



**Group  
Four**  
A PARASOL COMPANY

**“WE TAKE THE LOAD OFF YOUR MIND”**

# Digital Load Cells

*Innovative technology for your solutions*

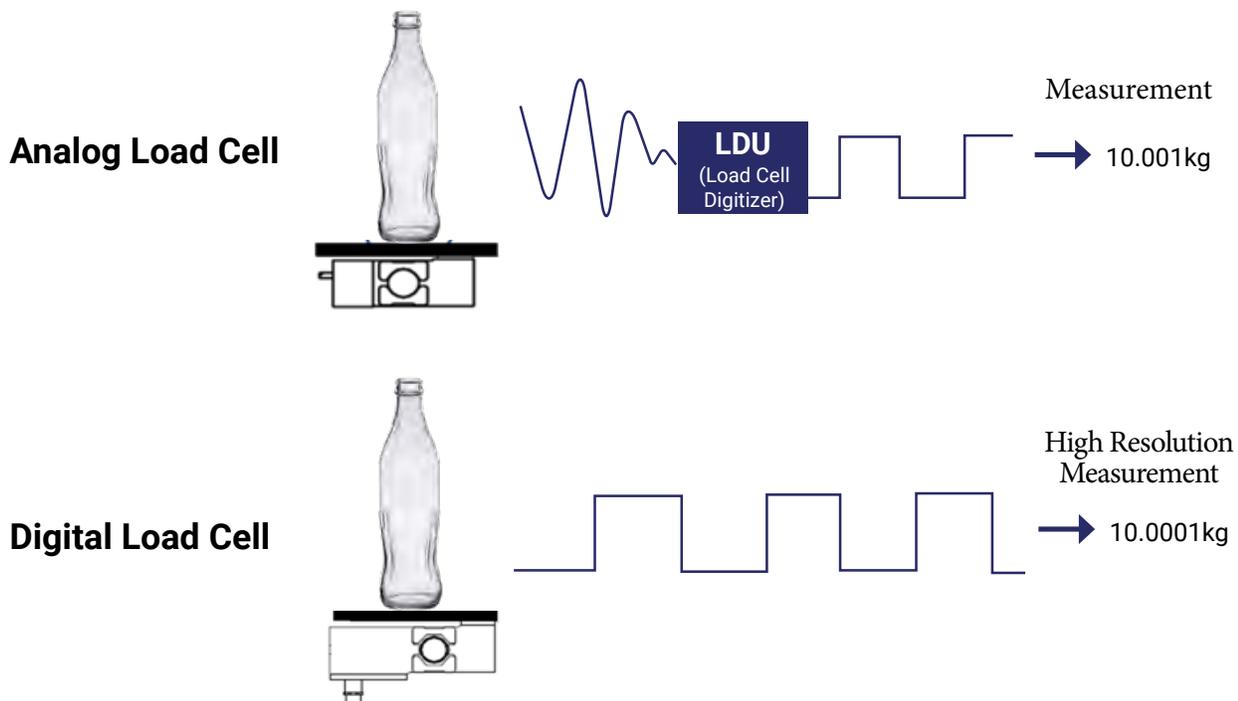
[groupfourtransducers.com](http://groupfourtransducers.com)

# Why Digital?

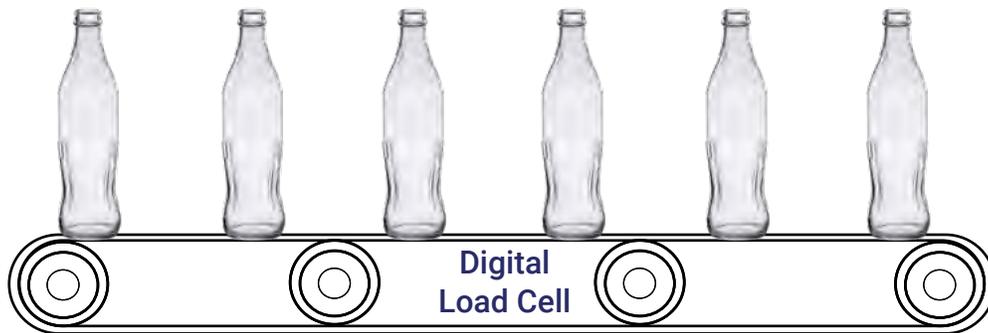
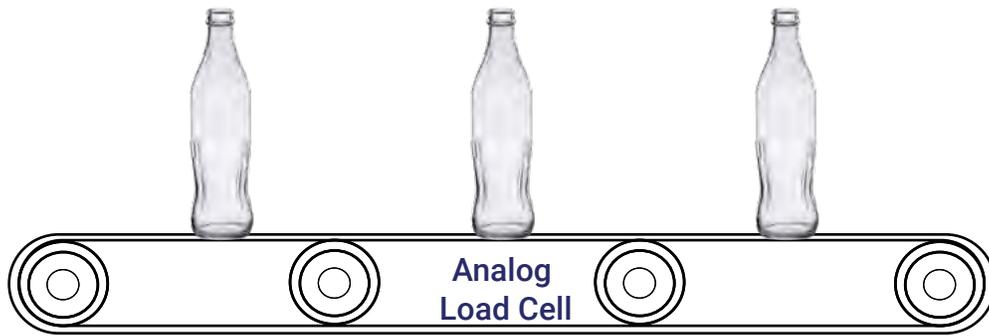
Group Four Transducers next generation of digital load cells significantly enhances the utilization and performance of standard analog load cells. Our advanced digital technology tightly intergrated to the strain gauge bridge results in vast improvements in linearity, temperature effects on zero and span, calibration, measurement speed and resolution.

The minimum verification interval is defined as the smallest value of a quantity which may be applied to a load cell without exceeding the maximum permissible error. With Digital load cells, the  $V_{min}$  is ten times better than a traditional analog load cell. As a result of the improved  $V_{min}$ , digital load cells can be used at a much lower measuring ranges.

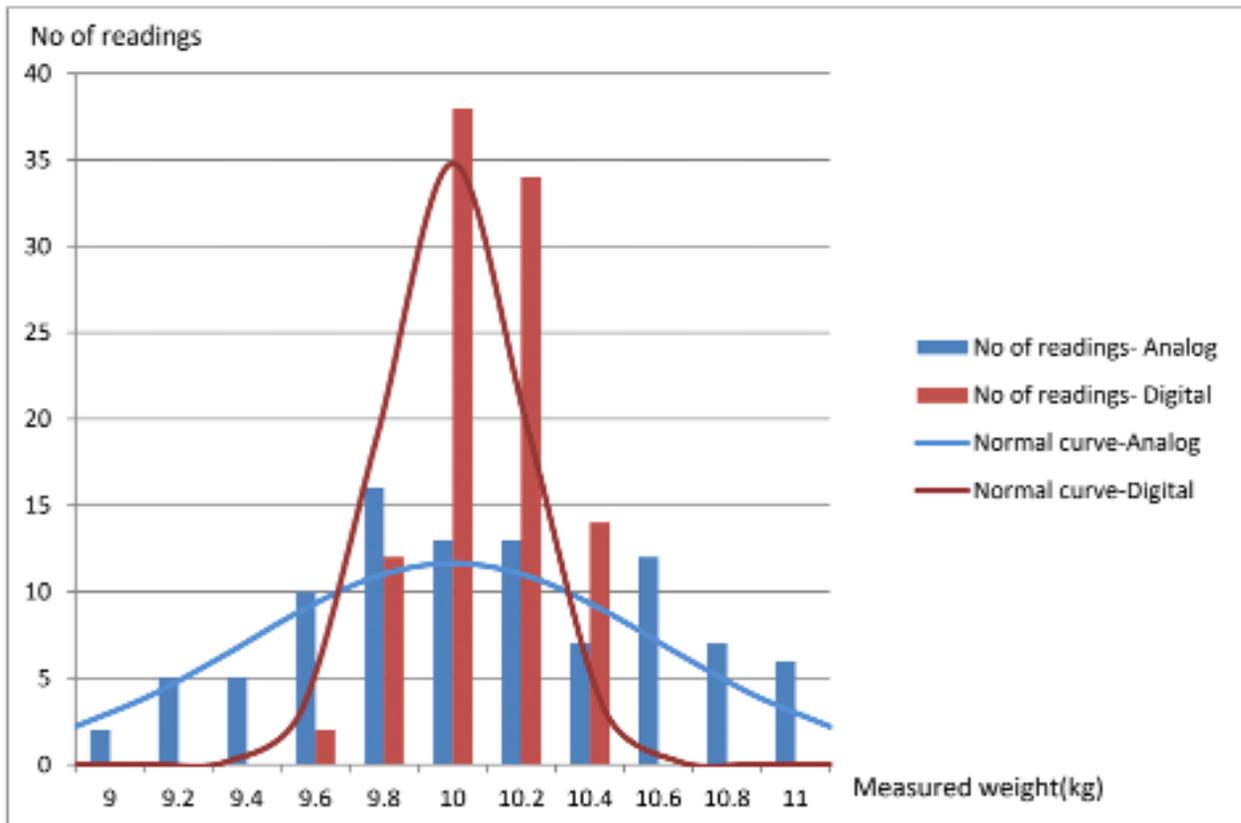
- ❖ Higher Accuracy
- ❖ Higher Resolution
- ❖ Fast Response
- ❖ Flexibility of Capacity Selection
- ❖ Easy Diagnostic Capability
- ❖ Easy to Install Pre-calibrated
- ❖ Easy Connection to PC, PLC or HMI
- ❖ Lower Cost



Higher precision and faster response enables high accuracy, fast weighing.



Higher accuracy with a lower standard deviation with digital vs analog.



## Digital Single Point Load Cells



Group four digital single point load cells are available in stainless steel and anodized aluminum. The stainless steel load cells are protection class IP69 and the aluminum load cells are protection class IP67.

Our digital single point load cells are developed for machine builders who have tasks within dynamic weighing, multi-head weighers, factory automation, packaging machines, filling and dosing, flow measurement, bench and platform scales, conveyor scales, process weighing and check weigher.

## Digital Single Ended Beams



Digital single ended beam load cell designs for dynamic weighing, process weighing, filling, packaging and general weighing applications.

## Digital S Beams



Group Four digital s beam load cells are designed to measure both tension and compression. Performance characteristics that are ten times better than analog load cells. The load cells are made from stainless steel and carry a protection class of IP68 and IP69. S beam load cells are suitable for smaller silo vessels and tank weighing systems, testing machines and unique OEM projects.

## Digital Column Load Cells



Group Four digital canister load cells are ideal for tank weighing, heavy capacity scale application and test machines. Ease of setup, calibration and diagnostics are some of the principle benefits for the scale manufacturer. The load cells are made from stainless steel and carry a IP69 protection class.

## Digital Single Point Load Cells

pg. 6 SPD Single



pg. 9 SPD Dual



pg. 12 SPF5 Single



pg. 15 SPF Dual



pg. 18 SP46HD



pg. 20 SP63



pg. 22 BSSPDE



## Digital Single Ended Beams

pg. 24 RB14D



pg. 26 ZQD



## Digital S Beams



WSBD pg. 28

## Digital Column Load Cell



DTC pg. 30

## Special Products



T Rex Stand pg. 32



DOP4 pg. 33



Gateway pg. 39



JBD pg. 41

The type SPD is a digital version of single point load cell with complete hermetic sealing. It is a perfect fit for use in harsh industrial environments and wash down applications.



IP69k

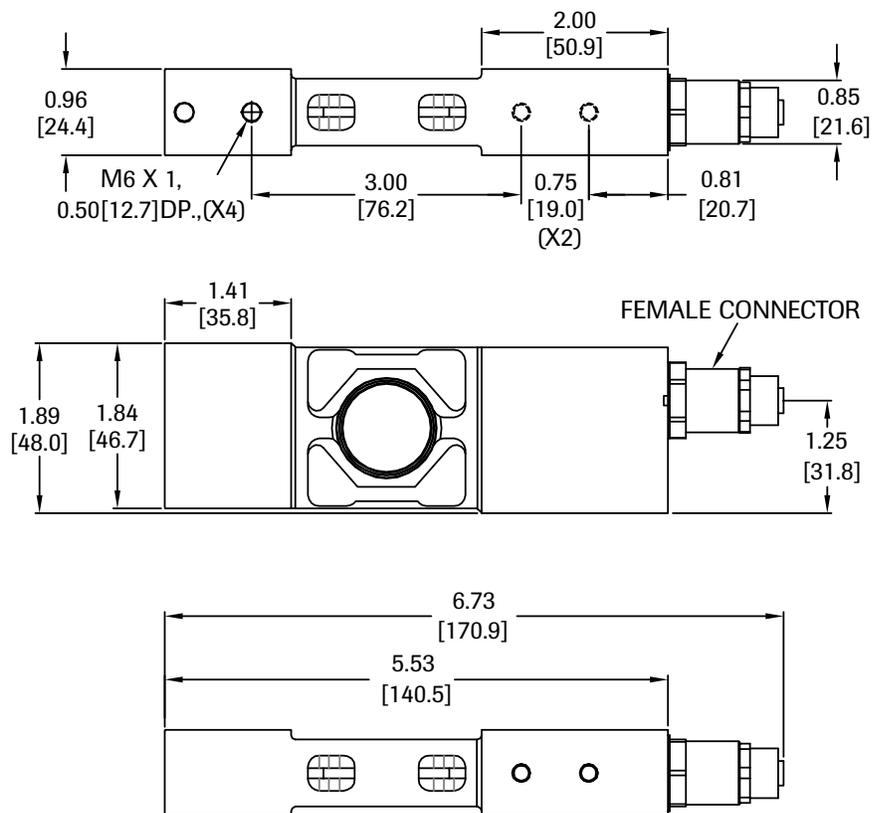
**FEATURES**

- Capacities from 10 to 50 kg.
- Stainless steel construction.
- Environmental Protection IP69k with complete hermetic sealing.
- AD conversion rate up to 1 200/s.
- Free professional software for setting up the digital load cell.
- Maximum platform size up to 450 x 450 mm.

**APPLICATIONS**

- Bench scales, conveyor scales, check weighers, filling plants, packaging machines and industrial process control.

