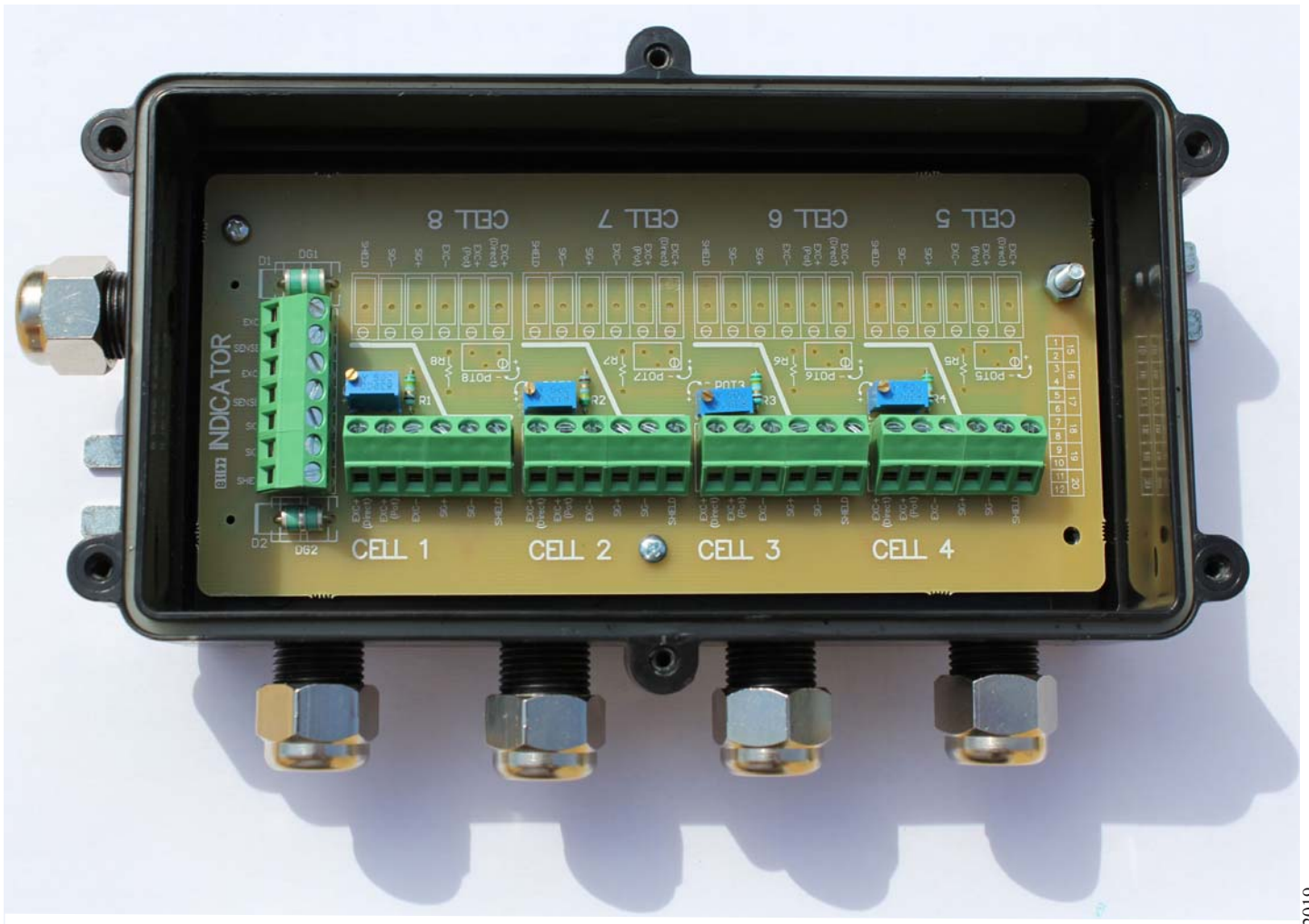


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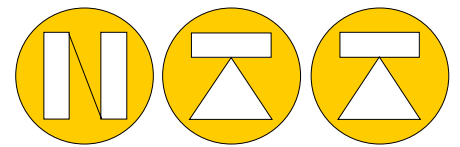


CAJA-A-PLG

Junction box for 4-8 load cells in High Resistant ABS Plastic IP68 protection !



