

### Additional Terms & Conditions (ATC)

- I. Guarantee/Warranty: The offered material shall be guaranteed against any manufacturing defect and poor workmanship for a period of 18 months from the date of supply or 12 months from the date of commissioning, whichever is earlier. In case the material fails during guarantee period due to defective material or bad workmanship, you will have to replace/rectify the same free of cost. The guarantee certificate should indicate our order number and your invoice number. **Guarantee/Warranty Certificate** shall be submitted along with dispatch documents at no extra cost to NFL.

### Item Specification & Quantity

Sl. No.	Item Code	Item Detail	UoM	Qty
1	IA8822050	ITEM : ELECTRONIC DIFFERENTIAL PRESSURE TRANSMITTER. RANGE: -30 to +30 mmWC, POWER SUPPLY: 24 VDC, OUTPUT: 4-20 maDC TWO WIRE. <b>DETAILED SPECIFICATION ARE AT ANNEXURE 1 ATTACHED BELOW</b>	NO	2
2	IA9815000	ELECTRONIC PRESSURE TRANSMITTER, RANGE : 0 - 10 KG/CM2, POWER SUPPLY: 24 V DC, OUTPUT: 4 - 20 mA DC TWO WIRE. <b>DETAILED SPECIFICATION ARE AT ANNEXURE 1 ATTACHED BELOW</b>	NO	2
3	IA9835000	ELECTRONIC DIFFERENTIAL PRESSURE TRANSMITTER, RANGE : 0 To 2500 MMWC, POWER SUPPLY: 24 V DC, OUTPUT: 4 - 20 mA DC TWO WIRE. <b>DETAILED SPECIFICATION ARE AT ANNEXURE 1 ATTACHED BELOW</b>	NO	2

**ANNEXURE - I**

**SPECIFICATION FOR ELECTRONIC DIFFERENTIAL PRESSURE TRANSMITTERS & ELECTRONIC PRESSURE TRANSMITTERS**

Sr.No.	Item Code	Item Description	Measuring range / Calibration Range	Max. Working Pressure	Quantity Required
1	IA9815000	Electronic Pressure Transmitter	0 to 10 Kg/cm <sup>2</sup>	100 Kg/cm <sup>2</sup>	2
2	IA9835000	Electronic Differential Pressure Transmitter	0 to 2500 mmwc	100 Kg/cm <sup>2</sup>	2
3	IA8822050	Electronic Differential Pressure Transmitter	(-)30 to (+)30 mmwc	10 Kg/cm <sup>2</sup>	2