**OUTLINE DIMENSIONS**



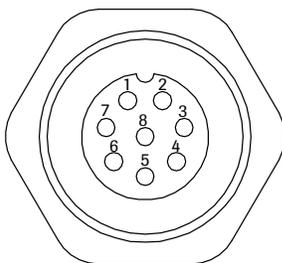
# single point SPD 4046



## WIRING

Standard Female Connector Signal Electronics M12AF0008		
Pin No.	RS-232+CAN	RS-485+RS-422
1	GND1	GND1
2	PROGRAM	PROGRAM
3	CANH	Rx+
4	TRIGGER INPUT	TRIGGER INPUT
5	CANL	Rx-
6	RxD	Tx-
7	TxD	Tx+
8	PWR+	PWR+

## PIN CONFIGURATION



## SPECIFICATIONS

Model	SPD			
Capacities (E <sub>max</sub> )	kg	10	20	50
Recommended min. external division	g	1	2	5
<b>PERFORMANCES</b>				
Accuracy class according to the OIML R60	C3			
Maximum load cell verification interval(V <sub>min</sub> )	E <sub>max</sub> /10000			
Combined error	%FS	≤±0.017		
Creep @ 30min	%FS	≤±0.017		
Zero balance, raw counts	Increments	±2000		
Output resolution at full load, raw counts	Increments	256000	512000	512000
Internal AD conversion rate	upd./sec	1200		
Fix, digital low pass IIR filter, default	Hz	18 (Supress 50Hz and 60Hz Influence)		
Adjustable , digital low pass IIR filter Adjustable , digital low pass FIR filter	Hz	18-0.25; Selectable in 8 Steps 40-5; Selectable in 8 Steps		
Adjustable, external output update rate	upd./sec	1200-9; Selectable in 8 Steps		
<b>GENERAL I/O's</b>				
Hardware interface, CAN version Hardware interface, RS version	CAN and RS232 RS485 and RS422 (Both four wire)			
Data transmission rates CAN Data transm. rates RS485/RS422/RS232	kb	125;250;500;1000 9.6;19.2;38.4;57.6;115.2;230.4;460.8		
Protocol CAN Protocol RS485/ RS422/ RS232	CAN Open ASCII or Modbus RTU			
Logical input, programmable	Trigger level 2-30Vdc,<3mA,Ref to Gnd.			
Power supply	VDC	10-30 ≤ 0.4 Watt		
Connections	Standard 8 pin, female M12MF 0008			
<b>INFLUENCES</b>				
Safe load limit	%* E <sub>max</sub>	300	150	150
Ultimate load	%* E <sub>max</sub>	600	300	300
Eccentric loading error acc. to OIML R76	%FS	±0.0233		
Max Platform Size	mm	450 x 450		
Temperature ffect on zero	Typical 2ppm/°K; Max 4ppm/°K			
Temperature effect on span	Typical 4ppm/°K; Max 8ppm/°K			
Temperature range	°C	Operating: -10/+40 Storage: -40/+70		
EMC Performance	MID Class E2 (Industrial locations)			
I/O Protection, all pins	Reversed polarity; Excess voltage and surge			
Insulation body/ Electronics (VDC)	GΩ	≥1		
Vibration	2.5G Operational; 5G Non-Operational			
Environmental Protection IEC529	Body IP69k; Connectors IP68			
Corrosion resistance	All stainless steel			

Dimensions and specifications subject to change without notice



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sales@group-4.com

single point  
**SPD**  
**4046D**



**PART NUMBERS**

Capacity (kg)	Option	Part No.
10	Single IO (RS232+CAN)	4046D-001-00
20	Single IO (RS232+CAN)	4046D-000-00
50	Single IO (RS232+CAN)	4046D-002-00
10	Single IO (RS485+RS422)	4046D-001-01
20	Single IO (RS485+RS422)	4046D-000-01
50	Single IO (RS485+RS422)	4046D-002-01

**Digital single point load cell designed for high speed filling and check weighing applications. Serial Interface with an optional dual logical input and four logical output enables direct connection to the PLC. The stainless steel load cell is hermetically sealed and is ideal for use in heavy washdown applications**



**IP69k**

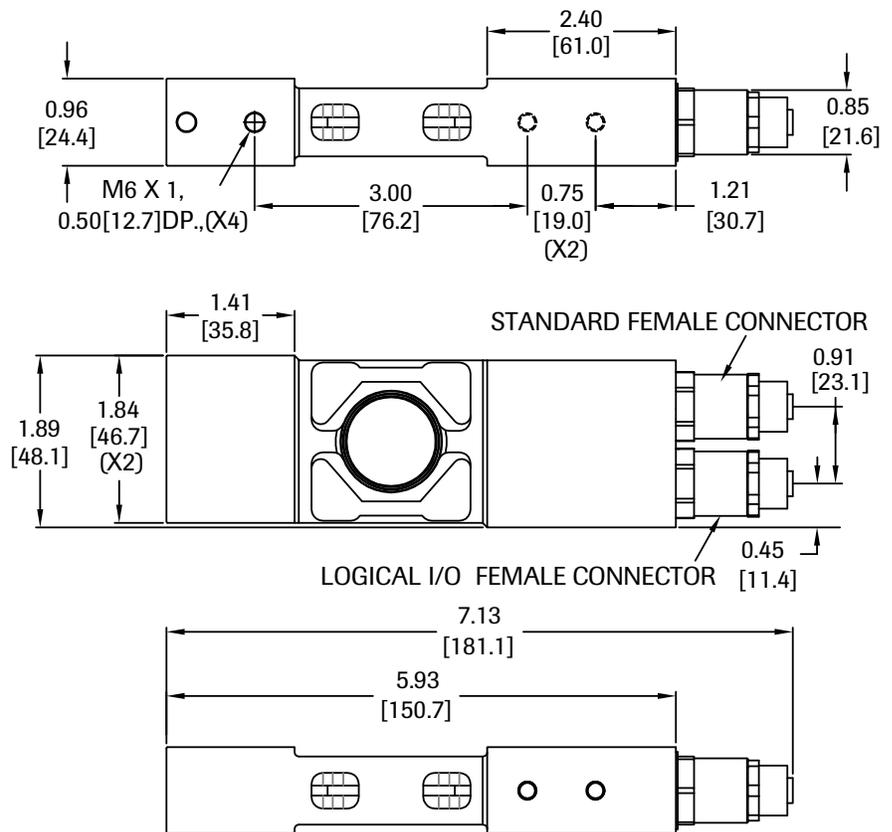
**FEATURES**

- Capacities from 10 to 50 kg.
- Stainless steel construction.
- Environmental Protection IP69k with complete hermetic sealing.
- AD conversion rate up to 1200upd./sec.
- The current drive per channel is  $\leq 1A$ .
- Over voltage, over current, EMC protection.
- The total constant current through all channels is 3Amps (Power<0.66W).
- Any two output channels can be paralleled to drive 2A(The load cell itself can virtually be a (simple) PLC with outputs of 2 x 2Amps or 1 x 2Amps + 2 x 1 Amp etc).
- Free professional software for setting up the digital load cell.
- Maximum platform size up to 450 x 450 mm.

**APPLICATIONS**

- Bench scales, conveyor scales, check weighers, filling plants, packaging machines and industrial process control.

**OUTLINE DIMENSIONS**



# single point SPD-DUAL 4046D

## SPECIFICATIONS

Model	SPD			
Capacities (E <sub>max</sub> )	kg	10	20	50
Recommended min. external division	g	1	2	5
<b>PERFORMANCES</b>				
Accuracy class according to the OIML R60	C3			
Maximum load cell verification interval(V <sub>min</sub> )	E <sub>max</sub> /10000			
Combined error	%FS	±0.017		
Creep @ 30min	%FS	±0.017		
Zero balance, raw counts	Increments	±2000		
Output resolution at full load, raw counts	Increments	256000	512000	512000
Internal AD conversion rate	upd./sec	1200		
Fix, digital low pass IIR filter, default	Hz	18 (Supress 50Hz and 60Hz Influence)		
Adjustable , digital low pass IIR filter	Hz	18-0.25; Selectable in 8 Steps		
Adjustable , digital low pass FIR filter	Hz	40-5; Selectable in 8 Steps		
Adjustable, external output update rate	upd./sec	1200-9; Selectable in 8 Steps		
<b>GENERAL I/O's</b>				
Hardware interface, CAN version	CAN and RS232			
Hardware interface, RS version	RS485 and RS422 (Both four wire)			
Data transmission rates CAN	kb	125;250;500;1000		
Data transm. rates RS485/RS422/RS232		9.6;19.2;38.4;57.6;115.2;230.4;460.8		
Protocol CAN	CAN Open			
Protocol RS485/ RS422/ RS232	ASCII or Modbus RTU			
Logical input, programmable	Trigger level 2-30Vdc, <3mA, Ref to Gnd.			
Power supply	VDC	10-30 ≤ 0.4 Watt		
Connections	Standard 8 pin, female M12MF 0008			
<b>LOGICAL I/O's</b>				
Number of logic inputs	Two (2) with common GND			
Programmable Logic input data	Trigger level 2-30Vdc, <3mA, Ref to GND			
Number of logic outputs	Four (4) channels with common High drive.			
Single channel logic output data	ON : Current ≤ 1.0 Amp. R <sub>ds</sub> 0.055Ω			
Dual channel output data	ON : Current ≤ 2.0 Amp. R <sub>ds</sub> 0.028Ω (Paralleled wiring and programmed for synchronous switching)			
Four channel total constant	ON: Current ≤ 3.0 Amp and 660mW			
	OFF: ≤ 40Vdc			
Protection measures of all channels	Short circuit protection; Over temperature shut down; Over voltage protection ; ESD protection			
Isolation Body/Electronics at 500VDC	GΩ	≥1		
Connection	Separate 8 pin, female M12MF 0008			



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# single point SPD-DUAL 4046D

## SPECIFICATIONS

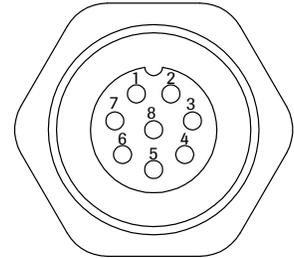
INFLUENCES				
Safe load limit	%* Emax	300	150	150
Ultimate load	%* Emax	600	300	300
Eccentric loading error acc. to OIML R76	%FS	±0.0233		
Max Platform Size	mm	450 x 450		
Temperature effect on zero	Typical 2ppm/°K; Max 4ppm/°K			
Temperature effect on span	Typical 4ppm/°K; Max 8ppm/°K			
Temperature range	°C	Operating: -10/+40, Storage: -40/+70		
EMC Performance (EN61326)	MID Class E2 (Industrial locations)			
I/O Protection, all pins	Reversed polarity; Excess voltage and surge			
Insulation body/ Electronics (VDC)	GΩ	≥1		
Vibration	2.5G Operational; 5G Non-Operational			
Environmental Protection IEC529	Body IP69k; Connectors IP68			
Corrosion resistance	All stainless steel			

## WIRING



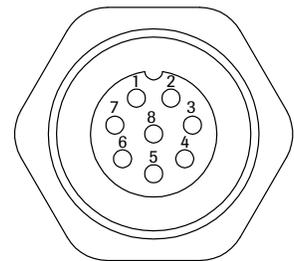
Standard Female Connector Signal Electronics M12AF0008		
Pin No.	RS-232+CAN	RS-485+RS-422
1	GND1	GND1
2	PROGRAM	PROGRAM
3	CANH	Rx+
4	TRIGGER INPUT	TRIGGER INPUT
5	CANL	Rx-
6	RxD	Tx-
7	TxD	Tx+
8	PWR+	PWR+

## PIN Configuration



Logical I/O'S Female Connector Signal Electronics M12AF0008	
Pin No.	Connection
1	OUT 1
2	OUT 2
3	OUT 3
4	OUT 4
5	UB2
6	GND2
7	IN1
8	IN2

## PIN Configuration



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**Digital single point load cell designed for high speed filling and check weighing applications. The stainless steel load cell is hermetically sealed and is ideal for use in heavy washdown applications**



**FEATURES**

- Capacities from 10 to 50 kg.
- Stainless steel construction.
- Accuracy class C3 and C6.
- Environmental Protection IP69k with complete hermetic sealing.
- AD conversion rate up to 1200upd./sec.
- Free professional software for setting up the digital load cell.
- Maximum platform size up to 450 x 450 mm.

**APPLICATIONS**

- Bench scales, conveyor scales, check weighers, filling plants, packaging machines and industrial process control.

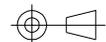
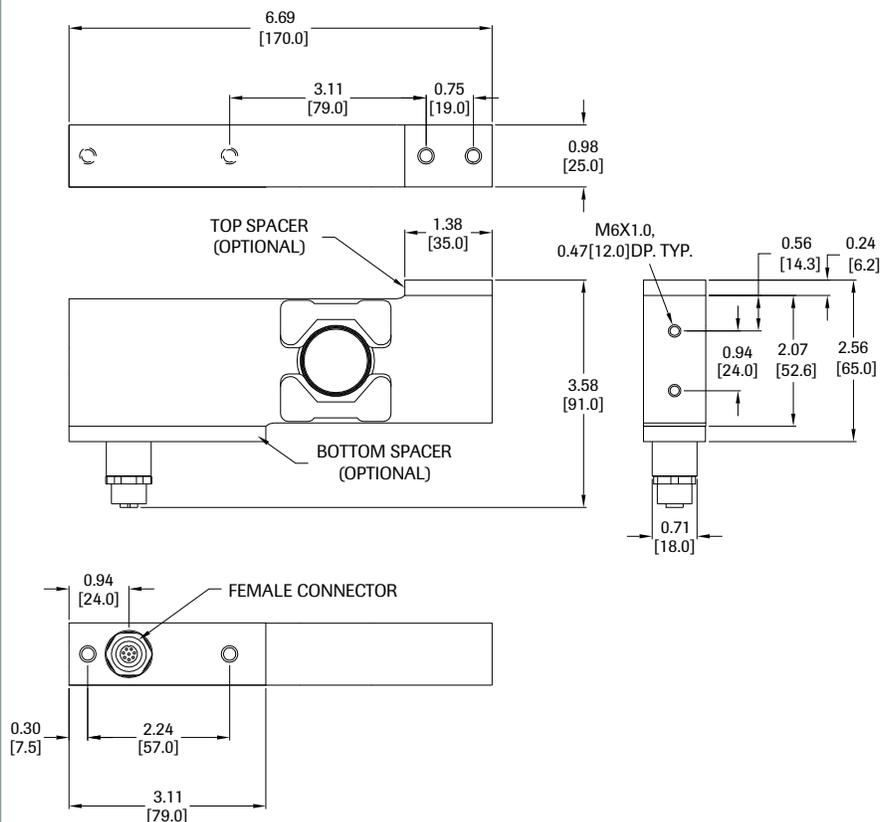
**APPROVALS/ CERTIFICATIONS**

- OIML Certificate of conformity for accuracy class C7. Certificate No. R60/2000-DK3-17.02

**OPTIONS**

- Optional spacer set.

