



Special features

- Precision in-line sensor
- Stainless steel construction
- Strain gauge measuring system
- Tension / Compression measurement
- Connection via cable or connector
- Available with built-in signal conditioner (with signal conditioner see the model **EMS151**)

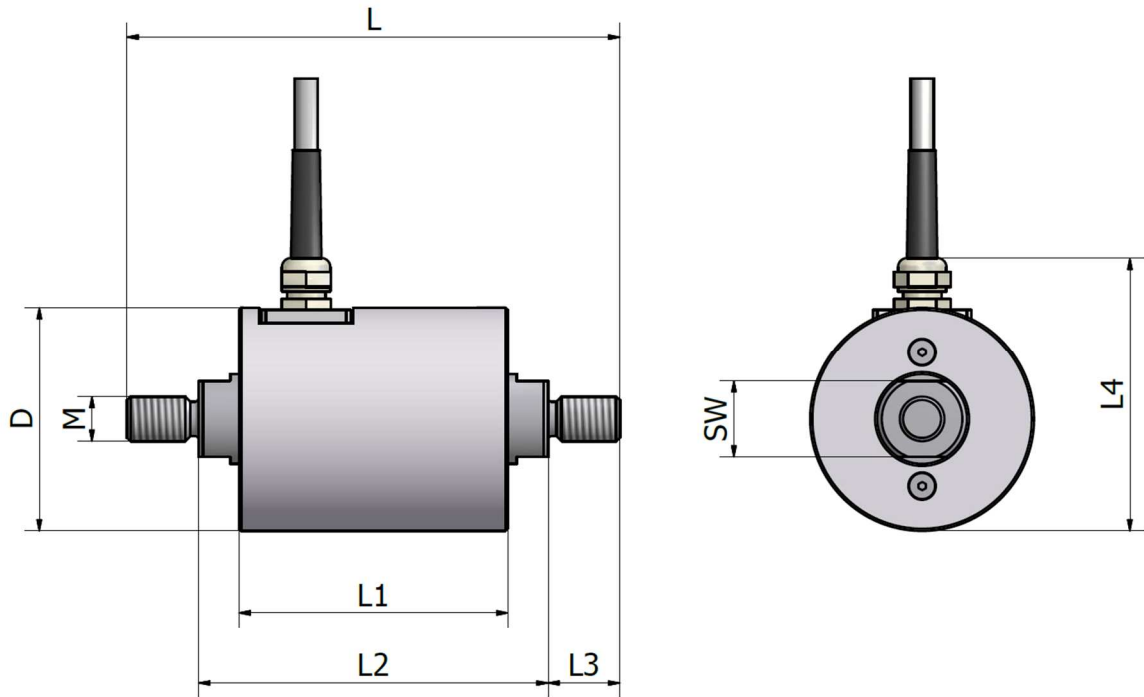
Specifications

Parameter	Value	Unit
Rated capacity (F _n)	0.5, 1, 2, 5, 10, 20, 50, 100, 200	kN
Overload		
- Safe	130	% F _n
- Ultimate	150	% F _n
- Permanent static load ¹	75	% F _n
- Dynamic load ¹	50	% F _n
Nominal sensitivity (C _n ± 2%)	2.0	mV/V
Zero balance	± 0.04	mV/V
Max error		
- Non-linearity	0.15	% F.S.
- Hysteresis	0.15	% F.S.
Temperature effect		
- On zero	0.05	% F.S./10 °C
- On output	0.05	% F.S./10 °C
Bridge resistance		
- Input	375 ± 20	Ω
- Output	350 ± 10	Ω
Insulation Impedance	> 500	MΩ
Excitation ²		
- Recommended	7 ... 10	V
- Maximal	15	V
Temperature range		
- Compensated	0 ... + 50	°C
- Operating	- 10 ... + 70	°C
Protection	IP54	
Connection		
- Cable		
- Type	LiYCY 4 x 0.14	
- Length	2	m
- Connector, Type	M12, 4 pin	

Notes:

