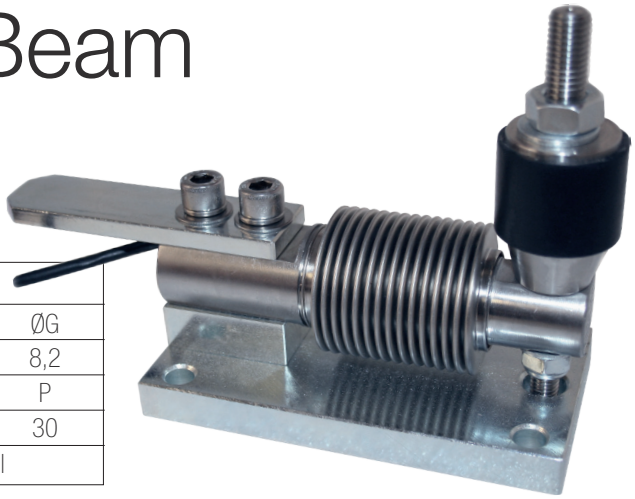
Yetec

Weighing & Radio Technology

Bellows Bending Beam

Internally gauged pins

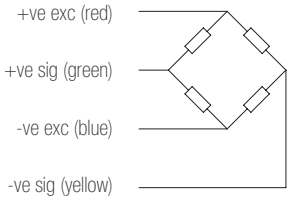


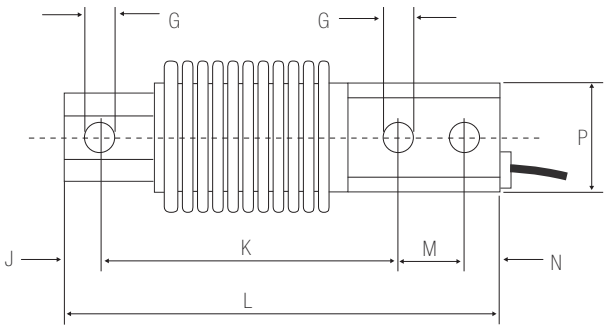
Range 10-200Kg						
ØA	ØB	C	D	E	F	ØG
42	34	20	24,5	42	53,5	8,2
ØH	J	K	L	M	N	P
27	10	82	120	18	10	30
4m screened polyurethane cable, Construction 17/4/PH stainless steel						

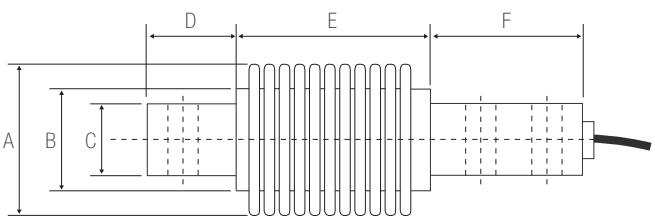
Specifications		
Rated output	2±0.1%	mV/V
Accuracy class	3000	n.OIML
Combined error	<±0.017	%
Non repeatability	<±0.015	%
Creep 30 mins	<±0.016	%
Temp effect on zero	<±0.001	%/ºC
Temp effect on span	<±0.001	%/ºC
Compensated temp range	-10 to +40	°C
Operating Temp. Range	-20 to +50	°C
Safe overload	150	%
Ultimate overload	200	%
Zero balance	<1	%
Input resistance	400±20	Ω
Output resistance	350±3	Ω
Insulation resistance	>5000	MΩ@100VDC
Supply Voltage (nominal)	10	V
Max Voltage	15	V

Specifications subject to change without notice

- Hermetically sealed, fully welded construction
- Easy to install
- Ranges 10kg to 200kg
- Atex versions available
- Suitable for belt and tank weighing, bag fillers and platforms
- Easy installation







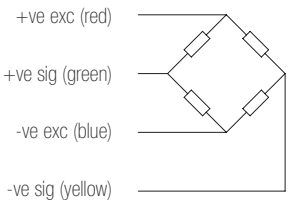
ATEX / IECEx Approved to
Ex ia IIC T6
Ex tD A20 IP68 T85C

Load Pin Series

Internally gauged pins

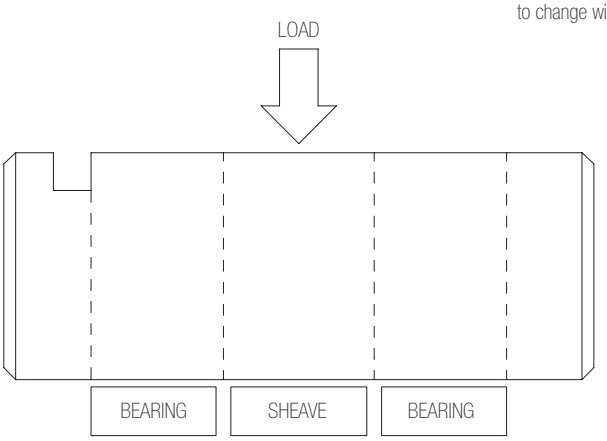
Product Description

Load measuring pins are designed for many diverse applications as direct replacements for clevis or pivot pins. They have many advantages over other load sensors in that they do not normally require any change to the mechanical structure being monitored. Load pins are typically used in rope, chain and brake anchors, sheaves, shackles, bearing blocks and pivots.



Specifications		
Capacities	0.1 to 1000+	tonne
Proof Load	150	% of rated load
Ultimate breaking load	500	% of rated load
Bridge Resistance	350/700/1000	ohms
Excitation	5 to 10	Volts (dc)
Output	1.0 to 1.5	mV/V
Non-Linearity	±1%	typical
Non-Repeatability	±0.04%	optimum
Environmental	IP67	
Operating Temp. Range	-20 to +70	°C
Temp. Coefficient on Zero	<0.02	% Capacity/°C
Temp Coefficient on Span	<0.02	% Capacity/°C
Signal cable	5m polyurethane 4 core	

Specifications subject to change without notice



- Range 0.1 to 1000 tonne
- Internally strain gauged
- Sealed to IP68
- ATEX certification available
- A variety of cable and connector options
- Stainless steel construction

Options

Special anti-rotation / locking plates
Internal greaseways
Plug / Socket breakdown at pin
Second redundancy gauge bridge
Internal signal amplifier
Witness by Lloyds Reg. Of Shipping, ABS etc.
Single shear pins

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Load Pin Series

Internally gauged pins

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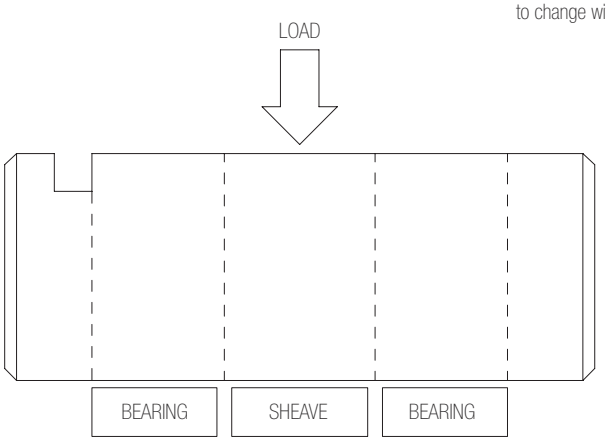
Temp Coefficient on Span	<0.02	% Capacity/°C
Signal cable	5m polyurethane 4 core	

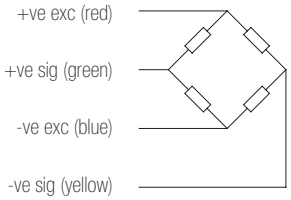
Specifications subject to change without notice



- Range 5te to 250te
- Sealed to IP68
- Low deflection
- Ideal for direct swap installation
- Robust construction
- ATEX certification

Options

Special anti-rotation / locking plates
Internal greaseways Plug / Socket breakdown at pin. Second redundancy gauge bridge. Internal signal amplifier
Witness by Lloyds Reg. Of Shipping, ABS etc. Single shear pins
Fully Welded. Submersible.
ATEX approval



Shackle Pin

High strength marine shackle pin

Capacity (te)	A	B	C	D	L	T
5	120	60	25	30	90	45
10	150	76	32	35	110	50
25	225	106	45	50	170	75
50	325	145	68	70	150	105
100	420	203	92	95	350	130
250	625	305	115	127	475	215

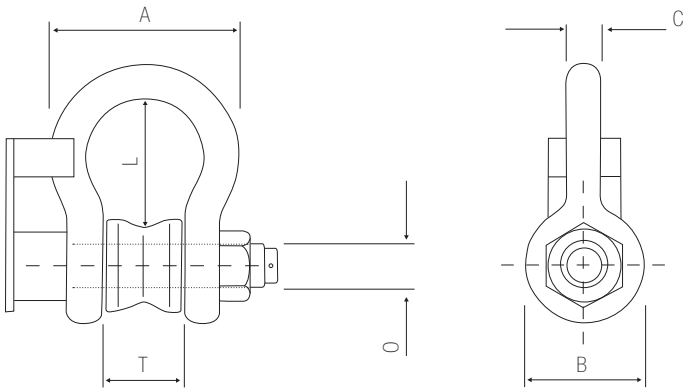
Specifications		
Capacities	5, 10, 25, 50,100, 250	te
Full Load Output	1.0 nom.	mV/V
Zero Load Output	<±0.004	%
Excitation (Max)	10 (15)	V
Accuracy	<0.5	%
Repeatability	<0.10	%
Input Resistance	375	Ω
Output Resistance	350	Ω
Compensated Temp. Range	+20 to +60	°C
Operating Temp. Range	- 30 to +70	°C
Temp. Coefficient on Zero	<0.050	% Capacity/°C
Temp Coefficient on Span	<0.030	% Capacity/°C
Safe Overload	150	%
Insulation	>500 @100Vdc	MΩ
Environmental Protection	IP68	

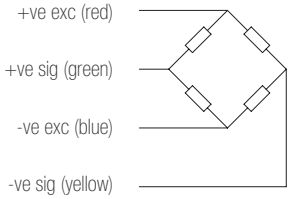
Specifications subject to change without notice

- Range 5te to 250te
- Sealed to IP68
- Low deflection
- Ideal for direct swap installation
- Robust construction
- ATEX certification

Options

Other ranges available on request
Non-standard sizes available





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ET Stainless Series

Underhook/Inline Load Link

Type	A	B	C	D	Dia.
1.5 te	175	110	70	17	16
2.5/5 te	185	120	70	25	20/26
7.5 te	200	135	70	25	30
10/12.5/15 te	270	170	90	30	36/39/43
20/25 te	350	220	120	50	52

All dimensiuns in mm

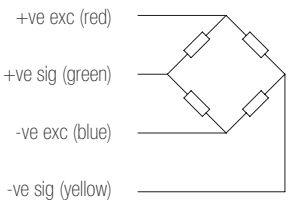
Specifications		
Capacities	1.5, 2.5, 5.0, 7.5, 10.0, 12.5, 15.0, 20.0, 25.0	tonne
Full Load Output	1 (nominal)	mV/V
Zero Load Output	<±2.0	%
Excitation (Max)	10 (15)	V
Accuracy	<0.1	%
Repeatability	<0.05	%
Input Resistance	375 (±20)	Ω
Output Resistance	350 (±2)	Ω
Compensated Temp. Range	0 to +60	°C
Operating Temp. Range	-10 to +80	°C
Temp. Coefficient on Zero	<0.0010	% Capacity/°C
Temp Coefficient on Span	<0.0010	% Capacity/°C
Safe Overload	300	%
Insulation	>500 @100Vdc	MΩ
Environmental Protection	IP68	