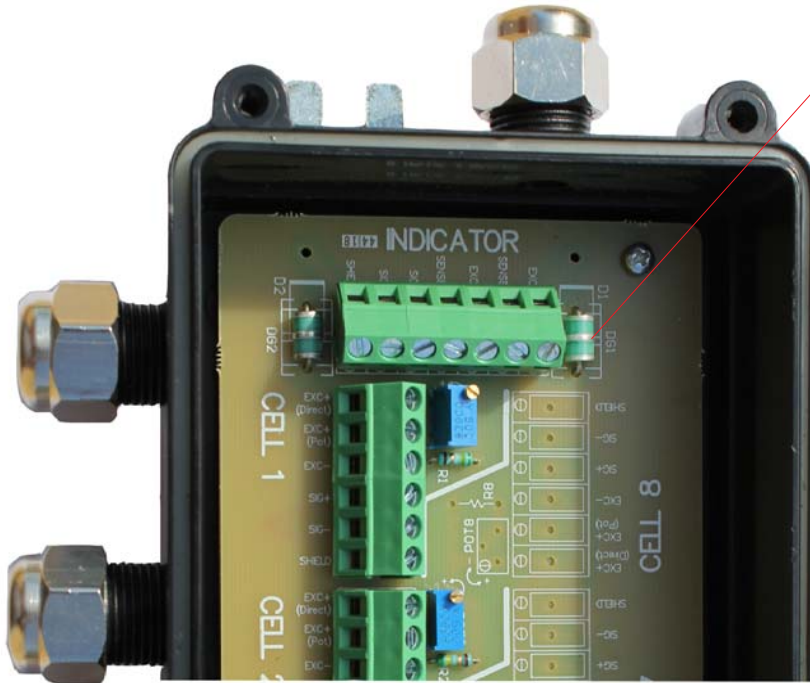
IP-68 (EN 60529)



NORDIC TRANSDUCER

CAJA/N-RA 4-8 load cells Strong J-Box IP68 protection

2 gas-fuses to protect against atmospheric discharges



At long distance between Load Cells and instrument say more than 10m where severe temperature changes can be the case from say from summer to winter it is a very good thing to use sense wires

Potentiometre: Normally with our load cells it's not necessary to use these, they are used if you have bigger differences say from corner to corner on a platform scale, but if good load cells are used it is recommended to find out the reason for this as there typically are a mechanical reason & solution for it.

So normal good load cells shall be connected on EXC+ (Direct) & not so good ones use EXC+ (Pot)

CAJA Junction box.

