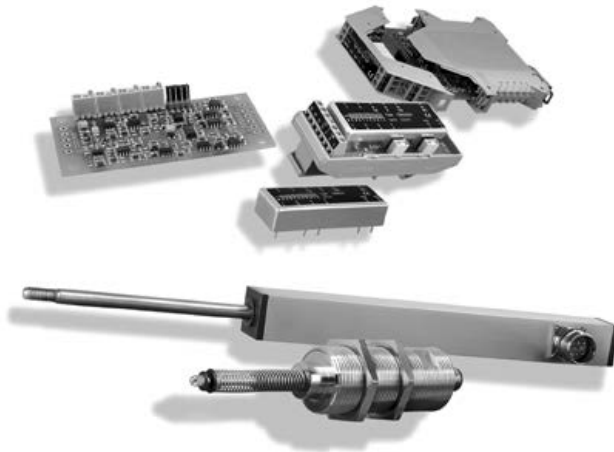


Standard type transducers:

Series	Housing	Range	Electronics	Remarks
SM20/21/22	ø8/10mm	max 20mm	external	miniature version
SM24	M12x1	max 15mm	external	housing M12x1
SM26	ø12mm	max 200mm	external	gauge type available
SM27	ø10mm	max 20mm	integrated	5V supply voltage
SM30	M30x1.5	max 15mm	integrated	housing M30x1.5
SM32	25x25mm	max 15mm	integrated	aluminium housing
SM40	ø25mm	max 200mm	integrated	standard displacement sensor
SM42	ø25mm	max 360mm	integrated	compact design
SM44	30x30mm	max 200mm	integrated	sturdy stainless steel housing
SM48	80x60x26.5mm	20mm	integrated	passable tag
SM60	ø36.5mm	max 90°	external	small design
SM61	ø36.5mm	max 120°	integrated	small design
SM62	ø58mm	max 120°	integrated	standard angle sensor
SM64	ø104mm	max 2x 120°	integrated	dual measuring sensor
SM70	ø10 / SW41	max 1500mm	integrated	magnetostrictive / pressure proof

Electronic modules

- with in-house ASIC
- current or voltage output
- 1- or 2-channel version
- up to 7-channel on board



Custom design

- development of customer specific design

Modular structure

enables rapid and inexpensive development and manufacture of customer-specific sensors

typical sensor design:

- ① stainless steel housing
- ② shielding and electronics
- ③ high precision coil
- ④ stainless steel plunger



Inductive displacement Transducer

Series

SM44



Standard measuring stroke:

100mm 200mm

Standard versions:

Type	Output	Supply voltage*	Signal**	Mid
SM441 SM442	0 .. 20 mA	20 .. 32 V	increasing decreasing	10 mA
SM443 SM444	4 .. 20 mA	20 .. 32 V	increasing decreasing	12 mA
SM445 SM446	± 10 V	±13 .. ±16 V	increasing decreasing	0 V
SM447 SM448	0..10 V	20 .. 32 V	increasing decreasing	5 V

* Pole reversal protection

** Increasing signal by moving the plunger in the direction towards the plug

Technical data:

Accuracy	< 0,5% or 0,25%
Temperature drift	< 0,01% / °C
Frequency limit	800 Hz
Temperature range	-20°C .. +85°C
Resistance to shock	250g SRS 20-2000Hz
Resistance to vibration	20g rms (50g peak)
Protection class	IP67*

* with mounted mating plug

- extra sturdy construction
- Stroke up to 200mm
- VA housing 30x30mm
- Integral electronic circuit
- Protection IP67
- Accuracy 0,5% or 0,25%

Operating principle:

A nickel-iron core is moved linearly inside a coil form. The displacement of the core leads to an inductance variation in both coils and the integral electronic circuit converts this variation into a signal proportional to the displacement.

Dimensions and masses:

