



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

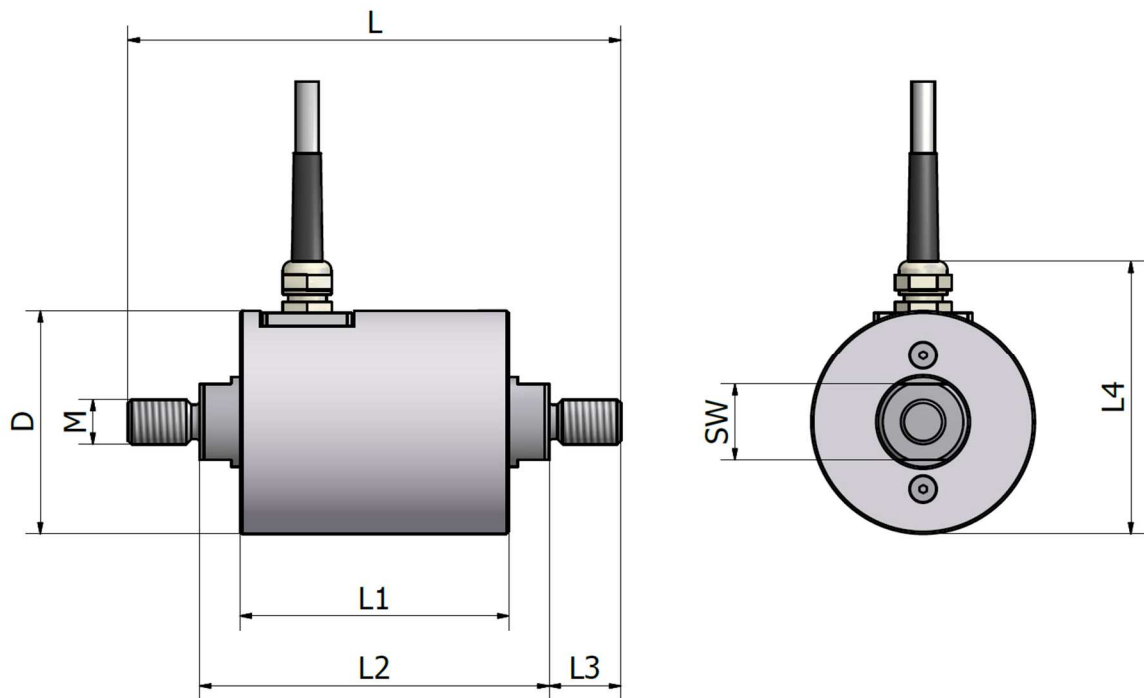
Rated capacity F_n	0.5, 1, 2, 5, 10, 20 50, 100, 200	kN
Overload		
- Safe	130	% F_n
- Ultimate	150	% F_n
- Permanent static load ¹	75	% F_n
- Dynamic load ¹	50	% F_n
Nominal sensitivity (C_n) $\pm 2\%$	2.0	mV/V
Zero balance	± 0.04	mV/V
Max error		
- Non-linearity	0.15	% F.S.
- Hysteresis	0.15	% F.S.
Temperature effect		
- On zero	0.05	% F.S./10 °C
- On output	0.05	% F.S./10 °C
Bridge resistance		
- Input	375 $\pm$ 20	Ω
- Output	350 $\pm$ 10	Ω
Insulation Impedance	> 500	M Ω
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