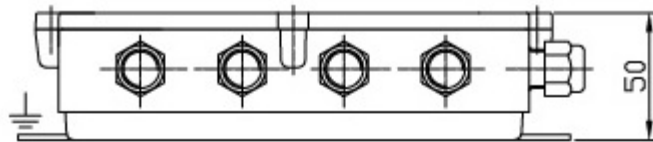
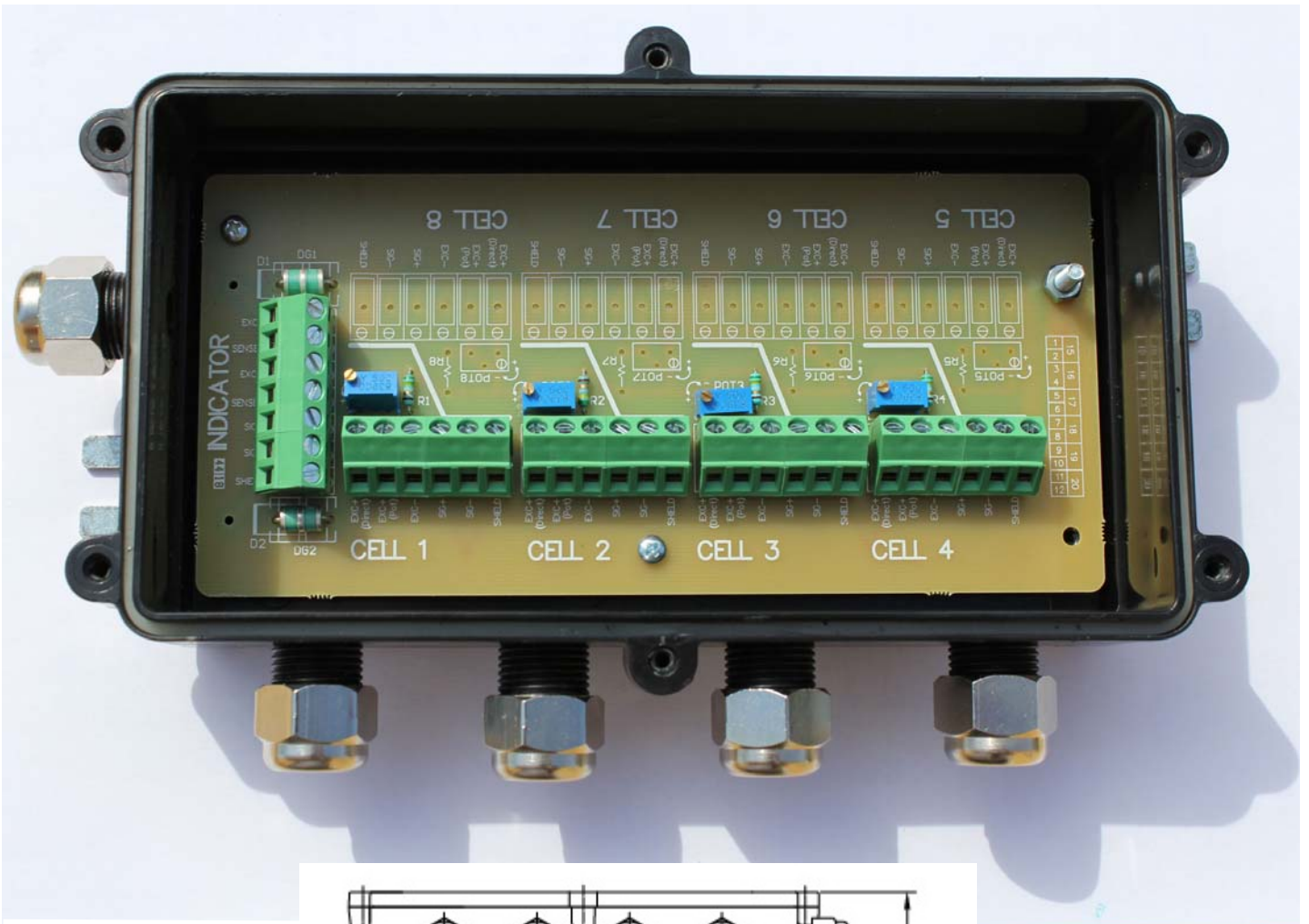
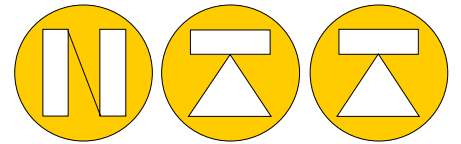
- Supply to Load Cell + = EXC+
- Supply to Load Cell - = EXC-
- Signal + from Load Cell = SIG+ (SG+)
- Signal - from Load cell = SIG- (SG-)
- Load cell with 6 wire then connect SENSE+ to EXC. + & SENSE - to EXC-.

