

شهاد فنی

تاریخ: ۱۴۰۴/۰۵/۱۹
شماره: Rev. ۰۴-۰۵۸۳۵-۰۳
پیوست: دارد (کاتالوگ)

- 1) Certificate of origin for all instruments shall be submitted otherwise it will be rejected from engineering side. (Original Version)
- 2) Calibration certificate for all instruments shall be submitted. (Original Version)
- 3) All field instruments shall be furnished with a stainless steel corrosion resistant nameplate, permanently fastened with screws.
- 4) Highlighted Catalog shall be submitted for each tag.
- 5) All client's requirements (datasheet) shall be met.

Item	Description		
A	Differential Pressure Gauge Tag No.: as below (SS Tag Plate will be provided as attached picture .) Type: Diaphragm (Elastic element: AISI 316L st.st.) Range: as below , Dual Range (Psi , Bar) Dial Size: 100mm Case Material: Stainless Steel Process Connection: 1/2" NPTM (will be coupled to Manifold: Remote) Process Connection Material: S.S. 316 Accuracy Class: 1.6 as per EN 837 Protection Degree: IP65 Model: MD15 MFR: NUOVAFIMA		
	Accessories		
	3 Valve Manifold Max Working Pressure: 6000 Psi Material: S.S.316L (NACE MR 0175) Inlet Connection: 1/2" NPTF Outlet Connection: 1/2" NPTF Vent Connection: 1/4" NPTF Model: 3VM01S MFR: VEELOK		
	Item	Tag No.	Dial Range
	1	DPI-A	2.5 Bar
	2	DPI-B	2.5 Bar

Item	Description					
B	Pressure Gauge Tag No.: as below (SS Tag Plate will be provided.) Type: Solid Front , Bourdon Tube (seamless tube: AISI 316L st.st) Range: as below Dial Size: 150mm Case Material: Stainless Steel Process Connection: 1/2" NPTM , Bottom Precess Connection Material: S.S. 316 Accuracy Class: 1 as per EN 837-1 Protection Degree: IP65 Model: MGS20 MFR: NUOVAFIMA					
	Item	Tag No.	Range(Bar)	Qty	Delivery	Remark
	1	PI-500	0-100	1	14-16 Working Weeks	
	2	PI-1100	0-100	1		
	3	PI-1300C	0-100	1		

Item	Description				
D	Temperature Gauge Tag No.: as below (SS Tag Plate will be provided as attached picture.) Type: Bi-Metal Range: as below Accuracy Class: 1 as per EN 13190, measuring Range Protection Degree: IP65 Dial Size: 6"(150mm) Case: Stainless Steel Process Connection: 1/2" NPTM , Every Angle (Sliding male and swivel nut) Process Connection Material: S.S.316 Stem Diameter: 6 mm Stem Length: 300 mm Model: TB8 MFR: NUOVAFIMA				
	TG-505-023 Comments: 1- The dial size shall be 160 mm. 2- The stem diameter and length shall be 8 mm and 308 mm, respectively. 3- The stem position shall be adjustable. 4- The instrument range shall be 0-80C. 5- The dial and pointer color shall be white with black figures and black, respectively. 6- The element material shall be specified. 7- The laminated safety glass window material shall be provided. 8- The external calibration adjustment shall be provided.				
Item	Tag No.	Range (°C)	Qty	Delivery	Remark
1	TI-1300	0-100	1	In Stock	
2	TG-505-023	0-100	1	In Stock	

