

DIFA 3351 Series Pressure Transmitter



DIFA3351 Series

"Pressure Transmitter; a reliable solution for precise measurement, process control, and system diagnostics with high efficiency."



GENERAL

DIFA 3351 DP/GP Series is a digital differential pressure transmitter designed for industrial Pressure measurement applications.

The DF 3351 can configure to provide integrated solutions.

For a broad range of pressure and flow measurement applications.

FEATURES

Updating time of current in 90ms, increased accuracy and greater stability

Two years stability of 0.1%, 0.075% accuracy parameter setting by keypad directly

4-20 mA output plus direct digital HART communication

Automatic zero calibration by Press-button

Explosion proof and weatherproof housing IP 65

STANDARD SPECIFICATION

Process Fluid	Liquid,Gas of vapor	Application	
Application	Absolute Pressure, Gauge Pressure	Differential Pressure	Accuracy
Measuring Range	0-0.16 KPa~0-1.0 KPa (Minimum) 0-4.0 MPa~0-20.0 MPa (Maximum)		
Stability	+/-0.15% of URL for 2 years		
Working Temperature	-25 to +95 °Ct		
Max. Pressure	70 MPa		
Flange/Adaptor	Connection: SUS 304 / SUS 316		
Housing	Housing: Low copper cast aluminum alloy whit polyurethane, light orange paint / Stainless steel		
Diaphragm	Diaphragm: SUS 316L / Tantalum/etc		
Name / Tag Plate	Stainless Steel 304 / Stainless Steel 316		
Bolts & Nuts	Carbon Steel / Stainless Steel		
Mounting Bracket	Carbon steel / Stainless Steel 304 / 316		
Name / Tag Plate	Stainless Steel		
Protection Class	IP65 (Standard) Intrinsically Safe EEx ia IIC T5 (Standard) Explosion proof Ex D IIB T5		
Display	5 Digits programmable & 0-100% Barograph		
Display Unit	Standard 22 different engineering unit 5 digits programmable for special unit		
Keypad	3 Internal keys for programming and output setting		
Current Output	4 - 20 mA 2 wires with Hart signal (Compatible) Load: Rohm=(Vdc-9) *50		
Power Supply	9 - 36 VDC		
Damping	0 - 32 seconds		
Response Time	100 mS		
Mounting	Direct installation or bracket on 2" pipe		
Humidity Limit	0 to 100% Relative Humidity		
Turn on Time	2 Seconds with minimum damping		
Zero Calibration	Automatic zero calibration by press-button		
Cable Entry	M20 Conduit Threads / 1/2" NPT (Female)		
Temperature Effect	+/-0.18% ~ +/-0.5% of span per 20 °C		
Process connection	1/2" NPT, 1/2" BSP		
Ambient Temperature	-25 to +85 °C		
Dimensions	102mm (W) * 160mm (H) * 130mm (D)		
Weight	1.3 kg		
Accuracy	+/- 0.75 % & +/-0.1 % of span		

Pressure Transmitter

MODEL Code

Item	Code	Specification
DF3351TG		Gauge Pressure Transmitter
DF3351TA		Absolute Pressure Transmitter
Measurement Range	A	0-0.217~1.087 psi (-0.015~0.075 bar)
	B	-14.5~5.4244 psi (-1~0.3739 bar)
	0	-14.5~26.97 psi (-1~1.86 bar)
	1	-14.5~100.07 psi (-1~6.9 bar)
	2	-14.5~299.9 psi (-1~20.68 bar)
	3	-14.5~999.3 psi (-1~68.9 bar)
	4	-14.5~2999.3 psi (-1~206.8 bar)
	5	-14.5~6000.2 psi (-1~413.7 bar)
	C	Customized
Output	A	4-20mA, HART Protocol, Linear output
Diaphragm Material	2	Stainless Steel 316L
	3	Hastelloy C
	G	Stainless Steel 316L + Gold Coated
	C	Customized
Fill Fluid	1	Silicone Oil
	2	Fluorine Oil
Housing Material/Cable Entry	A	Epoxy-coated ALUMINIUM 1/2 NPT
	B	Epoxy-coated ALUMINIUM M20*1.5
	S	Stainless Steel 1/2"NPT
	K	Stainless Steel M20*1.5
Body/Process Connection Material	B1	Stainless Steel 304
	B2	Stainless Steel 316
Process Connection	D	1/2" NPT-F
	E	1/2" NPT-M
	A	M20*1.5-F
	C	1/2" G-F
	M	Customized