Can also be supplied as ATEX godkendt CE Certificate LOM 12ATEX2029 X

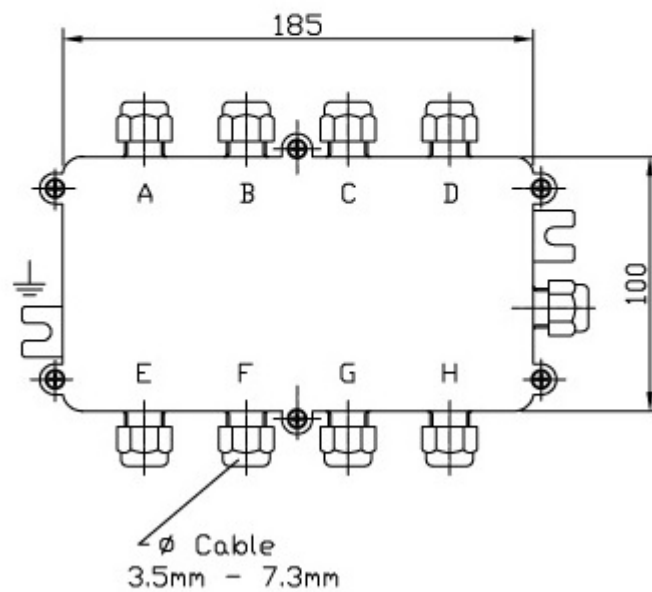
ATEX class is:

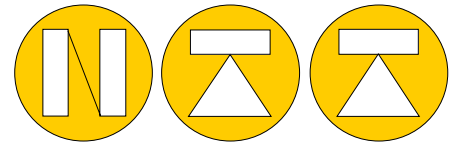
- Ex II 1GD
- Ex ia III 85 °C Da // Ex ia T4..T6 Ga





4 células: Salidas A, B, C, D
 6 células: Salidas A, B, C, E, F, G, H
 8 células: Salidas A, B, C, D, E, F, G, H





NORDIC TRANSDUCER

Color codes for load cell supplied by **NTT** from 2017

Names for load cell wires:

Power Supply +/- to the load cell can be named with many different names as:
+/- -Excitation, Exc., Exct., Excitat., In +/-, Input +/- (to the cell)

Signal from the load cell can be named as: Signal +/-, out +/-, output +/-

Sense will normally be named Sense or Sen +/-

Do you have an instrument and load cell with 6 wires then please use all 6, if only 4 wire load cell Sense + shall be connected to Exc.+ and Sense - to Exc. - via a jump wire

Vishay Revere Transducers

<u>Exct. +</u>	<u>Exct. -</u>	<u>signal +</u>	<u>signal -</u>	<u>sense+</u>	<u>sense-</u>
Green	black	white	red	yellow	blue
<i>Relevant for:</i> V-RTE model: ACB - HCB - HPS- SHB 6 wire					

<u>Exct. +</u>	<u>Exct. -</u>	<u>signal +</u>	<u>signal -</u>	<u>sense+</u>	<u>sense-</u>
Green	black	white	red		
<i>Relevant for:</i> V-RTE, ASC - ALC - BSP- SHB 4 wire					

<u>Exct. +</u>	<u>Exct. -</u>	<u>signal +</u>	<u>signal -</u>	<u>sense+</u>	<u>sense-</u>
Red	black	green	white	blue	brown
<i>Relevant for:</i> V-RTE, 642C - 652 - & VTH 3410					

<u>Exct. +</u>	<u>Exct. -</u>	<u>signal +</u>	<u>signal -</u>		
Red	black	green	white		
<i>Relevant for:</i> V-RTE Model: 363 - 9363 - 5123 - 9123 - 4158 -5102 - 9102-9103					

<u>Exct. +</u>	<u>Exct. -</u>	<u>signal +</u>	<u>signal -</u>		
Pink	grey	brown	white		
<i>Relevant for:</i> Vishay / Revere Model: RLC					