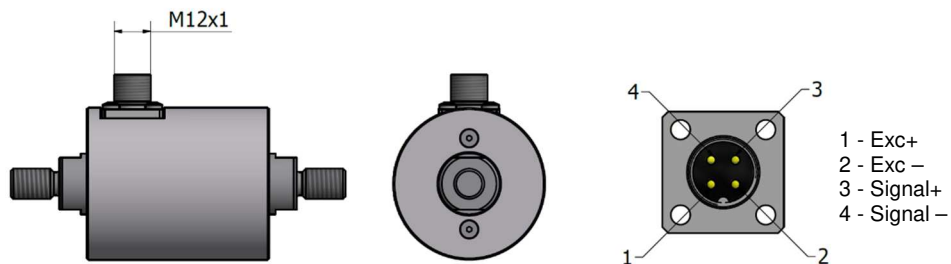
- 1 Recommended value
 2 DC or AC Voltage

Outline dimensions

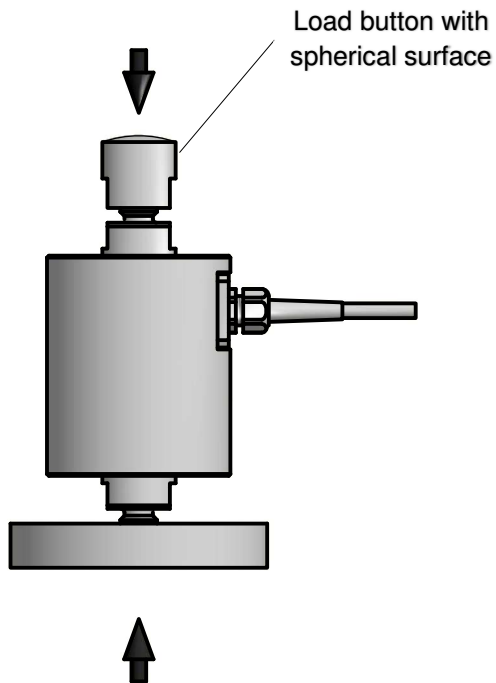


Rated capacity F_n , kN	L mm	L1 mm	L2 mm	L3 mm	L4 mm	D mm	M mm	SW mm	Mass kg	Deflection @ F_n , μm
0.5	95	55	71	12	55	45	M8	13	0.22	60
1	95	55	71	12	55	45	M8	13	0.23	60
2	110	60	78	16	60	50	M10	17	0.33	60
5	110	60	78	16	60	50	M10	17	0.37	60
10	140	80	100	20	70	60	M12	19	0.64	71
20	150	80	104	23	70	60	M16	24	0.86	84
50	170	80	108	31	70	60	M24	30	1.38	102
100	240	100	136	52	90	80	M36	46	3.63	123
200	300	120	166	67	110	100	M48	65	8.00	185

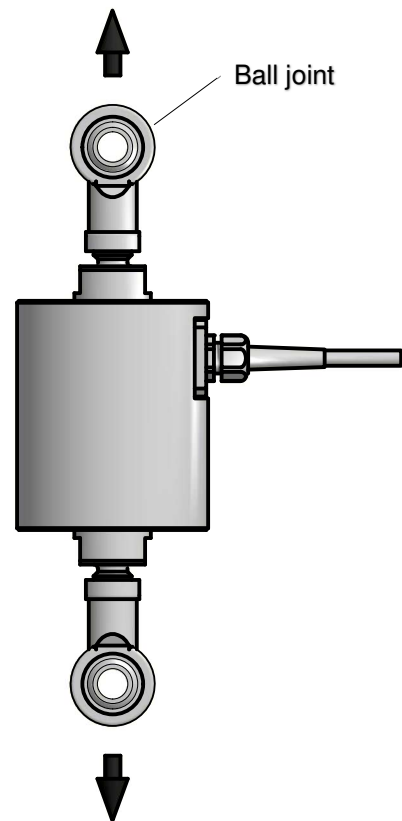
Version with connector (optional)