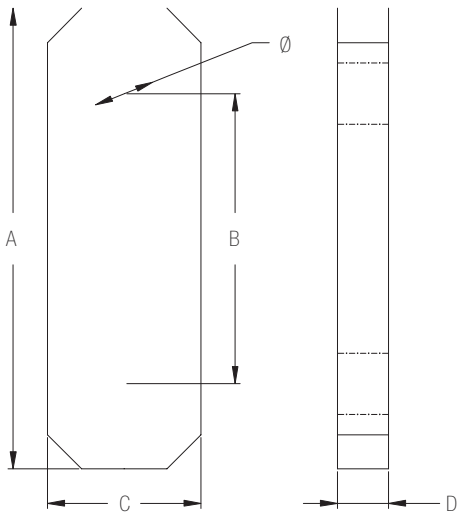
Specifications subject to change without notice

- Range 1.5 to 25 tonne
- For use with standard shackle
- Robust Stainless Steel Construction
- Sealed to IP68

Options

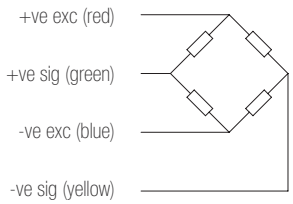
Other ranges available on request Integral connector or fixed cable option. Carry case for transportation and storage of link available





Bolt-on

Chassis Mount Cell



Capacity (te)	A	B	C	D	E	F	G	ØH
10t	198	152	269	326	57	63	M24	33

All dimensiuns in mm

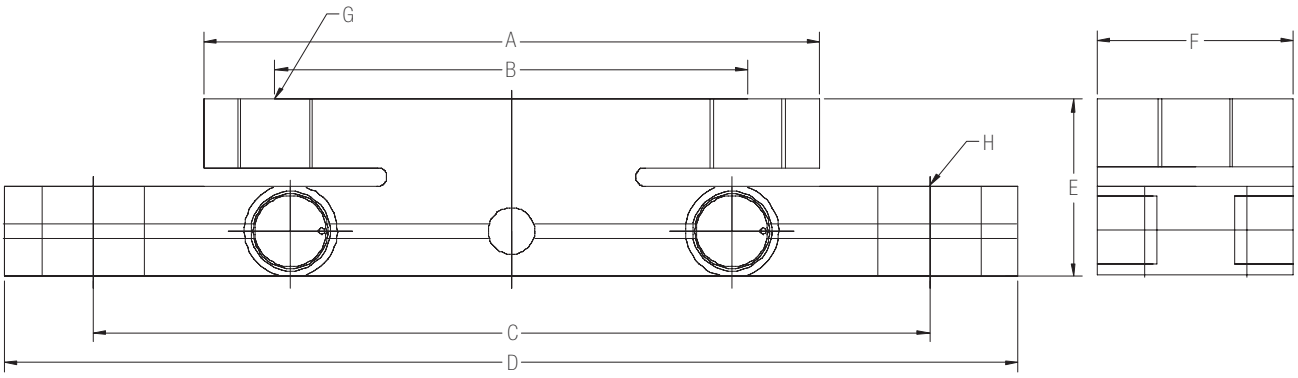
Specifications		
Capacities	10	tonne
Full Load Output	1.2 (±0.25%)	mV/V
Zero Load Output	<±2.0	%
Excitation (Max)	10 (15)	V
Accuracy	<0.05	%
Repeatability	<0.01	%
Input Resistance	750 (±20)	Ω
Output Resistance	700 (±2)	Ω
Compensated Temp. Range	-10 to +50	°C
Operating Temp. Range	-20 to +70	°C
Temp. Coefficient on Zero	<0.005	% Capacity/°C
Temp. Coefficient on Span	<0.005	% Capacity/°C
Safe Overload	150	%
Insulation	>500 @100Vdc	MΩ
Environmental Protection	IP68	

Specifications subject to change without notice

- Low height
- Stainless load cell
- Sealed to IP68
- High accuracy

Options

Alternative capacities available on request. Please enquire for details.

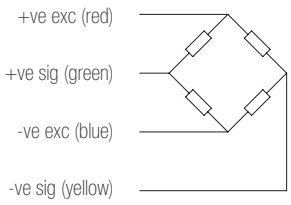


Clamp-On Series

Rope Clamp-On Load Cell, size 1

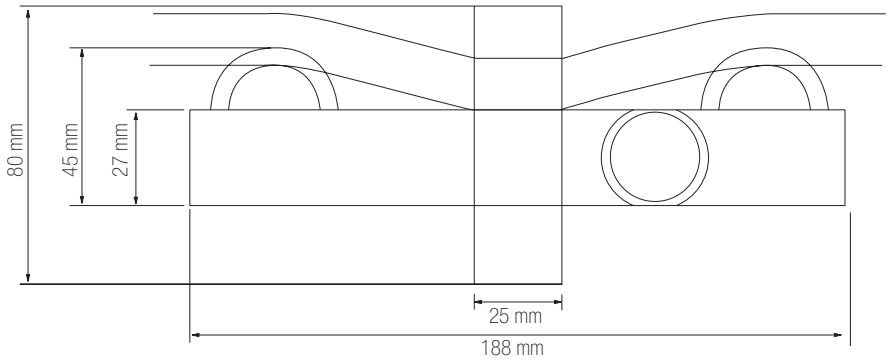
Rope Thickness (in.)	Rope Thickness (mm)	LOAD (kg)
3/8"	8-10	750
1/2"	11-13	1700
5/8"	14-16	3000
3/4"	18-19	4000
7/8"	20-22	5700
1"	24-26	7000

All dimensiuns in mm



Specifications		
Approx. Capacities	0.75, 1.7, 3, 4, 5.7, 7	tonne
Full Load Output	1.0 nom	mV/V
Zero Load Output	<±5.0	%
Excitation (Max)	10 (15)	V
Accuracy	<1	%
Repeatability	<0,25	%
Input Resistance	375 (±20)	Ω
Output Resistance	350 (±2)	Ω
Compensated Temp. Range	0 to +60	°C
Operating Temp. Range	-10 to +80	°C
Temp. Coefficient on Zero	<0.0010	% Capacity/°C
Temp. Coefficient on Span	<0.0010	% Capacity/°C
Safe Overload	150	%
Insulation	>500 @100Vdc	MΩ
Environmental Protection	IP68	

Specifications subject to change without notice



- Range 750 to 7000 kg
- For use with standard rope sizes 3/8" - 1"
- Fully welded stainless steel construction
- Sealed to IP68
- Low Weight

Parallel clamping system negates the need to alter standard rope installations, allowing straightforward fitting to existing systems.

Options

Other ranges avai able on request
Interchangeable Blocks to vary load capacity/rope gauge. Atex approval available.

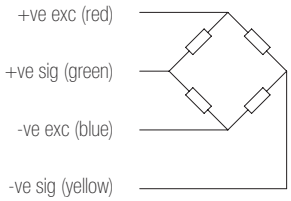
ATEX / IECEx Approved to
Ex ia IIC T6
Ex tD A20 IP68 T85C

Clamp-On Series

Rope Clamp-On Load Cell, size 2

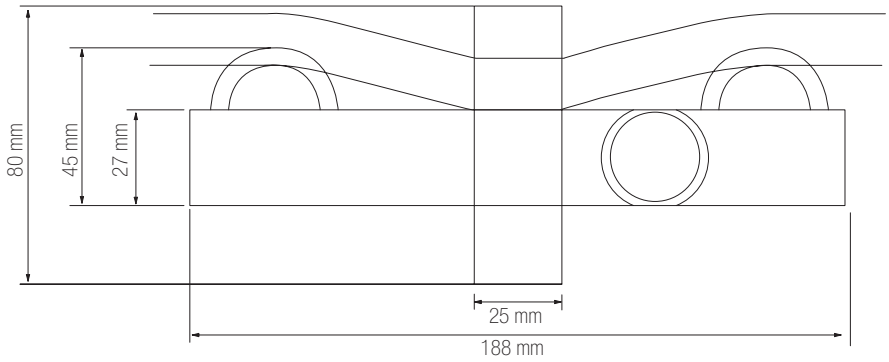
Rope Thickness (in.)	Rope Thickness (mm)	LOAD (kg)
1-1/8"	28	9,700
1-1/4"	32	12,600
1-3/8"	35	15,100
1-1/2"	38	17,900

All dimensiuns in mm



Specifications		
Approx. Capacities	9.7, 12.6, 15.1, 17.9	tonne
Full Load Output	1.0 nom	mV/V
Zero Load Output	<±5.0	%
Excitation (Max)	10 (15)	V
Accuracy	<1	%
Repeatability	<0,25	%
Input Resistance	375 (±20)	Ω
Output Resistance	350 (±2)	Ω
Compensated Temp. Range	0 to +60	°C
Operating Temp. Range	-10 to +80	°C
Temp. Coefficient on Zero	<0.0010	% Capacity/°C
Temp. Coefficient on Span	<0.0010	% Capacity/°C
Safe Overload	150	%
Insulation	>500 @100Vdc	MΩ
Environmental Protection	IP68	

Specifications subject to change without notice



- Range 9,700 to 17,900 kg
- For use with standard rope sizes 1-1/8" to 1-1/2"
- Fully welded stainless steel construction
- Sealed to IP68
- Low Weight

Parallel clamping system negates the need to alter standard rope installations, allowing straightforward fitting to existing systems.

Options

Other ranges available on request. Interchangeable Blocks to vary load capacity/ rope gauge. Atex approval available.

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Pressure Transducer

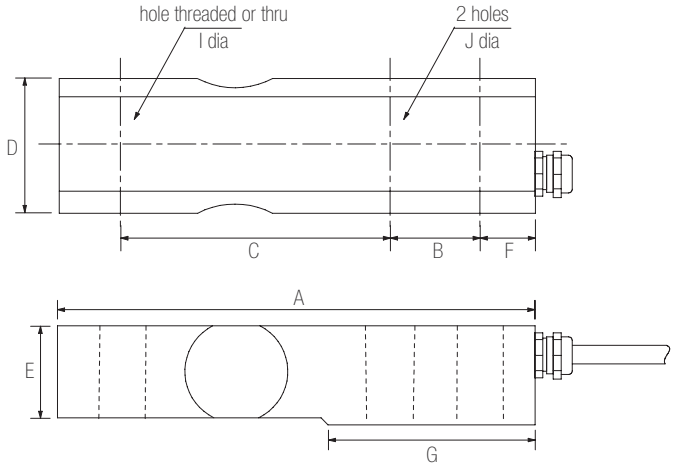
Underhook/Inline Load Link

Capacity (te)	A	B	C	D	E	F	G	H	ØJ	W1	W2	ØI
250 – 2000	135	25.4	76.2	38.1	26	16	58.5	28	13	22	27	M12x1.75
5000	170	38.1	95.3	50.8	36	20	76	39	21	28.5	36	Ø21
10000	220	50.8	120.7	68	46	26	105	52	26	35.5	50	Ø26

All dimensiuns in mm

Specifications		
Capacities	250,500,1000, 2000,5000,10000	kg
Full Load Output	2.0 (±0.25%)	mV/V
Zero Load Output	<±2.0	%
Excitation (Max)	10 (15)	V
Accuracy	<0.03	%
Repeatability	<0.01	%
Input Resistance	375 (±20)	Ω
Output Resistance	350 (±2)	Ω
Compensated Temp. Range	-10 to +40	°C
Operating Temp. Range	-20 to +70	°C
Temp. Coefficient on Zero	<0.0015	% Capacity/°C
Temp. Coefficient on Span	<0.002	% Capacity/°C
Safe Overload	150	%
Insulation	>500 @100Vdc	MΩ
Environmental Protection	IP68	

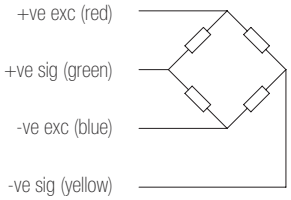
Specifications subject to change without notice



- Welded covers
- Stainless steel
- Sealed to IP68
- ATEX certification available
- Integral mounting base
- High accuracy
- Two year warranty

Options

Vessel mounting kit, load button and instrumentation.
Please enquire for details.