Item	Description				
E	Levelflex Tag No.: as below (SS Tag Plate will be provided as attached picture.) Approval: ATEX II 1/2G Ex ia IIC T6 Ga/Gb Power Supply; Output: 2-wire; 4-20mA HART Display, Operation: SD03 4-line, illum., touch control + data backu Housing: GT20 dual compartment, Alu, coated Electrical Connection: Gland M20, IP66/68 NEMA4X/6P Probe: as below , rope 4mm, 316, max 150mm nozzle height, center rod Seal: FKM Viton, -30...150oC/-22...302oF Process Connection: NPS 6" Cl.300 RF, 316/316L flange ASME B16.5 Additional Operation Language: English Calibration: 3-point linearity protocol observe minimum probe length, rod/coax >=1000mm, rope >=1250mm Test, Certificate: 3.1 Material certificate, wetted metallic parts, EN10204-3.1 inspection certificate Model: FMP51-BBAECALAA4AUJ+AAF3JAZ1 MFR: E+H				
	Please notify that the "Level Transmitter" already supplied by Client, and now we request a "Local Indicator" which be compatible with mentioned transmitter. If you require any further information, please do not hesitate to contact us.				
Item	Tag No.	Range (mm)	Qty	Delivery	Remark
1	LI-523-006	0-4600	1	14-16 Working Weeks	

Item	Description					
F	Pressure Transmitter Tag No.: as below (SS Tag Plate will be provided as attached picture) Type: Gauge Pressure Transmitter Calibration Range: as below Output Signal: 4 to 20 mA DC Output with Digital Communication (HART 5/HART 7 protocol) Measurement Span (capsule): 0.1 to 10 MPa (14.5 to 1450 psi) Process Connector Material: 316L S.S. Diaphragm Material: Hastelloy C-276 Amplifier Housing: Cast aluminum alloy Process Connections: 1/2" NPTF Electrical Connection: M20 female, two electrical connections without blind plugs Accuracy Class: ±(0.005+0.0035 URL/ span) % of Span Integral Indicator: Digital indicator With the Range Setting Switch (Push Button) Mounting Bracket: 316 SST 2-inch Pipe Mounting Approval: IECEX Intrinsically safe and Flameproof Intrinsically safe Ex ia Certificate: IECEX DEK 11.0081X Applicable Standard: IEC 60079-0, IEC 60079-11 Ex ia IIC T4 Ga Enclosure: IP66/IP67 Amb. Temp.: -50 to 60°C (-58 to 140°F), Max. Process Temp.: 120°C (248°F) Electrical Parameters: Ui=30V, Ii=200mA, Pi=0.9W, Ci=27.6nF, Li=0 µH Intrinsically safe Ex ic Certificate: IECEX DEK 13.0061X Applicable Standard: IEC 60079-0, IEC 60079-11 Ex ic IIC T4 Gc IP code: IP66 Amb. Temp.: -30 to 60°C (-22 to 140°F) *2, Max. Process Temp.: 120°C (248°F) Electrical Parameters: Ui=30V,Ci=27.6 nF, Li=0 µH Model: EJA530E-JCS4N-014EL/SU22/YT07/M15/HAC MFR: Yokogawa					
	Accessories Hex Nipple Max Working Pressure: 6000 Psi Material: S.S.316L (NACE MR 0175) Connection: 1/2" NPTM * 1/2" NPTM Model: HN8 MFR: VEELOK					
	2 Valve Manifold Max Working Pressure: 3000 Psi Material: S.S.316L (NACE MR 0175) Inlet Connection: 1/2" NPTF Outlet Connection: 1/2" NPTF Vent Connection: 1/4" NPTF Model: 2VM01S8FF MFR: VEELOK The instrument range shall be mentioned in [bar].					
Item	Tag No.	Calibration Range (Bar)	Instrument Range	Qty	Delivery	Remark
1	PT-521-020	0-30	0.1 to 10 Mpa	1	In Stock	

