

Protocol conversion using the INST-3001 and INSR-3001

The universal sensor transmission system (INST-3001, INSR-3001) can be utilize to perform protocol conversion. From Voltage to Current loop, Current loop to voltage, or one voltage range to another voltage. Examples follow.

Transmitter set for Current mode, Receiver set for voltage mode;

Input Current	Output voltage +/-1 Range	Output voltage +/-3 Range	Output voltage +/-10 Range
0 mA	0.00	0.00	0.00
4 mA	0.20	0.6	2.0
10 mA	0.50	1.5	5.0
15 mA	0.75	2.0	7.5
20 mA	1.00	3.0	10

Transmitter set for Voltage mode, Receiver set for current mode.

Note that negative output current will not be produced;

Input voltage +/-1 Range	Input voltage +/-3 Range	Input voltage +/-10 Range	Output Current
-1.00	-3.0	-10	0 mA
-0.75	-2.0	-7.5	0 mA
-0.50	-1.5	-5.0	0 mA
-0.20	-0.6	-2.0	0 mA
0.00	0.00	0.00	0 mA
0.20	0.6	2.0	4 mA
0.50	1.5	5.0	10 mA
0.75	2.0	7.5	15 mA
1.00	3.0	10	20 mA

Transmitter set for Voltage mode, Receiver set for Voltage mode;

Input			Output		
+/-1 Range	+/-3 Range	+/-10 Range	+/-1 Range	+/-3 Range	+/-10 Range
-1.00	-3.0	-10	-1.00	-3.0	-10
-0.75	-2.0	-7.5	-0.75	-2.0	-7.5
-0.50	-1.5	-5.0	-0.50	-1.5	-5.0
-0.20	-0.6	-2.0	-0.20	-0.6	-2.0
0.00	0.00	0.00	0.00	0.00	0.00
0.20	0.6	2.0	0.20	0.6	2.0
0.50	1.5	5.0	0.50	1.5	5.0
0.75	2.0	7.5	0.75	2.0	7.5
1.00	3.0	10	1.00	3.0	10