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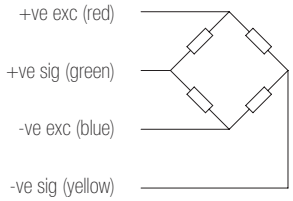
Low Profile

Stainless Steel Series

Range (kN)	D	H	G	K	T	
5, 10, 25, 50	107	33	90	8 off Ø8.5	M20 x 2	
100,200	155	45	130	12 off Ø11	M36 x 2	
500, 1000	280	78	230	16 off Ø17	M64 x 6	

All dimensiuns in mm



Specifications

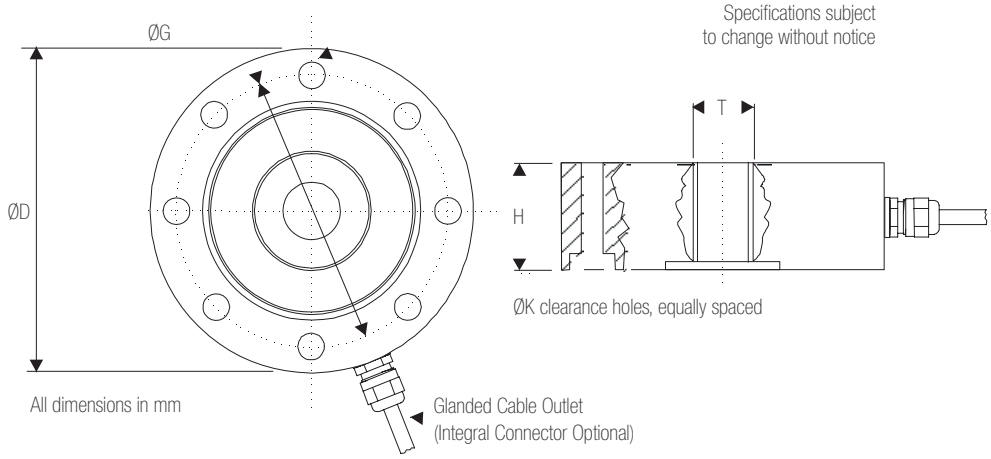
Capacities	±5, ±10, ±25, ±50 ±100, ±200, ±500, ±1000	kN
Full Load Output	2.0 (±0.25%)	mV/V
Zero Load Output	<±2.0	%
Excitation (Max)	10 (15)	V
Accuracy	<0.1	%
Repeatability	<0.03	%
Input Resistance	375(±20)	Ω
Output Resistance	350	Ω
Compensated Temp. Range	0 to +60	°C
Operating Temp. Range	-20 to +80	°C
Temp. Coefficient on Zero	<0.0050	% Capacity/°C
Temp. Coefficient on Span	<0.0050	% Capacity/°C
Safe Overload	150	%
Insulation	>500 @100Vdc	MΩ
Environmental Protection	IP65	

Specifications subject to change without notice

- Range 5kN to1000kN
- Low profile design
- Low deflection
- High natural frequency
- Excellent rejection of extraneous forces
- Fatigue Rated to 109 full cycles

Options

Other ranges available on request
Full range of mounting options
Connector version
Double bridge version

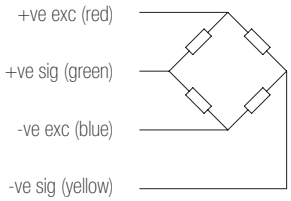


Low Profile

Aluminium Series

Type	D	H	G	K	T	P	R
500 N	76	25	60	6 off Ø6.2	M6 x 1.0	11	7
1, 2, 5 kN	76	25	60	6 off Ø6.2	M6 x 1.0	11	7
10, 20 kN	89	25	70	6 off Ø8.3	M12 x 1.75	14	8
50 kN	140	46	114	8 off Ø10.3	M20 x 1.5	17	11
100, 200 kN	152	46	124	8 off Ø14.5	M36 x 3.0	N/A	N/A

All dimensiuns in mm



Specifications

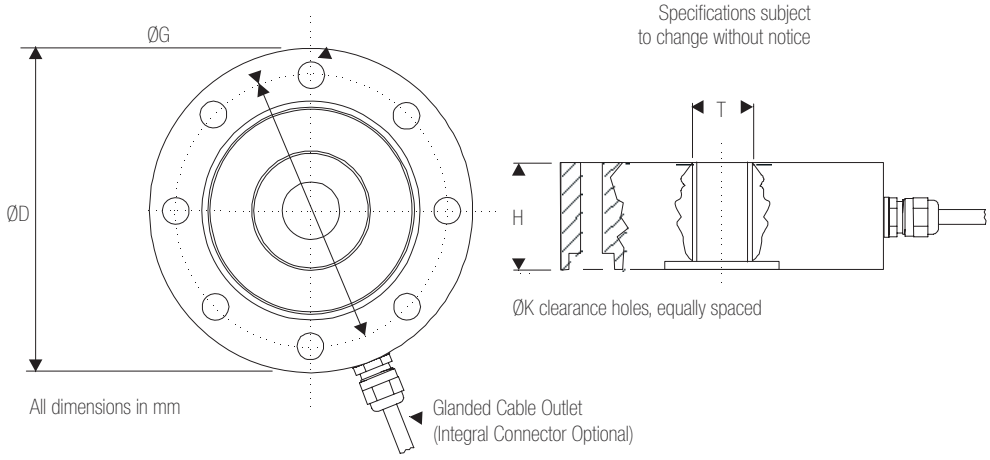
Capacities	0.5,1, 2, 5, 10, 20, 50, 100, 200	kN
Full Load Output	2.0 (±0.25%)	mV/V
Zero Load Output	<±2.0	%
Excitation (Max)	10 (15)	V
Accuracy	<0.1	%
Repeatability	<0.03	%
Input Resistance	400 (±20)	Ω
Output Resistance	350	Ω
Compensated Temp. Range	0 to +60	°C
Operating Temp. Range	-10 to +80	°C
Temp. Coefficient on Zero	<0.0050	% Capacity/°C
Temp. Coefficient on Span	<0.0050	% Capacity/°C
Safe Overload	150	%
Insulation	>500 @100Vdc	MΩ
Environmental Protection	IP65	

- Range 500N to 200kN
- Low profile design
- Low deflection
- High natural frequency
- Excellent rejection of extraneous forces

Options

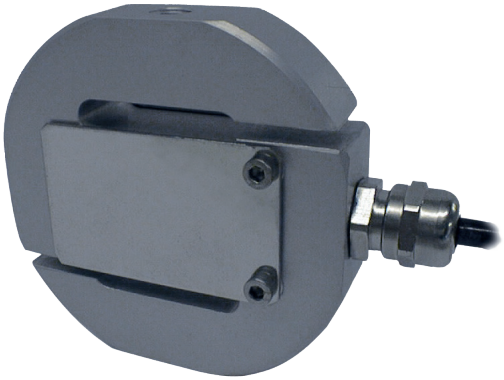
Other ranges available on request
Full range of mounting options
Stainless Steel versions
Integral connector version
Double bridge version

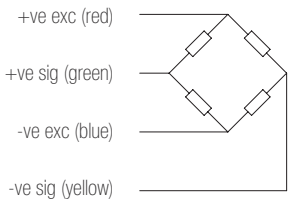
Specifications subject to change without notice



S Cell

Low Capacity





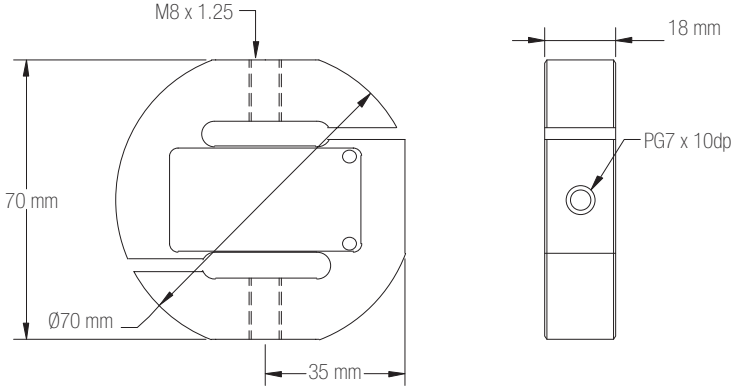
Specifications		
Capacities	10, 25, 50, 100	kg
Full Load Output	2.0 (±0.25%)	mV/V
Zero Load Output	<±2.0	%
Excitation (Max)	10 (15)	V
Accuracy	<0.03	%
Repeatability	<0.01	%
Input Resistance	375 (±20)	Ω
Output Resistance	350 (±2)	Ω
Compensated Temp. Range	-10 to +40	°C
Operating Temp. Range	-20 to +70	°C
Temp. Coefficient on Zero	<0.0015	% Capacity/°C
Temp. Coefficient on Span	<0.002	% Capacity/°C
Safe Overload	150	%
Insulation	>500 @100Vdc	MΩ
Environmental Protection	IP67	

Specifications subject to change without notice

- Bolt on covers
- Stainless steel
- Sealed to IP67
- Tension and compression
- High accuracy
- Two year warranty

Options

Eye-bolts, compression fittings and instrumentation. Please enquire for details.

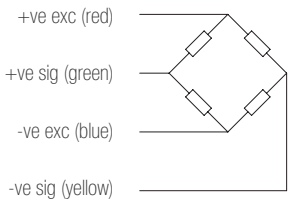


Pressure Transducer

Economical Pressure Measurement

Capacity (kg)	A	W	H	B	ØD	Tread T
250,500	35	72.5	70	24.5	75	M12 x 1.75
1000,2000	45	95	95	30	100	M20 x 1.5
5000	57.5	120	120	40	125	M24 x 2
10000	65	141	145	55	152	M30 x 2
20000	8	188	190	070	200	M45 x 3

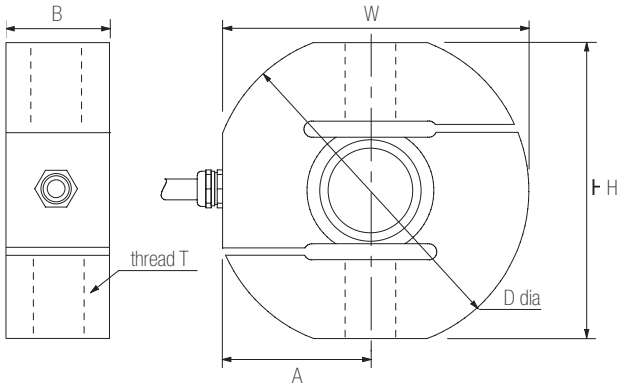
All dimensiuns in mm



Specifications

Capacities	250,500,1000, 2000, 5000, 10000	kg
Full Load Output	2.0 (±0.25%)	mV/V
Zero Load Output	<±2.0	%
Excitation (Max)	10 (15)	V
Accuracy	<0.03	%
Repeatability	<0.01	%
Input Resistance	375 (±20)	Ω
Output Resistance	350 (±2)	Ω
Compensated Temp. Range	-10 to +40	°C
Operating Temp. Range	-20 to +70	°C
Temp. Coefficient on Zero	<0.0015	% Capacity/°C
Temp. Coefficient on Span	<0.002	% Capacity/°C
Safe Overload	150	%
Insulation	>500 @100Vdc	MΩ
Environmental Protection	IP68	

Specifications subject to change without notice



- 250kg to 20,000kg
- Welded covers
- Stainless steel
- Sealed to IP68
- Tension and compression
- High accuracy
- Two year warranty

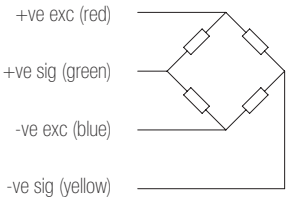
Options

Eye-bolts, compression fittings and instrumentation. Please enquire for details.