Item	Description						
G	Pressure Gauge						
	Tag No.: as below (SS Tag Plate will be provided as attached picture)						
	Type: Diaphragm (Model: MN18) , Bourdon Tube (Model: MGS18)						
	Range: as below						
	Dial Size: 150 mm						
	Case Material: Stainless Steel, Fillable, Filled By Glycerin						
	Process Connection: 1/2" NPTM , Bottom						
	Precess Connection Material: S.S. 316						
	Elastic Element: AISI 316 Ti st.st. diaphragm.						
	Accuracy Class: 1.0 as per EN 837-1						
	Protection Degree: IP65						
	Model: as below						
	MFR: NUOVAFIMA						
Accessories							
	2 Valve Manifold						
	Max Working Pressure: 6000 Psi						
	Material: S.S.316L (NACE MR 0175)						
	Inlet Connection: 1/2" NPTF						
	Outlet Connection: 1/2" NPTF						
	Vent Connection: 1/4" NPTF						
	Model: 2VM01S8FF						
	MFR: VEELOK						
	+Test & Inspection Certificate (for Veelok products)						
Item	Tag No.	Range (Bar)	Type / Model	Manifold	Qty	Delivery	Remark
1	PG-555-004A/B	0-0.6	Diaphragm / MN18	Yes	2	14-16 Working Weeks	
2	PG-555-003A/B	0-60	Bourdon Tube / MGS18	Yes	2	In Stock	
3	PG-555-009A/B	0-0.6	Diaphragm / MN18	Yes	2	14-16 Working Weeks	
4	PG-555-008A/B	0-16	Bourdon Tube / MGS18	Yes	2	In Stock	
5	PG-517-067A/B	0-16	Bourdon Tube / MGS18	Yes	2	In Stock	

Item	Description			
H	Pressure Transmitter			
	Tag No.: as below (SS Tag Plate will be provided as attached picture.)			
	Type: In-Line Pressure Transmitter			
	Range: -14.7 to 150 psi (-1.01 to 10.34 bar)			
	Calibration Range: 0 to 10 Kg/cm2 (g) (for PT-522-307A/B) & 0 to 5 bar (PT-520-303A)			
	Output: 4-20 mA with digital signal based on HART® Protocol			
	Case Material: Stainless Steel			
	Process Connection: 1/2" NPT Female			
	Process Connection Material: S.S. 316			
	Isolating Diaphragm Material: S.S. 316			
	Sensor Fill Fluid: Silicone			
	Housing Material: Aluminum			
	Electrical Connection: M20 x 1.5 Cable glands shall be supplied.			
	Mounting Bracket: Bracket for 2-in. pipe or panel mounting, all stainless steel			
	Product Certifications: NA			
Display: Yes, LCD display				
Model: 3051TG2A2B21BB4M5				
MFR: ROSEMOUNT				
Accessories				
	Hex Nipple			
	Max Working Pressure: 6000 Psi			
	Material: S.S.316L (NACE MR 0175) The original material certificate for hex nipples shall be provided.			
	Connection: 1/2" NPTM * 1/2" NPTM			
	Model: HN8			
MFR: VEELOK				
	2 Valve Manifold			
	Max Working Pressure: 6000 Psi			
	Material: S.S.316L (NACE MR 0175)			
	Inlet Connection: 1/2" NPTF			
	Outlet Connection: 1/2" NPTF			
	Vent Connection: 1/4" NPTF			
	The original material certificate for 2-way valve manifold shall be provided.			
Model: 2VM01S8FF				
MFR: VEELOK				
Item	Tag No.	Qty	Delivery	Remark
1	PT-522-307A/B	2	In Stock	
2	PT-520-303A	1	In Stock	

Item	Description			
J	Differential Pressure Transmitter			
	Tag No.: as below (SS Tag Plate will be provided as attached picture.)			
	Type: Coplanar pressure transmitter ,Differential			
	Range: -300 to 300 psi (-20.68 to 20.68 bar)			
	Calibration Range: 0 to 4 Kg/cm2 (g)			
	Output: 4-20 mA with digital signal based on HART® Protocol			
	Case Material: Stainless Steel			
	O-ring: Glass-filled PTFE			
	Isolating Diaphragm Material: S.S. 316			
	Sensor Fill Fluid: Silicone			
	Housing Material: Aluminum			
	Electrical Connection: M20 x 1.5			
	Mounting Bracket: Coplanar flange bracket, all SST, 2-in. (51 mm) pipe and panel			
	Product Certifications: NA			
	Display: Yes, LCD display			
	Model: 3051CD4A22A1BB4M5			
	MFR: ROSEMOUNT			
Accessories				
	5 Valve Manifold			
	Max Working Pressure: 6000 Psi		The original material certificate for 2-way valve manifold shall be provided.	
	Material: S.S.316L (NACE MR 0175)			
	Inlet Connection: 2 * 1/2" NPTF			
	Outlet Connection: Suitable For Pressure Transmitter Model 3051			
	Vent Connection: 1/4" NPTF			
	Model: 5VM05S			
	MFR: VEELOK			
Item	Tag No.	Qty	Delivery	Remark
1	PDT-522-301A/B	2	In Stock	

