

PR9376-010-011

Speed Proximity Sensor

Emerson PR9376-010-011 is a Hall-effect speed and proximity sensor for detecting a rotating ferromagnetic target. The selected configuration uses the PR9376/010 body with protective hose, 5 m cable and open cable end.

IDENTITY	VERIFIED VALUE
Manufacturer	Emerson
Complete model	PR9376-010-011
Product role	Speed Proximity Sensor
System family	PR9376 Hall-Effect Sensors
Country of origin	USA

DOCUMENT SCOPE

Exact identity, manufacturer-supported technical data, installation checks, applications, precautions and controlled verification records.

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PR9376-010-011

Technical Specifications

PARAMETER	VERIFIED VALUE
Complete order code	PR9376-010-011
Sensor principle	Hall effect
Output	One AC cycle per revolution or gear tooth
Maximum frequency	12 kHz
Supply	10–30 VDC; maximum 25 mA
Output high	Above 10 V at 12 VDC / 100 kΩ
Output low	Below 1 V at 12 VDC / 100 kΩ
Air gap	1 mm for module 1; 1.5 mm for module 2 or larger
Protection	IP67
Operating temperature	-25 to +100 °C

Model-Specific Engineering Note

ENGINEERING BOUNDARY

Set the sensor-to-target air gap for the actual gear module and verify the target is magnetically soft iron or steel, not stainless steel. Confirm 10–30 VDC supply, output levels and pulse frequency before enabling speed protection.

Pre-Installation Checks

NO.	REQUIRED CHECK
1	Confirm PR9376-010-011 and the ordered cable and hose configuration from the nameplate.
2	Use a magnetically soft iron or steel target; do not use stainless steel as the sensing target.
3	Isolate the rotating machine before adjusting sensor position.
4	Set the air gap for the actual target module.
5	Apply 10–30 VDC with the documented current limit.

System Role and Architecture

Emerson PR9376-010-011 is a Hall-effect speed and proximity sensor for detecting a rotating ferromagnetic target. The selected configuration uses the PR9376/010 body with protective hose, 5 m cable and open cable end.

FUNCTION 1
Generates one pulse cycle per tooth or revolution

FUNCTION 2
Supports pulse frequencies to 12 kHz

FUNCTION 3
Uses a 10–30 VDC Hall-effect circuit

FUNCTION 4
Provides an IP67 stainless-steel sensor body

Common Applications

APPLICATION	ENGINEERING CONTEXT
Turbine speed pickup	Detects passing ferromagnetic teeth for speed monitoring.
Keyphasor reference	Produces a once-per-revolution reference when aimed at a suitable target.
Gear-tooth frequency measurement	Converts each tooth passage into a logic-level pulse train.
Overspeed input sensing	Supplies a documented proximity pulse to compatible protection hardware.

CONTROLLED ACCEPTANCE DUTY
Confirm identity, physical interface, companion hardware, configured values and functional response against the installed-system record before release.

Engineering Precautions

NO.	PRECAUTION
1	Confirm PR9376-010-011 and the ordered cable and hose configuration from the nameplate.
2	Use a magnetically soft iron or steel target; do not use stainless steel as the sensing target.
3	Isolate the rotating machine before adjusting sensor position.
4	Set the air gap for the actual target module.
5	Apply 10–30 VDC with the documented current limit.
6	Route the cable and protective hose clear of hot, moving and sharp surfaces.
7	Check high and low output levels at controlled low speed.
8	Verify tooth count, pulse frequency, indicated speed and protection logic before release.

Model-Specific FAQ - Part 1

QUESTION	ANSWER
What target material is required for Emerson PR9376-010-011?	Use magnetically soft iron or steel. The official data sheet excludes stainless steel as the target material.
How much air gap should Emerson PR9376-010-011 have?	Emerson specifies 1 mm for a module-1 target and 1.5 mm for module 2 or larger.
What is the maximum pulse frequency of Emerson PR9376-010-011?	The documented maximum frequency is 12 kHz.
What supply is required by Emerson PR9376-010-011?	The sensor operates from 10–30 VDC and draws no more than 25 mA.

Model-Specific FAQ - Part 2

QUESTION	ANSWER
What output levels should be measured from Emerson PR9376-010-011?	At 12 VDC with a 100 kΩ load, high is above 10 V and low is below 1 V.
How many pulses does Emerson PR9376-010-011 create?	It produces one AC cycle for every passing gear tooth or one cycle per revolution when used with a single target.
What environmental rating applies to Emerson PR9376-010-011?	The official data sheet specifies IP67 and an operating range of -25 to +100 °C.
How should Emerson PR9376-010-011 speed scaling be validated?	Record the target tooth count, rotate at a controlled reference speed, compare pulse frequency with calculated speed and prove the configured alarm or trip path.

Related Products on Apter Power

MODEL	APTER POWER PAGE
Bently Nevada 133827-01	View Bently Nevada 133827-01
Bently Nevada 134652-01	View Bently Nevada 134652-01
Bently Nevada 135137-01	View Bently Nevada 135137-01
Bently Nevada 135473-01	View Bently Nevada 135473-01
Bently Nevada 135489-01	View Bently Nevada 135489-01
Bently Nevada 135489-03	View Bently Nevada 135489-03
Bently Nevada 135489-04	View Bently Nevada 135489-04
Bently Nevada 135613-01	View Bently Nevada 135613-01

MANUFACTURER SOURCE RECORD

PR9376 Hall Effect Speed/Proximity Sensor Data Sheet
Emerson data sheet, August 2024; PR9376 ordering matrix

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