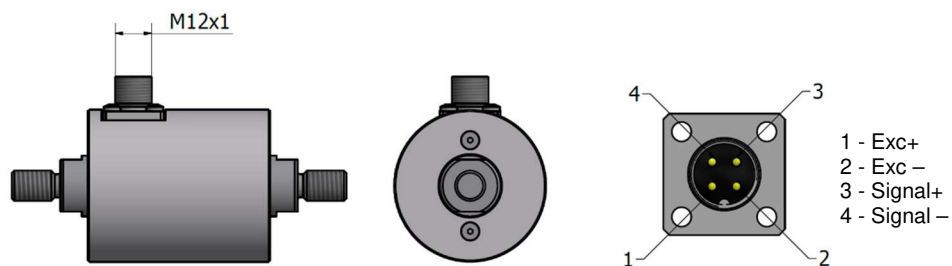
2 DC or AC Voltage

Outline dimensions

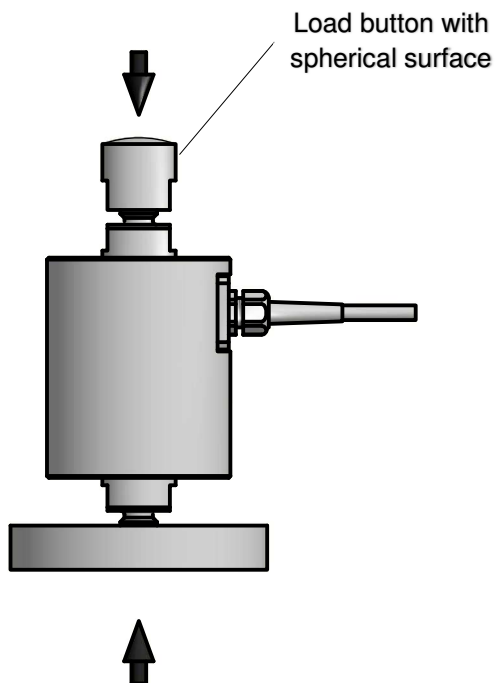


Rated capacity F_n , kN	A mm	B mm	C mm	D mm	E mm	F mm	G mm	SW mm	Mass kg	Deflection @ F_n , μm
0,5	95	55	71	45	55	12	M8	13	0,22	60
1	95	55	71	45	55	12	M8	13	0,23	60
2	110	60	78	50	60	16	M10	17	0,33	60
5	110	60	78	50	60	16	M10	17	0,37	60
10	140	80	100	60	70	20	M12	19	0,64	71
20	150	80	104	60	70	23	M16	24	0,86	84
50	170	80	108	60	70	31	M24	30	1,38	102
100	240	100	136	80	90	52	M36	46	3,63	123
200	300	120	166	100	110	67	M48	65	8,00	185

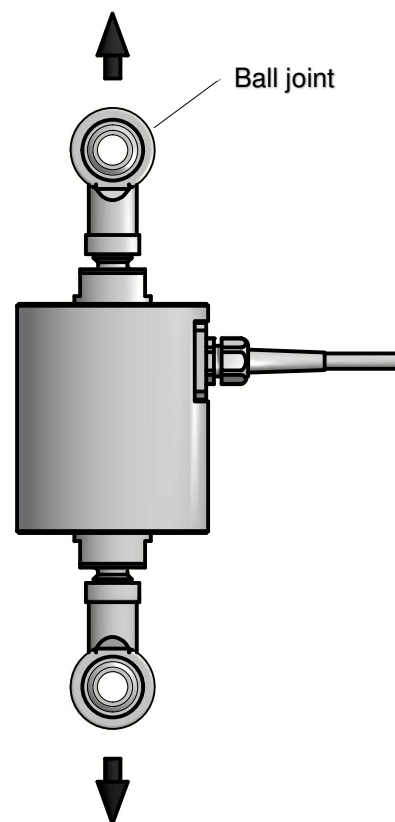
Version with connector (optional)