Pressure Transmitter

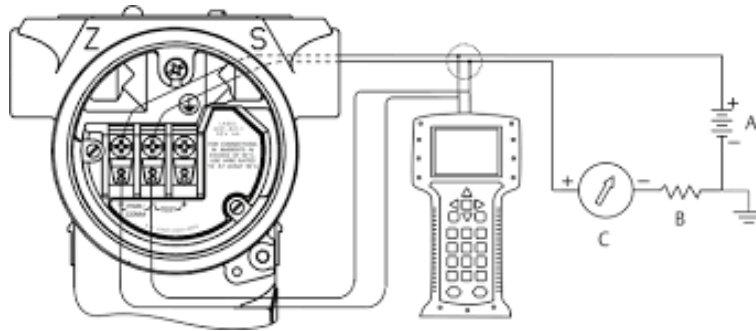
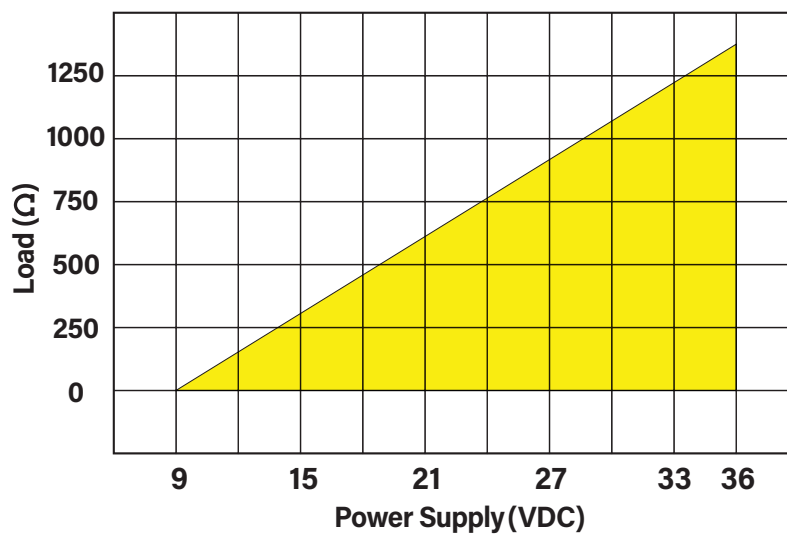
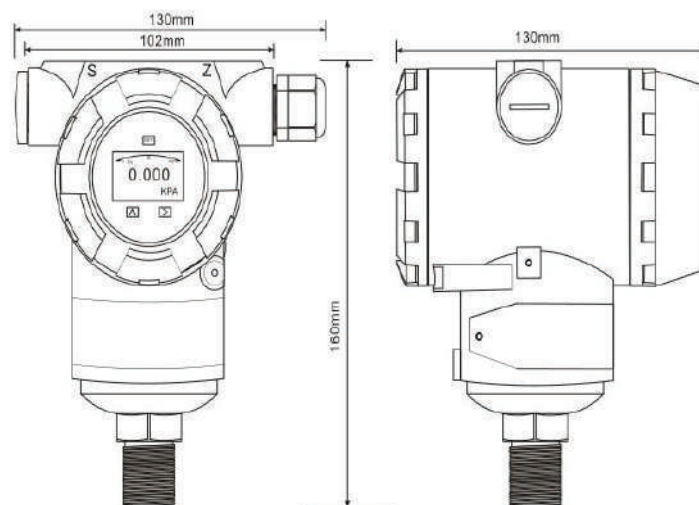
MODEL Code

