



VISHAY INTERTECHNOLOGY, INC.

LOAD CELLS

HIGH-SPEED WEIGHING

Vishay Transducers



MARKET SOLUTIONS



HIGH-SPEED WEIGHING

Vishay Transducers

Build the Vishay Advantage into Your High-Speed Weighing Applications

- Shorter settling time
- Faster weighing speeds
- Environmentally sealed and/or wash-down construction
- Stainless steel housing
- Ultra-fast response time
- High resistance to side loads
- Insensitivity to rotary dynamic force
- Ultra high-performance in dynamic weighing
- Multi-axis overload protection
- Mechanical tare load cancelling
- Extended load cell life
- Digital fluid damped load cell
- Fully calibrated and programmable filtered digital output
- Adjustable communication speed



High-speed in-motion



Rotary filling machine



Dynamic weighing



DYNAMIC WEIGHING AND PRECISION CONTROL

Dynamic Solutions

- Vishay supplies the largest and most comprehensive product line for high-speed weighing
- With over 45 years of experience producing load cells and fluid-damped load cells, Vishay provides the widest solution for dynamic in-motion systems
- Vishay products accommodate all your demands for filling, batching, and high-speed controlled processes

9010 Self-Contained Fluid-Damped Load Cell

OIML R60 Pending



- Fluid-damped load cell
- Unique and adjustable tare load-cancelling mechanism
- Highly effective viscous damping
- Built-in overload limit stops
- Fast weighing speed
- IP65 protection
- Aluminum housing, electroless nickel plating (optional stainless steel)

1410 Load Cell for Rotary Filling Machines



- Specially designed for use in rotary filling machines
- Short settling time
- High resistance to side loads
- Effective isolation of base vibrations
- Centrifugal forces do not affect accuracy
- Two mounting options

240 Fluid-Damped Load Cell



- Painted steel construction (optional stainless steel)
- OIML R60- and NTEP-approved
- Available in metric and UNC threads

1430 Damped Load Cells for Rotary Filling Machines



- Stainless steel construction
- Insensitive to rotary dynamic forces
- Single-point performance
- Rotary speed to 13 rpm at 1 m radius
- Sealed wash-down configuration

1010/1015 Aluminum Single-Point Load Cell



1033 Low-Profile Aluminum Single-Point Load Cell



1042 Single-Point Aluminum Load Cell with C6 OIML Approval



1510 Hermetically Sealed Single-Point Load Cell



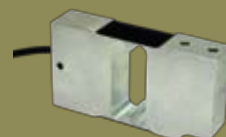
1260 Aluminum High-Capacity Single-Point Load Cell



HPS Hermetically Sealed Single-Point Load Cell



1063 Aluminum Single-Point Load Cell





Vishay's Wide Range of Products Offers Solutions for Your Dynamic Weighing and Precision Control Applications

- Fluid-damped load cell
- 9010 / 240 for high-speed weighing
- 1430 / 1410 for rotary filling machines
- A wide range of load cells (1010, 1033, 1042, 1063, 1260, 1510, HPS) for dynamic applications
- Digital fluid-damped load cells: 9010D / 240D
- Dynamic high-speed digital weighing: DHS

Transducer Type							
		Load Cells					
Model		1010	1063	1042	1033	HPS	1260
Capacities		3–90 kg	3–100 kg	1–150 kg	10–30 kg	6–60 kg	50–660 kg
Rated Output (mV/V)		2	2	2	2	2	2
Relative Stiffness		RFF. (1.0)	1.8	1042 – 0.8 1042S – 1.2	0.9	0.9	1.2
Environmental Protection		IP65 (optional IP67)	IP66	IP66	IP66	IP66 / IP68	IP66
Safety Overload		150%	150%	150%	150%	150%	150%
External Construction Material		Aluminum	Aluminum	Aluminum	Aluminum	Stainless steel	Aluminum
Optional Material		–	–	–	–	–	–
Settling Time							
Communication Interface		–	–	–	–	–	–
Communication Protocol		–	–	–	–	–	–
Applications	Batching	✓	✓	✓	✓	✓	✓
	Filling	✓	✓	✓	✓	✓	✓
	Rotary Filling						
	High Speed Weighing						