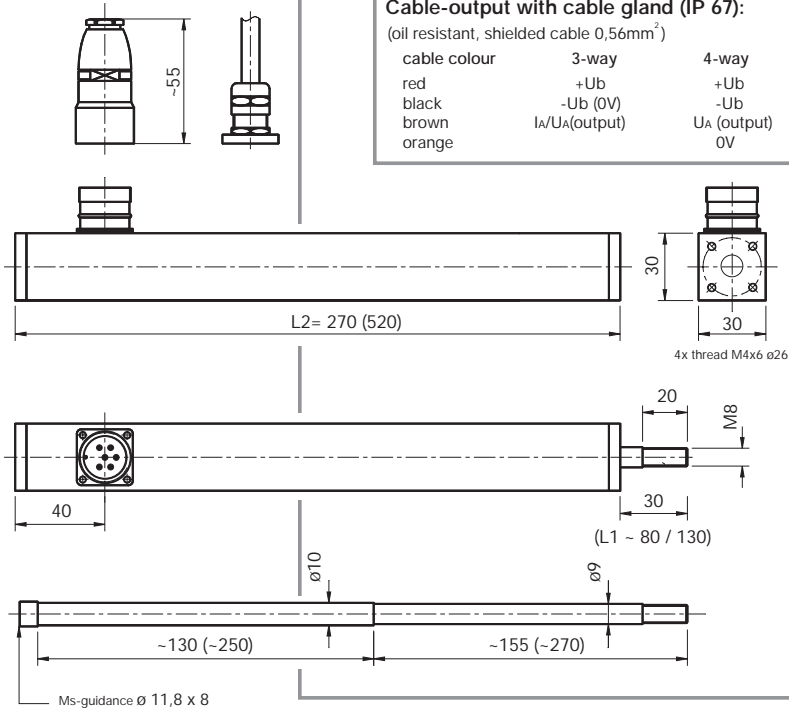
Stroke mm	L1 mm	L2 mm	Sensor	Plunger
100	80	270	750g	150g
200	130	520	1200g	200g

L1 = plunger in central position

Cable-output with cable gland (IP 67):

(oil resistant, shielded cable 0,56mm²)

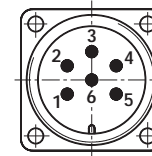
cable colour	3-way	4-way
red	+U _B	+U _B
black	-U _B (0V)	-U _B
brown	I _A /U _A (output)	U _A (output)
orange		0V



Electrical connections

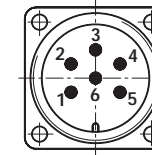
(view to the plug at sensor)

6-way plug / cable colour
output 1, 2, 3, 4, 7, 8



- 1: +U_B red
- 4: -U_B (0V) black
- 6: I_A / U_A (output) brown

6-way plug / cable colour
output 5, 6



- 1: +U_B red
- 3: 0V orange
- 4: -U_B black
- 6: U_A (output) brown

Mating plug:

(order separately)

SM901.442 (IP67)

Current output (SM441..444)

Output signal	0..20 mA or 4..20 mA
Supply current I _B	max. 60 mA
Load resistance R _L	0..500Ω
Residual ripple	< 0,005 mAss
Dependence on R _L	< 0,001% at ΔR _L = 100Ω
Dependence on U _B	< 0,05% at ΔU _B = 1V

Voltage output (SM445..448)

Output signal	±10 VDC or 0..10 VDC
Supply current I _B	max. 50 mA
Permissible load R _L	≥ 2 kΩ (short circuit proof)
Residual ripple	< 5 mV _{SS}
Residual voltage SM407/408	max. 0,1 VDC
Dependence on U _B	< 0,05% at ΔU _B = 1V

Note: Unless otherwise stated, all values are valid at +20°C ambient temperature and 24V or ±15V supply voltage, starting 10 minutes after switch-on.

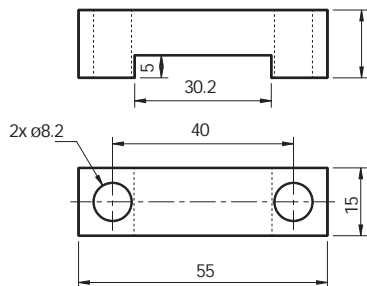
Materials:

Housing	stainless steel
Inner tube	stainless steel
Plunger	stainless steel
Core	nickel-iron
Connector	brass, nickel plated
Contacts	brass, gold plated

Special versions and accessories:

Version .K	with Pg9 cable gland and cable output
Version.FG	with 1 ball joint M8 and guided plunger
Version .FGH	with 2 ball joints M8 and guided plunger
SM906.440	mounting block

Mounting block
SM906.440



(inkl. 2 screws M8x65 DIN912 VA)

Order code

SM44 3 . 200 . 2 . K

- variation
- accuracy:1: 0.25%, 2: 0.50%
- stroke
- voltage or current output and signal direction
- series

order codes for customer versions will be named at the factory

for example: SM443.200.2
transducer series 44, output 4-20 mA (increasing), 200mm measuring stroke, accuracy 0,5%

Your Distributor:

a.b.jödden gmbh
Europark Fichtenhain A 13a
47807 Krefeld, Germany
Phone +49 2151 516259 0
Fax +49 2151 516259 20
info@abjoedden.de
www.abjoedden.de