ATEX / IECEx Approved to
Ex ia IIC T6
Ex tD A20 IP68 T85C

Comp Cell

500kg to 20,000kg



Capacity (t)	H	B	W	R	D	T	P
0.5, 1	21	4	10	50	59	M3x7	42
2, 5, 10, 20	35	5	20	150	98	M6x18	72

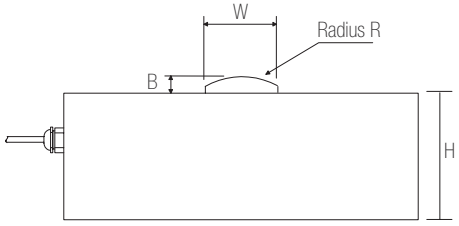
All dimensiuns in mm

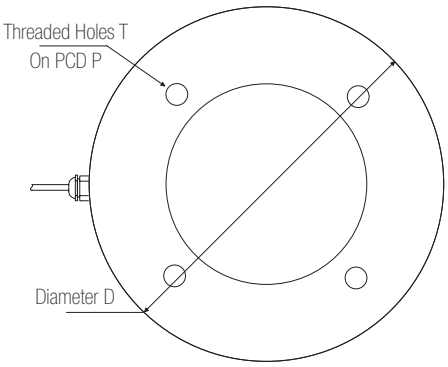
Specifications

Capacities	0.5,1,2,5,10,20	tonne
Full Load Output	2.0 (±0.25%)	mV/V
Zero Load Output	<±2.0	%
Excitation (Max)	10 (15)	V
Accuracy	<0.25	%
Repeatability	<0.1	%
Input Resistance	750 (±20)	Ω
Output Resistance	700 (±2)	Ω
Compensated Temp. Range	-10 to +50	°C
Operating Temp. Range	-20 to +70	°C
Temp. Coefficient on Zero	<0.005	% Capacity/°C
Temp. Coefficient on Span	<0.005	% Capacity/°C
Safe Overload	150	%
Insulation	>500 @100Vdc	MΩ
Environmental Protection	IP68	

Specifications subject
to change without notice

- Low height
- Stainless steel
- Sealed to IP68
- Compression load cell
- Integral load button
- Welded cover



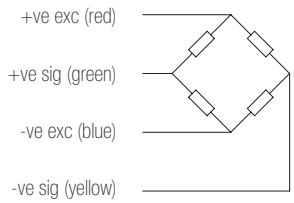


Annular Load Cell

Force Washer

Capacity (kN)	Bolt Size	A	B	C
10	M6	18	6.1	12
20	M8	22	8.1	12
40	M10	28	10.2	12
80	M12	38	12.2	15
100	M16	42	16.3	20
120	M24	50	24.3	25
160	M30	60	30.5	30
200	M36	75	36.5	30

All dimensiuns in mm



Specifications

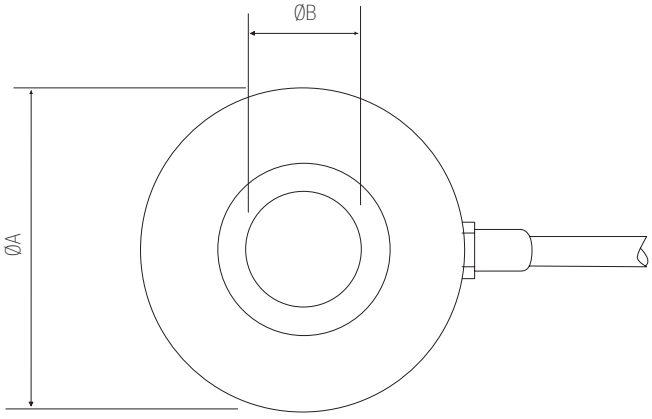
Capacities	10, 20, 40, 80, 120, 160, 200	kN
Full Load Output	1.0 nom.	mV/V
Zero Load Output	<±1.0	%
Excitation (Max)	10 (15)	V
Accuracy	<0.5	%
Repeatability	<0.10	%
Input Resistance	750	Ω
Output Resistance	700	Ω
Compensated Temp. Range	0 to +70	°C
Operating Temp. Range	-20 to +80	°C
Temp. Coefficient on Zero	<0.030	% Capacity/°C
Temp. Coefficient on Span	<0.0050	% Capacity/°C
Safe Overload	150	%
Insulation	>500 @100Vdc	MΩ
Environmental Protection	IP66	

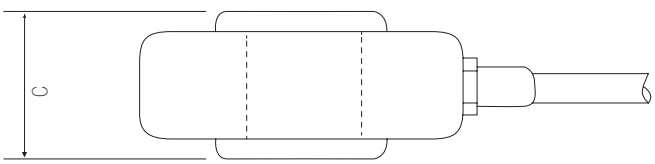
Specifications subject to change without notice

- Range 10kN to 200kN
- Sealed to IP66
- Low deflection
- Low profile and compact
- Suitable for metric or imperial bolts
- Robust construction

Options

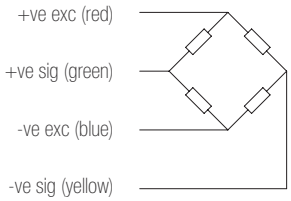
Other ranges available on request
Full range of mounting options
Non-standard sizes available





Tension Cell

100N to 20kN



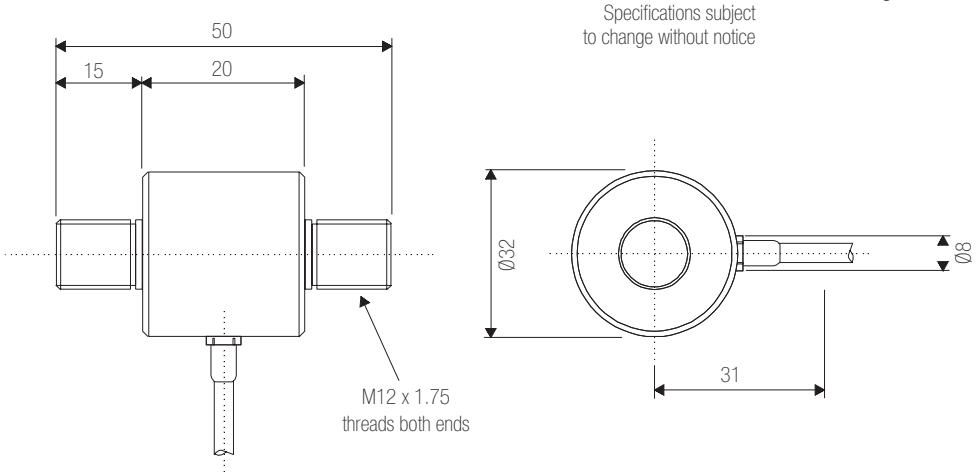
Specifications		
Capacities	0.1,0.2,0.5,1,2, 5,10,20	kN
Full Load Output	2.0 (±0.25%)	mV/V
Zero Load Output	<±2.0	%
Excitation (Max)	10 (15)	V
Accuracy	<0.25	%
Repeatability	<0.01	%
Input Resistance	375 (±20)	Ω
Output Resistance	350 (±2)	Ω
Compensated Temp. Range	-10 to +40	°C
Operating Temp. Range	-20 to +70	°C
Temp. Coefficient on Zero	<0.0015	% Capacity/°C
Temp. Coefficient on Span	<0.002	% Capacity/°C
Safe Overload	150	%
Insulation	>500 @100Vdc	MΩ
Environmental Protection	IP65	

Specifications subject to change without notice

- Tension and Compression
- Sealed to IP65
- Low profile and Compact
- Integral male threads for in-line mounting
- High Natural Frequency
- Low Deflection

Options

Non-standard sizes and ranges available on request. Shunt calibration facility
Spherical seating rod end bearings
Different cable lengths and special mounting fixtures



ET Telemetry Series

Underhook/Inline Load Link

Type	A	B	C	D	E	Weight (kg)
1, 2, 5 te	108	105	40	30	164	1.4
12 te	120	105	40	38	210	1.9
25 te	131	125	55	53	255	4
35 te	147	135	55	60	305	5
50 te	170	150	75	73	345	9
100 te	228	220	123	100	455	27
250 te	330	304	189	145	680	87
500 te	451	500	200	200	1015	225

All dimensiuns in mm

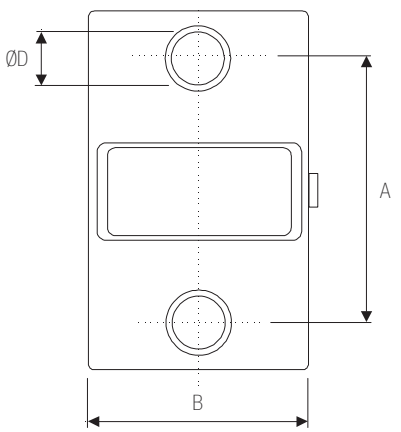
Specifications		
Capacities	10, 20, 40, 80, 120, 160, 200	kN
Full Load Output	1.0 nom.	mV/V
Zero Load Output	<±1.0	%
Excitation (Max)	10 (15)	V
Accuracy	<0.5	%
Repeatability	<0.10	%
Input Resistance	750	Ω
Output Resistance	700	Ω
Compensated Temp. Range	0 to +70	°C
Operating Temp. Range	-20 to +80	°C
Temp. Coefficient on Zero	<0.030	% Capacity/°C
Temp. Coefficient on Span	<0.0050	% Capacity/°C
Safe Overload	150	%
Insulation	>500 @100Vdc	MΩ
Environmental Protection	IP66	

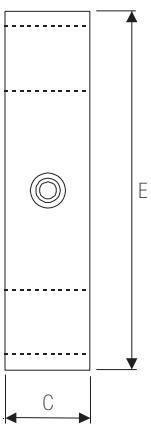
Specifications subject to change without notice

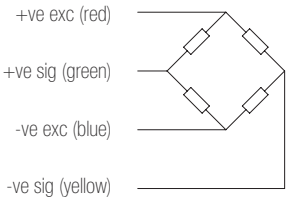
- Range 1 to 500 tonne
- For use with standard shackles
- Sealed to IP67
- Range 200m
- Up to 255 Links can be used in one installation
- Auto Power Down

Options

Other ranges available on request
Wireless Handheld unit
Carry case for transportation and storage of link and handheld







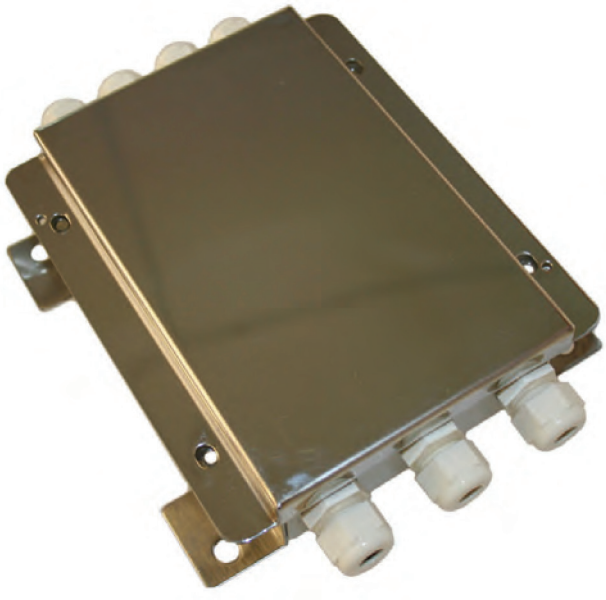
Equilised Junction Box

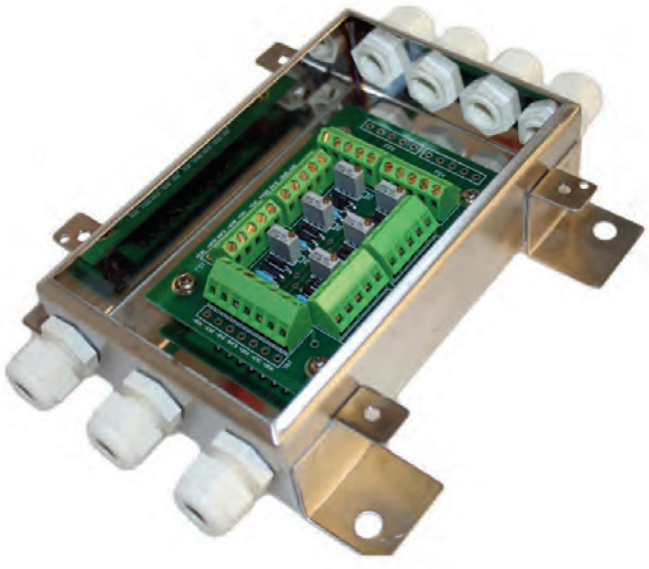
500kg to 20,000kg

Technical Features
Stainless steel case
Protection: IP65
Maximum input voltage: 24Vdc
Maximum input current: 700mA
Maximum input load cell signal: 1000mV
Temperature effects: 50ppm/ºC
Protection diodes against surges or electrostatic discharges
Inputs on screw connectors or soldering squares
Four cell model dimensions: 155x158x45mm
Six cell model dimensions: 190x132x50mm

Specifications subject
to change without notice

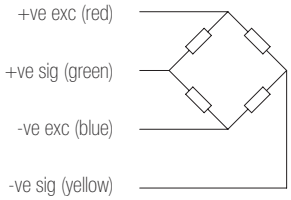
Stainless steel junction box with IP65 protection from water and dust, and fitted with electronic board for junction and equalisation of four or six load cells. Terminal board with screws for easyconnection of the load cells and signal adjustment trimmers for accurate and reliable equalisation.