Vishay Tedea Huntleigh

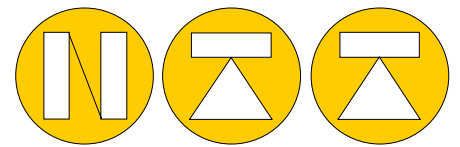
<u>Exct. +</u>	<u>Exct. -</u>	<u>signal +</u>	<u>signal -</u>		
Green	black	red	white		
<i>Relevant for:</i> V-TH model:-1004					

<u>Exct. +</u>	<u>Exct. -</u>	<u>signal +</u>	<u>signal -</u>	<u>sense+</u>	<u>sense-</u>
Green	black	red	white	blue	brown or yellow
<i>Relevant for:</i> V-TH model: 1010/1015					

<u>Exct. +</u>	<u>Exct. -</u>	<u>signal +</u>	<u>signal -</u>	<u>sense+</u>	<u>sense-</u>
Green	black	red	white	blue	brown
<i>Relevant for:</i> VTH model: 1042, 1130, 1140, 1241/42, 1250, 1252, 1260, 1320, 1410, 1510, 240, 606, 615/16 9010					

<u>Exct. +</u>	<u>Exct. -</u>	<u>signal +</u>	<u>signal -</u>	<u>sense+</u>	<u>sense-</u>
Blue	black	white	red	green	gray
<i>Relevant for:</i> VTH Model -220, 343, 355, 3510					

<u>Exct. +</u>	<u>Exct. -</u>	<u>signal +</u>	<u>signal -</u>		
Red	blue	green	yellow		
<i>Relevant for:</i> VTH-Model: 601					



NORDIC TRANSDUCER

Color codes for load cell supplied by **NTT** from 2017

Names for load cell wires:

Supply to the load cell can be named +/- -Excitation, Exc., Exct., In +/-, Input m.m.

Signal from the load cell can be named: Signal +/-, out +/-, output +/-

Sense will normally be named Sense or Sen +/-

Do you have an instrument and load cell with 6 wires then please use all 6, if only 4 wire load cell Sense + shall be connected to Exc.+ and Sense - to Exc. -

Nordic Transducer / Nordisk Transducer Teknik

<u>Exct. +</u>	<u>Exct. -</u>	<u>signal +</u>	<u>signal -</u>	<u>shield</u>
Red	black	green	white	yellow

Relevant for: NTT model. BBS-D4 - ET-3 - ET-4 - GY-2 - MS-1 - 9212 - 9223 - 9223W, TCS-9310 - TCSW-9310, TCTN-9110 - PE-1/ 2

<u>Exct. +</u>	<u>Exct. -</u>	<u>signal +</u>	<u>signal -</u>
Red	black	white	yellow

Relevant for: NTT, C2S, C8S, CBS, CM35, D100, D200, TC4, TS, TCS, T-20,

<u>Exct. +</u>	<u>Exct. -</u>	<u>signal +</u>	<u>signal -</u>	<u>sense+</u>	<u>sense-</u>
Red	black	green	white	yellow	blue

Relevant for:

NTT & all Sensocar Models.

AC1, AC2, AC3, BL- BLC, CS-A, DCO-2, 3, 4, PL.50, BS-1-2, FX-1, FX-2, CO-1, CO-2, TA-1, S-1, S2, SP-A, TR-1, TR-2,

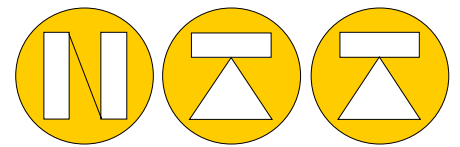
<u>Exct. +</u>	<u>Exct. -</u>	<u>signal +</u>	<u>signal -</u>	<u>sense+</u>	<u>sense-</u>
Blue	black	white	red	green	gray

Relevant for: NTT model A-SBT10 & 3510



Please also control that there is no mixe of load cells which look similar but do have different ohm values & mV/V output

REMEMBER TO MOUNT THE LOAD CELLS IN A MANNER SO THEY DO GIVE A POSITIVE OUTPUT SIGNAL AT THESE CONNECTIONS.