**OUTLINE DIMENSIONS**



single point  
**SPF5**  
**4086D**

**SPECIFICATIONS**

Model	SPF5VP						
Capacities (Emax)	kg	10	20	50	10	20	50
Recommended min. external division	g	1	2	5	0.2	0.5	1
<b>PERFORMANCES</b>							
Accuracy class according to the OIML R60	C3			C6			
Minimum load cell verification interval(Vmin)	Emax/10000			Emax/50000			
Combined error	%FS	≤±0.017			≤±0.012		
Creep @ 30min	%FS	≤±0.017			≤±0.012		
Zero balance, raw counts	increment	±2000					
Output resolution at full load, raw counts	increment	256000	512000	512000	256000	512000	512000
Internal AD conversion rate	upd./sec	1200					
Fix, digital low pass IIR filter, default	Hz	18 (supress 50Hz and 60Hz influence)					
Adjustable , digital low pass IIR filter Adjustable , digital low pass FIR filter	Hz	18-0.25; selectable in 8 steps 40-5; selectable in 8 steps					
Adjustable, external output update rate	upd./sec	1200-9; selectable in 8 steps					
<b>WEIGHING SCALE FUNCTIONS</b>							
In accordance with OIML R76							
Zero and Max calibration Span calibration point by choice with extrapolation. Selectable calibrated or manual Zero. Selectable Zero tracking One division defined as 1; 2; 5; 10; 20; 50; 100; 200 or 500 increments Decimal point as xxxx; xxx.x; xx.xx or x.xxx Local gravity acceleration (g=9.81m/s <sup>2</sup> ) compensation.							
<b>GENERAL I/O's</b>							
Hardware interface, CAN version Hardware interface, RS version	CAN and RS232 RS485 and RS422 (both four wire)						
Data transmission rates CAN Data transm. rates RS485/RS422/RS232	kbaud	125; 250; 500; 1000 9.6; 19.2; 38.4; 57.6; 115.2; 230.4; 460.8					
Protocol CAN Protocol RS485/ RS422/ RS232	CANopen ASCII or Modbus RTU						
Logical input, programmable	Trigger Level 2-30Vdc, <3mA, Ref to Gnd.						
Power supply	VDC	10-30 ≤ 0.4 Watt					
Connections	Standard 8 pin, female M12AF 0008						
<b>OPERATING SOFTWARE</b>	Complete Set-up, Calibration and Analysis program available.						



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# single point SPF5 4086D



## SPECIFICATIONS

INFLUENCES				
Capacities (E <sub>max</sub> )	kg	10	20	50
Safe load limit	%* E <sub>max</sub>	300	150	150
Ultimate load	%* E <sub>max</sub>	600	300	300
Eccentric loading error acc. to OIML R76	%E <sub>max</sub>	±0.0233		
Max platform size	mm x mm	450 x 450		
Temperature effect on zero	%E <sub>max</sub> /°C	0.001		
Temperature effect on span	%E <sub>max</sub> /°C	0.001		
Temperature range	°C	Operating: -10/+40 Storage: -40/+70		
EMC performance	EN61326	MID Class E2 (Industrial locations)		
I/O protection, all pins	Reversed polarity; Excess voltage and surge			
Insulation body/ Electronics @ 500VDC	GΩ	≥1		
Vibration	2.5g operational; 5g non-operational			
Environmental Protection	Body IP69k; Connector IP68			
Corrosion resistance	All stainless steel (Electro polished)			

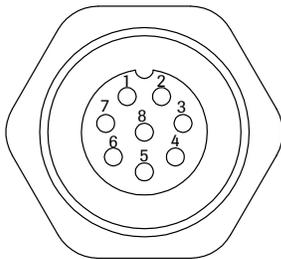
## WIRING

Female Connector Signal Electronics M12AF0008		
Pin No.	RS-232 & CANbus	RS-422/-485
1	GND1	GND1
2	PROGRAM	PROGRAM
3	CANH	Rx+
4	TRIGGER INPUT	TRIGGER INPUT
5	CANL	Rx-
6	RxD	Tx-
7	TxD	Tx+
8	PWR+	PWR+

## PART NUMBERS

Capacity (kg)	Option	Part No.
10	• Single IO (RS-232 & CANbus) • Accuracy Class C3	4086D-000-08
20		4086D-001-08
50		4086D-002-08
10	• Single IO (RS-232 & CANbus) • Accuracy Class C6	4086D-000-00
20		4086D-001-00
50		4086D-002-00
10	• Single IO (RS-422/-485) • Accuracy Class C3	4086D-000-09
20		4086D-001-09
50		4086D-002-09
10	• Single IO (RS-422/-485) • Accuracy Class C6	4086D-000-01
20		4086D-001-01
50		4086D-002-01

## PIN Configuration



Dimensions and specifications subject to change without notice



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IP69k

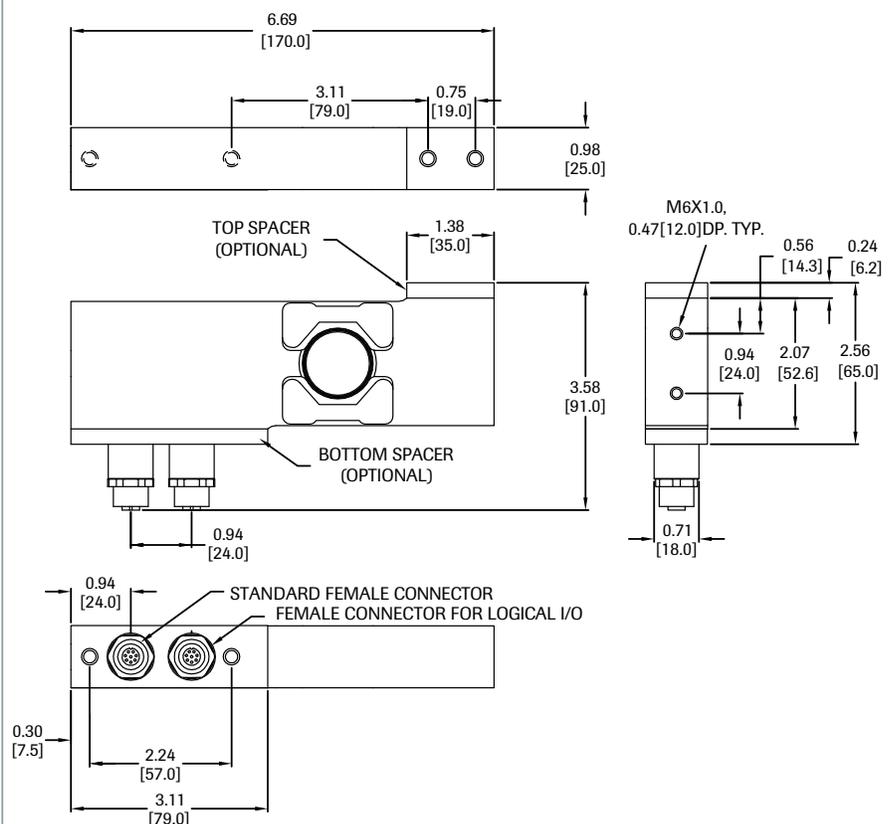
### FEATURES

- Capacities from 10 to 50 kg.
- Stainless steel construction.
- Environmental Protection IP69k with complete hermetic sealing.
- AD conversion rate up to 1200 upd./sec.
- The current drive per channel is  $\leq 1A$ .
- Over voltage, over current, EMC protection.
- The total constant current through all channels is 3Amps (Power $<0.66W$ ).
- Any two output channels can be paralleled to drive 2A(The load cell itself can virtually be a (simple) PLC with outputs of 2 x 2Amps or 1 x 2Amps + 2 x 1 Amp etc).
- Free professional software for setting up the digital load cell.
- Maximum platform size up to 450 x 450 mm.

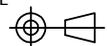
### APPLICATIONS

- Bench scales, conveyor scales, check weighers, filling plants, packaging machines and industrial process control.

### OUTLINE DIMENSIONS



NOTE : M12 , 8 PIN MATING CONNECTOR WITH CABLE IS PROVIDED WITH LOAD CELL



digital single point  
**SPF5-DUAL**  
**4086D**

**SPECIFICATIONS**

Model	SPF5			
Capacities (E <sub>max</sub> )	kg	10	20	50
Recommended min. external division	g	1	2	5
<b>PERFORMANCES</b>				
Accuracy class according to the OIML R60	C3			
Maximum load cell verification interval(V <sub>min</sub> )	E <sub>max</sub> /10000			
Combined error	%FS	≤±0.017		
Creep @ 30min	%FS	≤±0.017		
Zero balance, raw counts	increment	±2000		
Output resolution at full load, raw counts	increment	256000	512000	512000
Internal AD conversion rate	upd./sec	1200		
Fix, digital low pass IIR filter, default	Hz	18 (Supress 50Hz and 60Hz influence)		
Adjustable , digital low pass IIR filter	Hz	18-0.25; Selectable in 8 steps		
Adjustable , digital low pass FIR filter	Hz	40-5; Selectable in 8 steps		
Adjustable, external output update rate	upd./sec	1200-9; Selectable in 8 steps		
<b>GENERAL I/O's</b>				
Hardware interface, CAN version	CAN and RS232			
Hardware interface, RS version	RS485 and RS422 (Both four wire)			
Data transmission rates CAN	kb	125;250;500;1000		
Data transm. rates RS485/RS422/RS232		9.6;19.2;38.4;57.6;115.2;230.4;460.8		
Protocol CAN	CAN Open			
Protocol RS485/ RS422/ RS232	ASCII or Modbus RTU			
Logical input, programmable	Trigger Level 2-30Vdc,<3mA,Ref to Gnd.			
Power supply	VDC	10-30 ≤ 0.4 Watt		
Connections	Standard 8 pin, female M12MF 0008			
<b>LOGICAL I/O's</b>				
Number of logic inputs	Two (2) with common GND			
Programmable Logic input data	Trigger level 2-30Vdc, <3mA, Ref to GND			
Number of logic outputs	Four (4) channels with common High drive.			
Single channel logic output data	ON : Current ≤ 1.0 Amp. R <sub>ds</sub> 0.055Ω			
Dual paralleled channel output data	ON : Current ≤ 2.0 Amp. R <sub>ds</sub> 0.028Ω (Paralleled wiring and programmed for synchronous switching)			
Four channel total constant	ON: Current ≤ 3.0 Amp and 660mW			
	OFF: ≤ 40Vdc			
Protection measures of all channels	Short circuit protection; Over temperature shut down; Over voltage protection ; ESD protection			
Isolation body/ Electronics at 500VDC	GΩ	≥1		
Power supply	VDC	9-40		
Connection	Separate 8 pin, female M12MF 0008			



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## SPECIFICATIONS

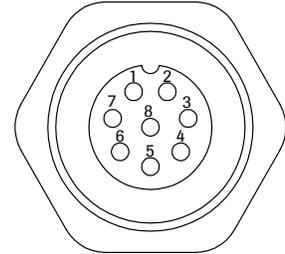
INFLUENCES				
Safe load limit	%* Emax	300	150	150
Ultimate load	%* Emax	600	300	300
Eccentric loading error acc. to OIML R76	%FS	±0.0233		
Max platform size	mm x mm	450 x 450		
Temperature effect on zero	%FS/°C	0.001		
Temperature effect on span	%FS/°C	0.001		
Temperature range	°C	Operating: -10/+40, Storage: -40/+70		
EMC performance	MID Class E2 (Industrial locations)			
I/O protection, all pins	Reversed polarity; Excess voltage and surge			
Isolation body/ Electronics at 500VDC	GΩ	≥1		
Vibration	2.5G operational; 5G non-operational			
Environmental Protection	Body IP69k; Connectors IP68			
Corrosion resistance	All stainless steel			

## WIRING

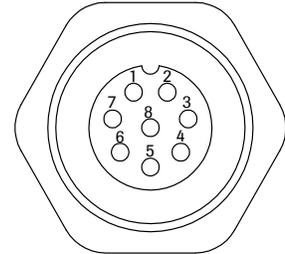
Standard Female Connector Signal Electronics M12AF0008		
Pin No.	RS-232+CAN	RS-485+RS-422
1	GND1	GND1
2	PROGRAM	PROGRAM
3	CANH	Rx+
4	TRIGGER INPUT	TRIGGER INPUT
5	CANL	Rx-
6	RxD	Tx-
7	TxD	Tx+
8	PWR+	PWR+

Logical I/O'S Female Connector Signal Electronics M12AF0008	
Pin No.	Connection
1	OUT 1
2	OUT 2
3	OUT 3
4	OUT 4
5	UB2
6	GND2
7	IN1
8	IN2

### PIN Configuration Standard Female Connector



### PIN Configuration Logical I/O'S Female Connector



## PART NUMBERS

Capacity(kg)	RS232+CAN	RS485+RS422
10	4086D-000-02	4086D-000-03
20	4086D-001-02	4086D-001-03
50	4086D-002-02	4086D-002-03

Dimensions and specifications subject to change without notice



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www.groupfourtransducers.com

Phone : (800) 419 1444  
Fax : (413) 525 -6182  
sales@group-4.com

**Digital Stainless Steel Single point load cell. For use in Conveyor weighing systems, Tank Bin and hopper Weigh Systems, Bench Scales and Floor Scales. Protection class IP69, Ideal for use in heavy wash down areas.**



IP69

**FEATURES**

- Capacities 20, 100, 200 and 500kg.
- Stainless steel construction.
- Environmental protection IP69.
- AD conversion rate up to 1200upd./sec.