Item	Code	Specification
Integral Assembly	N0	None
	S1	Assemble to 1199 Diaphragm seal
	S5	Assemble to Integral 2 Valve Manifold
	ACC	Other accessories(Cooling element, Syphon, ...)
Mounting BracketOutput	B0	None
	B4	Tube type2-in. pipe (stainless steel)
	B6	Wall mounting bracket (carbon steel)
	B7	Wall mounting bracket (stainless steel)
Product Certification	I1	Intrinsically Safe (Exia IIC T4~T6) ATEX
	E8	Explosion proof (Exd IIC T6 Gb) ATEX
	K8	Intrinsically Safe (Exia) & Explosion proof (Exd)
	WO	Without Certification
Display and Interface Options	M5	LCD Display
Calibration	Q4	Calibration Certificate
Optional	Q8	Material Certificate
	Q7	PMI Test (Only For Body and Housing)
	P1	Hydrostatic Test
	C4	Lightning Protection
	K1	Degreasing Treatment
Nameplate	Y2	SST Nameplate

DF 3351 TG - - - - - - - - - - - - - - -

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16

Example: DF 3351TG-2-A-2-1-B-B2-E-N0-B5-I1-M5-Q4

WIRING DIAGRAM**SUPPLY VOLTAGE VS LOOP LOAD****DIEMENSION**

Certificato di esame UE del tipo
EU-type examination certificate
n. ECM 24 ATEX-B UN60
 Rilasciato ai sensi della direttiva 2014/34/UE – Allegato III – Modulo B
 Issued according to 2014/34/UE Directive – Annex III – Module B

Richiedente
Applicant
 Ragione Sociale Dibagaran Farayand Engineering Company (DIFACO)
 Company Name
 Indirizzo No7, East Goltzar Alley, Adli Blvd., Pounak, Tehran, Iran
 Address
 Apparecchiatura Pressure Transmitter (Differential Pressure Transmitter)
 Equipment
 Modelli DF3351 Series
 Models

Questa apparecchiatura o sistema di protezione e le sue eventuali varianti accettate sono descritte nel presente Certificato e sono descritte in this Certificate and its Annex.
 This equipment or protective system and any acceptable variation variants accepted are described in this Certificate and its Annex.

L'ECM, Organismo Notificato n° 1282 in conformità all'art. 17 della Direttiva 2014/34/UE del Parlamento europeo e del Consiglio del 26 febbraio 2014, certifica che questa apparecchiatura o sistema di protezione verificata secondo la procedura di cui all'allegato III, Modulo B, è conforme ai requisiti essenziali di sicurezza e salute per il progetto e la costruzione di apparecchiature e sistemi di protezione destinati ad essere utilizzati in atmosfere potenzialmente esplosive, definiti nell'allegato II della Direttiva.
 The ECM, Notified Body No. 1282 in accordance with Article 17 of Directive 2014/34/UE of the European Parliament and of the Council of 26 February 2014, certifies that this equipment or protective system was tested according to the procedure set out in Annex III, Module B, complies with the essential health and safety requirements for the project and construction of equipment and protective systems intended for use in potentially explosive atmospheres given in Annex II of the Directive.

Le verifiche ed i risultati di prova sono registrati nel rapporto n° 002-2024-UN60.
 The examination and test results are recorded in confidential report no. 002-2024-UN60.

I requisiti essenziali di sicurezza e salute sono assicurati dalla rispondenza alle Norme applicate: EN 50079-0:2018, EN 60079-1:2014, EN 60079-11:2012.
 The essential health and safety requirements are assured by compliance with applied Standard: EN 50079-0:2018, EN 60079-1:2014, EN 60079-11:2012.

Questo Certificato di esame UE del tipo è relativo soltanto al design, progetto, all'esame ed alle prove dell'apparecchiatura o sistema di protezione specificato in accordo con la Direttiva 2014/34/UE. Further requirements of the Directive shall be Ulteriori requisiti di questa Direttiva si applicano al processo di produzione e fornitura dell'apparecchiatura o sistema di protezione: questi requisiti non sono oggetto del presente certificato.
 This EU-type examination certificate relates only to the design, project, and tests specified equipment in accordance with protection specified in accordance with the Directive 2014/34/UE. Further requirements of the Directive shall be Ulteriori requisiti di questa Direttiva si applicano al processo di produzione e fornitura dell'apparecchiatura o sistema di protezione: these requirements are not covered by this certificate.