Recommended installation

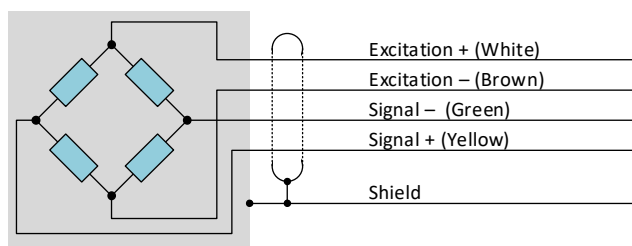


Direction of load COMPRESSION

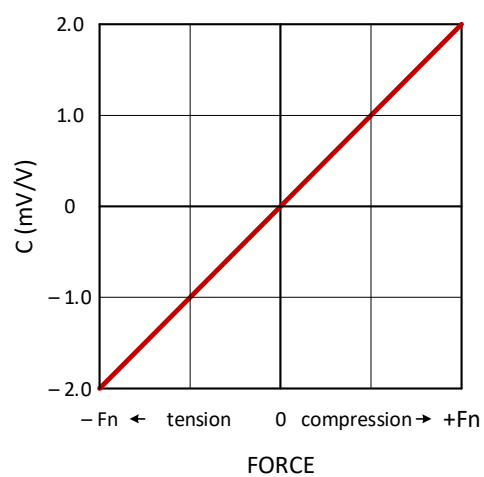


Direction of load TENSION

Sensor wiring colour code



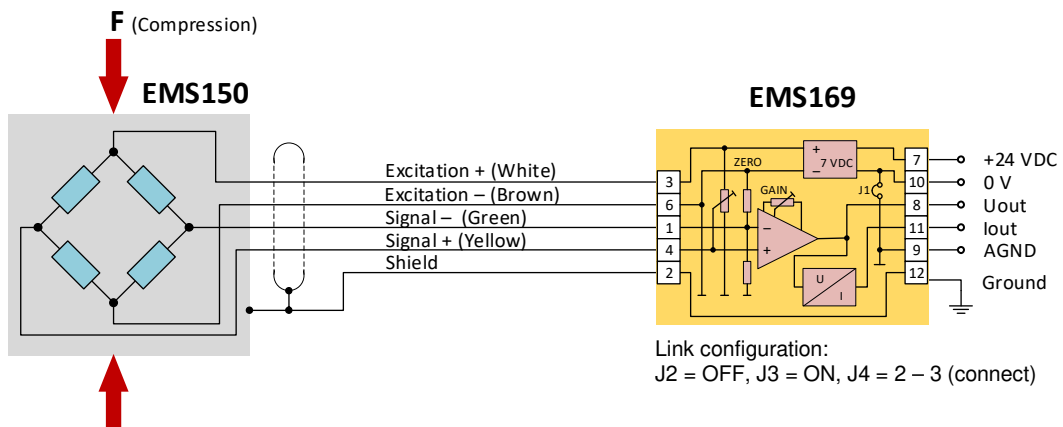
Sensor output characteristic



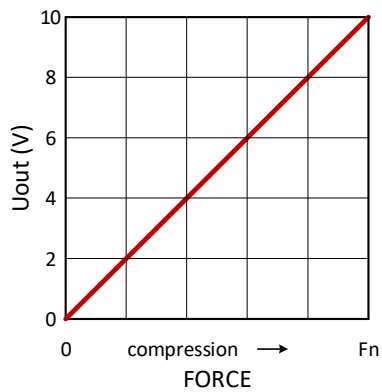
Wiring diagram, connection example to EMS169 signal conditioner