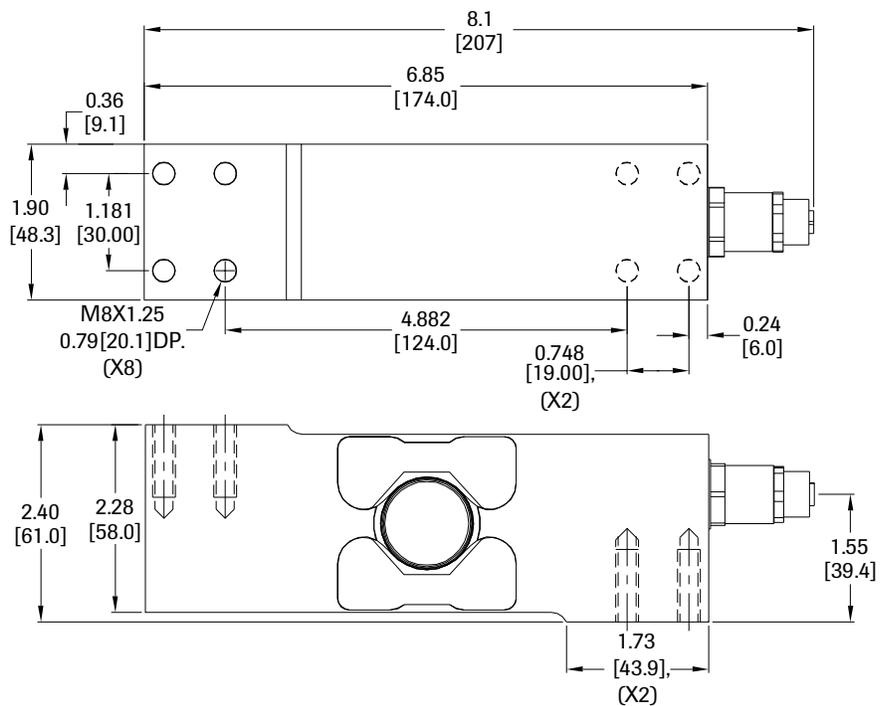
**APPLICATIONS**

- Bench scales, floor scales, Conveyor weighing systems, Tank Bin and hopper Weigh Systems.

**OPTIONS**

- Load cells can be supplied with calibration certificates as per ASTM E74.

**OUTLINE DIMENSIONS**



NOTE: M12, 8PIN MALE CONNECTOR TO OPEN ENDED, 6 FEET LONG MATING CABLE PROVIDED WITH THE LOAD CELL.



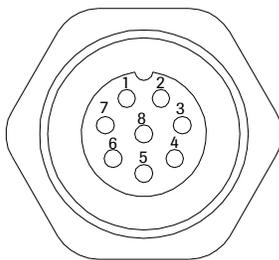
# digital single point SP46HD 4075D



## WIRING

Female Connector Signal Electronics M12AF0008		
Pin No.	RS-232+CAN	RS-485+RS-422
1	GND1	GND1
2	PROGRAM	PROGRAM
3	CANH	Rx+
4	TRIGGER INPUT	TRIGGER INPUT
5	CANL	Rx-
6	RxD	Tx-
7	TxD	Tx+
8	PWR+	PWR+

## PIN CONFIGURATION



## PART NUMBERS

Capacity(kg)	Option	Part No.
20	RS232 + CAN	4075D-000-00
100	RS232 + CAN	4075D-001-00
200	RS232 + CAN	4075D-002-00
500	RS232 + CAN	4075D-003-00

Capacity(kg)	Option	Part No.
20	RS485+RS422	4075D-000-01
100	RS485+RS422	4075D-001-01
200	RS485+RS422	4075D-002-01
500	RS485+RS422	4075D-003-01

## SPECIFICATIONS

Model	SP46HD				
Capacities (E <sub>max</sub> )	kg	20	100	200	500
<b>PERFORMANCES</b>					
Non linearity	%FS	≤±0.03			
Hysteresis	%FS	≤±0.03			
Combined Error	%FS	≤±0.03			
Creep @ 30min	%FS	≤±0.025			
Zero Balance, raw counts	increments	±2000			
Output resolution at full load, raw counts	increments	512000			
Internal AD conversion rate	upd./sec	1200			
Fix, Digital Low Pass IIR Filter, Default	Hz	18 (Supress 50Hz and 60Hz Influence)			
Adjustable , Digital Low Pass IIR Filter Adjustable , Digital Low Pass FIR Filter	Hz	18-0.25; Selectable in 8 Steps 40-5; Selectable in 8 Steps			
Adjustable, External Output Update Rate	upd./sec	1200-9; Selectable in 8 Steps			
<b>GENERAL I/O's</b>					
Hardware Interface, CAN Version Hardware Interface, RS Version	CAN and RS232 RS485 and RS422 (Both Four Wire)				
Data transmission rates CAN Data transm. rates RS485/RS422/RS232	kb	125;250;500;1000 9.6;19.2;38.4;57.6;115.2;230.4;460.8			
Protocol CAN Protocol RS485/ RS422/ RS232	CAN Open ASCII or Modbus RTU				
Logical Input, Programmable	Trigger Level 2-30Vdc, <3mA, Ref to Gnd.				
Power supply	VDC	10-30 ≤ 0.4 Watt			
Connections	Standard 8 pin, female M12AF0008				
<b>INFLUENCES</b>					
Safe Load Limit	%* E <sub>max</sub>	150			
Ultimate Load	%* E <sub>max</sub>	200			
Temperature Effect on Zero	%FS/10°C	0.02			
Temperature Effect on Span	%FS/10°C	0.02			
Temperature Range	°C	Operating: -10/+40 Storage: -20/+65			
EMC performance	MID Class E2 (Industrial Locations)				
I/O Protection, All Pins	Reversed Polarity; Excess Voltage and Surge				
Isolation Body/ Electronics at 500VDC	GΩ	≥1			
Vibration	2.5G Operational; 5G Non-Operational				
Environmental Protection	Body IP69k; Connectors IP68				
Corrosion Resistance	Stainless steel				

Dimensions and specifications subject to change without notice



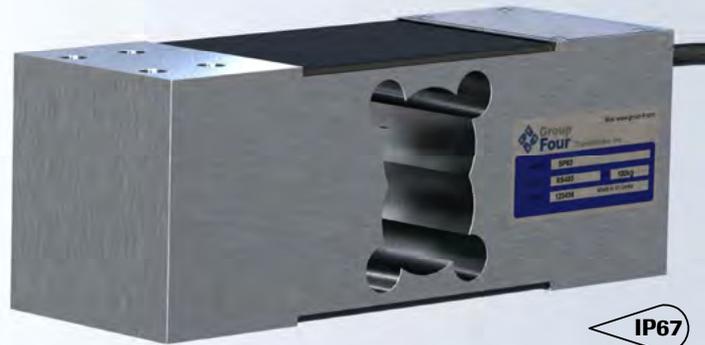
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E. Longmeadow, MA 01028  
www.groupfourtransducers.com

Phone : (800) 419 1444  
Fax : (413) 525 -6182  
sales@group-4.com

**Digital Aluminum Single point load cell. For use in Conveyor weighing systems, Tank Bin and hopper Weigh Systems, Bench Scales and Floor Scales. Protection class IP67.**



IP67

**FEATURES**

- Capacity 100kg.
- High grade aluminum construction.
- Environmental protection IP67.
- AD conversion rate up to 1200upd./sec.

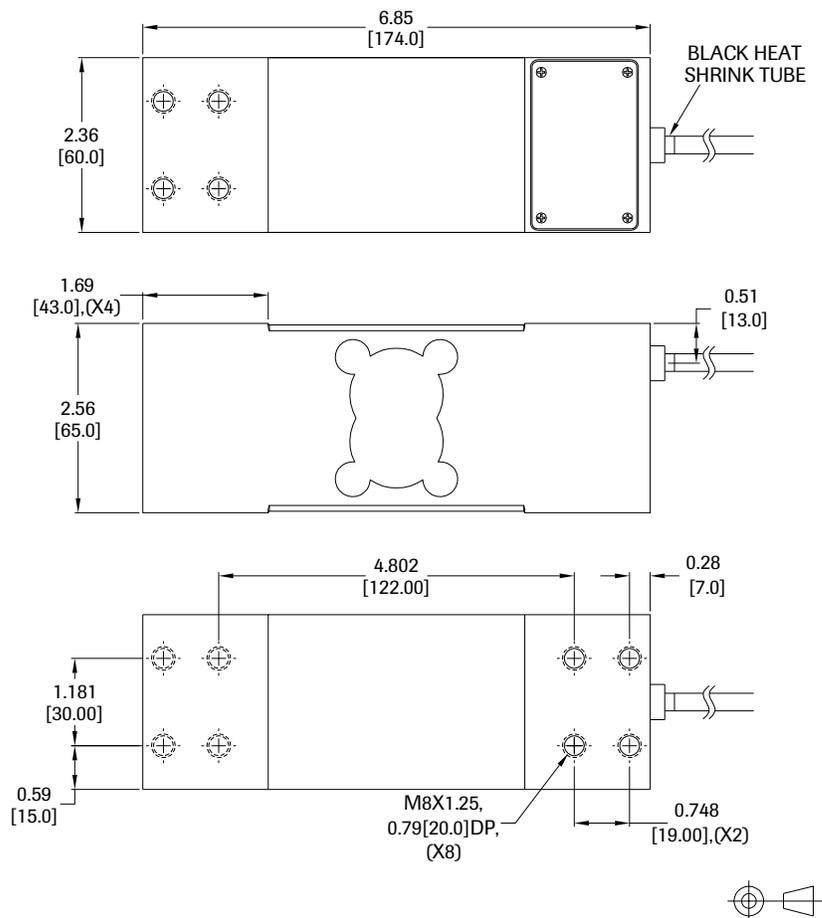
**APPLICATIONS**

- Conveyor weighing systems, Tank Bin and hopper Weigh Systems, Bench Scales and Floor Scales.

**OPTIONS**

- Load cells can be supplied with calibration certificates as per ASTM E74.

**OUTLINE DIMENSIONS**



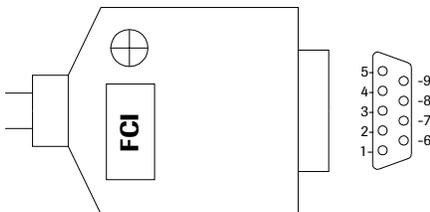
# digital single point SP63 4053D



## WIRING

Pin No.	Connection	Cable Color
2	TxD	Green
3	RxD	White
4	GND1	Black
8	PWR+	Red

## PIN CONFIGURATION OF DB9 MALE CONNECTOR



Note: Shield is connected to DB9 connector body.

## SPECIFICATIONS

Model	SP63	
Capacities (E <sub>max</sub> )	kg	100
<b>PERFORMANCES</b>		
Accuracy class according to OIML R60		C3
Combined Error	%FS	≤±0.017
Creep @ 30min	%FS	≤±0.017
Zero Balance, raw counts	increments	±2000
Output resolution at full load, raw counts	increments	512000
Internal AD conversion rate	upd./sec	1200
Fix, Digital Low Pass IIR Filter, Default	Hz	18 (Supress 50Hz and 60Hz Influence)
Adjustable , Digital Low Pass IIR Filter Adjustable , Digital Low Pass FIR Filter	Hz	18-0.25; Selectable in 8 Steps 40-5; Selectable in 8 Steps
Adjustable, External Output Update Rate	upd./sec	1200-9; Selectable in 8 Steps
<b>GENERAL I/O's</b>		
Hardware Interface, RS Version	RS232	
Data transm. rates RS232	kb	9.6;19.2;38.4;57.6;115.2;230.4;460.8
Protocol RS232	ASCII or Modbus RTU	
Logical Input, Programmable	Trigger Level 2-30Vdc,<3mA,Ref to Gnd.	
Power supply	VDC	10-30 ≤ 0.4 Watt
<b>INFLUENCES</b>		
Safe Load Limit	%* E <sub>max</sub>	150
Ultimate Load	%* E <sub>max</sub>	200
Eccentric loading error acc. to OIML R76	%FS	≤±0.023
Max platform size	mm	400X600
Temperature Effect on Zero	%FS/°C	0.004
Temperature Effect on Span	%FS/°C	0.004
Temperature Range	°C	Operating: -10/+40 Storage: -40/+70
EMC performance	MID Class E2 (Industrial Locations)	
I/O Protection, All Pins	Reversed Polarity; Excess Voltage and Surge	
Isolation Body/ Electronics at 500VDC	GΩ	≥1
Cable	24AWG, 4 Conductor, Black, TPM Cable	
Cable Length	in	24 +1/-0
Vibration	2.5G Operational; 5G Non-Operational	
Environmental Protection as per IEC 529	IP67	
Corrosion Resistance	Anodized aluminum	

## PART NUMBERS

Capacity(kg)	Part No.
100	4053D-000-00

Dimensions and specifications subject to change without notice



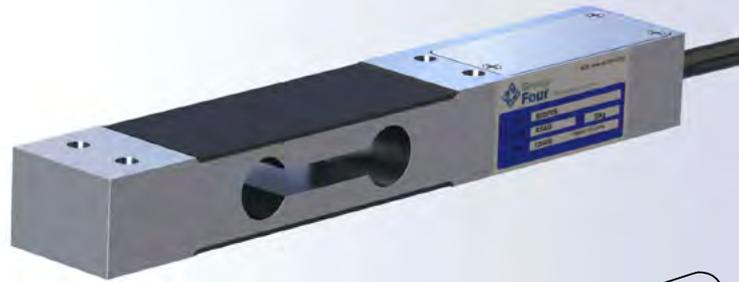
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www.groupfourtransducers.com

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Fax : (413) 525 -6182  
sales@group-4.com

The BSSPDE is a Digital Aluminum Single Point Load Cell. Ideal for use in Bench Scales, Conveyor Scales, Filling and Packaging Machines.