L'apparecchiatura o il sistema di protezione deve riportare i seguenti contrassegni:
 The equipment shall be marked with the following symbols:

II 2 G Ex db IIC T6 Gb
II 1 G Ex ia IIC T1 T6 Ga
 Protection Level: IP 66

Valsamoggia (BO)
 Data - Date 01/04/2024
 Timbro
 Scadenza - Expiry date 31/03/2029

Firma autorizzata
 Authorized signature
 Amanda Payne
 (Deputy Manager)

Test Report / Technical Construction File no. DF20240320-25ATEX

Questo certificato, incluso l'allegato, può essere riprodotto solo integralmente e senza alcuna variazione.
 This certificate, annex included, can only be reproduced in its entirety and without any change.

Cer. 11 ATEX AII, III Rev. 1 – 06/03/2017

Ente Certificazione Macchine srl
 Via Ca' Bella 242 - Loc. Castello di Serravalle - 40053 Valsamoggia (BO)
 ☎ +39 0516705141 ☎ +39 0516705156 ✉ info@entecerma.it www.entecerma.it

Pag. 1 di 2

شهادة - 증명서 - Certificat - 證書 - Сертификат - Certificate

SIL
Functional Safety Certificate

No. 41231013.DFEC80
 Test Report / Technical Construction File no. SIL-YLBSZS(23)-51

Certificate's Holder: Dibagaran Farayand Engineering Company (DIFACO)
 No. 7, East Goltzar Alley, Adli Blvd., Pounak, Tehran, Iran

Product: Pressure Transmitter (Differential Pressure Transmitter)

Model(s): DF3351 Series

Standard: Has been assessed per the relevant requirements of:
 IEC 61508:2010 Part 1-7
 And meets requirements providing a level of integrity for:
 Systematic Capability (SC) SIL 3 (3 Capable)
 Random Capability: Type B Element
 SIL 2 @ HFT=0, SIL 3 @ HFT=1; Route 2+
 PFD and Architecture/Contents must be verified each application
 Safety function:
 The pressure transmitter measures the level, density and pressure of liquids, gases or vapors and converts them into 4-20 mA DC signal outputs.
 * It is suitable to be safety function according to the description and the configuration defined in Annex I

Verification Mark:

Remark: This SIL Verification of Compliance has been issued on a voluntary basis. ECM confirms that a Test Report is existent for the above listed product(s) and found to meet the requirements of above standards for application in safety related system up to Safety Level of SIL 3. The unit must be properly designed into a safety instrument function as per the requirements in the Safety Manual. The Verification Mark shows active can be affixed on the product. It is NOT permitted to alter the Verification Mark in any way. In addition the Verification's holder is NOT allowed to transfer the Verification to third parties. This certificate can be checked for validity at: www.entecerma.it

Date of issue 13 October 2023
Expiry date 12 October 2028

For online check:


Approver
 Ente Certificazione Macchine
 Legal Representative
 Luca Bedonni

Ente Certificazione Macchine
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بسمه تعالی

کارگروه ارزیابی شرکتها و موسسات دانشبنیان

تاییدیه شرکت‌های دانشبنیان

نام شرکت	مهندسی دیاگران فرایند	شناسه ملی	10102555842
استان	البرز	تاریخ تایید	1401/08/29
موزه فناوری	06- برق و الکترونیک، فوتونیک، مخابرات و سیستم‌های خودکار	نوع تایید	تولیدی نوع 2