Recommended installation

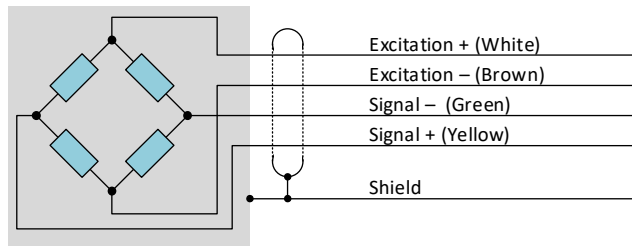


Direction of load COMPRESSION

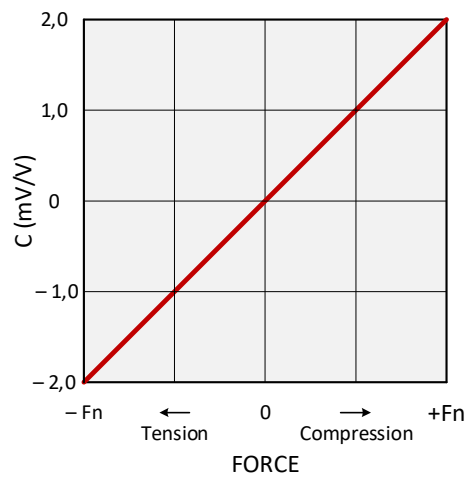


Direction of load TENSION

Sensor wiring colour code



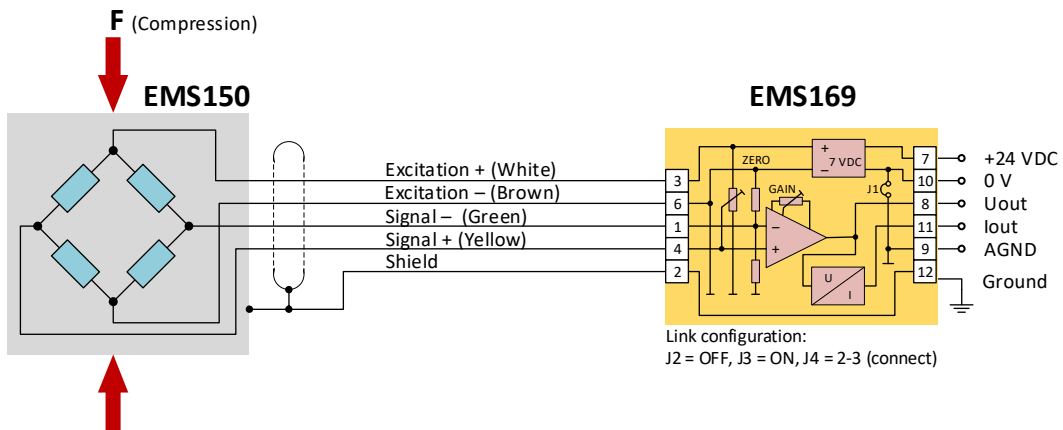
Sensor output characteristic



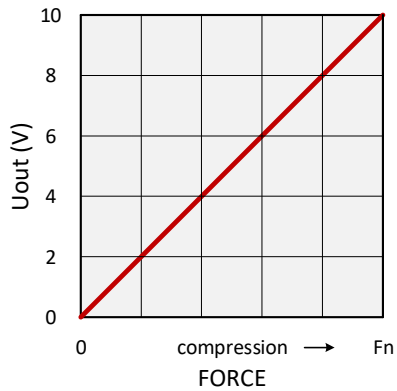
Wiring diagram, connection example to EMS169 signal conditioner