Bolt-On

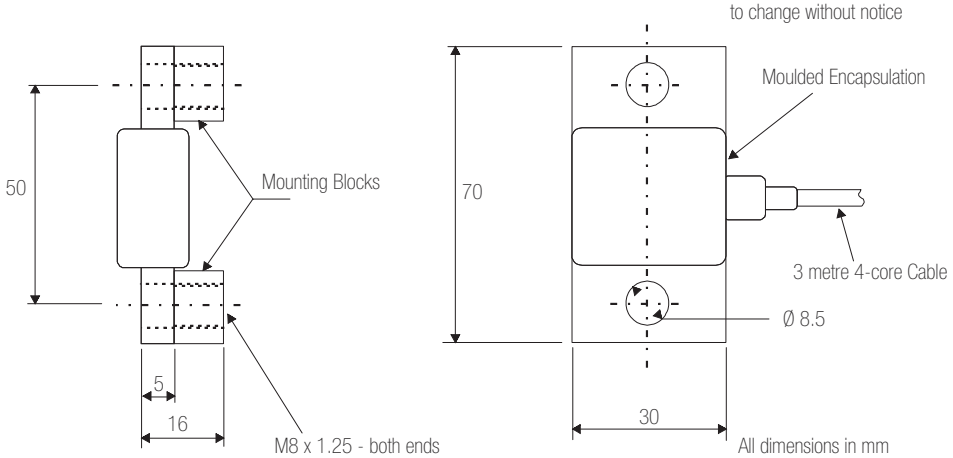
Bolt On Strain Sensing



Charcteristics	BOSS-F	BOSS-S	UNITS
Full Load Output	1.0 nom.	20.0 nom.	mV/V @ 10000psi
Zero Load Output	<±5.0	<±5.0	%
Excitation (Max)	10 (15)	10 (15)	V
Accuracy	<0.25	<0.25	%
Repeatability	<0.04	<0.04	%
Input Resistance	350 nom.	2100 nom.	Ω
Output Resistance	<0.5	<0.5	mm
Compensated Temp. Range	-30 to +70	-30 to +70	°C
Operating Temp. Range	+15 to +65	+15 to +65	°C
Temp. Coefficient on Zero	0.010	0.010	% Capacity/°C
Temp. Coefficient on Span	0.005	0.010	% Capacity/°C
Safe Overload	200	200	%
Insulation	>5000@100Vd	>5000@100Vd	MΩ
Environmental Protection	IP65	IP65	

- Cost effective solution for high capacity vessel/silo weighing applications
- Sealed to IP65
- Robust construction
- Simple installation
- All mounting accessories supplied

Specifications subject to change without notice



Electric Dynamometer

Underhook/Inline Load Link

D2000A-XT

Under hook / Inline load link	
Article number:	D2000A-2T, D2000A-6,5T, D2000A-12,5T, D2000A-25T
	D2000A-55T, D2000A-120T
Application areas:	Electric weight dynamometer and calibration for weight sensors for hoisting equipment
Accuracy:	0,2% +-1d.
Input:	Charge input niMh charger 4-10 cell
Bold diameter:	D2000A-2T; 16 mm
	D2000A-6,5T; 25,5 mm
	D2000A-12,5T; 35,5 mm
	D2000A-25T; 51 mm
	D2000A-55T; 70 mm
	D2000A-120T; 100 mm
Size (W x h):	D2000A-2T 95 X 150 mm, Weight in kg 2,5
	D2000A-6,5T; 95 X 220 mm, Weight in kg 4
	D2000A-12,5T; 95 X 250 mm, Weight in kg 4,5
	D2000A-25T; 108 X 340 mm, Weight in kg 8
	D2000A-55T; 160 X 440 mm, Weight in kg 16
	D2000A-120T; 200 X 500 mm, Weight in kg 37
Features:	Can communicate with external radio receiver (20008-6V-RTX)
IP classification:	IP62

D1004-4-RF

2000B-6V-RTX

Electronic Weight Sensors

OL3000 A, WT1, WT2

WT1

WT2

Weight sensors WT1 & WT2	
Article number:	WT1 & WT2
Application areas:	Weight sensors for hoisting equipment
Accuracy:	WT1; 10% WT2; 5% Overload use; 1%
Output:	Balanced signal
Power supply:	5V Dc
Size:	WT1; 100 x 65 x 40-50 mm WT2; 15 x 60 x 52-80 mm
Wire size:	WT1; 6-15 mm, 0-3,5T on the unit WT2; 14-28 mm, 0-8,5T on the unit

Amplifier OL3000A & OL3000C	
Article number:	OL3000A, OL3000c
Application:	Amplifier for weight sensors, Din rail mounted
Accuracy:	< 0,1%
Output	4-20 mA
Size:	54 x 90 x 61 mm
Features:	relays (n0) triggers at a user set level

OL3000 A

Overload Switch

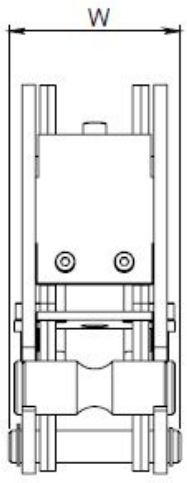
Mechanical Overload Switch

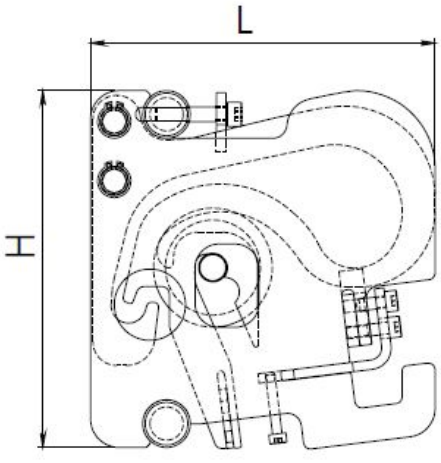
SM4065 SM4066

Product Description

SM4065/66 is standard delivered with 1 refraction point. SM4066 can be delivered with 2 refraction-point´s in use for crane-certificate (for example 5 & 10T crane overload limits).

Specifications	
Article number:	SM4065, SM4066
Application areas:	Mechanical overload switch for hoisting equipment
Hysterese:	max, 4% FS
	SM4065 for wire Ø 5-18mm
	SM4066 for wire Ø 13-25mm
The SM4066 can be special build up to 30mm on request	
Maximum load:	SM4065 25KN on unit (to be multiplied with crane revvings)
	SM4066 70KN on unit (to be multiplied with crane revvings)
Size (w x h x l):	SM4065: 64 x 150 x 145
	SM4066 :95 x 222 x 208
Weight:	SM4065: 2,5 kg
	SM4066 :9,5 kg





Jaguar
T 70 system

With the T70 system you can have several active transmitters and receivers in the same area. You will always have an available channel that you can use to transmit since there are 64 selectable channels between 433-434 MHz. Even if there are other radio transmitters in the area, they will not disturb your equipment.

In the system the transmitter is equipped with 2, 3, 6 or 16 functions and the receiver is equipped with 3, 9 or 15 relay outputs. The TX2-A transmitter has 16 functions and a stop button. When you press the stop button the information is transmitted to the receiver, and the transmitter turns off. It is possible to get the transmitter with standard foil or you can adjust it according to your needs and wishes. The system offers you several different options, for example you can control two receivers with one transmitter.

8 butten

Transmitters & Receivers

2/6 button on/off, 8 button, 3 relays, 9 relays, 15 relays

8 butten

2/6 butten on/off

3, 9,15 releays

2/6 button on/off	
Article no.:	T70TX-0**TB
Frequency:	433 MHz, 64 channels
Battery:	Exchangeable
Weight:	~ 120 g incl. batteries
Dimensions:	~ 66 x 113 x 35 mm
Protection:	IP65
Relays:	Up to 6 functions
Temperature:	-20 to +55°C
Code comb.:	16.777.216

8 button	
Article no.:	T70TX-08ERB2
Frequency:	433 MHz, 64 channels
Battery:	Exchangeable
Weight:	~ 300 g incl. batteries
Dimensions:	~ 95 x 185 x 44 mm
Protection:	IP65
Relays:	Up to 16 functions
Temperature:	-20 to +55°C
Code comb.:	16.777.216

3 relays	
Article no.:	T70RX-03A*B
Frequency:	433 MHz, 64 channels
Power supply:	6-26V AC/DC
Dimensions:	~ 133 x 120 x 45 mm
Protection:	IP65
Relays:	3
Temperature:	-20 to +55°C
Code comb.:	16.777.216

9 relays	
Article no.:	T70TX-0**TB
Frequency:	433 MHz, 64 channels
Power supply:	Multi
Dimensions:	~ 175 x 125 x 75 mm
Protection:	IP65
Relays:	9
Temperature:	-20 to +55°C
Code comb.:	16.777.216

15 relays	
Article no.:	T70TX-0**TB
Frequency:	433 MHz, 64 channels
Power supply:	Multi
Dimensions:	~ 175 x 125 x 75 mm
Protection:	IP65
Relays:	15
Temperature:	-20 to +55°C
Code comb.:	16.777.216

860 Lion System

Industrial Plants

When you choose an 860 Lion you will get a very secure system. It has an approved stop function according to category 3 and PLd. Also, the receiver has dedicated security relays that monitor the stop function.

The system makes it possible to use personal PIN codes to start the transmitter. You can get the hand transmitter with up to 24 functions and the joystick transmitters with 2 joysticks and 2 or 4 speed settings. All 860 Lion transmitters have a robust design and are comfortable to use, even when wearing working gloves. The transmitter is delivered with a standard foil, but it can also be delivered with a foil that is adapted to your specific needs and wishes. Depending on the requirements of your application you get the receiver with 10, 15 or 24 function relays. With 860 Lion you have many options and built in functions as standard. You can for example control 2 receivers, independent of each other or in unison, a so-called twin function. The system transmits at up to 69 different frequencies between 433-434 MHz.

