



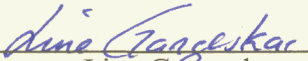
DET NORSKE VERITAS

EC-TYPE EXAMINATION CERTIFICATE

- [2] **EQUIPMENT OR PROTECTED SYSTEM INTENDED FOR USE IN POTENTIALLY EXPLOSIVE ATMOSPHERES DIRECTIVE 94/9/EC**
- [3] EC-Type Examination Certificate Number: **DNV-2004-OSL-ATEX- 0199**
- [4] Equipment or Protective System: **Repeater power supply and trip amplifier D1054 S
Fieldbus Isolating Repeater D1061 S**
- [5] Applicant – Manufacturer or Authorized representative: **G.M. International S.r.l**
- [6] Address: **Via San Fiorano 70, 20058 Villasanta (MI), Italy**
- [7] This equipment or protective system and any acceptable variation thereto is specified in the schedule to this certificate and the documents therein referred to.
- [8] DNV, notified body number 0575 in accordance with Article 9 of Council Directive 94/9/EC of 23 March 1994, certifies that this equipment or protective system has been found to comply with the Essential Health and Safety requirements relating to the design and construction of equipment and protective systems intended for use in potentially explosive atmospheres given in Annex II to the Directive.
- The examination and test results are recorded in confidential report no. **2004-3292**
- [9] Compliance with the Essential Health and Safety Requirements has been assured by compliance with:
EN 50014: 1997 + A1: 1999 + A2: 1999, EN 50020:2002 and EN50284:1999
- [10] If the sign “X” is placed after the certificate number, it indicates that the equipment or protective system is subject to special conditions for safe use specified in the schedule to this certificate.
- [11] This EC-TYPE EXAMINATION CERTIFICATE relates only to the design and construction of the specified equipment or protected system. If applicable, further requirements of this Directive apply to the manufacturer and supply of this equipment or protective system.
- [12] The marking of the equipment or protective system shall include the following :

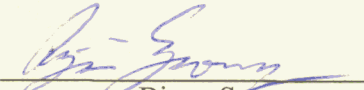
 II (1) G D [EEEx ia] IIC  I (M2) [EEEx ia] I $-20^{\circ}\text{C} \leq T_a \leq +60^{\circ}\text{C}$

Høvik, 2004-08-31
for Det Norske Veritas Certification AS


Line Gangeskar
Head of Section



This certificate replaces the version
issued 2004-08-09


Bjørn Spongsveen
Senior Engineer

Notice: This Certificate is subject to terms and conditions overleaf. Any significant change in design or construction may render this Certificate invalid.

If any person suffers loss or damage which is proved to have been caused by any negligent act or omission of Det Norske Veritas, then Det Norske Veritas shall pay compensation to such person for his proved direct loss or damage. However, the compensation shall not exceed an amount equal to ten times the fee charged for the service in question, provided that the maximum compensation shall never exceed USD 2 million. In this provision "Det Norske Veritas" shall mean the Foundation Det Norske Veritas as well as all its subsidiaries, directors, officers, employees, agents and any other acting on behalf of Det Norske Veritas.



[13]

Schedule

[14] EC-TYPE EXAMINATION CERTIFICATE No.: DNV-2004-OSL-ATEX-0199

[15] **Description of Equipment or Protective System**

The D1054 S series DIN Rail isolator is an associated apparatus designed as single channel galvanic isolators to interface intrinsically safe apparatus field devices located in hazardous area with non-intrinsically safe measuring and process control equipment located in safe area.

The D1061 S series DIN Rail isolator is an associated apparatus designed as galvanic isolators to transfer bidirectional serial communication from Hazardous area equipment and convert their signals to drive bidirectionally non-intrinsically safe digital communication systems located in safe area.

They are enclosed in a plastic enclosure suitable for installation on T35 DIN rails.

Electrical Data

D1054 S

Input:		Output:		Output between +TX and +IN, Terminals 14 and 15		Output between +IN and -IN, Terminals 15 and 16	
Um	250V	Uo =		26,7 V	Uo =		1,1 V
Ui =	30V DC	Io =		90.76 mA	Io =		56 mA
Ii =	182,2 mA	Po=		611 mW	Po=		16 mW
		Lo=	IIA	34,5 mH	Lo=	IIA	90,7 mH
			IIB	17,2 mH		IIB	45,3 mH
			IIC	4,3 mH		IIC	11,3 mH
		Co=	IIA	2,39 μF	Co=	IIA	1000 μF
			IIB	720 nF		IIB	1000 μF
			IIC	35 nF		IIC	100 μF
		L ₀ /R ₀	IIA	462,48 μH/Ω	L ₀ /R ₀	IIA	18,618 mH/Ω
			IIB	231,24 μH/Ω		IIB	9,309 mH/Ω
			IIC	57,81 μH/Ω		IIC	2,327 mH/Ω