Item	Description			
K	Differential Pressure Transmitter Tag No.: as below (SS Tag Plate will be provided as attached picture.) Type: Coplanar pressure transmitter ,Differential Range: -300 to 300 psi (-20.68 to 20.68 bar) Calibration Range: 0 to 4 Kg/cm2 (g) Output: 4-20 mA with digital signal based on HART® Protocol Case Material: Stainless Steel O-ring: Glass-filled PTFE Isolating Diaphragm Material: S.S. 316 Sensor Fill Fluid: Silicone Housing Material: Aluminum Electrical Connection: M20 x 1.5 Mounting Bracket: Coplanar flange bracket, all SST, 2-in. (51 mm) pipe and panel Product Certifications: ATEX Intrinsic Safety Display: Yes, LCD display Model: 3051CD4A22A1BB41M5 MFR: ROSEMOUNT			
	Accessories			
	5 Valve Manifold Max Working Pressure: 6000 Psi Material: S.S.316L (NACE MR 0175) Inlet Connection: 2 * 1/2" NPTF Outlet Connection: Suitable For Pressure Transmitter Model 3051 Vent Connection: 1/4" NPTF Model: 5VM05S MFR: VEELOK			
Item	Tag No.	Qty	Delivery	Remark
1	PDT-522-301A/B	2	In Stock	

Item	Description				
L	Differential Pressure Transmitter Tag No.: as below (SS Tag Plate will be provided as attached picture.) Type: Level transmitter Range: -250 to 250 inH2O (-621.60 to 621.60 mbar) Calibration Range: 0 to 2000 mmWC Output: 4-20 mA with digital signal based on HART® Protocol Process connection: 2-in./DN 50/A, 316L SST, Flush mount only Mounting Flange: 2-in. , ASME B16.5 Class 300 , 316 SST Seal Fill Fluid: Silicone 200 , -49 to 401 °F (-45 to 205 °C) Low Pressure Side: Differential O-ring: Glass-filled PTFE Housing Material: Aluminum Electrical Connection: M20 x 1.5 Product Certifications: NA Display: Yes, LCD display Model: 3051L2AG0YD21ABM5 MFR: ROSEMOUNT				
	Accessories				
	5 Valve Manifold Max Working Pressure: 6000 Psi Material: S.S.316L (NACE MR 0175) Inlet Connection: 2 * 1/2" NPTF Outlet Connection: Suitable For Pressure Transmitter Model 3051 Vent Connection: 1/4" NPTF Model: 5VM05S MFR: VEELOK				
	Item	Tag No.	Qty	Delivery	Remark
	1	LT-522-301A/B	2	In Stock	

Item	Description				
M	Temperature Gauge				
	Tag No.: as below (SS Tag Plate will be provided as attached picture.)				
	Type: Bi-Metal				
	Range: as below				
	Accuracy Class: 1 as per EN 13190, measuring Range				
	Protection Degree: IP65				
	Dial Size: 6"(150mm)				
	Case: Stainless Steel				
	Process Connection: 1/2" NPTF , Every Angle				
	Process Connection Material: S.S.316				
	Stem Diameter: 6mm				
	Stem Length: 200				
	Model: S5551				
	MFR: WIKA				
Item	Tag No.	Range (°C)	Qty	Delivery	Remark
1	TG-521-212B, TG-521-213B, TG-521-214B, TG-521-215B	0-200	4	In Stock	