12 BUTTONS 12X2

Transmitters (Lion)

10 button 4x2, 10x2, 12 butten 12x2

Joystick 2x2, Joystick 2x4

JOYSTICK 2X2 AND 2X4

10 buttons 4x2	
Article no.:	860TX-A*B
Frequency:	433 MHz, 69 channels
Battery:	Re-chargeable
Weight:	~ 270 g incl. batteries
Dimensions:	~ 70 x 160 x 35 mm
Protection:	IP54
Relays:	Up to 4x2, 2x1 functions
Temperature:	-20 to +55°C
Code comb.:	65.536

10 buttons 10x2	
Article no.:	860TX-10-00B
Frequency:	433 MHz, 69 channels
Battery:	Re-chargeable
Weight:	~ 270 g incl. batteries
Dimensions:	~ 70 x 160 x 35 mm
Protection:	IP54
Relays:	Up to 10x2 functions
Temperature:	-20 to +55°C
Code comb.:	65.536

10 BUTTONS 4X2

10 BUTTONS 10X2

12 buttons 12x2	
Article no.:	860TX-12-00C
Frequency:	433 MHz, 69 channels
Battery:	Re-chargeable/ exchangeable
Weight:	~ 300 g incl. batteries
Dimensions:	~ 80 x 210 x 40 mm
Protection:	IP65
Relays:	Up to 12x2 functions
Temperature:	-20 to +55°C
Code comb.:	65.536

Joystick 2x2	
Article no.:	860JD-T4-3-0000
Frequency:	433 MHz, 69 channels
Battery:	Re-chargeable/ exchangeable
Weight:	~ 1200 g incl. batteries
Dimensions:	~ 210 x 140 x 130 mm
Protection:	IP65
Relays:	Up to 2x2 functions
Temperature:	-20 to +55°C
Code comb.:	65.536

Joystick 2x4	
Article no.:	860JD-T4-2-0000
Frequency:	433 MHz, 69 channels
Battery:	Re-chargeable/ exchangeable
Weight:	~ 1200 g incl. batteries
Dimensions:	~ 210 x 140 x 130 mm
Protection:	IP65
Relays:	Up to 2x4 functions
Temperature:	-20 to +55°C
Code comb.:	65.536

Receivers (Lion)

12 Relays, 12 Relays 69 Ch, 17 Relays, 26 Relays

12 relays	
Article no.:	860RX-MN-10B
Frequency:	433 MHz, 16 channels
Power supply:	Multi
Dimensions:	~ 256 x 217 x 85 mm
Protection:	IP66
Relays:	12
Temperature:	-20 to +55°C
Code comb.:	65.536
Other:	10 relay outputs + 2 for stop function

12 relays 69 Ch	
Article no.:	860RX-MD-10B
Frequency:	433 MHz, 69 channels
Power supply:	Multi
Dimensions:	~ 256 x 217 x 85 mm
Protection:	IP66
Relays:	12
Temperature:	-20 to +55°C
Code comb.:	65.536
Other:	10 relay outputs + 2 for stop function

17 relays	
Article no.:	860RX-MX-15B
Frequency:	433 MHz, 69 channels
Power supply:	Multi
Dimensions:	~ 256 x 217 x 85 mm
Protection:	IP66
Relays:	17
Temperature:	-20 to +55°C
Code comb.:	65.536
Other:	15 relay outputs + 2 for stop function

26 relays	
Article no.:	860RX-MX-24B
Frequency:	433 MHz, 69 channels
Power supply:	Multi
Dimensions:	~ 256 x 217 x 85 mm
Protection:	IP66
Relays:	26
Temperature:	-20 to +55°C
Code comb.:	65.536
Other:	10 relay outputs + 2 for stop function

Tiger G2

Radio controlled lifting

Tiger has been developed for radio controlled lifting applications and can be used to control different types of cranes, EOT c ranes, container cranes and more. When you control your application with Tiger you get qualities such as duplex communication, CANopen and Modbus - all in the same system. You also work with the maximum level of security since the system is equipped with an approved stop function, according to SIL 3, IEC 61508.

When it comes to technology, security, functionality and flexibility, Tiger fulfills the demands of controlling advanced lifting applications. The systems software can be easily mod fied. This means that we can adapt the system to fit your needs.

Futhermore, the Tiger system complies to a high safety standard and is CSA certified.

TX-6

Transmitters (Tiger)

10 button + display, 12 butten
Joystick 2x2, Joystick 2x4

10 buttons + display	
Article no.:	TG-T3-4-0000
Frequency:	433 MHz, 69 channels
Battery:	Re-chargeable/ exchangeable
Weight:	~ 300 g incl. batteries
Dimensions:	~ 80 x 210 x 40 mm
Protection:	IP65
Relays:	Up to 10x2 functions
Temperature:	-20 to +55°C
Code comb.:	4.2 B

12 buttons	
Article no.:	TG-T3-5-0000
Frequency:	433 MHz, 69 channels
Battery:	Re-chargeable/ exchangeable
Weight:	~ 300 g incl. batteries
Dimensions:	~ 80 x 210 x 40 mm
Protection:	IP65
Relays:	Up to 12x2 functions
Temperature:	-20 to +55°C
Code comb.:	4.2 B

10 BUTTONS
+ display

12 BUTTONS

Joystick 2x2	
Article no.:	TG-T4-11-0000
Frequency:	433 MHz, 69 channels
Battery:	Re-chargeable/ exchangeable
Weight:	~ 1200 g incl. batteries
Dimensions:	~ 210 x 140 x 130 mm
Protection:	IP65
Relays:	Up to 2x2 functions
Temperature:	-20 to +55°C
Code comb.:	4.2 B

Joystick 2x4	
Article no.:	TG-T3-4-0000
Frequency:	433 MHz, 69 channels
Battery:	Re-chargeable/ exchangeable
Weight:	~ 1200 g incl. batteries
Dimensions:	~ 210 x 140 x 130 mm
Protection:	IP65
Relays:	Up to 2x4 functions
Temperature:	-20 to +55°C
Code comb.:	4.2 B

JOYSTICK 2X2 AND 2X4

Receivers (Tiger)

16 Relays, 32 Relays,
16 relays Anybus

16 relays	
Article no.:	TG-R1-1-0000
Frequency:	433 MHz, 69 channels
Power supply:	Multi
Dimensions:	~ 256 x 217 x 85 mm
Protection:	IP66
Relays:	16
Temperature:	-20 to +55°C
Code comb.:	4.2 B

32 relays	
Article no.:	TG-R1-11-0000
Frequency:	433 MHz, 69 channels
Power supply:	Multi
Dimensions:	~ 256 x 217 x 85 mm
Protection:	IP66
Relays:	32
Temperature:	-20 to +55°C
Code comb.:	4.2 B

16 relays	
Article no.:	TG-R1-6-0000
Frequency:	433 MHz, 69 channels
Power supply:	Multi
Dimensions:	~ 256 x 217 x 85 mm
Protection:	IP66
Relays:	16
Temperature:	-20 to +55°C
Code comb.:	4.2 B

Transmitters

The MIDI & MIDI Extended transmitters

Product benefits

- Two-way communication with feedback to a graphic display and LEDs
- Can be customised for a wide range of applications and according to preference
- Ergonomic joysticks made of tempered steel with superior durability
- The use of a unique digital protocol and verification by double processors ensures safety
- Designed for challenging environments and reliable operation. The transmitter complies with protection class IP65 and can withstand chemicals, cold, heat and humidity
- Backwards compatibility makes it possible to use the MIDI series in place of previous transmitter models

Transmitters

MIDI & MIDI

The Vetec MIDI series has been designed for safe radio remote control in demanding industrial environments. It is suitable for everything from standard applications to advanced specialised equipment. Choose either the MIDI or the larger MIDI Extended, depending on the number of functions required.

Flexible and user-friendly

The front panel of the transmitter can be adapted according to the application and user preferences by choosing appropriate joysticks and switches. The front panel is laser-engraved with the customer's preferred symbols, texts and logos. Feedback information from the receiver to the transmitter is shown on a graphic display and/or LEDs. The housing, which is made of impact-resistant plastic, is ergonomically designed with sturdy handles, and the top part is available in black, red or blue.

Convenient online programming

This versatile transmitter can be programmed and calibrated online to ensure optimal control of proportional functions. Calibrated values, such as initial, maximum and micro speeds, are stored in three different memory banks. By means of a toggle switch, the operator can access these memory banks to select a particular setting or suitable operating properties.

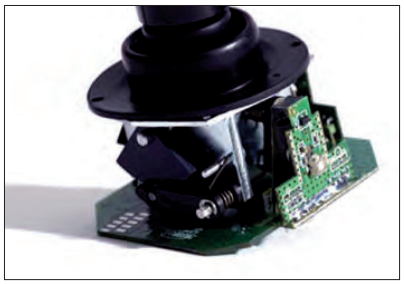
Panel design – Choose the layout, controls, symbols and text With Vetec you can have your very own panel design. You choose the type and number of joysticks, switches and indicators you require. We will engrave your own text and symbols on the panel. You can also select the colour and have your own logo on the transmitter to match your corporate identity.

Safe multiple operation

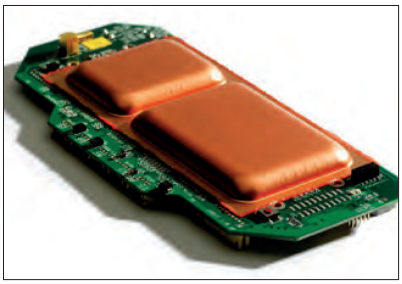
Multiple-receiver operation means that one transmitter can take control of up to three receivers at the same time. This makes it easy to handle simultaneous lifting, for instance. Multipletransmitter operation means that the control can be shifted between three transmitters. Handovers may be appropriate in the case of long transfers where the view is blocked. Vetec's multiple operation ensures that only one transmitter at a time can have control of the receiver. Operators have to make an active choice to transfer the control, by either relinquishing control or taking control.

Two-way communication

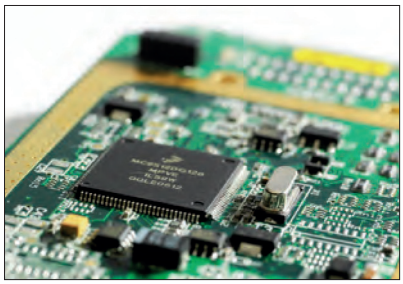
Information can be sent back to the transmitter on the same frequency as the control commands to the receiver, by using semi duplex technology. The information is presented on a graphic display and/or LEDs. Images, text and figures are shown on the display in a flexible format and sequence.



Robust and ergonomically designed joysticks made of tempered steel with low static stress on joints.



Encapsulated circuit board. The electronics are hermetically sealed and protected against all outside influences.



Sophisticated technology and software provide superior safety.

A flexible graphic display provides excellent feedback to the user.

Activation of the stop button puts the system in a safe stop mode within 0.5 seconds.

The case is impact resistant and can withstand UV light, chemicals, heat, cold and humidity. The ergonomic design makes it comfortable and easy to keep hold of even when using working gloves.

Comprehensive safety

The transmitter is equipped with a built-in start control, preventing startup in the event of safety-critical errors. LED indicators and audible signals inform the user as to what has caused the error. The transmitter continuously sends information to the receiver using a digitally verified protocol unique to Vetec. In the event of even the smallest error arising, the receiver will immediately (<0.5 seconds) revert to a safe stop mode. Each Vetec transmitter is assigned a unique ID code, ensuring that any given transmitter can only activat its own dedicated receiver. No other transmitter or product can ever activate a Vetec system.

Robust, ergonomic joysticks

Vetec's joysticks are supplied with well-defined neutral positions and speed steps, or are designed for proportional control (128 levels for proportional control). The joysticks are made of tempered steel, ensuring superior durability and quality. The design gives a low static resistance, preventing wear and tear on joints. The joysticks come in many different designs to suit different types of applications as well as the operators' individual preferences.