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

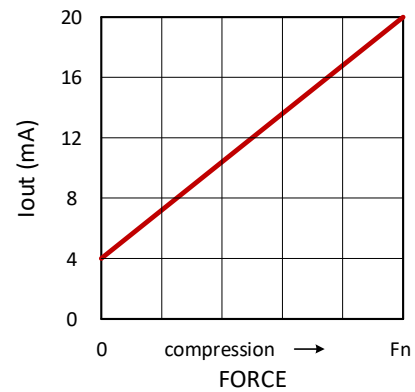
Wiring diagram



Output characteristic



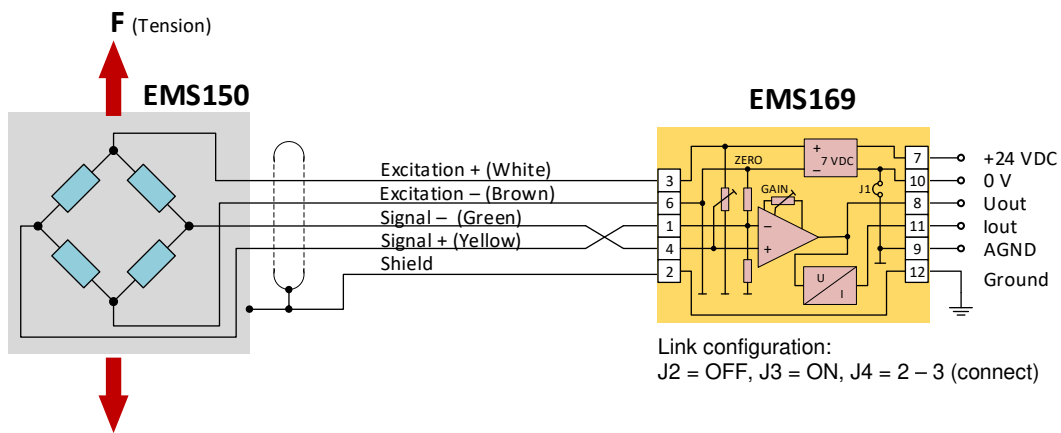
U_{out} vs. F



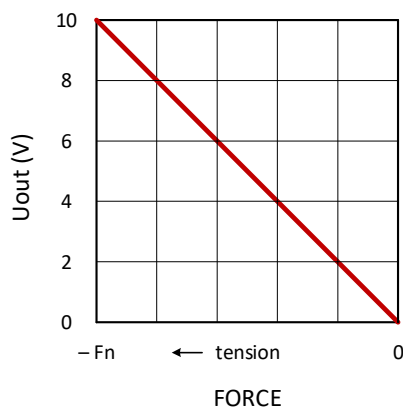
I_{out} vs. F

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

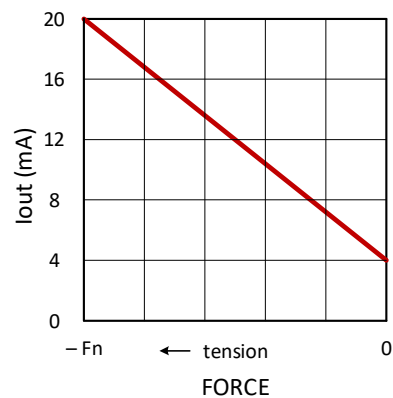
Wiring diagram



Output characteristic



Uout vs. F

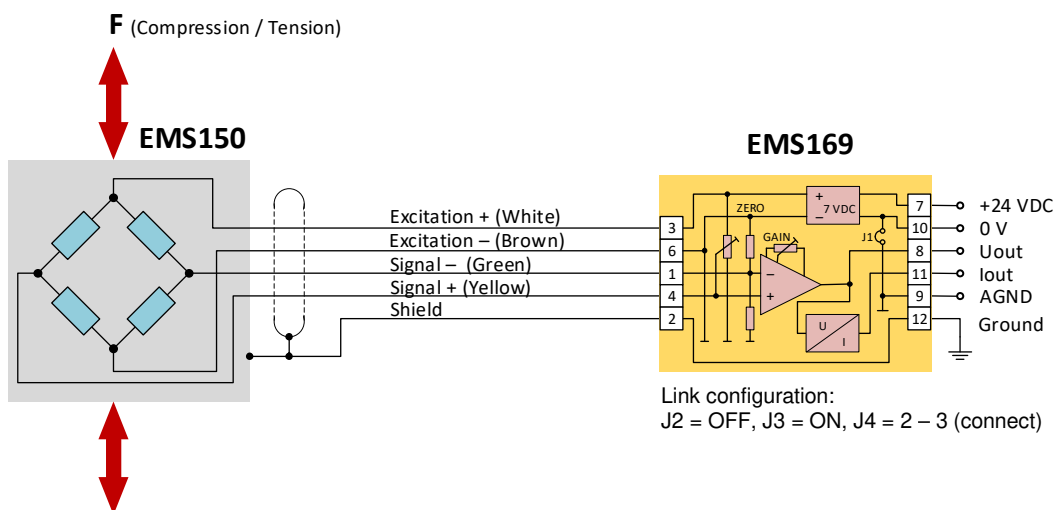


Iout vs. F

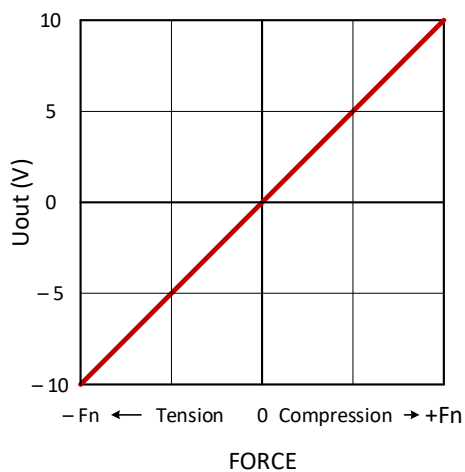