Typical Applications

- Check weighers
- Bottle rotary filling
- Multi-head packaging
- Dynamic batching and weighing
- Batching control
- Packaging, filling, sorting, controlling
- High-speed in-motion weighing
- Rotary filling
- Multi-head combination precise weighing

	Fluid-Damped Load Cells for Rotary Filling Machines		Analog Fluid-Damped Load Cells		Digital Fluid-Damped Load Cells		Digital Interface	
	1510	1430	1410	240	9010	240 Digital	9010 Digital	DHS
	100–500 kg	3 kg, 17 lb, 23 lb	10, 20, 30 kg	2–50 kg	3–90 kg	1–90 kg	3–90 kg	–4 mV/V to +4 mV/V
	2	2	2	2	2	2	2	–
	3.0	–	–	–	–	–	–	–
	IP66 / IP68	IP66	IP66	IP66	IP65 (optional IP66)	IP66	IP65 (optional IP66)	IP66
	150%	Negative 120% Positive 160%	Negative 120% Positive 160%	150%	400%	150%	400%	
	Stainless steel	Stainless steel	Aluminum	Coated mild steel	Nickel plated aluminum	Coated mild steel	Nickel plated aluminum	Stainless steel
	–	–	–	Stainless steel	Stainless steel	Stainless steel	Stainless steel	
			300 milliseconds	40–300 milliseconds	40–300 milliseconds	40–300 milliseconds	40–300 milliseconds	
		–	–	–	–	RS232, RS485	RS232, RS485	RS232, RS485
		–	–	–	–	ASCII, Modbus	ASCII, Modbus	ASCII, Modbus
	✓	✓	✓			✓	✓	✓
	✓	✓	✓	✓	✓	✓	✓	✓
		✓	✓					✓
				✓	✓	✓	✓	✓

Digital Solutions

- More features, advantages, and benefits through the line of high-speed fluid-damped load cells
- Combines digital capability with the unique mechanical advantages of analog fluid-damped load cells
- Increase product throughput with simplified control communication
- Advanced control of measurement signals converted to high-precision weighing

9010D Digital Self-Contained Fluid-Damped Load Cell



- Unique adjustable tare load cancelling mechanism
- Highly effective viscous damping
- Built-in positive and negative overload limit stops
- Fully calibrated filtered digital output
- High update rate, up to 1200 updates per second
- Four opto-isolated digital inputs and outputs
- Advance configurable digital filtering
- Safeguard access to calibration data for approved applications
- Reading on request or continuous output
- Extensive diagnostics
- Optional: stainless steel
- Graphic User Interface (GUI) PC application enables easy setup, calibration, and monitoring

240D Digital Fluid-Damped Load Cell



- Fully calibrated and filtered digital output
- High update rate, up to 1200 updates per second
- Checkweigher function—reading acquired over period set by remote sensor trigger
- Four opto-isolated digital inputs and outputs
- Advanced configurable digital filtering
- Safeguard access to calibration data for approved applications
- Reading on request or continuous output
- Visual indication of operating mode and errors
- Extensive diagnostics
- Fluid damped and overload protected
- Graphic User Interface (GUI) PC application enables easy setup, calibration, and monitoring

DHS Dynamic High-Speed Digital Interface



- Link to any load cell or analog fluid-damped load cell
- Convert the signal to digital data
- Four opto-isolated digital inputs and outputs
- Advanced configurable digital filtering
- Reading on request or continuous output
- Graphic User Interface (GUI) PC application enables easy setup, calibration, and monitoring

