SIEMENS

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Eliminating false pulses due to environmental vibration

Application examples

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Legal information

Warning notice system

This manual contains notices you have to observe in order to ensure your personal safety, as well as to prevent damage to property. The notices referring to your personal safety are highlighted in the manual by a safety alert symbol, notices referring only to property damage have no safety alert symbol. These notices shown below are graded according to the degree of danger.

⚠ DANGER

indicates that death or severe personal injury **will** result if proper precautions are not taken.

⚠ WARNING

indicates that death or severe personal injury **may** result if proper precautions are not taken.

⚠ CAUTION

indicates that minor personal injury can result if proper precautions are not taken.

NOTICE

indicates that property damage can result if proper precautions are not taken.

If more than one degree of danger is present, the warning notice representing the highest degree of danger will be used. A notice warning of injury to persons with a safety alert symbol may also include a warning relating to property damage.

Qualified Personnel

The product/system described in this documentation may be operated only by **personnel qualified** for the specific task in accordance with the relevant documentation, in particular its warning notices and safety instructions. Qualified personnel are those who, based on their training and experience, are capable of identifying risks and avoiding potential hazards when working with these products/systems.

Proper use of Siemens products

Note the following:

⚠ WARNING

Siemens products may only be used for the applications described in the catalog and in the relevant technical documentation. If products and components from other manufacturers are used, these must be recommended or approved by Siemens. Proper transport, storage, installation, assembly, commissioning, operation and maintenance are required to ensure that the products operate safely and without any problems. The permissible ambient conditions must be complied with. The information in the relevant documentation must be observed.

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Disclaimer of Liability

We have reviewed the contents of this publication to ensure consistency with the hardware and software described. Since variance cannot be precluded entirely, we cannot guarantee full consistency. However, the information in this publication is reviewed regularly and any necessary corrections are included in subsequent editions.

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Introduction 1

1.1 Objective

The objective of this application guide is to help the user become familiar with the steps required to eliminate false pulses caused by environmental vibration.

1.2 Overview

This application has been prepared as a guide for replacing optical encoders adversely affected by environmental vibration.

Vibration from nearby equipment may cause optical encoders to continue generating pulses even after the weighfeeder has stopped running. This effect is amplified in high resolution encoders, such as those with 2500 ppr. To eliminate these false pulses, Siemens has developed a circuit that removes the encoder's pulse input in one direction.

Resolution	Old Encoder Part Number(s)	New Encoder Replacement Part Number
500 PPR	6FX20014QA50 6FX20012QA50	6FX20012PA50
1000 PPR	6FX20014QB00	6FX20012PB00
1024 PPR	6FX20012QB02	6FX20012PB00
1250 PPR	6FX20012QB25	6FX20012PB00
2500 PPR	6FX20014QC50 6FX20012QC50	6FX20012PC50

Note

The 6FX style encoders feature a 10 mm input shaft. If the weighfeeder does not have a Siemens brand encoder, please contact the factory for a proposal on retrofit parts.

Additional components

2

The new style encoders require the addition of the following components:

Termination box with circuit card

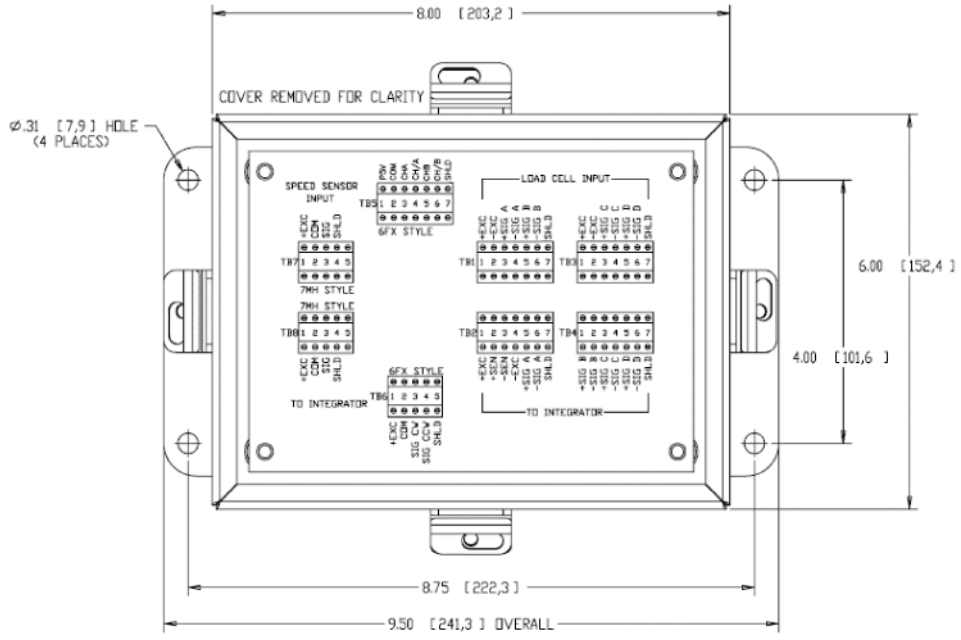
Mild Steel	7MH77231ND
OR	
Stainless Steel	7MH77231NE

Connection cable

Connector with 20 inch (6m) of cable	7MH77231KM

Note

The termination box with circuit card has the following mounting dimensions:



Some weighfeeder models may feature a smaller mounting footprint than shown. In this case, new mounting holes are needed. For more dimensional information, please see DWG A5E03629821.

When connecting a new termination box to the integrator, please ensure the rotation of the encoder is correctly connected on TB6 in terminal 3 (Clock-wise) or 4 (Counter clock-wise).