The D2801 MIDI Extended

The MIDI Extended has the same basic functions as the MIDI, but the transmitter has a larger housing, with space for more joysticks, paddles and switches. The enlarged panel has plenty of room for controls, symbols and text, and has space for up to three joysticks, seven paddles and also a large number of toggle switches and LEDs. The MIDI Extended can handle up to 60 control functions simultaneously, and a powerful battery provides up to 30 hours of continuous operation.

Backwards compatibility

The MIDI series is backwards compatible and can substitute for all of Vetec's previous transmitter models. This makes it possible to update an older system using a new transmitter without making modifications to the radio receiver and relay cabinet. Vetec products are generally backwards compatible in terms of both hardware and software, so that we can provide the best possible service.

Transmitters

The MIDI & MIDI Extended transmitters

D2801 MIDI	
Dimensions.:	120 x 280 x150 mm
Weight:	1.0 – 1.5 kg with battery
Temperature range:	-25° – 70°C
Protection class:	IP65
RADIO TRANSMISSION	
Frequency:	406 – 472 MHz
Output power:	1 – 100 mW (standard 10 mW)
Range:	>100 m
CABLE CONTROL	
Technology:	2-wire
Length:	≤200 metres (standard 10 m)
POWER SUPPLY	
Battery:	4.8 VDC NiMH
Effective operating time:	<14 hours continuous operation
Charging time:	2.5 hours
CONTROL FUNCTIONS	
Proportional functions:	8
Digital functions:	16
FEEDBACK	
Technology:	semi-duplex
Graphic display:	128 x 64 pixels / 60 x 30 mm
LEDs:	16
JOYSTICKS	
Number:	0 – 2
Axis:	Y, X/Y, X/Y/Z
Speed steps:	1, 2, 3, 4, 5, 6 or proportional

D2801 MIDI Extended	
Dimensions.:	140 x 340 x 160 mm
Weight:	1.7 – 2.5 kg with battery
Temperature range:	-25° – 70°C
Protection class:	IP65
RADIO TRANSMISSION	
Frequency:	406 – 472 MHz
Output power:	1 – 100 mW (standard 10 mW)
Range:	>100 m
CABLE CONTROL	
Technology:	2-wire
Length:	≤200 metres (standard 10 m)
POWER SUPPLY	
Battery:	7.2 VDC NiMH
Effective operating time:	<30 hours continuous operation
Charging time:	2.5 hours
CONTROL FUNCTIONS	
Proportional functions:	8
Digital functions:	52
FEEDBACK	
Technology:	semi-duplex
Graphic display:	128 x 64 pixels / 60 x 30 mm
LEDs:	16
JOYSTICKS	
Number:	0 – 3
Axis:	Y, X/Y, X/Y/Z
Speed steps:	1, 2, 3, 4, 5, 6 or proportional

Receivers

The D2001K receiver

The Vetec D2001K (L/M/PLC) receiver series is designed to safely control industrial and mobile applications. The receiver is suitable for operating overhead cranes, telphers and winches in industrial environments. It is also suitable for operating mobile units, such as concrete chutes/pumps, sewage tankers and hook lifts.

Robust and easy to maintain

The receiver is designed for harsh working environments and a long service life. Separate circuit boards for radio, logic devices and relays with LEDs indicating operating status and information flow make any troubleshooting easy. All connectors and relays are socket-mounted, making it easy to replace the defective module, thereby keeping downtime to a minimum. The receiver is mounted inside a sturdy steel cabinet that complies with protection class IP65. If the receiver will be particularly exposed to such things as chemicals, sea water or road salt, a stainless-steel cabinet can be chosen as an option. The radio board and logic devices are mounted in an aluminium case inside the receiver cabinet door. The front of the case is fitted with transparent perspex, making it easy to see the operating status of each board. A quick-release coupling keeps the case in place, so it can easily be removed. This facilitates fast and easy replacement of important electronics, the moving of electronic devices between different receivers, troubleshooting in a more suitable location or sending the unit in for service.

Radio transmission

The receiver's frequency is adjusted to the required frequency band. For frequency shift transmitters, the receiver scans the frequency band until it finds the relevant transmitter with the correct ID code and protocol.

PRODUCT BENEFITS

- **Suitable for overhead cranes, telphers and winches in industry as well as mobile units, such as concrete chutes/pumps, sewage tankers and hook lifts**
- **Comes in four basic versions and can be customised according to preference**
- **Easy to install and maintain**
- **The use of a unique digital protocol and verification by double processors ensures safety**
- **Designed for challenging environments and reliable operation. The receiver complies with protection class IP65 and is resistant to chemicals, cold, heat and humidity**

Recommended transmitters
D2801 MIDI
D2801 MIDI Extended
D2012 Hand-Held Transmitter

Comprehensive safety

Vetec uses synchronous data transmission, which means that each bit of data is checked very carefully. Even the smallest deviation from the norm is detected, and then the entire data packet that has been received is rejected. Each system has a unique ID code. If the transmitter's ID code does not match the receiver's, radio communication will never be established. Both the protocol and its checksum are digitally verified by dual processors using different software. This provides what is known as a redundancy check. If the processors interpret the protocol differently, they immediately shut down all outputs. Such safety features as digitally verified transmission and redundancy checking are just two of the innovations which Vetec has pioneered in the area of radio remote control.

Feedback

The receivers in this series can be provided with two-way communication. Feedback to the transmitter unit is obtained through semi-duplex, which means that only one frequency is utilised for both control signals to the receiver and feedback data. This is advantageous if availability of frequencies is limited, as you are only taking up one frequency instead of two.

The receiver series is available in four different versions

The D2001K can control up to 20 digital functions. The receiver is suitable for applications with one, two or more speed steps. The D2001KL can control up to four motions proportionally along with nine digital functions. The four analogue outputs are galvanically separated and are fitted with directional and, if required, full-speed relays.

The D2001KM can control up to 14 digital functions. This receiver is more compact (220 x 120 x 90 mm) than the other receivers in this series and is therefore suitable for installation in confined spaces. The receiver enclosure is made of sturdy fibreglass, which complies with protection class IP65.

The D2001K PLC has parallel PNP outputs or serial communication via RS-232 for PLC control. The receiver is supplied as standard on a mounting plate with terminal strips to be fitted into a control cabinet together with a PLC. As an option, the receiver can also be supplied in a steel or stainless-steel cabinet.

Options

- Signal horn
- Pre-assembled machine cable with Harting connector
- Extension cable for aerial
- Stainless-steel cabinet

	2001K	2001KL	2001KM	2001K/PLC
Dimensions:	300 x 200 x 160 mm	300 x 200 x 160 mm	220 x 120 x 90 mm	280 x 250 x 70 mm
Output relays:	8A/250 VDC	8A/250 VDC	8A/250 VDC	–
Proportional outputs:	–	4 pcs 0 – 10 VDC / +/-10 VDC / 4 – 20 mA	–	–
Digital outputs:	20	9	14	28 (PNP)
Digital inputs:	6	6	6	6
Digital / analogue inputs:	8	8	8	
Serial output:	–	–	–	RS232
Frequency:	406 – 472 MHz	406 – 472 MHz	406 – 472 MHz	406 – 472 MHz
Temperature range:	-25° – 70°C	-25° – 70°C	-25° – 70°C	-25° – 70°C
Protection class:	IP65	IP65	IP65	IP20
Supply voltage:	12 – 36 VDC / 48, 110, 230 VAC	24 – 36 VDC / 48, 110, 230 VAC	12 – 36 VDC	12 – 36 VDC

Receivers

D2001/D2801 receiver

The Vetec D2001/D2801 receiver has been designed for a long service life in harsh environments and for easy maintenance. Separate circuit boards for radio logic devices and power supply with LEDs indicating operating status and information flow make any troubleshooting easy. The 11-pin socket-mounted industrial relays manage high loads (10 A/250 VAC), which means that the receiver can be directly connected to all kinds of apparatus without the need for intermediate devices. Older cranes with large contactors and high power consumption can also be directly operated.

Robust and easy to maintain

The receiver is mounted inside a sturdy steel cabinet which complies with protection class IP65. If the receiver will be particularly exposed to such things as chemicals, sea water or road salt, a stainless-steel cabinet can be chosen as an option. The radio board, logic devices and voltage transformer are mounted in an aluminium case inside the receiver cabinet door.
The front of the case is fitted with transparent perspex, making it easy to see the operating status of each board. A quick-release coupling keeps the case in place, so it can easily be removed. This facilitates fast and easy replacement of important electronics, the moving of electronic devices between different receivers, troubleshooting in a more suitable location or sending the unit in for service.

The 11-pin industrial relays are socketmounted, which makes them easy to replace if required. Connections to controlled applications are made using connection blocks with screw terminals. The individually detachable connections facilitate easy disabling and trouble shooting of different functions. This makes it easy to identify and replace the defective module, thereby avoiding longer downtime.

PRODUCT BENEFITS

- **Suitable for construction cranes, overhead cranes, deck winches, etc. with two or more speed steps**
- **11-pin industrial relays that manage high loads: 10 A/250 VAC**
- **Can be customised for various applications and according to preference**
- **Easy to install and maintain**
- **The use of a unique digital protocol and verification by double processors ensures safety**
- **Designed for challenging environments and reliable operation. The receiver complies with protection class IP65 and is resistant to chemicals, cold, heat and humidity**
- **Backwards compatibility makes it possible to use the D2001/D2801 in place of previous receiver models**

Comprehensive safety

Vetec uses synchronous data transmission, which means that each bit of data is checked very carefully. Even the smallest deviation from the norm is detected, and then the entire data packet that has been received is rejected. Each system has a unique ID code. If the transmitter's ID code does not match the receiver's, radio communication will never be established.

Both the protocol and its checksum are digitally verified by dual processors using different software. This provides what is known as a redundancy check. If the processors interpret the protocol differently, they immediately shut down all outputs. Such safety features as digitally verified transmission and redundancy checking are just two of the innovations which Vetec has pioneered in the area of radio remote control.

Radio transmission

The receiver's frequency is adjusted to the required frequency band. For frequency shift transmitters, the receiver scans the frequency band until it finds the relevant transmitter with the correct ID code and protocol.

Feedback

The receivers in this series can be provided with two-way communication. Feedback to the transmitter unit is obtained through semi-duplex, which means that only one frequency is utilised for both control signals to the receiver and feedback data. This is advantageous if availability of frequencies is limited, as you are only taking up one frequency instead of two.

Customised receivers

The receiver cabinet is available in two different sizes, depending on the number of functions/relays required. Receivers with up to 23 relays come in a cabinet measuring 380 x 380 x 210 mm. Receivers with more than 23 relays come in a cabinet measuring 380 x 600 x 210 mm.

D2001 can control up to 20 digital functions.

D2801 can control up to 28 digital functions.

D2801 Extended can control more than 28 digital functions by using two receiver logic boards in a master/slave configuration. This makes it possible to have 56 simultaneous digital outputs from the receiver.

GENERAL INFORMATION

Dimensions:	380 x 380 x 210 mm (≤23 relays)
Dimensions:	380 x 600 x 210 mm (>23 relays)
Temperature range:	-25° – 70°C
Protection class:	IP65
Frequency:	406 – 472 MHz
Supply voltage:	48/110/230 VAC
Digital outputs:	≤56
Output relays:	10 A/250 VAC
Digital inputs:	6
Digital / analogue inputs:	8

OPTIONS

- Signal horn
- Pre-assembled machine cable with Harting connector
- Extension cable for aerial
- Stainless-steel cabinet

RECOMMENDED TRANSMITTERS

D2801 MIDI
D2801 MIDI Extended
D2012 Hand-Held

Receivers

The D6003B receiver

The Vetec D6003B field bus receiver has been designed to operate industrial and mobile applications safely. The receiver is suitable for all kinds of applications where the Profibus DP-V1 or various types of CAN-bus are used. Field bus technology involves the serial transmission of information to a PLC, as opposed to parallel transmission using separate outputs.