**FEATURES**

- Capacities from 6kg to 30kg.
- Aluminum construction.
- Environmental protection IP67.
- AD conversion rate up to 1200upd./sec.

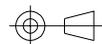
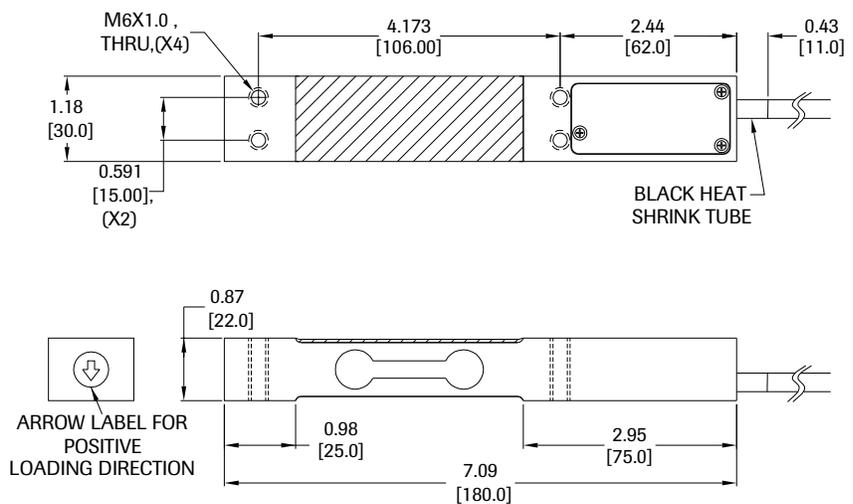
**APPLICATIONS**

- Bench scales, Retail scale, Conveyor scales, Filling and Packaging machines.

**OPTIONS**

- Load cells can be supplied with calibration certificates as per ASTM E74.

**OUTLINE DIMENSIONS**



# digital single point BSSPDE 4002D



## WIRING

Color code	RS-232+CAN	RS-485+RS-422
Red	PWR+	PWR+
Black	GND	GND
White	RxD	Rx+
Green	TxD	Rx-
Brown	CANH	Tx+
Blue	CANL	Tx-

Cable:  
24 AWG, 6 Conductor foil Shielded  
black PVC cable.

## SPECIFICATIONS

Model	BSSPDE	
Capacity (E <sub>max</sub> )	kg	6      30
Recommended min. external division	g	0.6      3
<b>PERFORMANCES</b>		
Accuracy class according to the OIML R60	C3	
Minimum load cell verification interval	g	E <sub>max</sub> /10000
Combined Error	%FS	±0.017
Creep @ 30min	%FS	±0.017
Zero Balance, raw counts	increments	±2000
Output resolution at full load, raw counts	increments	512000
Internal AD conversion rate	upd./sec	1200
Fix, Digital Low Pass IIR Filter, Default	Hz	18 (Supress 50Hz and 60Hz Influence)
Adjustable , Digital Low Pass IIR Filter Adjustable , Digital Low Pass FIR Filter	Hz	18-0.25; Selectable in 8 Steps 40-5; Selectable in 8 Steps
Adjustable, External Output Update Rate	upd./sec	1200-9; Selectable in 8 Steps
<b>GENERAL I/O's</b>		
Hardware Interface, CAN Version	CAN and RS232	
Hardware Interface, RS Version	RS485 and RS422 (Both Four Wire)	
Data transmission rates CAN Data transm. rates RS485/RS422/RS232	kb	125;250;500;1000 9.6;19.2;38.4;57.6;115.2;230.4;460.8
Protocol CAN Protocol RS485/ RS422/ RS232	CAN Open ASCII or Modbus RTU	
Logical Input, Programmable	Trigger Level 2-30Vdc, <3mA, Ref to Gnd.	
Power supply	VDC	10-30 ≤ 0.4 Watt
<b>INFLUENCES</b>		
Safe Load Limit	%* E <sub>max</sub>	150
Ultimate Load	%* E <sub>max</sub>	300
Temperature Effect on Zero	%FS/°C	0.001
Temperature Effect on Span	%FS/°C	0.001
Temperature Range	°C	Operating: -10/+40 Storage: -40/+70
EMC performance	MID Class E2 (Industrial Locations)	
I/O Protection, All Pins	Reversed Polarity; Excess Voltage and Surge	
Isolation Body/ Electronics at 500VDC	GΩ	≥1
Vibration	2.5G Operational; 5G Non-Operational	
Cable Length	ft	5 +0.1/ -0
Environmental Protection	IP67	
Corrosion Resistance	Aluminum	

## PART NUMBERS

Capacity(kg)	Option	Part No.
6	RS232 + CAN	4002D-001-01
30	RS232 + CAN	4002D-002-01

Capacity(kg)	Option	Part No.
6	RS485+RS422	4002D-001-02
30	RS485+RS422	4002D-002-02

Dimensions and specifications subject to change without notice



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Phone : (800) 419 1444  
Fax : (413) 525 -6182  
sales@group-4.com

**Digital single ended beam load cell constructed from stainless steel, ideal for use in floor scales and tank weighing systems.**



**FEATURES**

- Capacities from 250lb to 5000lb.
- Stainless steel construction.
- Environmental protection IP69k.
- AD conversion rate up to 1200upd./sec.

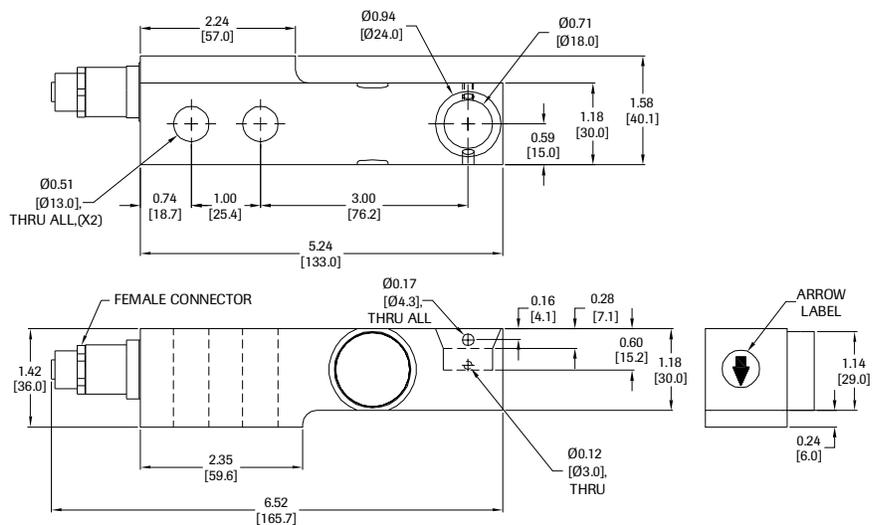
**APPLICATIONS**

- Platform scales, Tank weighing systems.

**OPTIONS**

- Load cells can be supplied with calibration certificates as per ASTM E74.

**OUTLINE DIMENSIONS**



**NOTE:**  
M12, 8PIN MALE CONNECTOR TO OPEN ENDED, 6 FEET LONG MATING CABLE PROVIDED WITH THE LOAD CELL.



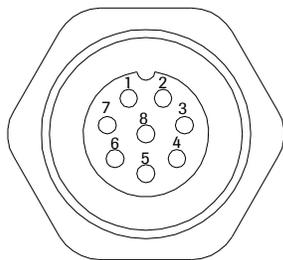
# digital single ended beam RB14D 1032D



## WIRING

Female Connector Signal Electronics M12AF0008		
Pin No.	RS-232+CAN	RS-485+RS-422
1	GND1	GND1
2	PROGRAM	PROGRAM
3	CANH	Rx+
4	TRIGGER INPUT	TRIGGER INPUT
5	CANL	Rx-
6	RxD	Tx-
7	TxD	Tx+
8	PWR+	PWR+

## PIN CONFIGURATION



## SPECIFICATIONS

Model	RB14D	
Capacities (E <sub>max</sub> )	lb	250-5000
<b>PERFORMANCES</b>		
Combined Error	%FS	≤±0.03
Creep @ 30min	%FS	≤±0.02
Zero Balance, raw counts	increments	±2000
Output resolution at full load, raw counts	increments	512000
Internal AD conversion rate	upd./sec	1200
Fix, Digital Low Pass IIR Filter, Default	Hz	18 (Supress 50Hz and 60Hz Influence)
Adjustable , Digital Low Pass IIR Filter	Hz	18-0.25; Selectable in 8 Steps
Adjustable , Digital Low Pass FIR Filter	Hz	40-5; Selectable in 8 Steps
Adjustable, External Output Update Rate	upd./sec	1200-9; Selectable in 8 Steps
<b>GENERAL I/O's</b>		
Hardware Interface, CAN Version	CAN and RS232	
Hardware Interface, RS Version	RS485 and RS422 (Both Four Wire)	
Data transmission rates CAN	kb	125;250;500;1000
Data transm. rates RS485/RS422/RS232		9.6;19.2;38.4;57.6;115.2;230.4;460.8
Protocol CAN	CAN Open	
Protocol RS485/ RS422/ RS232	ASCII or Modbus RTU	
Logical Input, Programmable	Trigger Level 2-30Vdc, <3mA, Ref to Gnd.	
Power supply	VDC	10-30 ≤ 0.4 Watt
Connections	Standard 8 pin, female M12AF0008	
<b>INFLUENCES</b>		
Safe Load Limit	%* E <sub>max</sub>	150
Ultimate Load	%* E <sub>max</sub>	300
Temperature Effect on Zero	%FS/°C	0.004
Temperature Effect on Span	%FS/°C	0.004
Temperature Range	°C	Operating: -10/+40 Storage: -40/+70
EMC performance	EN61326	MID Class E2 (Industrial Locations)
I/O Protection, All Pins	Reversed Polarity; Excess Voltage and Surge	
Isolation Body/ Electronics at 500VDC	GΩ	≥1
Vibration	2.5G Operational; 5G Non-Operational	
Environmental Protection	Body IP69k; Connectors IP68	
Corrosion Resistance	Stainless Steel, Electro polished	

## PART NUMBERS

Capacity(lb)	Option	Part No.
250	RS232 + CAN	1032D-000-01
2500	RS232 + CAN	1032D-002-01

Dimensions and specifications subject to change without notice



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Fax : (413) 525 -6182  
sales@group-4.com

The type ZQD is an aluminum single ended beam. Ideal for use in floor scales, Bench Scales, tank and hopper weigh systems and conveyor scales.



**FEATURES**

- Capacities from 10kg to 100kg.
- Aluminum construction.
- Environmental protection IP67.
- AD conversion rate up to 1200upd./sec.

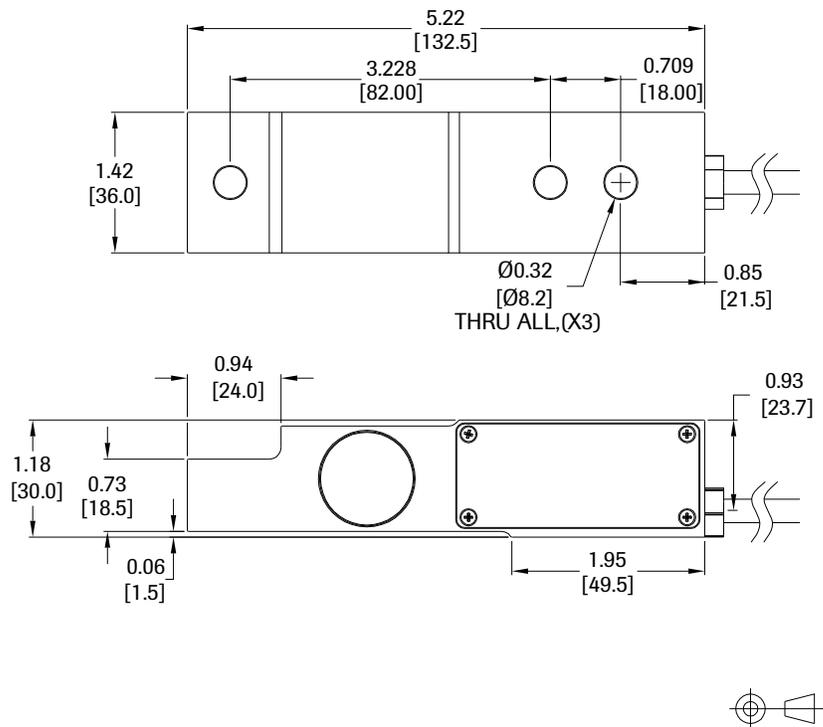
**APPLICATIONS**

- Floor scales, Bench Scales, tank and hopper weigh systems and conveyor scales.

**OPTIONS**

- Load cells can be supplied with calibration certificates as per ASTM E74.

**OUTLINE DIMENSIONS**



# digital single ended beam ZQD 4089D



## WIRING

Cable wire color	RS-485+RS-422
Black	GND
Green	Rx+
White	Rx-
Red	PWR+
Blue	Tx+
Brown	Tx-

Cable : 24 AWG, 6 Conductor, black, foil shielded PVC matt cable.