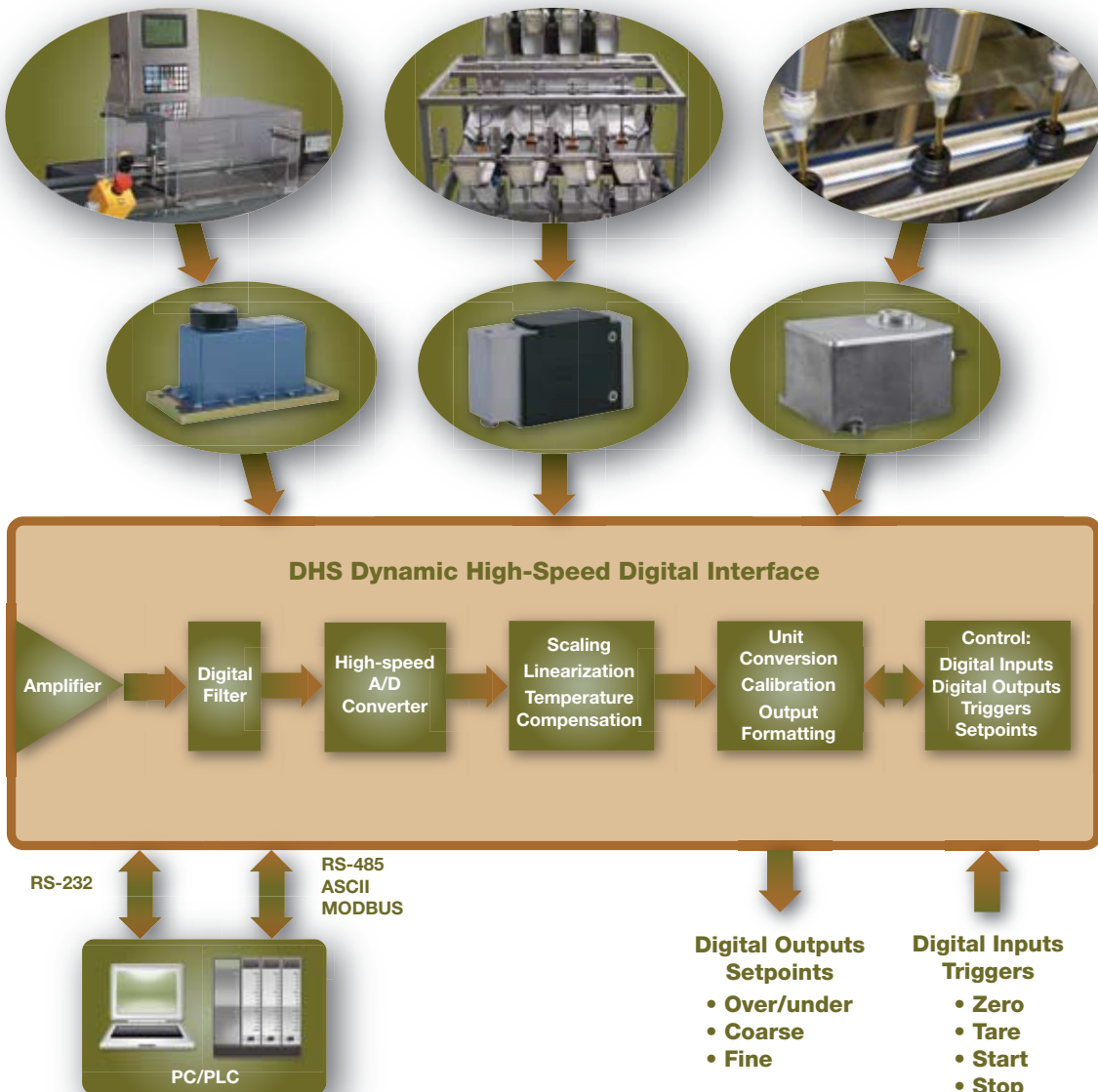
HIGH-SPEED WEIGHING

Vishay Transducers



DHS – Dynamic Digital Interface

- Conversion of analog signal to digital data
- Full calibration and filtered digital output
- Link to any analog load cell and fluid-damped load cells
- Perfect solution to improve your weighing process
- Designed for easy installation and calibration in harsh process environments
- Cost-effective solution for your needs
- Guarantees high reliability and accurate production



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VISHAY MEASUREMENTS GROUP:

Vishay Micro-Measurements
Vishay Transducers
Vishay Systems – Weighing and Force Measurements



One of the World's Largest Manufacturers of
Discrete Semiconductors and Passive Components

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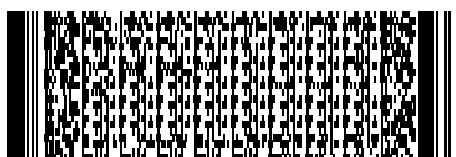
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