1. Load compression, signal conditioner output positive (0 ... 10 V, 4 ... 20 mA)

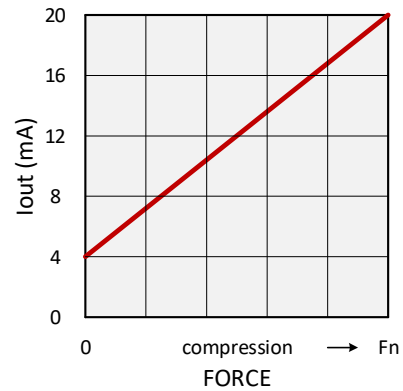
Wiring diagram



Output characteristic



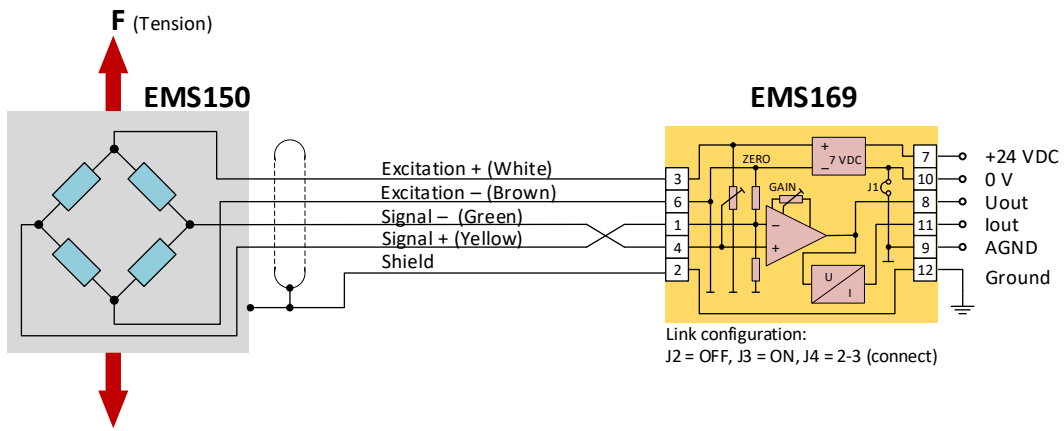
Uout vs. F



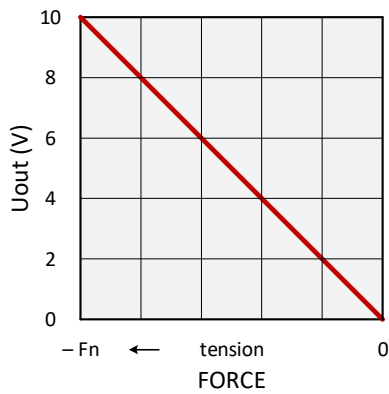
Iout vs. F

2. Load tension, signal conditioner output positive (0 ... 10 V, 4 ... 20 mA)

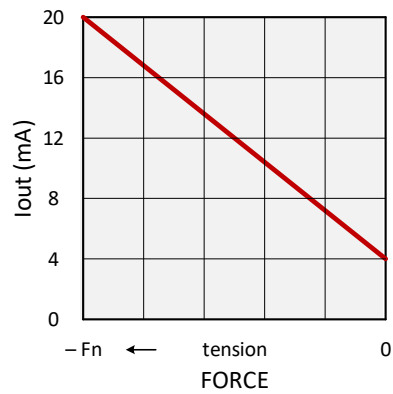
Wiring diagram



Output characteristic



Uout vs. F

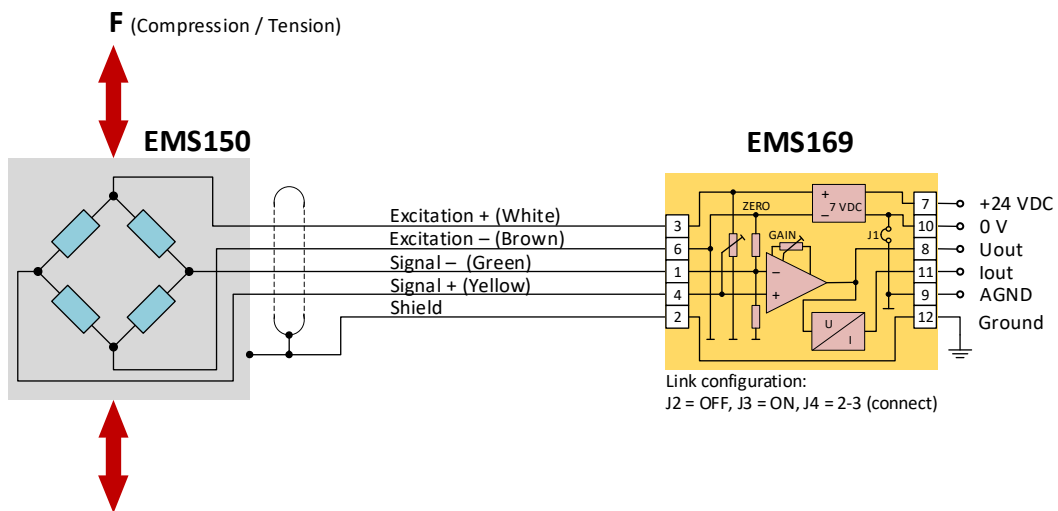


Iout vs. F

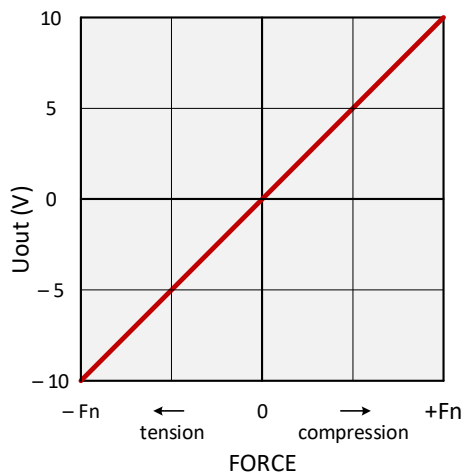
3. Load compression and tension, signal conditioner output bipolar (± 10 V)

Note: The current output does not work in the negative range.