## SPECIFICATIONS

Model	ZQD	
Capacities (E <sub>max</sub> )	kg	10/ 100
<b>PERFORMANCES</b>		
Accuracy class according to the OIML R60	C3	
Combined Error	%FS	≤±0.02
Creep @ 30min	%FS	≤±0.02
Zero Balance, raw counts	increments	±2000
Output resolution at full load, raw counts	increments	512000
Internal AD conversion rate	upd./sec	1200
Fix, Digital Low Pass IIR Filter, Default	Hz	18 (Supress 50Hz and 60Hz Influence)
Adjustable , Digital Low Pass IIR Filter Adjustable , Digital Low Pass FIR Filter	Hz	18-0.25; Selectable in 8 Steps 40-5; Selectable in 8 Steps
Adjustable, External Output Update Rate	upd./sec	1200-9; Selectable in 8 Steps
<b>GENERAL I/O's</b>		
Hardware Interface, RS Version	RS485 with four wires	
Data transm. rates RS485	kb	9.6;19.2;38.4;57.6;115.2;230.4;460.8
Protocol RS485	ASCII or Modbus RTU	
Logical Input, Programmable	Trigger Level 2-30Vdc,<3mA,Ref to Gnd.	
Power supply	VDC	10-30 ≤ 0.4 Watt
<b>INFLUENCES</b>		
Safe Load Limit	%* E <sub>max</sub>	150
Ultimate Load	%* E <sub>max</sub>	300
Temperature Effect on Zero	%FS/10°C	0.04
Temperature Effect on Span	%FS/10°C	0.04
Temperature Range	°C	Operating: -10/+40 Storage: -40/+70
EMC performance	MID Class E2 (Industrial Locations)	
I/O Protection	Reversed Polarity; Excess Voltage and Surge	
Isolation Body/ Electronics at 500VDC	GΩ	≥1
Vibration	2.5G Operational; 5G Non-Operational	
Cable length	m	3 +0.05/ -0
Environmental Protection	IP67	
Corrosion Resistance	Anodized Aluminum	

## PART NUMBERS

Capacity(kg)	Part No.
100	4089D-000-00

Dimensions and specifications subject to change without notice



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sales@group-4.com

**Digital S Beam, ideal for force, test stands and weight measurement.**



**FEATURES**

- Capacities from 50lb to 2000lb.
- Stainless steel construction.
- Environmental protection IP67.
- AD conversion rate up to 1200upd./sec.
- Free PC based start up and evaluation software available.

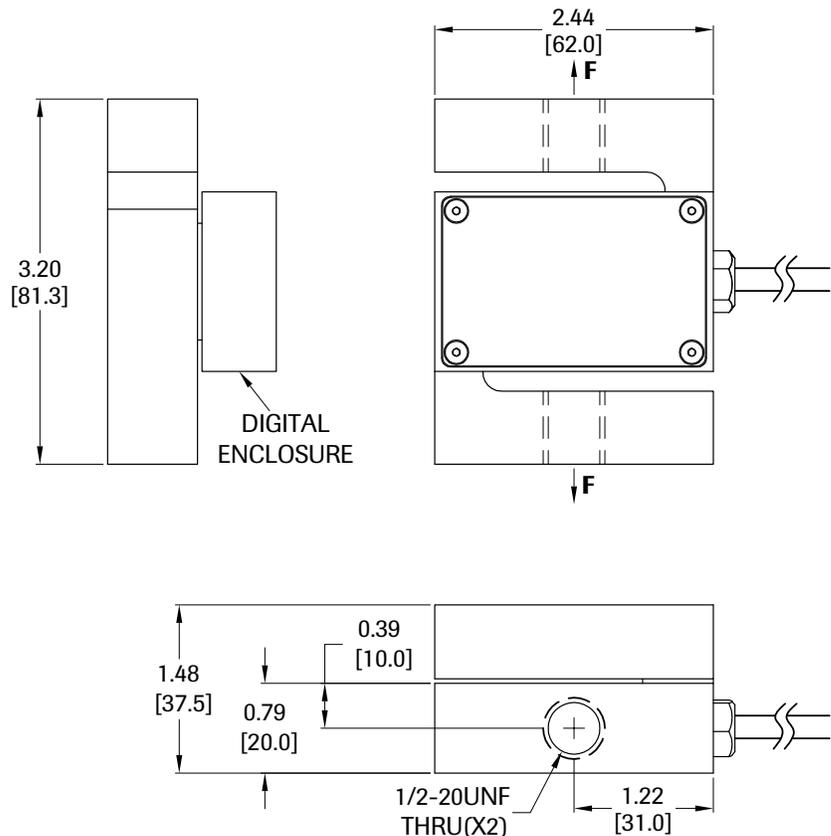
**APPLICATIONS**

- Force measurement in material testing machines, cranes, lifts and other general tension applications.

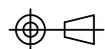
**OPTIONS**

- Load cells can be supplied with calibration certificates as per ASTM E74.

**OUTLINE DIMENSIONS**



NOTE: SHOWN LOADING DIRECTION IS FOR POSITIVE OUTPUT



# digital s beam WSBD 3013D



## WIRING

COLOR CODE	RS232+CAN	RS485+RS422
RED	PWR+	PWR
BLACK	GND	GND
WHITE	RxD	Rx+
GREEN	TxD	Rx-
BROWN	CANH	Tx+
BLUE	CANL	Tx-

## SPECIFICATIONS

Model	WSBD			
Capacities (E <sub>max</sub> )	kg	50	500	2000
<b>PERFORMANCES</b>				
Combined Error	%FS	≤±0.017		
Creep @ 30min	%FS	≤±0.017		
Zero Balance, raw counts	increments	±2000		
Output resolution at full load, raw counts	increments	512000		
Internal AD conversion rate	upd./sec	1200		
Fix, Digital Low Pass IIR Filter, Default	Hz	18 (Supress 50Hz and 60Hz Influence)		
Adjustable , Digital Low Pass IIR Filter	Hz	18-0.25; Selectable in 8 Steps		
Adjustable , Digital Low Pass FIR Filter	Hz	40-5; Selectable in 8 Steps		
Adjustable, External Output Update Rate	upd./sec	1200-9; Selectable in 8 Steps		
<b>GENERAL I/O's</b>				
Hardware Interface, CAN version	CAN and RS232			
Hardware Interface, RS version	RS485 and RS422 (Both Four Wire)			
Data transmission rates CAN	kb	125; 250;500;1000		
Data transm. rates RS485/RS422/RS232		9.6;19.2;38.4;57.6;115.2;230.4;460.8		
Protocol CAN	CANopen			
Protocol RS485/ RS422/RS232	ASCII or Modbus RTU			
Power supply	VDC	10-30 ≤ 0.4 Watt		
Cable	24 AWG 6 conductor, foil shielded black PVC cable			
Cable length	ft	5 +0.1 /-0.0		
<b>INFLUENCES</b>				
Safe Load Limit	%* E <sub>max</sub>	150		
Ultimate Load	%* E <sub>max</sub>	300		
Temperature Effect on Zero	%*FS/°C	0.001		
Temperature Effect on Span	%*FS/°C	0.001		
Temperature Range	°C	Operating: -10/+40		
EMC performance	MID Class E2 (Industrial Locations)			
I/O Protection, All Pins	Reversed Polarity; Excess Voltage and Surge			
Isolation Body/ Electronics at 500VDC	GΩ	≥1		
Environmental Protection	IP67			
Corrosion Resistance	Stainless Steel			

## PART NUMBERS

Capacity(lb)	Communication Interface	Part No.
50	RS485+RS422	3013D-000-00
500	RS485+RS422	3013D-001-00

Dimensions and specifications subject to change without notice



**“WE TAKE THE LOAD OFF YOUR MIND”**

### Group Four Transducers

22 Deer Park Drive,  
E. Longmeadow, MA 01028  
www.groupfourtransducers.com

Phone : **(800) 419 1444**  
Fax : (413) 525 -6182  
sales@group-4.com

**Digital column type load cell designed for tank weighing and force testing applications. The stainless steel load cell is hermetically sealed and is ideal for use in heavy wash down applications.**



**FEATURES**

- Capacity range 1k-50k.
- Stainless steel construction.
- Environmental protection IP69.
- AD conversion rate up to 1200upd./sec.
- Free software for simple load cell set up and operation.

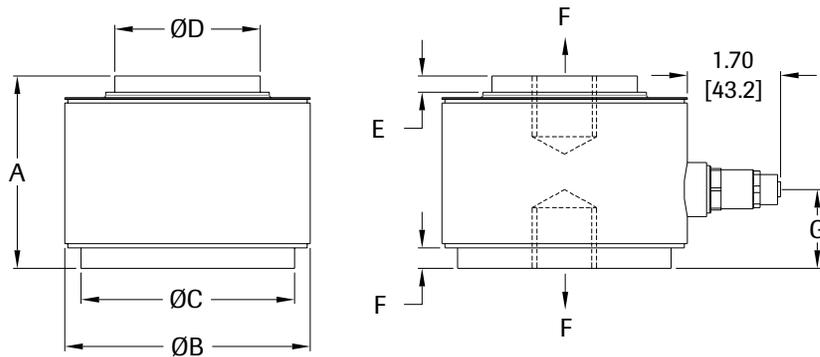
**APPLICATIONS**

- Aircraft weighing, Tank weighing, Truck scales, Digital force testers.

**OPTIONS**

- Load cells can be supplied with calibration certificates as per ASTM E74.

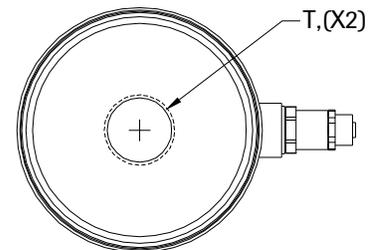
**OUTLINE DIMENSIONS**



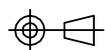
NOTE:

POSITIVE LOADING DIRECTION IS SHOWN BY ARROWS.

M12, 8PIN MALE CONNECTOR TO OPEN ENDED, 6 FEET LONG MATING CABLE PROVIDED WITH THE LOAD CELL.



Capacity (klb)	A	B	C	D	E	F	G	T
10	2.51 [63.8]	3.48 [88.4]	2.53 [64.3]	1.25 [31.8]	0.12 [3.0]	0.12 [3.0]	1.00 [25.4]	5/8-18UNF-3B, 1.12[28.4]DP.
50	3.50 [88.9]	4.46 [113.3]	3.89 [98.8]	2.65 [67.3]	0.30 [7.5]	0.37 [9.4]	1.43 [36.4]	1-1/4-12UNF-3B 1.40[35.5]DP.



# column load cell

## DTC

### 5043D



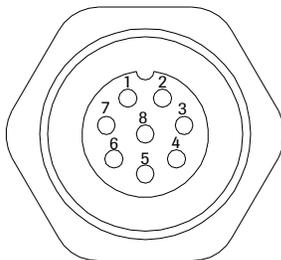
#### SPECIFICATIONS

Model	DTC		
Capacities (E <sub>max</sub> )	klb	10	50
<b>PERFORMANCES</b>			
Minimum Load Cell Verification Interval(V <sub>min</sub> )	g	E <sub>max</sub> /10000	
Combined Error	%FS	≤±0.017	
Creep @ 30min	%FS	≤±0.017	
Zero Balance, raw counts	increments	±2000	
Output resolution at full load, raw counts	increments	512000	
Internal AD conversion rate	upd./sec	1200	
Fix, Digital Low Pass IIR Filter, Default	Hz	18 (Supress 50Hz and 60Hz Influence)	
Adjustable , Digital Low Pass IIR Filter	Hz	18-0.25; Selectable in 8 Steps	
Adjustable , Digital Low Pass FIR Filter	Hz	40-5; Selectable in 8 Steps	
Adjustable, External Output Update Rate	upd./sec	1200-9; Selectable in 8 Steps	
<b>GENERAL I/O's</b>			
Hardware Interface, CAN Version	CAN and RS232		
Hardware Interface, RS Version	RS485 and RS422 (Both Four Wire)		
Data transmission rates CAN Data transm. rates RS485/RS422/ RS232	kb	125;250;500;1000 9.6;19.2;38.4;57.6;115.2;230.4;460.8	
Protocol CAN	CAN Open		
Protocol RS485/ RS422/RS232	ASCII or Modbus RTU		
Logical Input, Programmable	Trigger Level 2-30Vdc,<3mA,Ref to Gnd.		
Power supply	VDC	10-30 ≤ 0.4 Watt	
Connections	Standard 8 pin, female M12AF0008		
<b>OPERATING SOFTWARE</b>	Complete set-up, Calibration and load analysis program available		
<b>INFLUENCES</b>			
Safe Load Limit	%* E <sub>max</sub>	140	
Ultimate Load	%* E <sub>max</sub>	150	
Temperature Effect on Zero	%*E <sub>max</sub> /10°C	0.01	
Temperature Effect on Span	%*E <sub>max</sub> /10°C	0.01	
Temperature Range	°C	Operating: -10/+40 Storage: -40/+70	
I/O Protection, All Pins	Reversed Polarity; Excess Voltage and Surge		
Isolation Body/ Electronics at 500VDC	GΩ	≥1	
Vibration	2.5G Operational; 5G Non-Operational		
Environmental Protection	Body IP69; Connectors IP68		
Corrosion Resistance	Stainless Steel		

#### WIRING

Female Connector Signal Electronics M12AF0008		
Pin No.	RS-232+CAN	RS-485+RS-422
1	GND1	GND1
2	PROGRAM	PROGRAM
3	CANH	Rx+
4	TRIGGER INPUT	TRIGGER INPUT
5	CANL	Rx-
6	RxD	Tx-
7	TxD	Tx+
8	PWR+	PWR+

#### PIN CONFIGURATION



#### PART NUMBERS

Capacity(klb)	Option	Part No.
10	RS-232+CAN	5043D-000-00
50	RS-232+CAN	5043D-001-00

Dimensions and specifications subject to change without notice



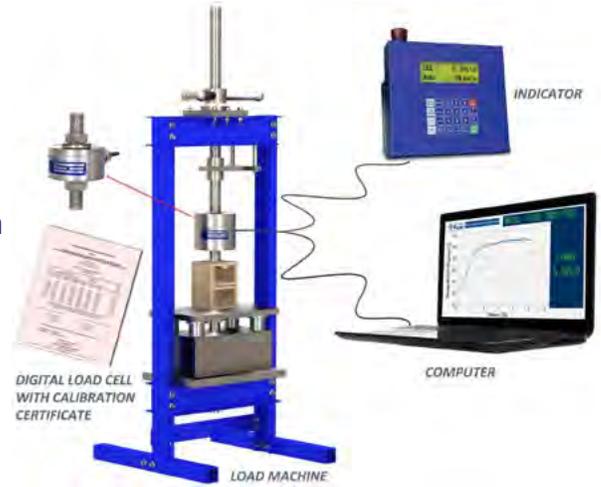
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The T-Rex Test Stand has been designed to accommodate a variety of materials, component and product tests. This rugged and flexible system provides the capacity of 4 tons in tension and 10 tons in compression. The numerous applications possible with the T-Rex System include: mechanical connection tests, adhesive bond strength verification, extraction force tests, crushing strength review and many other test applications. Material strengths typically investigated include metals, rigid plastics, concrete, adhesives, foils, paper, packaging, wood and others.