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DNV-2004-OSL-ATEX-0199

D1061 S

Input:		Output:	
Um =	250V	Uo =	3,65 V
Ui =	30V DC	Io =	224,81 mA
Ii =	282,58 mA	Po=	205,14 mW
	Lo=	IIA	5,6 mH
		IIB	2,8 mH
		IIC	0,7 mH
	Co=	IIA	1000 μ F
		IIB	1000 μ F
		IIC	100 μ F
	L ₀ /R ₀	IIA	1386 μ H/ Ω
		IIB	693 μ H/ Ω
		IIC	173 μ H/ Ω

- [16] **Report No.:** 2004-3292
Project No.: 42035406

Descriptive Documents

Number	Title	Rev.	Date
CRR022	Certification Report D1054	0	2004-05-21
SCD059	Electric Schematic D1054	1	2004-05-18
PCF067	Printed Circuit Board D1054 Mother Board	1	2004-05-18
PCF068	Printed Circuit Board D1054 Daughter Board	1	2004-05-18
TRS004	Technical Specification Transformer TFRT006	0	1999-09-08
TRS005	Technical Specification Transformer TFRT007	1	2001-09-03
CRR023	Certification Report D1061	0	2004-05-31
SCD055	Electric Schematic D1061	2	2004-05-13
PCF059	Printed Circuit Board D1061 Mother Board	2	2004-05-13
PCF060	Printed Circuit Board D1061 Daughter Board	2	2004-05-13
TRS019	Technical Specification Transformer TFRT029	0	2004-05-04

- [17] **Special Conditions for Safe Use**
 N
- [18] **Essential Health and Safety Requirements**
 See part 9 of this certificate



END OF CERTIFICATE



SUPPLEMENT 1 to EC-TYPE EXAMINATION CERTIFICATE

EC-TYPE EXAMINATION CERTIFICATE No.: DNV-2004-OSL-ATEX- 0199

This EC-Type Examination Certificate is extended to include the Strain Gauge Bridge Isolating Repeater type D1063S. The single channel DIN-Rail Strain Gauge Isolating Repeater D1063S acts as a transparent galvanic isolated interface installed between a weighing indicator in safe area and a load cell (or group of load cells) in hazardous area. The Repeater Power Supply contains electronic circuitry including transformers that provide galvanic isolation between the hazardous and non-hazardous area circuitry, zener diodes to limit the output voltage and resistors to limit the output current. This is housed in a plastic enclosure with external terminals.

Electrical data:

Input: Terminals 1 to 8		Output:	Output Terminals 9, 10, 11 and 12 (including terminals 13 and 14)	Output Terminals 13 and 14	
Um	250V	Uo =	17,3 V	Uo =	17,3 V
		Io =	199,6 mA	Io =	8 mA
		Po=	864 mW	Po=	35 mW
		Lo=	IIA 6,8 mH IIB 3,4 mH IIC 0,85 mH	Lo=	IIA 2,4 H IIB 1,2 H IIC 0,3 H
		Co=	IIA 8,5 μF IIB 2,06 μF IIC 353 nF	Co=	IIA 8,5 μF IIB 2,06 μF IIC 353 nF
		L ₀ /R ₀	IIA 329,6 μH/Ω IIB 164,8 μH/Ω IIC 41,2 μH/Ω	L ₀ /R ₀	IIA 8,22 mH/Ω IIB 4,11 mH/Ω IIC 1,02 mH/Ω

The output data I_o , P_o and L_0/R_0 for terminals Terminals 9, 10, 11 and 12 (including terminals 13 and 14) is valid for all terminals connected together. The values for terminals 13 and 14 are only valid if the output circuits are separated and regarded as a separate circuits according to EN50020.

Ex-code

[EEx ia] IIC $-20^{\circ}\text{C} \leq T_{\text{amb}} \leq +60^{\circ}\text{C}$

Degrees of protection (IP Code)

IP20

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DNV-2004-OSL-ATEX- 0199


Report No.: 2004-3549

Project No.: 42035529

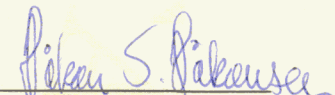
Descriptive Documents

Number	Title	Rev.	Date
CRR024	Certification report Strain Gauge Bridge Isolating Repeater D1063	2	2005-02-18
PCF065 (10 pages)	D1063 Bridge Interface repeater DIN Rail	2	2004-07-28
PCF066 (10 pages)	D1063 Bridge Interface repeater DIN Rail	2	2004-07-28
SCD058	D1063 Bridge Interface repeater DIN Rail	2	2004-07-28
TRS021	Technical specification Transformer TRFT031	0	2004-07-28

Høvik, 2005-03-03
for Det Norske Veritas Certification AS


Line Gangeskar
Head of Section




Håkon S. Håkonsen
Senior Engineer

END OF SUPPLEMENT