3. Load compression and tension, signal conditioner output bipolar ($-10\text{ V} \dots 0 \dots +10\text{ V}$)

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

Wiring diagram



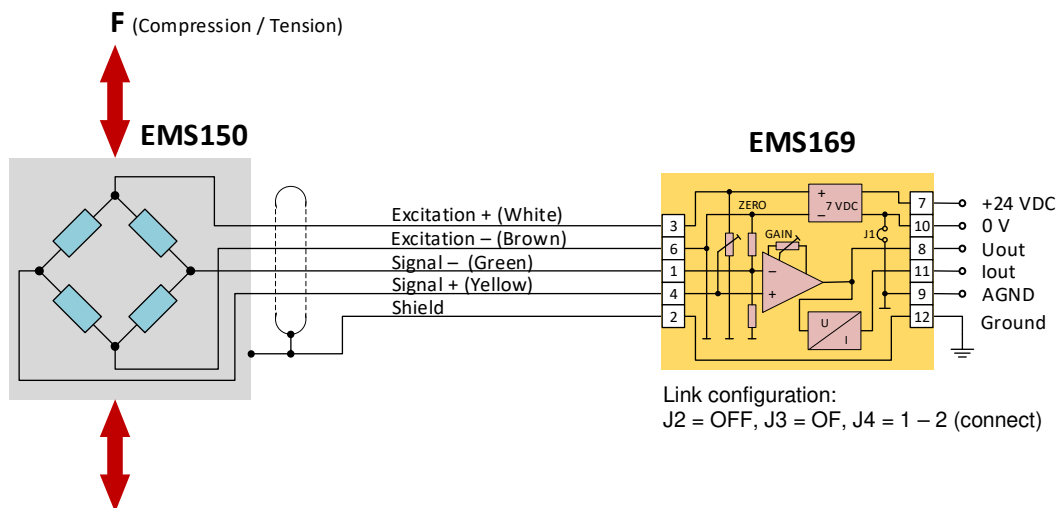
Output characteristic



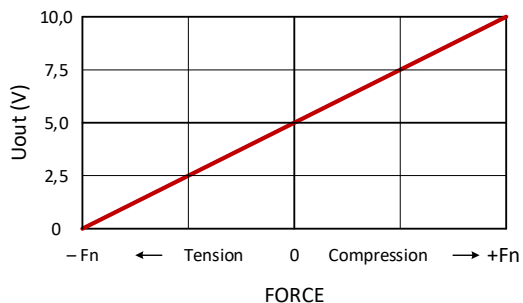
Uout vs. F

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

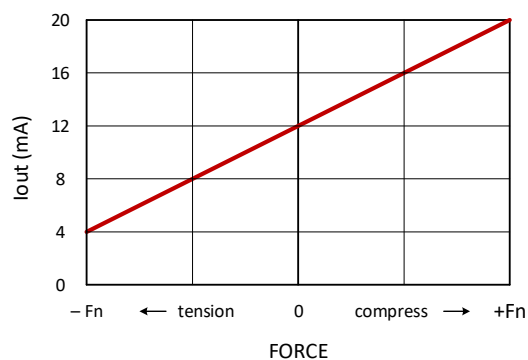
Wiring diagram



Output characteristic



Uout vs. F



Iout vs. F

Parallel wiring diagram