## FEATURES:

- Wide range of test load
- High accuracy
- Fully automated testing
- Real time test report generation
- Upgraded design with high quality digital load cell
- Inbuilt overload protection features

## OPTIONAL COMPONENTS AVAILABLE:

- Digital Height Micrometer - Frame Mount
- Digital Travel Indicator
- WinWedge Serial Data Acquisition Software
- Ultra Precision Load Cell
- Electric Pump
- Custom Fixtures Available
- RS 232/Analog Outputs

## T-REX CUSTOM DESIGNS:

Group Four realizes that a uniform product cannot meet everyone’s needs. This is why we are working with our customers to create custom versions of our test stand. Reach out to Group Four to see how T-Rex can evolve to meet your specific needs.

Ask about system retrofits to your existing press. T-Rex designs available in 25 and 55 tons.

The DOP 4 software is a tool for calibrating, analyzing and fine tuning measurement parameters for a number of the Group four digital load cells and digital amplifier devices for weighing and force measurements.



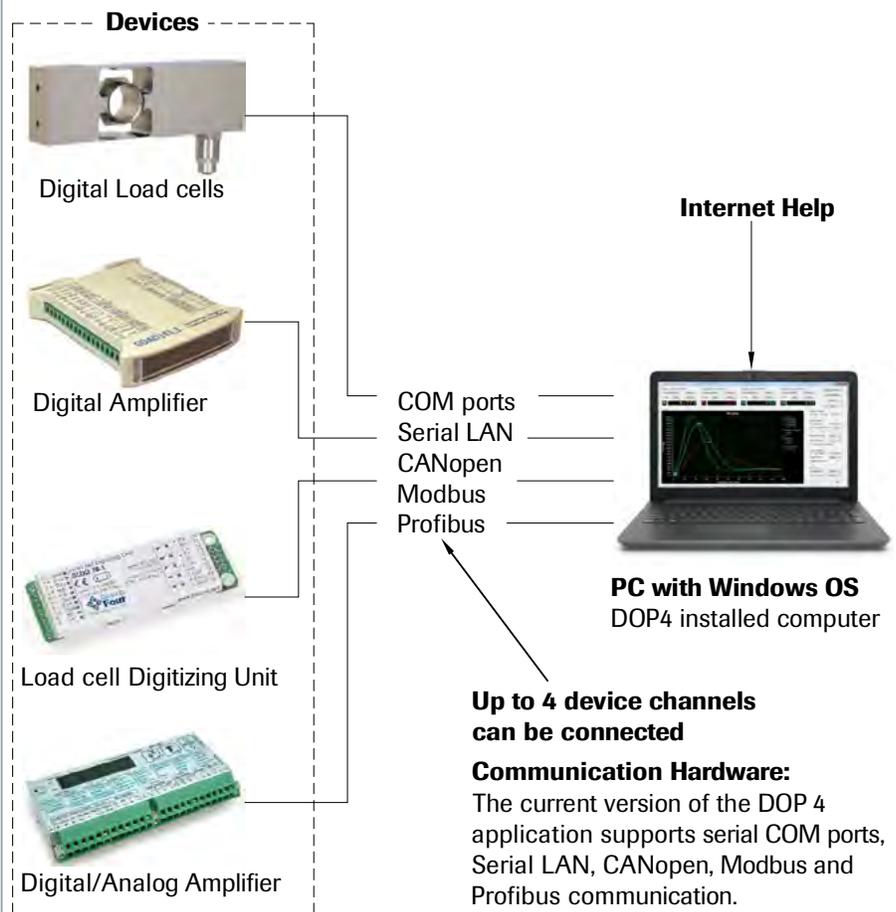
**FEATURES**

- User friendly software with free updates.
- Device output can be monitor real time.
- Up to 4 device channels can be monitored.
- Supports serial COM ports, Serial LAN, CANopen, Modbus and Profibus communication.
- Device configuration commands automatically previewed in command view with online help.
- Special Dialogs for filling and check weighing applications.
- Long time recording with high update rate.
- Unlimited data storage capacity.
- Special analytical tools are available for setting trigger time, measurement time and filter adjustment.
- Online help available for DOP4 running PC with Internet connection.

**APPLICATIONS**

- Real time monitoring, data storing and analyzing of digital load cells and digital amplifier devices.

**DIAGRAM FOR EXTERNAL DEVICE CONNECTIONS**



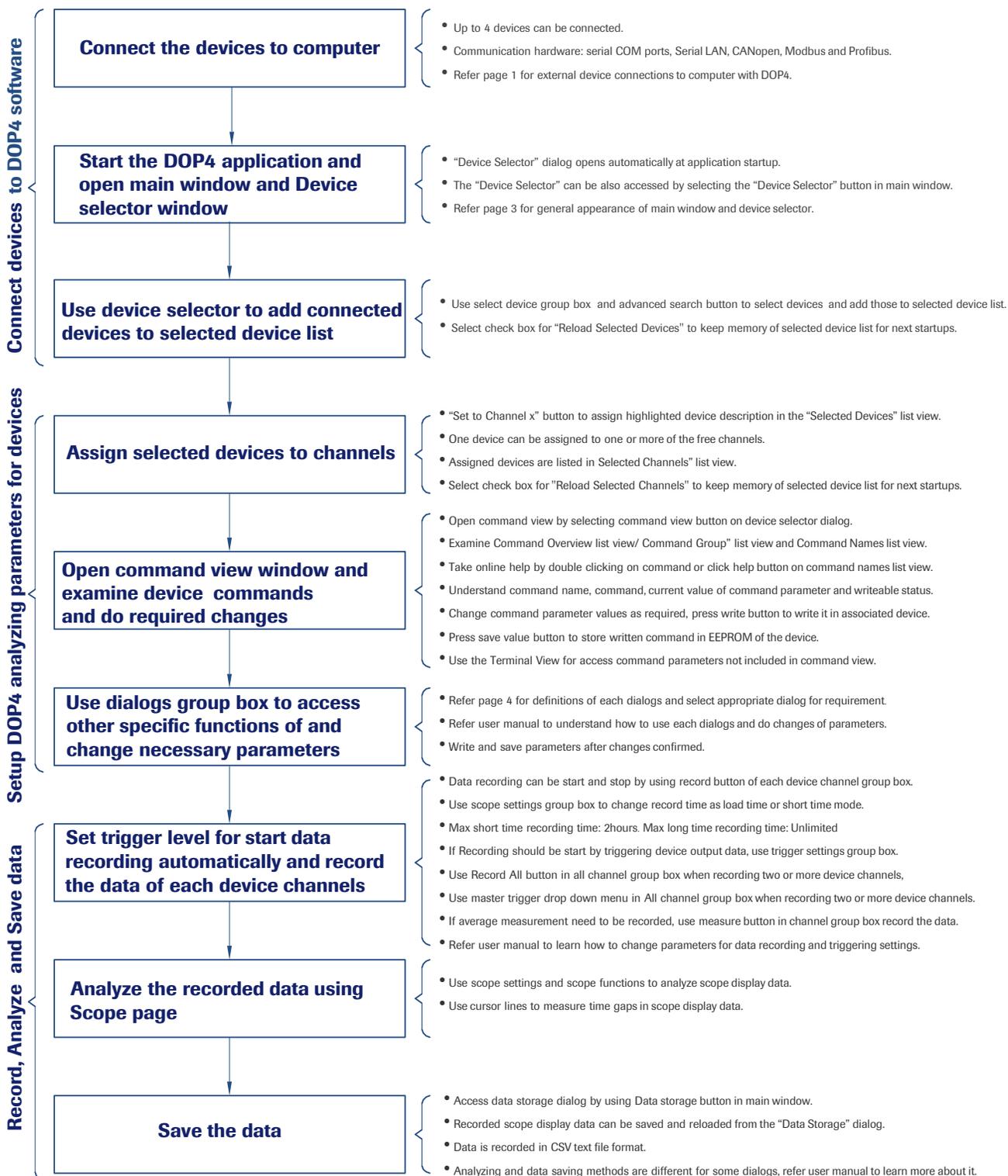
**Supporting devices for DOP4:**

- Complete range of Group four Digital load cells.
- Load cell digitizing units and digital / analog amplifiers.
- All new devices released by Group four transducers.

# software program

# DOP4

## FLOW CHART FOR QUICK START



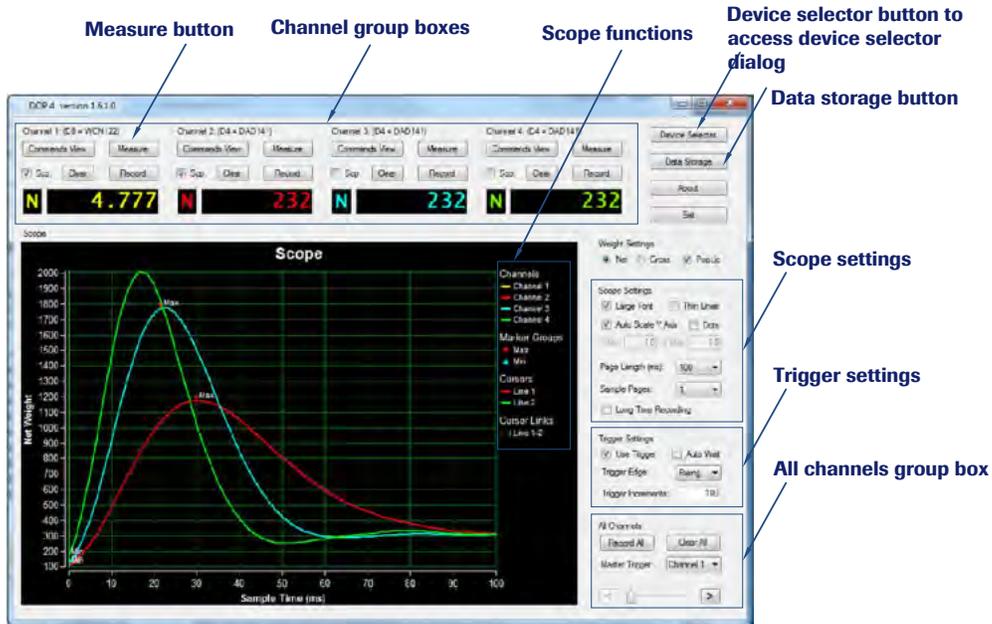
### Group Four Transducers

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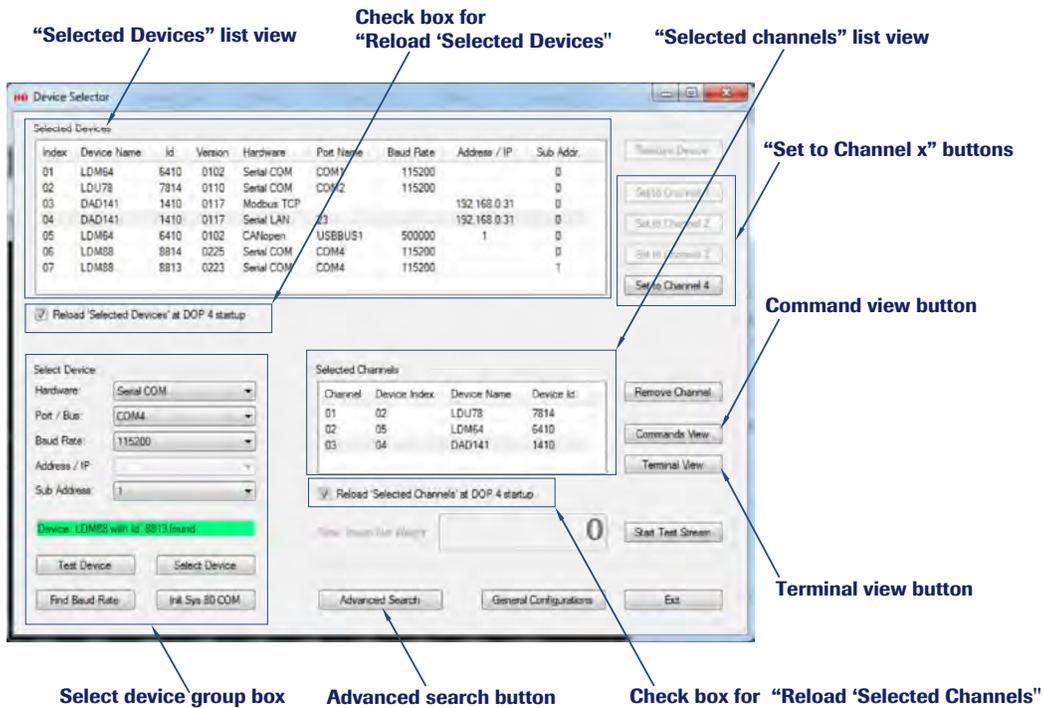
Phone : (800) 419 1444  
Fax : (413) 525 -6182  
sales@group-4.com

# software program DOP4

## Main Window (Application Startup)



## Device Selector Dialog



# software program DOP4

## Commands View

**Command Overview list view**

**Select device group box    Command names group box    Write and Save value button**

## Most Important Dialogs

### Calibration Dialog

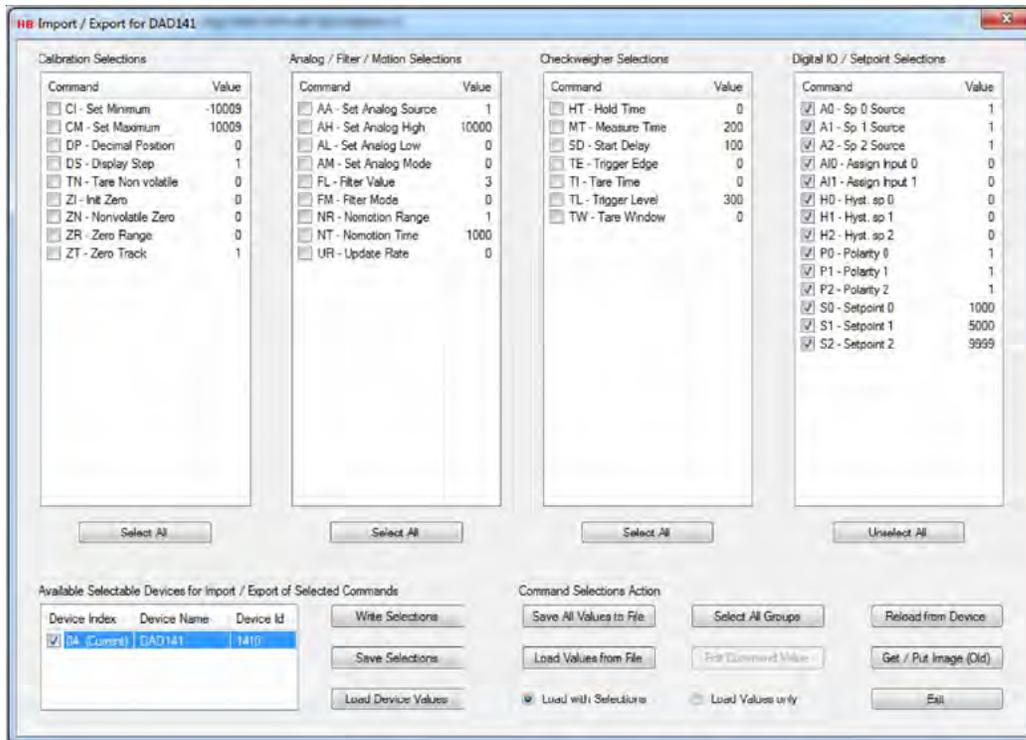
If zero and span calibration is to be performed, or the value of the “Decimal Position”, is to be changed, it’s recommended that the special dialog “Calibration Dialog” is used.