Wiring diagram



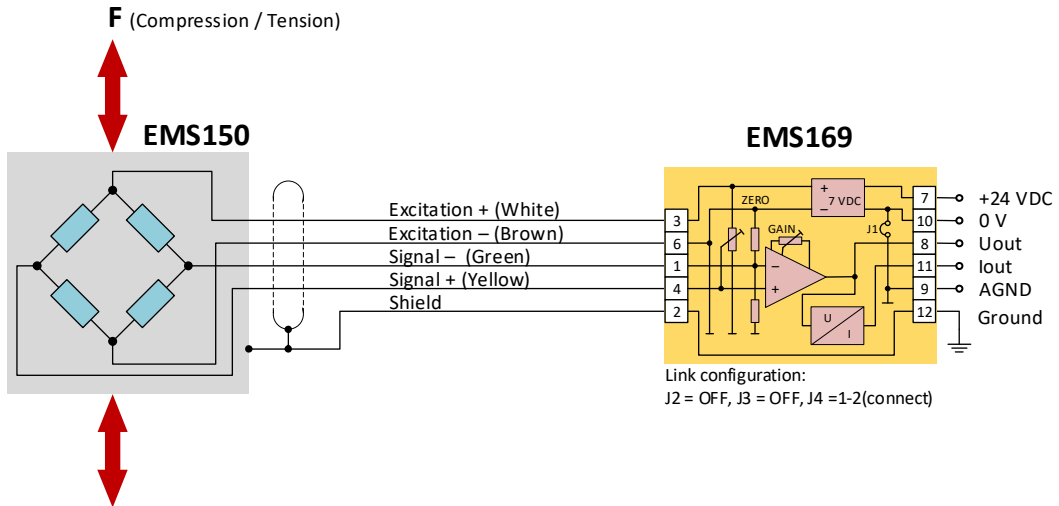
Output characteristic



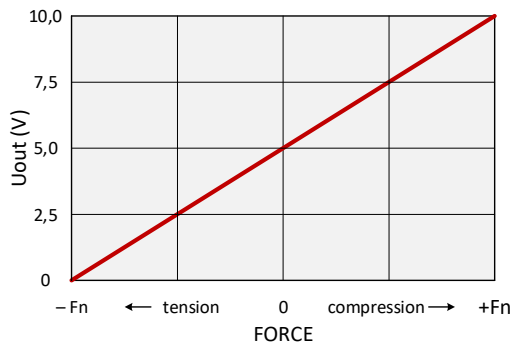
Uout vs. F

4. Load compression and tension, signal conditioner output positive
(5 ± 5 V, 12 ± 8 mA)

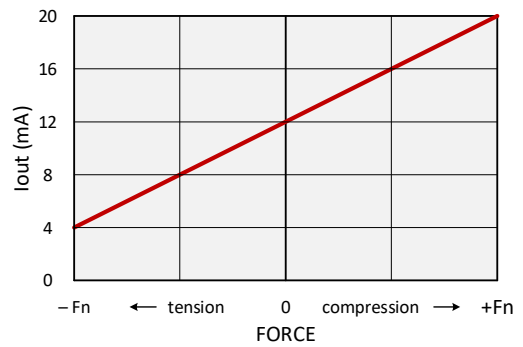
Wiring diagram



Output characteristic

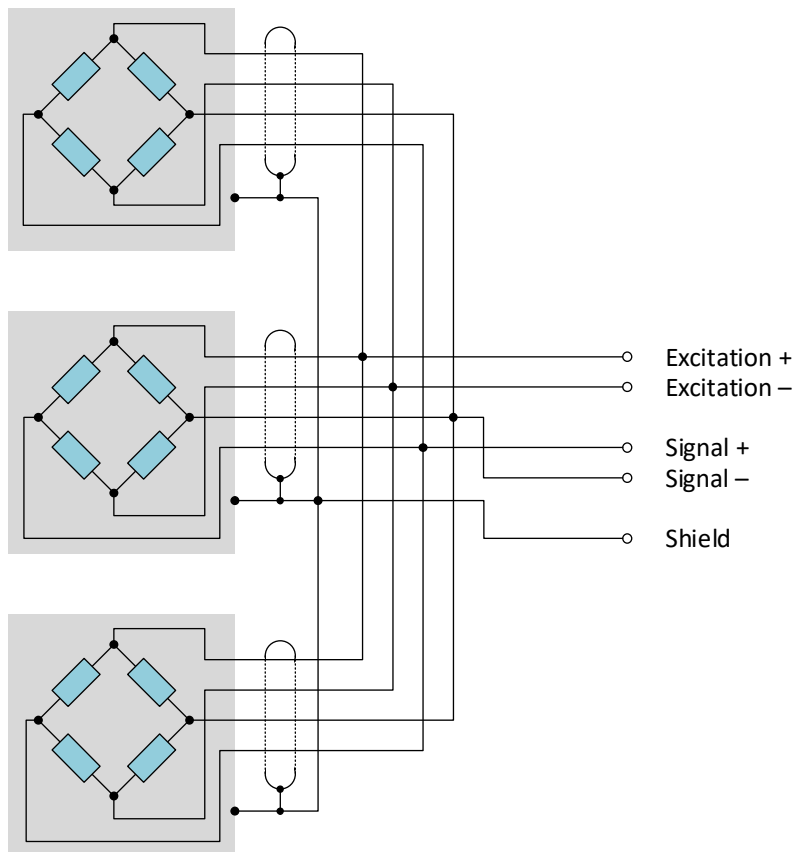


Uout vs. F



Iout vs. F

Parallel wiring diagram



Legal information

The company EMSYST, spol. s r. o., registered office: Súvoz 111, 911 01 Trenčín, ID No.: 34 115 749, VAT No.: SK2020386115, registered in the Commercial Register maintained by the District Court Trenčín, section: Sro, file No.: 502/R (hereinafter referred to as the "Company"), hereby informs that any texts, descriptions, information, graphic and technical data contained in this document are subject to Company's copyright in accordance with the provisions of Act no. 185/2015 Coll. Author's of the Act, as amended. These materials are intended for customers of the Company and it is not possible to copy, modify or reproduce it without previous written consent of the Company.

The company further informs that any information that has been made available for customers, resulting from this document (primarily prices, technical know-how, or other special specification), relating to the Company's products and processes are the subject of a special trade secret of the Company and are subject to legal protection resulting from the provisions of § 17 et seq. Act No. 513/91 Coll. Commercial Code as amended.