Item	Description				
N	Orifice Plate				
	Tag No.: as below (The tag number and the orientation will be engraved on the handle)				
	Type: Restriction Orifice				
	Orifice Plate Thickness: 3mm				
	Size: 1/2" - #300				
	Material: S.S.316L				
	Bore Diameter: 3.2 mm				
	MFR: ISATIS				
	+ MTC (Material Test Certificate)				
	Only the following tags shall be supplied: 1- RO-517-402A 2,3- RO-517-405A/B 4- RO-517-403B 5- RO-517-404A 6,7- RO-517-401A/B 8,9- RO-517-401AA/BB				
Item	Tag No.	Qty	Delivery	Remark	
1	RO-517-401A/B	4	10 Working Days		
2	RO-517-402A/B	4	10 Working Days		
3	RO-517-403A/B	2	10 Working Days		
4	RO-517-404A/B	4	10 Working Days		
5	RO-517-405A/B	4	10 Working Days		
6	RO-520-301A/B	4	10 Working Days		

Item	Description	
E	Level Transmitter Tag No.: as below Type: Differential Pressure Calibration Range: 0-2000 mmH2O Output signal: 4 to 20 mA DC with digital communication (HART 5/HART 7) Measurement span (capsule): 1 to 100 kPa (4 to 400 inH2O) Process connections: 1/4 NPT female on the cover flanges (Coupled to D) Bolts and nuts material: 316L SST Installation: Horizontal piping and left side high pressure Amplifier housing: Cast aluminum alloy Diaphragm Material: Hastelloy C-276 Electrical connection: M20 female two electrical connections Integral indicator: Digital indicator with the range setting switch (push button) Mounting bracket: 304 SST 2-inch pipe mounting flat type (for horizontal pipe) Approval: Multiple types of protection (KF22, KS21 or Intrinsically safe Ex ic) Applicable Standard: EN IEC 60079-0, EN 60079-11 II 3 G Ex ic IIC T4 Gc, Amb. Temp.: -30 to 60°C (-22 to 140°F) Ui=30 V, Ci=27.6 nF, Li=0 µH Model: EJA110E-JMS5G-914EB/KU22 MFR:Yokogawa	LZT-526-083 Comments: 1- The zero and span adjustment shall be provided. 2- The accuracy and repeatability shall be specified. 3- The scale factor shall be configurable. 4- The RFI and write protection shall be provided. 5- The power consumption shall be specified. 6- The ingress protection degree shall be specified. 7- The tropicalized shall be provided. 8- The O-ring material shall be specified. 9- The fill fluid necessity for sensor, body and diaphragm seal shall be specified. 10- The ambient temperature effect and operating temperature limits shall be specified. 11- The gold plated material shall be provided. 12- The top and bottom housing material shall be specified. 13- The lightning protection shall be provided. 14- The SS tag plate shall be provided.
	Accessories Diaphragm Seal With Capillary (2 Sets for High and low sides) Type: Flanged, Flushed Type, Remote with Capillary Body Material: S.S.316L Diaphragm Material: S.S.316L Process Connection: 2" 150# RF , ASME B16.5 Capillary Length: 6 m for each leg Capillary Material: S.S.316+ PVC armor MFR: ISATIS	
Item	Tag No.	Qty
E-1	LZT-526-083	1
Item	Description	
F	Pressure Gauge Tag No: as below Type: Bourdon Tube Range: as below Window: Safety Glass Dial Size: 150 mm Case Oil Filling: Glycerine Case Material: S.S. Process Connection: 1/2" NPT Male , Bottom Accuracy: 1 as per EN 837-1 Protection Degree: IP65 Model: MGS18 MRF: NUOVAFIMA	
	Accessories Diaphragm Seal Type: Threaded , Direct Body Material: S.S.316 Diaphragm Material: S.S.316 Process Connection: 1/2" NPT Male Gauge Connection: 1/2" NPT Female MFR: ISATIS	
	Pressure Gauge Snubber (PGS) Max. Working Pressure: 6000 psi Material : S.S.316L (NACE MR 075) Inlet Connection: 1/2" NPT Male Outlet Connection: 1/2" NPT Female Model : PGSS8MF MFR: Veelok	Adjustable (AOF) Max. Working Pressure: 6000 psi Material : S.S.316L Inlet Connection: 1/2" NPT Male Outlet Connection: 1/2" NPT Female Setting Range: 0 to 100% Model : AOF MFR: Veelok