# software program

## DOP4

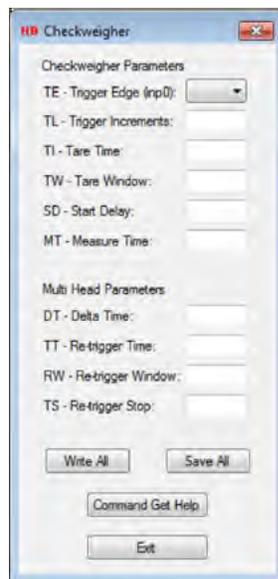
### Import / Export Dialog

For exporting and importing selected command parameters to one or more group-4 devices, the special dialog "Import / Export" can be used.



### Checkweigher Dialog

For changing checkweigher or filling command parameter values the special dialog "Checkweigher" or "Filling" dialog depending on the currently selected group-4 device can be used.



## software program

# DOP4

### Other Dialogs

#### **Filter / Tare**

For changing filter command values and setting tare, it's recommended that the special dialog "Filter / Tare" is used.

#### **Input / Output**

For changing setpoints and digital IO command parameter values and monitoring input / output values the special dialog "Input / Output" can be used.

#### **Display Panel**

For having a big weight display to be watched from distance, the "Display Panel" dialog can be used.

#### **Values Log View**

For viewing, saving or printing all of the command parameter values for the currently selected device, the "Values Log View" dialog can be used.

#### **Sequencer Dialog**

For sending a sequence of specific commands to the current device with a controlled delay between the defined commands the "Sequencer" dialog can be used.

#### **Communication**

For setting up communication parameters for serial communication devices, the "Communication" dialog can be used. (Only for devices connected by Serial COM or Serial LAN interface).

#### **The Terminal View**

The "Terminal View" dialog is a dialog tool for sending raw parameter commands to the device and to examine the received command responses. The "Terminal View" dialog comes in two versions, one version for devices using Serial COM and Serial LAN as communication interface, and one version for devices using CANopen as communication interface

*This data sheet provides basic structure and features of the DOP4 program. Refer user manual and quick start guide to learn how to use software functions in detail. User manual and Quick start guide is available on request.*



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---

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The type EGM187.1 universal ethernet gateway is used for directly interfacing digital load cells via Ethernet/IP.



**FEATURES**

- Two flexible Ethernet ports for fieldbus communication.
- Fieldbuses(optional)  
Profinet, EtherNet/IP, EtherCAT, Modbus-TCP, ASCII.
- Connection up to 32 digital load cells.
- RS232 service port allowed parallel.
- Space saving DIN rail mounting.
- Free DOP4 software for easy configuration of devices.

**APPLICATIONS**

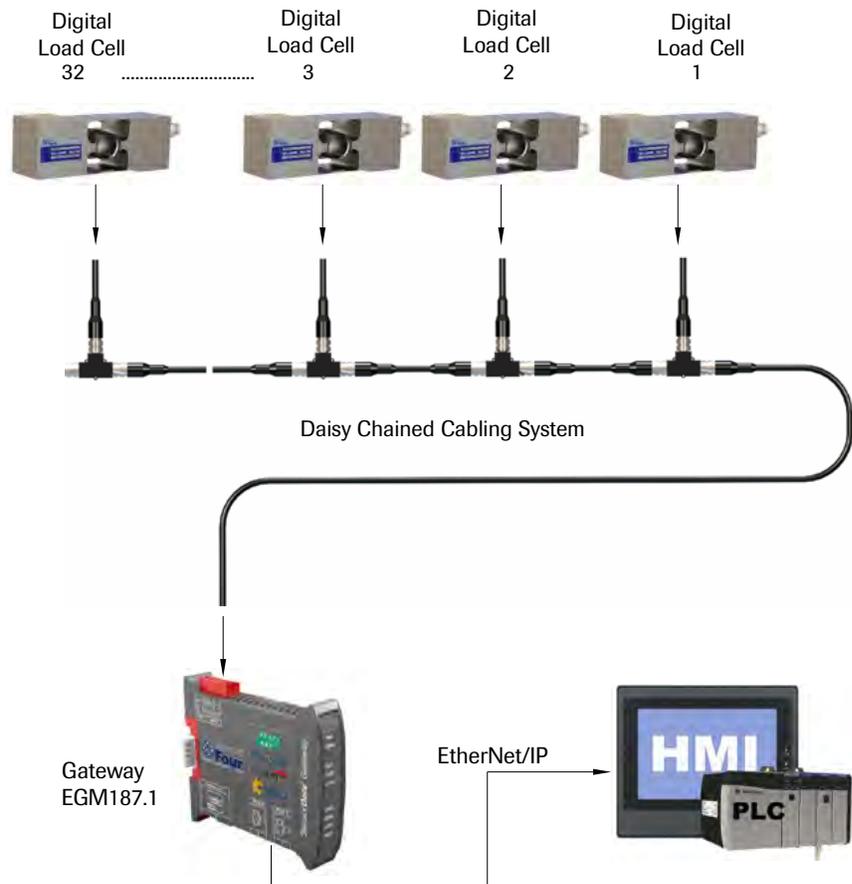
- Advanced weighing system with EtherNet/IP communication PLCs.

**OUTLINE DIMENSIONS**

**Overall dimensions:**

Height /length/width L:105mm (4.1”); H:120mm (4.7”); W22.5mm (.9”)

**General Connection Diagram**



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digital accessories

# Gateway EGM187.1

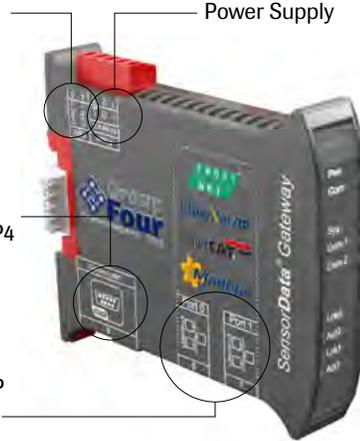


Interface 1 : CAN  
For Digital Load cell input

Power Supply

Interface 2 :RS232  
Service RS232 port for  
connection to PC with DOP4

EtherNet/IP  
ports



## WIRING

### Interface 1 : CAN For Digital Load cell input

Pin no.	Description
4	CAN_L
5	CAN_H

### EtherNet/IP port

Standard RJ45 Ethernet Pin Out

### Interface 2 :RS232 Service RS232 port for connection to PC with DOP4

Pin no.	Description
3	Rx(Receive Data)
2	Tx(Transmit Data)
5	GND(Signal ground RS 232)

## SPECIFICATIONS

Fieldbus	Profinet, EtherNet/IP, EtherCAT, Modbus-TCP, ASCII.	
Mounting	To be clipped on to DIN Rail TS35	
Interface 1	CAN	
	Bit rate	10 to 1000kbits/s
	Protocol	CAN Open (CAN2.0B)
Interface 2	RS-232	
	Bit rate	9600 to 460800 kbits/s
	Frame format	8 data bits, 1 stop bit, no parity bits
	Protocol	Readable ASCII
DIN Rail Port	CAN	
	Bit rate	10 to 1000kbits/s
	Protocol	CAN Open (CAN2.0B)
	Communication LDM 64.1 to Gateway EGM 187.1	CAN Open (CAN2.0B)
	Address range	1 to 99
Power supply	10-30VDC	
Temperature Range	°C	Operating: -15/+55 Storage: -30/+70

Dimensions and specifications subject to change without notice



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Fax : (413) 525 -6182  
sales@group-4.com

The type JBD is digital junction box for connection up to four digital load cells with RS-485 / RS-422 serial interfaces.



**FEATURES**

- Connection of the RS-485 / RS-422 serial interfaces.
- Connection up to 4 digital load cells.
- Environmental protection IP65.
- Connection to PC using RS485/RS422 to USB converter.

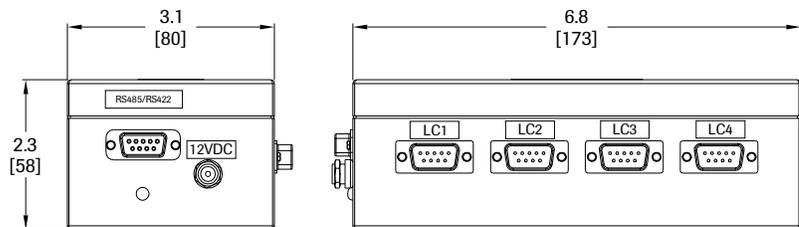
**APPLICATIONS**

- Applications with digital load cells.

**OPTIONS**

- JBD with RS485/RS422 to USB converter.

**OUTLINE DIMENSIONS**



**GENERAL CONNECTION DIAGRAM**



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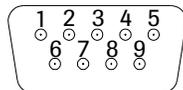
# digital accessories

## JBD



### PIN CONFIGURATION

#### DB9 MALE CONNECTOR (LOAD CELL INPUT)



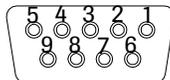
RS485/422 MALE

PIN 1	Tx+
PIN 2	Tx-
PIN 3	Rx+
PIN 4	Rx-
PIN 6	PWR+
PIN 8	GND

#### SPECIFICATIONS

Model	JBD
Serial interface	RS-485 / RS-422
Power supply	12V DC
Environmental protection	IP65
Housing material	Cast aluminum

#### DB9 FEMALE CONNECTOR (JUNCTION BOX OUTPUT)



RS422 FEMALE

PIN 1	Rx+
PIN 2	Rx-
PIN 3	Tx+
PIN 4	Tx-
PIN 5	GND



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# Group Four Transducers Inc.

## Warranty/Repair Policy

### Limited Warranty on Products

Any of our products which, under normal operating conditions, proves defective in material or workmanship within one year from the date of shipment by Group Four Transducers, Inc., ("Group Four") will repair or replace free of charge provided that you obtain a return material authorization from Group Four. Send the defective product, transportation charges prepaid with notice of the defect, and establish that the product has been properly installed, maintained, and operated within the limits of rated and normal usage. Replacement product will be shipped F.O.B. our plant. The terms of this warranty do not extend to any product or part thereof which, under normal usage, has an inherently shorter useful life than one year. The replacement warranty detailed here is the buyer's exclusive remedy, and will satisfy all obligations of Group Four whether based on contract, negligence, or otherwise. Group Four is not responsible for any incidental or consequential loss or damage, which might result from a failure of any Group Four Transducer, Inc. product. This express warranty is made in lieu of any and all other warranties, expressed or implied, including implied warranty of merchantability or fitness for particular purpose. Any unauthorized disassembly or attempt to repair voids this warranty. Removal of load cell label voids warranty.

### Obtaining Service Under Warranty

Advance authorization (RMA) is required prior to the return to Group Four. Before returning the item either write to the repair department, Group Four Transducers, Inc., 22 Deer Park Drive, East Longmeadow, MA 01028, or call (413) 525-2705 with 1.) A part number; 2.) A serial number for defective product; 3.) Shipping and billing addresses; and 4.) A technical description of the defect. (In order to properly repair a product, it is absolutely necessary for Group Four to receive information specifying the reason the product is being returned. Specific test data, written observations on the failure and the specific corrective action you require, are needed.) Shipment to Group Four shall be at buyer's expense and must be labeled with RMA Number. Repaired items will be shipped to you F.O.B. our plant in East Longmeadow, Massachusetts. Non-verified problems or defects may be subject to a \$55 evaluation charge.

### Obtaining Non-Warranty Service

1.) Advance authorization (RMA) is required prior to the return to Group Four. Please follow same procedure as "Obtaining Service Under Warranty." After the product is evaluated by Group Four we will contact you to provide the estimated repair costs before proceeding. The minimum evaluation charge is \$55. Shipment to Group Four shall be at buyer's expense and repaired items will be shipped to you F.O.B. our plant in East Longmeadow, Massachusetts.

### Repair Warranty

All repairs of Group Four products are warranted for a period of 90 days from date of shipment. This warranty applies only to those items, which are found defective and repaired. It does not apply to products in which no defect was found and which are returned, "as is" with the exception of recalibration. Out of warranty products may not be capable of being returned to the exact original specifications or dimensions.



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**USA Headquarters**  
800-419-1444  
sales@group-4.com

**European Sales Office**  
sales-eu@group-4.com

**Asia Sales Office**  
mtare@group-4.com



**Sri Lanka  
Sales Office**  
bandarag@slt.net.lk

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