**COMMON SPECIFICATION FOR ITEMS Sr. NO. 1,2,3 and 4**

Sr.No	DESCRIPTION	REQUIREMENT	VENDOR'S CONFIRMATION
1	MATERIAL FOR DETECTING UNIT		
A	PROCESS COVER	AISI 316	
B	MEASURING DIAPHRAGM / CAPSUL MATERIAL	AISI 316L SS OR BETTER	
C	OTHER WETTED PART	AISI 316 SS OR BETTER	
D	SENSOR BODY MATERIAL	AISI 316 SS OR BETTER	
2	VENT / DRAIN	316 SS	
3	SENSOR TYPE	PARTY TO SPECIFY	
4	FILLED FLUID	SILICON OIL	
5	PROCESS CONNECTION	1/2" NPT (F)	
6	STUD / BOLT / NUT MATERIAL	AISI SS 304	
7	ELECTRICAL HOUSING	MATERIAL-ALUMINIUM ALLOY, COLOUR/PAIN T - AS PER MANUFACTURER STANDARD HAVING WEATHER RESISTANCE PAINT.	
8	ENCLOSURE CLASS	IP-67 OR BETTER	
9	HAZARDOUS AREA CERTIFICATION	TRANSMITTER SHALL BE SUITABLE FOR INSTALLATION IN HAZARDOUS AREA OF ZONE 0, GAS GROUP IIC EEx ib IIC T 4 WITH SHORT CIRCUIT CURRENT LIMIT 120 MA 60°C AMBIENT CONFORMING TO STANDARD IS - 2147 / IS - 2148. TRANSMITTER SHALL ALSO CONFIRM TO INTRINSIC SAFE STANDARD CENELEC EN 500 20.	
11	POWER SUPPLY	18 V DC TO 36 V DC OR BETTER	
12	TRANSMITTER OUTPUT	4-20 MA DC (TWO WIRE) WITH DIGITAL COMMUNICATION THROUGH HART PROTOCOL ( HART 5.1 OR BETTER LATEST)	
13	WIRING SYSTEM	TWO WIRE	
14	ALLOWABLE LOAD RESISTANCE	MAX 1290 OHMS AT 42 VDC AND MIN 600 OHMS AT 24 VDC OR BETTER	
15	ACCURACY (INCLUDING LINEARITY, HYSTERESIS & REPEATABILITY)	+/- 0.07 % OF SPAN OR BETTER	
16	RANGEABILITY	100 : 1	
17	OVER RANGE EFFECT	ZERO SHIFT 0.5% OF URL FOR ANY OVERRANGE TO MAXIMUM LIMIT.	
18	SUPPLY VOLTAGE EFFECT	LESS THAN 0.05% OF CALIBRATED SPAN PER 10V.	
19	STABILITY	+/- 0.2% OF URL FOR 6 MONTHS.	
20	TEMPERATURE EFFECT	EFFECT PER 55°C CHANGE BETWEEN THE LIMITS OF -40°C & + 85 °C ZERO SHIFT : ±0.7% OF URL. TOTAL EFFECT : ± 1.0% OF URL.	
21	ZERO SUPPRESSION / ELEVATION	100 % MAX.	
22	LIGHTENING PROTECTION	LIGHTNING SURGE UPTO +/-3200V FOR 1µ SEC.	
23	ZERO & SPAN ADJUSTMENT	CONTINUOUSLY ADJUSTABLE EXTERNALLY, NON-INTERACTING TYPE (INTERACTING TYPE NOT ACCEPTED).	
24	INDICATOR	INTEGRAL OUTPUT DIGITAL INDICATOR (LCD TYPE) WITH CONFIGURATION FACILITY.	
25	ELECTRICAL CONNECTION	1/2" NPT (F) CABLE CONNECTION EQUIPPED WITH DOUBLE COMPRESSION EXPLOSION PROOF TYPE SS CABLE GLAND.	
26	MOUNTING	ON 2" NB VERTICAL PIPE	
27	AMBIENT TEMPERATURE	0 TO 60 °C.	
28	AMBIENT HUMIDITY	90% RH	
29	SELF TEST / DIAGNOSIS	YES	
30	WRITE PROTECTION	YES	
31	DATA STORAGE	NON VOLATILE MEMORY	
	<b>DESCRIPTION</b>	<b>REQUIREMENT</b>	
32	CONFIGURATION FACILITY	ADJUSTABLE DAMPING, SQ ROOT EXTRACTION, TEMP./PRESSURE CORRECTION AND ALARM CORRESPONDING TO MIN. / MAX. SPAN.	
33	MANIFOLD ( DIFFERENTIAL PRESSURE TRANSMITTER)	COMPLETE THREE WAY MANIFOLD ALONG WITH SS NUT, BOLTS & O-RINGS AND ADAPTOR OVAL FLANGES (BOTH SIDE) OF 1/2 " NPT (F) REQUIRED WITH EACH DIFFERENTIAL PRESSURE TRANSMITTER.	
34	MANIFOLD ( PRESSURE TRANSMITTER)	COMPLETE TWO WAY BLOCK AND BLEED SS316 L MANIFOLD OF 1/2 " NPT (F) IF REQUIRED WITH EACH PRESSURE TRANSMITTER.	
35	ACCESSORIES	THE PARTY SHALL SUPPLY TRANSMITTERS COMPLETE WITH MOUNTING ACCESSORIES, NUTS CLAMPS, BRACKETS SUITABLE TO MOUNT ON 2" SIZE PIPE & DOUBLE COMPRESSION EXPLOSION FROOF SS CABLE GLAND OF 1/2 " NPT	
36	STATIC PRESSURE TEST	EACH DIFFERENTIAL PRESSURE TRANSMITTER SHOULD BE STATIC PRESSURE TESTED AT 1 KG/CM2 FOR ITEM SR. NO. 2 & 3. THE ZERO AND SPAN SHIFT SHOULD NOT BE MORE THAN 0.2% OF CALIBRATED SPAN.	
37	FOLLOWING CERTIFICATES ARE TO BE PROVIDED BY THE VENDOR.		
	(i) CALIBRATION CERTIFICATES.		
	(ii) STATIC PRESSURE TEST CERTIFICATES.		
	(iii) GUARANTEE / WARRANTY CERTIFICATE		
	(iv) MATERIAL TEST CERTIFICATES		
38	DOCUMENTATION		
	PARTY SHALL SUPPLY 1 SET OF COMPLETE DOCUMENTS AND DRAWING INCLUDING CIRCUIT DETAILS FOR PROBLEM DIAGNOSIS, INSTALLATION DETAILS, OPERATION AND MAINTENANCE. HARD COPY AND SOFT COPY SHALL BE PART OF THE SUPPLY.		
39	GUARANTEE / WARRANTY		
	THE TRANSMITTERS SHALL BE GUARANTEED FOR 12 MONTHS FROM THE DATE OF INSTALLATION OR 18 MONTHS FROM THE DATE OF RECEIPT WHICHEVER IS EARLIER		