Item	Tag no.	Range (bar)	Accessories				Qty	Delivery	Remarks
			PGS	AOP	Glycerine	Diaphragm Seal			
F-1	PG-526-121	0-2.5	No	Yes	Yes	Yes	1	10 Working Days	
F-2	PG-526-120	0-4	Yes	Yes	Yes	Yes	2	10 Working Days	

shall be 1.

Item	Description
G	Flow Transmitter Tag No.: as below Type: Differential Pressure Calibration Range: 0 -250 mbar Output signal: 4 to 20 mA DC with digital communication (HART 5/HART 7 protocol) Measurement span (capsule): 1 to 100 kPa (4 to 400 inH2O) Process connections: 1/4 NPT female on the cover flanges Bolts and nuts material: 316L SST Installation: Horizontal piping and left side high pressure Amplifier housing: Cast aluminum alloy Diaphragm Material: Hastelloy C-276 Electrical connection: M20 female, two electrical connections Integral indicator: Digital indicator with the range setting switch (push button) Mounting bracket: 304 SST 2-inch nine mounting, flat type (for horizontal piping) Approval: Ex ia IIA T3 Multiple types of protection (KF22, KS21 or Intrinsically safe Ex ic) Applicable Standard: EN IEC 60079-0, EN 60079-11 I 3 G Ex ic IIC T4 Gc, Amb. Temp.: -30 to 60°C (-22 to 140°F) Ui=30 V, Ci=27.6 nF, Li=0 µH Model: EJA110E-JMS5G-914EB/KU22 MFR:Yokogawa +Calibration Certificate

Accessories		
Manifold Type: 3 Valve Material: S.S.316L (NACE MR0175) Max Working Pressure: 6000 psi Inlet Connection: 1/2" NPT Female Outlet Connection: Flange Vent Connection: 1/4" NPT Female Model: 3VM03S MFR:Veelok	Orifice Plate Size: 1 1/2" 300# RF Type: Square Edge & Concentric Orifice Facing: Flat Material: S.S.316 ASTM A105N. Plate Thickness: 3 mm Bore Diameter: will be calculated after PO Vent Hole Diameter(mm): will be calculated after PO MFR: Isatis	Orifice Flange Type: Weld Neck Material: ASTM A105 Size: 1-1/2" #300 RF , ASME B16.36 Tap Size: 2 * 1/4" NPT Female MFR: FAD or Equivalent

Gasket Material Size: Acc. to size of Flanges Type: Spiral Wound Material: SS304 + Graphite Filler , ASME B16.20 MFR: Behta Flange Stud Bolt and Hex Nuts (Material: Stud Bolts to ASTM A193 GR.B7, N

Item	Tag No.	Qty	
G-1	FT-517-070	1	10 V

FT-517-070 Comments:

- 1- The zero and span adjustment shall be provided.
- 2- The accuracy and repeatability shall be specified.
- 3- The scale factor shall be configurable.
- 4- The RFI protection shall be provided.
- 5- The power consumption shall be specified.
- 6- The failure/diagnostic alarm necessity shall be specified.
- 7- The ingress protection degree shall be specified.
- 8- The tropicalized shall be provided.
- 9- The O-ring material shall be specified.
- 10- The fill fluid necessity shall be specified.
- 11- The ambient temperature effect and operating temperature limits shall be specified.
- 12- The lightning protection shall be provided.
- 13- The SS name plate shall be provided.

(کی) ارائه میگردد.

یاز به استعلام مجدد خواهد بود.

با تشکر
سعید علیپور
مدیر فروش