NORDIC TRANSDUCER

Kabel længder for vejeceller.

Vejeceller har typisk 3-5m kabel monteret, dette er typisk med skærm som ikke er monteret til vejecelle huset, flere vejeceller samles så i en samleboks som her i beskrevet !, disse samlebokse har 4 wire input/ouput fra vejecellerne samt 6 wire forbindelse til instrumentet, ved længder over ca. 15 meter anbefaler vi at benytte min. 0,34 mm² kabel med skærm.

Følgende skema stammer fra en af vore gamle leverandører som har fremstillet dette for anskuelighedsgørelse af temperatur påvirkning i forbindelse med lange kabler af forskellig modstand ! dette giver en god fornemmelse af problemet, det kan nævnes at vore vejeceller typisk ligger mellem 350 - 1000 Ohm i værdi.

Load cell applications suggestions

If to use 4 or 6 wire connection.

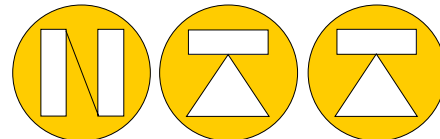
Choosing between the 4 or 6 wire connection depends on both the impedance of the sensor connected to the instrument and the cable resistance (function of the cable cross-section and the length). Usually the 6 wire connection is preferred if the sensor impedance is low (say <1 kOhm) and the cable resistance is high (say >10 Ohm), but these values are not mandatory limits.

Referring to the following table and keeping in mind that the input sense impedance of the MD1010 & MD1010-R is 30 kOhm the error computation is:

