IDS DSM SPECIFICATIONS

STANDARD FEATURES

SCALE SPECIFICATIONS

A/D Channels	4-Independent 20-bit Sigma Delta A/D
Conversation Rate	100 samples/second typical
Internal Resolution	1,048,000 divisions
Graduation Resolution	200,000 dd industrial; 10,000 dd HB44
Graduation Increments	Selectable 1, 2, 5, 10, 20, 50 100
Decimal Point	Selectable 0, 1, 2, 3, 4 decimal places
Signal Sensitivity	0.1 uV/graduation (min)
Signal Range	0.5 mV/V to 6mV/V
Load Cell Excitation	10 ± 0.5VDC (-5 to +5)
Load Cell Power	350 Ω or 700 Ω load cells
Auto Zero Tracking	0-60 dd in 1/4 dd increments
Auto Zero Delay	0-25 seconds In 0.1 second increments
Motion Detect	0-60 dd in 1/4 dd increments
Motion Delay	0-25 seconds In 0.1 second increments
Digital Filter	0-18 selectable filter (DSP) levels
Calibration	Analog or Digital (no test weights)
Watchdog Timer	Enable/disable fault tolerant operation
RFI/Voltage Protection	Signal, excitation and sense lines
RAM	32K for setup and program storage
Watchdog Timer	Fault tolerant operation

COMMUNICATIONS

Serial Port 1	Full duplex RS232 or 20mA current loop
Serial Port 2	Full duplex RS232, RS485 or 20ma
Digital Port	6 inputs and 7 outputs; Active low (TTL) For remote operation and relay control

GENERAL SPECIFICATIONS

Power	Universal A/C internal power supply 100/240VAC ±10% @ 47-63Hz; Optional 12-28 VDC operation.
Power Consumption	4W @ 115VAC; 3.7W @ 12VDC
Operating Temperature	-10 to +40 °C.
Enclosure	Hoffman NEMA metal enclosure
Weight	7 lbs (3.18 kg)
Warranty	One year limited

GENERAL DESCRIPTION

The DSM is a leading edge digital summing module that brings digital weighing technology to a wide range of weighing applications using tried-and-proven standard analog load cells. With this solution, you avoid being locked into other manufactures that offer proprietary digital load cell technology.

State-of-the-art technology incorporates four high-speed and independent channels for fast and easy calibration. This design replaces the use of traditional junction boxes and eliminates the time-consuming manual load cell trimming. In addition to analog calibration, the DSM provides digital calibration without the need to use test weights. This is accomplished though the available front-ends (DS200 control terminals).

Real-time diagnostics is performed automatically to detect and identify any failures with load cells. If a failure occurs, a visual message and an output signal are generated on the front-end to alarm the problem. The Interpolation function allows one loadcell to act for the other so the system can continue to operate to prevent costly down time.

When used with the optional Front-End control terminals the DSM offers a complete digital weighing technology solution at an affordable price.

The DSM is fully programmable in an easy and flexible macro language called Scale Basic™. In addition to the normal mode of operation, Scale Basic allows you to customize the operation of the DSM to meet your application requirements. The Scale Basic language provides various commands and functions that include: math operations, I/O control, setpoints, timers, data entry, ID storage, message display, and program sequence control among others. Programming the DSM can be performed through the front-end controller or a PC using the optional EZ-LINK™ software that greatly facilitates setup and programming.

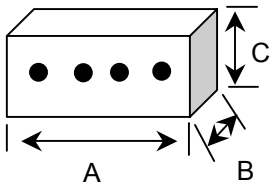
OPTIONS

S200	Front-End controller terminal
Ez-Link	PC software for setup and Programming Windows 95/98/2000
Enclosure	Stainless steel Nema4/4X (IP68)
Analog output module	Fully isolated 0-10VDC or 4-20mA; 16-bit resolution; 650Ω load resistance
Lightning arrestors	For load cell and DSM protection
Relay Box	External 4 or 8 channel box
Relay Modules	Input/output solid-state (AC/DC) relays
IS Barrier	Hazard location intrinsic safety barriers
QD-Connector	Quick disconnects
PC-FE	PC front-end for indication
*Multi-Scale	Multi-scale input configuration

* (For future release)

DIMENSIONS

A = 8.5” (21.59 cm)
B = 6.5” (16.51 cm)
C = 4.5” (11.43 cm)



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INDUSTRIAL DATA SYSTEMS

WEIGHING TECHNOLOGY LEADERS

MODEL IDS DSM

DIGITAL SUMMING MODULE

APPLICATIONS

- Batching, Bulk weighing and Process Control systems
- High capacity scales, silos, bins, tanks and hoppers
- Scale conversions to digital weighing technology
- Loss-in-Weight and Level monitoring
- Vehicle and railroad weighing
- Unattended weighing

THE BEST OF BOTH WORLDS

FEATURES

- 4-Independent high-speed load cell channels for fast and easy calibration (Replaces the use of traditional junction boxes)
- Calibration adjustment for each load cell is done digitally instead of trim pots
- Expandable communication bus for multiple load cell applications
- Each channel can be turned into a separate and independent scale (optional)
- Real-time diagnostics for detecting and identifying load cell failures
- Intuitive diagnostics for testing and troubleshooting. Load cells can be enabled or disabled manually
- When used with the optional Front-Ends, the DSM offers a complete digital weighing technology solution using standard analog load cells
- Provides demand/continuous weight data transmission for use as a stand-alone module (block box). Analog output is also provided, as an option, for the same purpose
- Programmable in Scale Basic™ macro language for application development (event driven)
- Digital port for relay and remote operation
- 2 full duplex serial ports: RS232, RS485 and 20mA current loop
- Selectable baud rates (600 – 38.2K) and data formats

SDS200PM

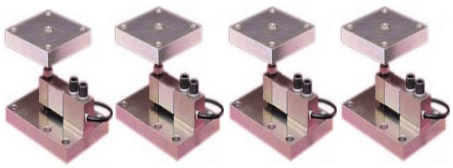
SDS200

DS200

OPTIONAL FRONT-ENDS

OPTIONS

- DS200 front-end controller terminal
- PC-DSM PC software; For setup and basic operation from a PC; Windows 95/98/2000 compatible
- Stainless steel Nema4/4X enclosure
- 4-20mA/0-10VDC isolated analog output with 16-bit resolution
- 4 to 8 channel external relay box
- Input/output solid-state relay modules (AC/DC)
- Lightning arrestors for load cell and DSM protection
- Intrinsic safety Barriers for hazardous locations Class I/II/III Div. 1 and 2 Groups A-G
- Sealed (IP68) connectors for quick disconnection
- PC front-end software for control and indication
- Multi-Scale input



STANDARD ANALOG LOAD CELLS
With Digital Summing Technology