



Picture: Reed Transducer

The *sns/rs/a, au, ai..* reed transducers measure the position of the piston in a hydraulic cylinder. They consist of a stainless steel tube fitted with reed contacts which are activated by a special ring magnet. The converter *sns/rs/i* is integrated in the reed transducers type *sns/rs/ai*.

marco order numbers for reed transducers "*sns/rs/a, au, ai<L1><y>*", where the identifier "*a*" stands for the type of rod used, contain the following information:

- sns/rs/a* stands for potentiometer,
- sns/rs/au* stands for voltage output (0.5 - 4.5V),
- sns/rs/ai* stands for current output (0.2 - 1mA),
- <L1>* is the stroke length,
- <y>* specifies details such as electrical interface, cable length, connector type.

Cable lengths are measured as follows: cable 4 and Lumberg - from seal to end of connector
 Marco - from seal to wire end ferrule.

Standard reed transducer types:

sns/rs/a	600a	700a	750a	775b	800a	800b	850a	850b	850c	850d	850e
Cable Length	500	270	1150	1000	500	1100	770	210	450	1200	1000
Scaling	Marco	Marco	Marco	Marco	Marco	Marco	Hemscheidt	Marco	Marco	Marco	Marco
Connection	cable 1	cable 1	cable 1	cable 1	cable 1	cable 1	Lumberg	cable 1	cable 1	cable 1	cable 1

sns/rs/a	900a	900b	975a	1150a
Cable Length	1500	250	230	455
Scaling	Marco	Marco	Hemscheidt	Hemscheidt
Connection	cable 1	cable 1	Lumberg	Lumberg



Reed transducers with voltage output:

sns/rs/au	480b	700a	700c	710a	750a	765a	800a	800b	802a	850a
Cable Length	1500	170	100	1500	1500	1500	131	1500	200	1200
Connection	cable 2	cable 2	cable 4	cable 2	cable 2	cable 2	cable 2a	cable 2	Lumberg	cable 2

sns/rs/au	850b	850c	870a	900a	900b	900c	950a	980a	1050a	1100a	1200a
Cable length	175	300	205	175	1500	300	175	131	175	175	500
Connection	Lumberg	cable 2	Lumberg	Lumberg	cable 2	cable 2	Lumberg	cable 2a	Lumberg	Lumberg	cable 2

Reed transducers with current output:

sns/rs/ai	310a	400a	450a	525a	550a	550b	585a	585b	600a	620a	700a
Cable Length	1000	500	300	250	300	1500	300	1500	300	850	250
Connection	cable 3	cable 3	cable 3	cable 3	cable 3	cable 3	cable 3	cable 3	cable 3	cable 3	cable 3

sns/rs/ai	700b	850a	850c	900a	900b	900c	900d	950a	960a	960b
Cable Length	1500	800	110	800	175	1200	1500	700	1500	1500
Connection	cable 3	Lumberg	cable 3	cable 3	Lumberg	cable 3	cable 3	Lumberg	cable 3	Lumberg

sns/rs/ai	980a	1000a	1000b	1050a	1100a	1100b
Cable Length	1500	1200	1500	1500	1500	3000
Connection	cable 3	cable 3	cable 3	cable 3	cable 3	cable 3

All dimensions are in millimetres.

Connection	Type a		Type au		Type ai	
Cable 1, 2, 2a, 3, 4	1 white 2 brown 3 green	piston side pickup cyl. side	1 white 2 brown 3 green	+ UB signal GND	1 white 2 brown	+ UB signal
cable 1, 2a: wire end ferrule	cable 2: tin-plated		cable 3: wire end ferrule		cable 4: conm connector	
Lumberg	1 3 4	piston side pickup cyl. side	1 3 4	+ UB signal GND	1 3	+ UB signal

Operating pressure	500bar
Operating voltage	12 V nom.
Resolution	4 mm
Temperature range	-20 °C to +60 °C
Connection type a, au	3 wire cable, 5mm Ø or Lumberg connector
Connection type ai	2 wire cable, 4.2mm Ø or Lumberg connector
Degree of protection	IP 68
Approval ATEX	I M1 EEx ia I, INERIS 03ATEX0116
Approval Russia	GOST-R
Approval Ukraine	GOST-U

**Input parameters**

Reed transducer	U_i	I_i	L_i	C_i
with power output	13.2 V	2 A	0	1 μ F in series with 322.6 Ω
with current output	13.2 V	2 A	0	1 μ F in series with 199.6 Ω

Application

The *sns/rs/a, au, ai..* reed transducer is activated coaxially by a *sns/rs/magn** (*) magnet. Its pressure resistant design makes it suitable for use in high-pressure hydraulic cylinders.

The marco reed transducers are designed to be used with marco magnets. The resolution specified by marco can only be attained by using marco magnets as only these have the magnetising zones required by our reed transducers.

(*) refer to data sheet *doc:D/sns/rs/006*.

Order Number	Release	Description
<i>sns/rs/a<L1><y></i>	2.0	Reed Transducer, for <L1> mm stroke, type <y>
<i>sns/rs/au<L1><y></i>	2.0	Reed Transducer, with voltage output, for <L1> mm stroke, type <y>
<i>sns/rs/ai<L1><y></i>	2.1	Reed Transducer, with current output, for <L1> mm stroke, type <y>