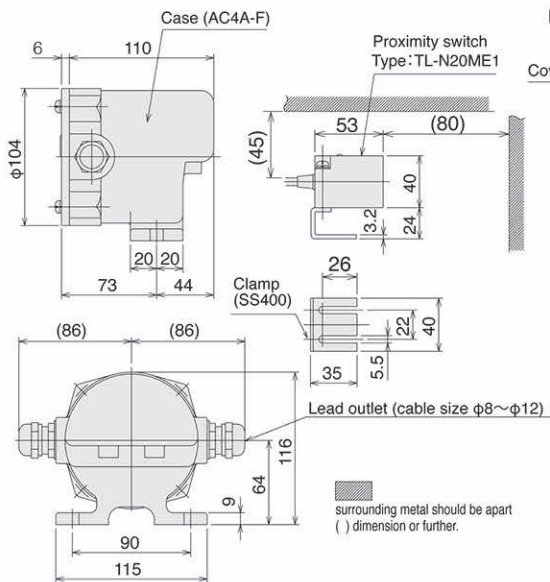
ESPB-030



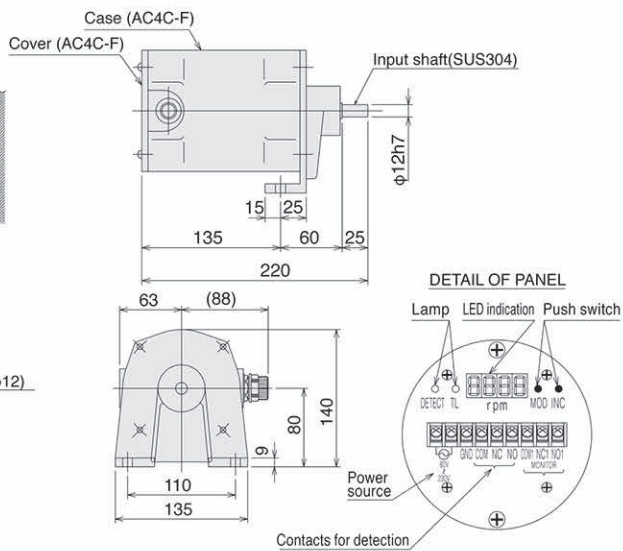
ASTC-041  
TL-N20ME1



ESPB-041  
TL-N20ME1

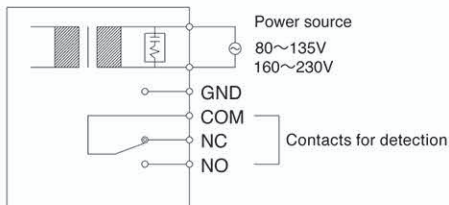


ESKB-610M

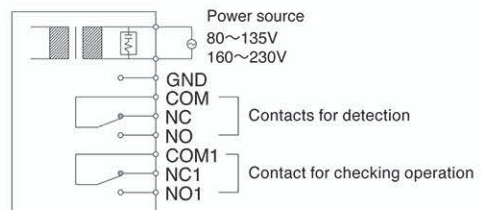


## Dimension

ESPB-030  
ESPB-041  
ASTC-041 Common



ESKB-610M



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## Matsushima Measure Tech Co., Ltd.

**HEAD OFFICE**  
1-8-18, NORIMATSU-HIGASHI, YAHATANISHI-KU, KITAKYUSHU, 807-0837 JAPAN  
Tel: +81-93-691-3731 FAX: +81-93-691-3735  
http://www.matsushima-m-tech.com E-mail: info@matsushima-m-tech.com

**Pohang Representative Office**  
Odyssey Bldg. 1F, 41, Jukdo-ro 28beon-gil, Buk-gu, Pohang-si, Gyeongsangbuk-do, 791-841, Korea  
Tel: +82-(0)54-274-3731 FAX: +82-(0)54-274-3731

**Affiliated company**  
Shanghai Dahong Matsushima Machinery Co., Ltd.  
70 Hengchang Road, Dahong, Malu, Jiading, Shanghai 201818, China  
Tel: +86-(0)21-5951-4138 FAX: +86-(0)21-5951-4139