Comprehensive safety

Vetec uses synchronous data transmission, which means that each bit of data is checked very carefully. Even the smallest deviation from the norm is detected, and then the entire data packet that has been received is rejected. Each system has a unique ID code. If the transmitter's ID code does not match the receiver's, radio communication will never be established.

Both the protocol and its checksum are digitally verified by dual processors using different software. This provides what is known as a redundancy check. If the processors interpret the protocol differently, they immediately shut down all outputs. Such safety features as digitally verified transmission and redundancy checking are just two of the innovations which Vetec has pioneered in the area of radio remote control.

Radio transmission

The receiver's frequency is adjusted to the required frequency band. For frequency-shift transmitters, the receiver scans the frequency band until it finds the relevant transmitter with the correct ID code and protocol.

PRODUCT BENEFITS

- **Safe control of industrial and mobile applications**
- **Communicates with the field bus variants Profibus DP-V1 and various types of CAN-bus**
- **Can be customised for each application and according to preference**
- **Easy to install and maintain**
- **The use of a unique digital protocol and verification by double processors ensures safety**
- **Designed for challenging environments and reliable operation. The receiver complies with protection class IP65 and is resistant to chemicals, cold, heat and humidity**

Feedback

The receivers in this series can be provided with two-way communication. Feedback to the transmitter unit is obtained through semi-duplex, which means that only one frequency is utilised for both control signals to the receiver and feedback data. This is advantageous if availability of frequencies is limited, as you are only taking up one frequency instead of two.

Enclosure

The receiver comes in a robust fibreglass enclosure which complies with protection class IP65.

GENERAL INFORMATION

Dimensions:	220 x 120 x 90 mm
Temperature range:	-25° – 70°C
Protection class:	IP65
Frequency:	24 VDC
Supply voltage:	48/110/230 VAC
Field busses:	Datek CAN CANopen Sauer-Danfoss +1 OEM adjustments Profibus DP-V1
Digital outputs:	7
Field bus:	Limited by the transmitter
Digital inputs:	6
Field bus:	Analogue/Digital
Alarm messages:	65,536

RECOMMENDED TRANSMITTERS

- D2801 MIDI
- D2801 MIDI Extended
- D2012 Hand-Held Transmitter

Receivers

The D6003 receiver

The Vetec D6003 receiver is designed to control hydraulic applications safely. This receiver is suitable for various proportional applications such as truck cranes, drilling rigs, piling machines, concrete chutes/ pumps, etc. Receiver output signals are adjustable to accommodate current- and/ or voltage-controlled hydraulic valves from various manufacturers.

Robust and easy to maintain

The receiver is designed for harsh working environments and a long service life. Separate circuit boards and LEDs indicating control functions, information flow and operating status make any troubleshooting easy. All connectors and relays are socket-mounted, making it easy to identify and replace the defective module, thereby avoiding longer downtime. The receiver is mounted inside a sturdy stainless-steel cabinet that complies with protection class IP65. The radio board and logic board are mounted in an aluminium case inside the receiver cabinet door. The front of the case is fitted with transparent perspex, making it easy to see the operating status on each board. A quick-release coupling keeps the case in place, so it can easily be removed. This facilitates fast and easy replacement of important electronics, the moving of electronic devices between different receivers, troubleshooting in a more suitable location or sending the unit in for service. All outputs are protected against transients and short circuits.

Radio transmission

The receiver's frequency is adjusted to the required frequency band. For frequency-shift transmitters, the receiver scans the frequency band until it finds the relevant transmitter with the correct ID code and protocol.

PRODUCT BENEFITS

- **Easy to install and maintain**
- **Can be customised for various applications and according to preference**
- **The use of a unique digital protocol and verification by double processors ensures safety**
- **Online calibration for optimal control of proportional applications**
- **Designed for challenging environments and reliable operation. The receiver complies with protection class IP65 and is resistant to chemicals, cold, heat and humidity**
- **Backwards compatibility makes it possible to use the D6003 in place of previous receiver models**

Comprehensive safety

Vetec uses synchronous data transmission, which means that each bit of data is checked very carefully. Even the smallest deviation from the norm is detected, and then the entire data packet that has been received is rejected. Each system has a unique ID code. If the transmitter's ID code does not match the receiver's, radio communication will never be established.

Both the protocol and its checksum are digitally verified by dual processors using different software. This provides what is known as a redundancy check. If the processors interpret the protocol differently, they immediately shut down all outputs. Such safety features as digitally verified transmission and redundancy checking are just two of theinnovations which Datek has pioneered in the area of radio remote control. Since its founding in 1979 Datek has focused on developing safe radio remote controls, something we still do and will continue to do.

Feedback

The receivers in this series can be provided with two-way communication. Feedback to the transmitter unit is obtained through semi-duplex, which means that only one frequency is utilised for both control signals to the receiver and feedback data. This is advantageous if availability of frequencies is limited, as you are only taking up one frequency instead of two.

Output signals

The receiver's standard design has eight proportional and thirteen digital output signals. All functions can be controlled simultaneously. If control of more functions is needed, the receiver can either be extended or functions can be shifted.

Online calibration

From the transmitter, many parameters can easily be calibrated online to ensure optimal control. Calibrated values, such as initial, maximum and micro speeds, are stored in three different memory banks. By means of a switch on the transmitter, the operator can access these memory banks to select a particular setting or suitable operating properties. The calibrated values are stored in the receiver. If a new transmitter is ordered for the system, all settings are saved, and the operating properties remain the same. A further number of parameters can be preconfigured from the factory or adjusted by authorised personnel either online or using a PC. These include acceleration, retardation, linearity, cruise control and overloads. A system's specific characteristics can be copied to another system or to a PC.

D6003K – the more compact receiver

For Danfoss hydraulics, a more compact version of the receiver with a sturdy fibreglass enclosure is available. This receiver measures only 220 x 120 x 90 mm and is therefore suitable for installation in confined spaces. The receiver can control eight proportional and 21 digital functions simultaneously.

GENERAL INFORMATION

Dimensions:	300 x 200 x 160 mm (≤23 relays)
Temperature range:	-25° – 70°C
Protection class:	IP65
Frequency:	406 – 472 MHz
Technology:	2-wire
Length:	≤200 metres (standard 10 m)
Supply voltage:	12/24 VDC
Proportional outputs:	8
Digital outputs:	13
Digital inputs:	6
Digital/analogue inputs:	8

OPTIONS

- Pre-assembled cables with connectors for hydraulic valves and other functions
- Extension cable for aerial
- Cable control between transmitter and receiver

RECOMMENDED TRANSMITTERS

D2801 MIDI
D2801 MIDI Extended
D2012 Hand-held transmitter

Large Displays

D1002/4-L and D1004/4-L

Display functions

- Total
- Rate / Speed
- Target (ideal for production lines)
- Frequency
- Weight
- Temperature
- Humidity
- Real Time
- Elapsed Time
- Power, RPM, Torque
- Pressure
- ... any combination of the above

The Fusion series has these benefits...

- Easy to use, no-menu programming
- Smart styling, slim, easy to install
- Competitively priced
- Remote setting from ground level
- Modular options to suit your exact needs
- Displays can be built to custom formats
- Indoor and outdoor models
- Fast, free technical support
- Long warranty, extendable free of charge
- Can be built with AlphaNumeric displays
- Wide range of mounting and gland positions

Input signals for the Fusion

- 4-20mA, 0-10V, 1-5V etc
- Loadcells
- PNP, NPN, Namur, Contact closure, etc
- Serial Data RS232, 485, 422 etc.
- Temperature sensors
- Humidity sensor• Profibus DP
- Logic Reset, Tare, Peak/Valley etc.

Sealing Standards

- IP65 for bottom glands, IP54 for top

What size digits are available?

- 57 mm for up to 25 metres viewing
- 102mm for up to 50 metres viewing
- 150mm for up to 75 metres viewing
- 200mm for up to 100 metres viewing
- 300mm for up to 140 metres viewing
- 400mm for up to 200 metres viewing

Which output options are possible?

- 2 or 4 alarm SPST relays, 2x SPDT
- 4-20mA, 0-10V or -10 to +10V analog
- RS232, RS485, Ethernet data output

Displays P1001/6

Most Popular panel meter range

- Easy to use
- Clear, variable brightness display
- Available with digits up to 400mm high
- Clear written manuals & video guides - online!
- Saves you time and money
- Generally available from stock
- Plug-in options for quick upgrades
- Calibration counter for audit trails
- Adjustable menu timeout for new users

These are among the easiest of programmable panel meters to commission. And they offer high precision with long term reliability. If you normally programme meters via a menu system, you will know how tedious and time consuming this can be. This is why we designed the INTUITIVE series - to save you time. The INTUITIVE family eliminates the need for menus. This means faster commissioning and less stress for you. Not only is the meter easy to adjust, the operating manual is clear, simple and easy to understand. You can directly access the setting you want with our unique "Quick-Step" method. If you want to calibrate the zero, or the scaling, or the analogue output, or the alarms, or the 11 point linearisation facility, you get directly to that setting, not down a long menu system via other steps or settings!

Plug-in Output options...

Isolated and scalable Analogue output

4-20mA	- Option ANI
0-10V	- Option ANV
-10 to +10V	- Option ANB

Alarm relays rated 5A 250 VAC resistive

2 alarms	- Option AL2
4 alarms	- Option AL4
2 x SPCO	- Option SPCO
2 x Solid state	- Option DSS

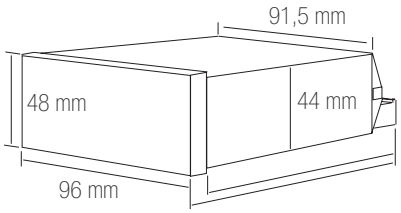
Isolated Data output options

RS232	- Option 232
RS485	- Option 485
Ethernet	- Option EN
Profibus DP	- Option PDP

INT2-P	Process I/P for 4-20mA, 0-10V etc.
INT2-I	Process Integrator for flow totalising
INT2-T	Temperature J,K,T,R,S, PT100
INT2-L	4 and 6 wire loadcells. 10V 120mA exc.
INT2-R	Resistance meter. 4 wire sensing.
INT2-C	Counter/Rate 6 digits, fully scalable
INT2-S	Serial Data I/P for slave display
INT2-H	Chronometer / Elapsed timer
INT2-M	Millivolt input (shunt etc)

Panel cutout should be
92mm wide x 45mm high,
+1mm, -0mm 1/8 DIN.
Depth behind panel 125mm max,
including cables. 350 grammes typical weight

1/8 DIN format case,
black polycarbonate, IP65 front



Meter input type		Analogue Output		Alarm Output		Serial Data Output		Display Colour		Supply Voltage		Special Requirements	
Process	INT2-P	No output	-0	No alarms	-0	No data	-0	Red	-R	100-240VAC	-AC	None	-0
Integrator	INT2-I	4-20mA	-ANI	2 alarms	-AL2	RS232	-232	Green	-G	11-30VDC	-DC	8 memories*^	-MEM
Temp	INT2-T	0-10V	-ANV	4 alarms	-AL4	RS485	-485	Yellow	-Y			IP67 cover	-SPC4
Loadcell	INT2-L	-10/+10V	-ANB	2xSPCO	-SPCO	Ethernet^	-EN					Factory Scaled	-FS
Ohms	INT2-R			Dual SS	- DSS	Profibus^	-PDP					Plain lens	-PL
Chrono	INT2-H											Wall Box IP65	-WB
Counter	INT2-C											Remote buttons^	-RBF
RS232	INT2-S2											Fast update^	-100X
RS485	INT2-S4												
Millivolt	INT2-M												

Example part number = INT2-P-ANI-AL2-0-R-AC-SPC4-FS

* Only available on -P and -L meters. ^ Reduces some options/specs.

Ordering Guide. Create a full part number like this:-

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