

## 5000/Profi Profibus-DP Communications For the 5000 Series

- Provides fieldbus interface for the Nova Weigh 5001 and 5002 digital weight indicators
- High speed data rates of up to 12 Mbit/sec for real-time batching control
- Enables multi-vendor operation on a common data bus
- Major reductions in system implementation costs - especially installation cabling
- Simple system integration using GSD configuration files



Profibus Gateway for 5001 digital weight indicator

### Profibus-DP

Profibus-DP is established as one of the most popular international fieldbus standards with a huge installed base. Profibus-DP offers the user a number of major benefits including ...

- Reduced project costs – especially in the areas of cabling and installation
- Interoperability of different vendors equipment on a shared network
- An open and internationally accepted standard – avoiding the need for costly and sometimes troublesome 'drivers' for each manufacturers equipment
- Extremely high speed data transfer and excellent data integrity
- The potential to distribute control functions in the field with consequential savings in control room costs



Model 5002/Profi field mount weight indicator

### Model 5001 with Fieldbus Gateway

The Profibus interface for the 5001 is provided by a separate DIN-rail mounting module – the Fieldbus Gateway. Often, several 5001s will be installed in one panel and a single Fieldbus Gateway can interface to four 5001s without loss of performance.

This architecture provides flexibility and cost savings in multi-instrument installations. The Fieldbus Gateway Module requires a 24 VDC power supply.

### Model 5002/Profi

The field mounting 5002/Profi has the fieldbus interface components installed inside the stainless steel enclosure.

### Functionality

Installing the Profibus option takes over Data Port 1 of the 5001 or 5002. Data port 2 is still available with its normal functionality, e.g. for connection of a printer or slave display.

A full list of the inputs and outputs is shown overleaf.

### GSD File

The GSD file supplied with the instrument allows the user to install the 5001 or 5002 onto the Profibus network simply and quickly.

## TECHNICAL SPECIFICATION

### Profibus inputs (instrument data)

Function	Byte/word
gross weight	floating point
net weight	floating point
tare weight	floating point
status bits (1)	byte
alarm	bit
gross weight zero	bit
gross mode display	bit
setpoint one reached	bit
net mode display	bit
setpoint two reached	bit
motion	bit
setpoint three reached	bit
status bits (2)	byte
gross weight at zero	bit
net weight at zero	bit
gross mode display	bit
batch running	bit
x 10 mode display	bit
net mode display	bit
tare mode display	bit
rate mode display	bit
setpoint one	floating point
setpoint two	floating point
setpoint three	floating point
in-flight correction	floating point

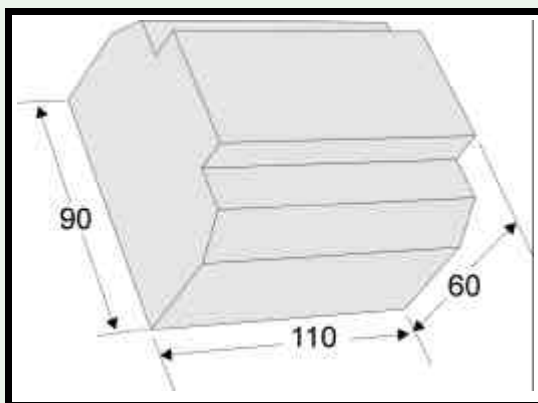
**Note 1:** some of the status bits such as 'gross mode display' appear in both status bits (1) and status bits (2), these are identical

**Note 2:** the gateway data map can contain up to 41 words of input data and 16 words of output data. The Profibus master must be capable of handling this quantity of data.

### Profibus Outputs (instrument commands and input variables)

Function	Byte/word
command bits (1)	byte
set zero	bit
set tare	bit
clear tare	bit
set gross display	bit
set net display mode	bit
set tare display mode	bit
set flow rate mode (and display)	bit
command bits (2)	byte
batch run	bit
batch stop	bit
setpoint 1	floating point
setpoint 2	floating point
setpoint 3	floating point
in-flight correction	floating point
print string ST1A [SA]	string
print string ST1B [SB]	string
print string ST2A [SC]	string
print string ST2B [SD]	string

### DIMENSIONS (mm)



**Fieldbus Gateway for Model 5001 digital weight indicator**

### Operation

A network can support up to 32 devices (or 126 with repeaters)

The 5001 panel mount implementation uses a Fieldbus Gateway device which supports up to 4 instruments with a single profibus address. This provides increased flexibility whilst keeping system costs down.

### Configuration

Each 5002/Profi or 5001 Fieldbus Gateway is provided with a GSD file for simple network configuration.



# NOVA WEIGH



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