- به موجب این تاییدیه، شرکت موسسه فوق الذکر بر اساس ارزیابی انجام شده طبق «این نامه اجرایی حمایت از شرکتها و موسسات دانشبنیان» و «قانون حمایت از شرکتها و موسسات دانشبنیان» و «نقارن سازی نوآوریها و اختراعات»، بصورت شرکت موسسه دانشبنیان تایید شده است.
- این تاییدیه لزوماً به معنای تایید همه کالاها و خدمات شرکت به عنوان کالا و خدمات دانشبنیان نیست، بلکه ممکن است صرفاً برخی از کالاها و خدمات شرکت، مورد تایید کارگروه ارزیابی شرکتها و موسسات دانشبنیان قرار گرفته باشند.
- اعتبار و صحت این تاییدیه از آدرس pub.daneshbonyan.ir قابل استعلام است.
- این تاییدیه به صورت خودکار و از طریق سامانه دانشبنیان pub.daneshbonyan.ir صادر شده است.
- شرکت‌های تایید شده در کارگروه ارزیابی شرکتها و موسسات دانشبنیان، تا زمانی که تاییدیه آنها در فهرست سامانه دانشبنیان (pub.daneshbonyan.ir) قرار دارد، می‌توانند از مزایای قانون حمایت از شرکتها و موسسات دانشبنیان استفاده کنند و در صورت ارزیابی مجدد و عدم تایید شرکت، از این فهرست حذف خواهند شد.
- استفاده از هرگونه حمایت، منوط به استعلام دستگاه اجراییست. حمایت از، دیرینه کارگروه ارزیابی شرکتها و موسسات دانشبنیان و تایید آن از سوی این دیرینه می‌باشد. در غیر این صورت دستگاه اجرایی ذیربط بر طبق قانون و مقررات مربوط مسئول خواهد بود. اجرای هر کدام از حمایت‌ها، مطابق دستورالعمل‌های اجرایی مراجع ذیربط می‌باشد.
- در صورت هرگونه تخلف در استفاده از تسهیلات مربوط توسط شرکت‌های تایید شده، مطابق مجازات‌های ماده ۱۱ قانون «حمایت از شرکتها و موسسات دانشبنیان» و «نقارن سازی نوآوریها و اختراعات» با آنها برخورد می‌شود.
- براساس مصوبه کارگروه ارزیابی شرکت های دانش بنیان، شرکت های تولیدی و نوپای نوع 2 با نوع 3 (استعد دانش بنیان)، مشمول معافیت مالیاتی نخواهند بود.

تاریخ چاپ تاییدیه: ۱۴۰۲/۰۸/۰۹

دیرینه کارگروه ارزیابی شرکتها و موسسات دانشبنیان

E.P.I.L.V.
 Energy and Power Industries Laboratories Co.
 Assessment Report

Document No: LQF-708-05
 Date of Issue/Revise: 99/09/04
 Revision no: 00
 Page: 1 of 3

Section 1 - General

Assessment report number: EP.12222022

Prepared by + signature: M. Ghanbariha

Reviewed by + signature: S. Jamshidi

Approved by + signature: S.M. Misadi

Date of issue: December 22, 2022

Note:
 This assessment report includes:
 1- EXTR No.: HI-70013
 2- Supplementary Technical Documents No: DI- AT-12222022

Ex Testing Laboratory: EPIL Co.
 Address: Unit 12, No.2, Boujar Sefat Dead-End, Corner of Fariman St.,
 Bazorgmehr St., Vahid-Asr Ave., Tehran- Iran

Manufacturer: Dibagaran e farayand (Difaco)
 Address: Unit 2, No.9, Sanajee St., Karimkhan-e-zand, Tehran, Iran

Reference Standards: EN 60079-0: 2018, EN 60079-1: 2014

General remarks:
 The test results presented in this report relate only to the object tested.

Test and/or assessed item description:
 Equipment/Component: Pressure transmitter
 Model/type reference: DF3351
 Trademark: Difaco

Ex Code: Ex db IIC T6 Gb
 Rating:
 Rated voltage: 24 VDC
 Rated current: Max. 20 mA
 Rated power: Max. 0.65 W

ASSESSMENT REPORT REFERENCE: EP.12222022

Document validity status
 Obsolete ☐ Valid ☒