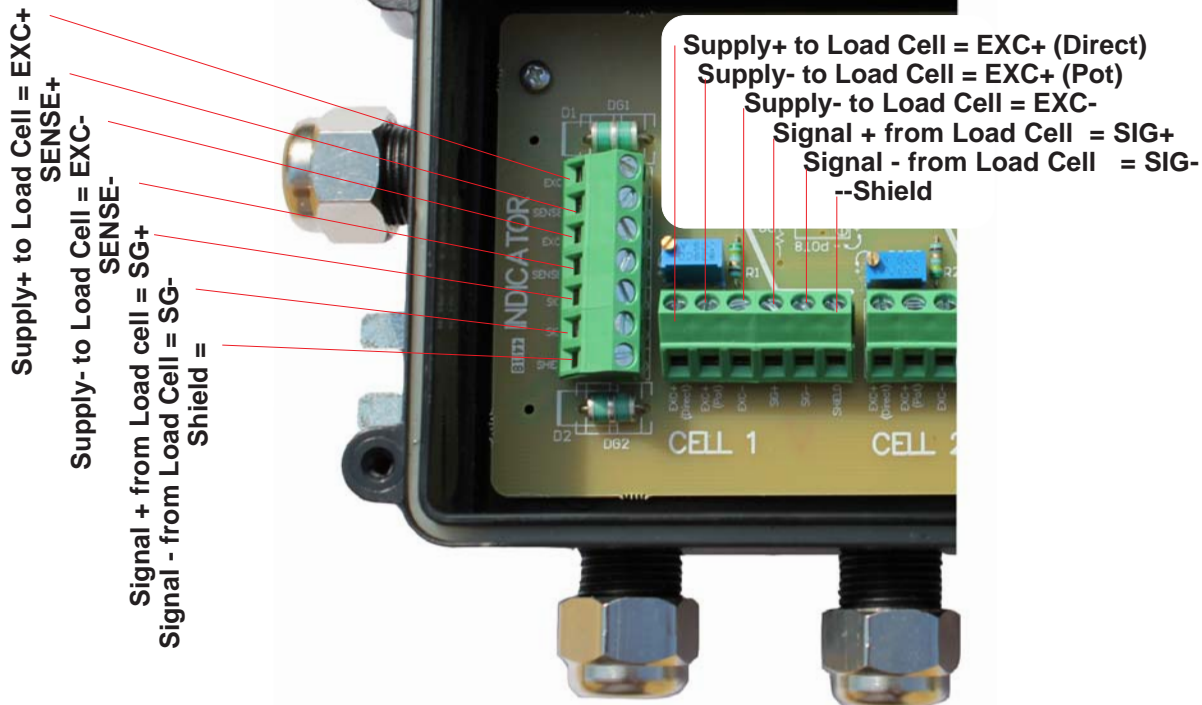
Cable length	Conductor diameter	Sensor resistance	Connection	Cable resistance	Span error	Span drift 20-60 °C
50 m / 164 ft	1.0 mm / 0.04 in	1 kOhm	4 wire	2.2 Ohm	0.22 %	-0.035 % / -9 ppm/°C
50 m / 164 ft	1.0 mm / 0.04 in	120 Ohm	4 wire	2.2 Ohm	1.80 %	-0.29 % / -70 ppm/°C
100 m / 328 ft	1.0 mm / 0.04 in	1 kOhm	4 wire	4.4 Ohm	0.44 %	-0.070 % / -17 ppm/°C
100 m / 328 ft	1.0 mm / 0.04 in	120 Ohm	4 wire	4.4 Ohm	3.60 %	-0.58 % / -145 ppm/°C
50 m / 164 ft	1.5 mm / 0.06 in	1 kOhm	4 wire	0.98 Ohm	0.1 %	-0.016 % / -4 ppm/°C
50 m / 164 ft	1.5 mm / 0.06 in	120 Ohm	4 wire	0.98 Ohm	0.82 %	-0.13 % / -33 ppm/°C
100 m / 328 ft	1.5 mm / 0.06 in	1 kOhm	4 wire	1.97 Ohm	0.20 %	-0.03 % / -8 ppm/°C
100 m / 328 ft	1.5 mm / 0.06 in	120 Ohm	4 wire	1.97 Ohm	1.64 %	-0.26 % / -65 ppm/°C
50 m / 164 ft	1.0 mm / 0.04 in	1 kOhm	6 wire	2.2 Ohm	0.007 %	+0.001% / +0.25 ppm/°C
50 m / 164 ft	1.0 mm / 0.04 in	120 Ohm	6 wire	2.2 Ohm	0.007 %	+0.001% / +0.25 ppm/°C
100 m / 328 ft	1.0 mm / 0.04 in	1 kOhm	6 wire	4.4 Ohm	0.014 %	+0.002% / +0.50 ppm/°C
100 m / 328 ft	1.0 mm / 0.04 in	120 Ohm	6 wire	4.4 Ohm	0.014 %	+0.002% / +0.50 ppm/°C
50 m / 164 ft	1.5 mm / 0.06 in	1 kOhm	6 wire	0.98 Ohm	0.03 %	+0.005% / +1.25 ppm/°C
50 m / 164 ft	1.5 mm / 0.06 in	120 Ohm	6 wire	0.98 Ohm	0.03 %	+0.005% / +1.25 ppm/°C
100 m / 328 ft	1.5 mm / 0.06 in	1 kOhm	6 wire	1.97 Ohm	0.06 %	+0.010% / +2.50 ppm/°C
100 m / 328 ft	1.5 mm / 0.06 in	120 Ohm	6 wire	1.97 Ohm	0.06 %	+0.010% / +2.50 ppm/°C

Connecting a device with a four wire connection introduces a span error that can be zeroed if a field calibration is performed. However the cable resistance changes with temperature a so high cable resistance can be zeroed but still exhibit a span thermal coefficient which reduces the reading as the temperature rises. If the cost of a six wire connection is not a problem a better accuracy is obviously obtained.

CAJA-A-PLG Junction box



NORDISK TRANSDUCER



REMEMBER TO MOUNT THE LOAD CELLS IN A MANNER SO THEY GIVE AN POSITIVE OUTPUT SIGNAL AT THESE CONNECTIONS



Please also control that there is no mixe of load cells which look similar but do have different ohm values & mV/V output

