



Translation

(1) **Statement of Conformity**

(2) Equipment and protective systems intended for use in potentially explosive atmospheres, **Directive 94/9/EC**

(3) **Statement of Conformity Number:** TÜV 06 ATEX 553388 X

(4) for the equipment: Solenoid Driver type IM72-**Ex/L

(5) of the manufacturer: **Hans Turck GmbH & Co. KG**

(6) Address: Witzlebenstraße 7
D-45472 Mülheim an der Ruhr

Order number: 8000553388

Date of issue: 2006-11-28

- (7) This equipment or protective system and any acceptable variation thereto are specified in the schedule to this statement of conformity and the documents therein referred to.
- (8) The TÜV NORD CERT GmbH 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 the confidential report No. 06 YEX 553388.
- (9) Compliance with the Essential Health and Safety Requirements has been assured by compliance with:
EN 60079-0:2004 **EN 60079-15:2005**
- (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 statement of conformity relates only to the design, examination and tests of the specified equipment in accordance to the Directive 94/9/EC. Further requirements of the Directive apply to the manufacturing process and supply of this equipment. These are not covered by this certificate.
- (12) The marking of the equipment or protective system must include the following:

II 3 G Ex nA [nL] IIC/IIB T4

TÜV NORD CERT GmbH, Langemarckstraße 20, 45141 Essen, accredited by the central office of the countries for safety engineering (ZLS), Ident. Nr. 0044, legal successor of the TÜV NORD CERT GmbH & Co. KG Ident. Nr. 0032

The head of the certification body

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(13) **SCHEDULE**

(14) **Statement of Conformity No. TÜV 06 ATEX 553388 X**

(15) Description of equipment

The solenoid driver type IM72-**Ex/L is used for the supply of passive two-poles (e.g. solenoid valves, signal lamps and four wire transmitters) as well as for the safe galvanic separation of the energy limited circuits and the non energy limited circuits. The solenoid driver is executed with one or two channels. The solenoid driver is an associated electrical apparatus for installation outside of the explosion hazardous area (according to EN 50020) resp. an apparatus for use in Zone 2 explosion hazardous areas (according to EN 60079-15).

The permissible ambient temperature range is -25°C ... +70°C.

Electrical data

Input circuits
(Connections channel 1: 11 [+], 12 [-]
Connections channel 2: 8 [+], 9 [-])

U = 24 V d.c. (max. 30 V d.c.)
P ≤ 3 W

Output circuits
(Connections channel 1: 1 [+], 3 [-]
Connections channel 2: 4 [+], 6 [-])

energy limited circuits Ex nL IIC/IIB
Maximum values per channel:
U_o = 27 V
I_o = 96 mA
R = 295 Ω
P_o = 678 mW
Characteristic line: trapezoidal

The effective internal inductances and capacitances are negligibly small.

	Ex nL	IIC	IIB	
max. permissible external inductance	0.68 mH	0.5 mH	13 mH	2.0 mH
max. permissible external capacitance	120 nF	130 nF	570 nF	620 nF

Output circuits
(Connections channel 1: 2 [+], 3 [-]
Connections channel 2: 5 [+], 6 [-])

energy limited circuits Ex nL IIC/IIB
Maximum values per channel:
U_o = 17.6 V
I_o = 96 mA
R = 295 Ω
P_o = 678 mW
Characteristic line: trapezoidal

The effective internal inductances and capacitances are negligibly small.

Schedule Statement of Conformity No. TÜV 06 ATEX 553388 X

Ex nL	IIC		IIB	
max. permissible external inductance	1.2 mH	0.5 mH	13 mH	2.0 mH
max. permissible external capacitance	370 nF	420 nF	1.0 µF	2.1 µF

The maximum values of the tables are also allowed to be used up to the permissible limits as concentrated capacitances and as concentrated inductances.

The energy limited output circuits of channel 1 are safely galvanically separated from the energy limited output circuits of channel 2.
The energy limited output circuits of the same channel are galvanically connected with each other.
The energy limited output circuits are safely galvanically separated from the non energy limited circuits up to a peak crest value of the voltage of 375 V.

(16) Test documents are listed in the test report No. 06 YEX 553388.

(17) Special conditions for safe use

- Only one energy limited circuit is allowed to be connected to the connections of the same channel; the connection of 2 energy limited circuits with the belonging maximum values of C_o and L_o is not permissible. The permissible maximum values have to be taken from the aforementioned tables.
- The solenoid driver type IM72-**Ex/L has to be installed in a suitable housing according to EN 60079-15 in such a way, that a degree of protection of at least IP 54 according to EN 60529 is reached.
- The connecting and disconnecting of energised non energy limited circuits is only permitted if no explosion hazardous atmosphere exists.
- For the supply circuit arrangements have to be taken externally, that the rated voltage is exceeded not more than 40% by transient disturbances.

(18) Essential Health and Safety Requirements

no additional ones

Konformitätserklärung Nr. 3181-1 M Declaration of Conformity



Diese Konformitätserklärung entspricht der Europäischen Norm EN 45014 "Allgemeine Kriterien für Konformitätserklärungen von Anbietern". Die Grundlage der Kriterien sind internationale Dokumente, insbesondere ISO/IEC Leitfadens 22, 1982: "Information on manufacturer's declaration of conformity with standards or other technical specifications".

This "Declaration of Conformity" complies with the European Standard EN 45014 "General criteria for a supplier's declaration of conformity". These criteria are based on the relevant international documentation, particularly the ISO/IEC Guide 22, 1982: "Information on the manufacturer's declaration of conformity with standards or other technical specifications".

Wir/ We **HANS TURCK GMBH & CO KG**
WITZLEBENSTR. 7, D - 45472 MÜLHEIM A.D. RUHR

erklären in alleiniger Verantwortung, dass die Produkte
declare under our sole responsibility that the products

Ventilsteuerbausteine Typenreihe IM72-..Ex/L

auf die sich die Erklärung bezieht, mit den folgenden Normen übereinstimmen
to which this declaration relates are in conformity with the following standards

EN 61326 / 1998; A1 / 1999

und wo anwendbar
and where applicable

EN 50014 + A1 +A2 / 1997 EN 50020 / 2002 EN 60079-15 / 2005

Gemäß den Bestimmungen der Richtlinie (falls zutreffend)
Following the provisions of Directive (if applicable)

EMV - Richtlinie	/ EMC Directive	89 / 336 / EWG	3. Mai 1989
Richtlinie ATEX 100a	/ Directive ATEX 100a	94 / 9 / EG	23. März 1994

Weitere Normen
additional standards

Aussteller der EG-Baumusterbescheinigung:

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Am TÜV 1, D-30519 Hannover
Kenn-Nr. 0044, Registernummer: TÜV 05 ATEX 2846 X TÜV 06 ATEX 553388 X

Mülheim, den 26.01.07



(i.V. W. Stoll)

Ort und Datum der Ausstellung /
Place and date of issue

Name und Unterschrift des Befugten /
Name and signature of authorized person