1 # TYPE EXAMINATION CERTIFICATE

2 **Equipment Intended for use in Potentially Explosive Atmospheres
Directive 94/9/EC**

3 Type Examination Certificate Number: **Baseefa03ATEX0649X**

4 Equipment: **TYPE NM6 SOLENOID VALVE OPERATOR**

5 Manufacturer: **ASCO JOUCOMATIC LIMITED**

6 Address: **2 Pit Hey Place, West Pimbo, Skelmersdale, Lancashire, WN8 9PG**

7 This equipment and any acceptable variation thereto is specified in the schedule to this certificate and the documents therein referred to.

8 Baseefa (2001) Ltd. certifies that this equipment has been found to comply with the Essential Health and Safety Requirements relating to the design and construction of equipment of Category 3 intended for use in potentially explosive atmospheres given in Annex II to European Union Directive 94/9/EC of 23 March 1994.

The examination and test results are recorded in confidential Report No. **03(C)0576, dated 18 November 2003**

9 Compliance with the Essential Health and Safety Requirements has been assured by compliance with:

EN 50021: 1999 **EN 50281-1-1: 1998**

except in respect of those requirements listed at item 18 of the Schedule.

10 If the sign "X" is placed after the certificate number, it indicates that the equipment is subject to special conditions for safe use specified in the schedule to this certificate.

11 This TYPE EXAMINATION CERTIFICATE relates only to the design of the specified equipment and not to specific items of equipment subsequently manufactured.

12 The marking of the equipment shall include the following :

⟨Ex⟩ **II 3GD** **EEx nA II T4 or T3 (See Schedule)** **-20°C ≤ Tamb ≤ 50°C**

This certificate may only be reproduced in its entirety, without any change, schedule included.

Baseefa (2001) Ltd. Customer Reference No. **0080** Project File No. **03/0576**

This certificate is granted subject to the general terms and conditions of Baseefa (2001) Ltd. It does not necessarily indicate that the equipment may be used in particular industries or circumstances.

R S SINCLAIR
DIRECTOR
On behalf of
Baseefa (2001) Ltd.

Baseefa (2001) Ltd.
Health and Safety Laboratory Site, Harpur Hill,
Buxton, Derbyshire SK17 9JN
Telephone +44 (0) 1298 28255 Fax +44 (0) 1298 28216
e-mail info@baseefa2001.biz web site www.baseefa2001.biz
Registered in England No. 4305578 at 13 Dovedale Crescent, Buxton, Derbyshire, SK17 9BJ

13 # Schedule

14 ## Certificate Number Baseefa03ATEX0649X

15 Description of Equipment

The Type NM6 Solenoid Valve Operator comprises a coil of polyimide enamelled copper wire wound on a polyphenylene sulphide (Ryton R7) bobbin. The coil is mounted within a mild steel yoke assembly. The assembly is encapsulated in a mineral filled glass fibre reinforced epoxy moulding compound.

Electrical connection to the coil is provided for by a socket. Three connection pins protrude from the encapsulating compound. One pin is connected internally to the yoke assembly (earth), the other two to the coil ends. The pins engage into the socket which comprises a polyamide body, housing receptors for connection to the solenoid pins and screw connections for external connection. The socket is held in position, when connected to the solenoid, by a screw. A silicone gasket fits between the socket and the solenoid body to provide for ingress protection. A compression type cable gland or gland adaptor is fitted to the socket rear outlet to facilitate cable entry.

The solenoid is available in a.c. or d.c. arrangements; the main difference being that a.c. versions include a non-resettable thermal fuse, positioned close to the winding in order to isolate the supply if the coil overheats. The a.c. version of the solenoid is rated at up to 400V with a maximum dissipation of 9W, while the d.c. version is rated at up to 240V with a maximum dissipation of 15.3W. The temperature classification is dependent on nominal power rating as tabulated below.

Power Rating	Temperature Classification
Up to 9.7W d.c	T4
From 9.7W to 15.3W d.c.	T3
Up to 9W a.c.	T3

Variation 0.1

An increase in size to form the Type NMXX Solenoid Valve Operator. The a.c. version of the solenoid is rated at up to 400V with a maximum dissipation of 16.7W, while the d.c. version is rated at up to 240V with a maximum dissipation of 19.7W. The temperature classification is T3.

Variation 0.2

A further increase in size to form the Type NM12 Solenoid Valve Operator. The a.c. version of the solenoid is rated at up to 400V with a maximum dissipation of 20W, while the d.c. version is rated at up to 240V with a maximum dissipation of 23W. The temperature classification is T3.

16 Report Number

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17 Special Conditions for Safe Use

1. High voltages may be generated on interruption of the supply and appropriate measures may be required to protect other connected apparatus from the voltage peaks.
2. These solenoids are suitable for installation only in areas where there is a low risk of impact damage.
3. The incoming supply cable must be provided with additional clamping in order to prevent the cable gland from being subjected to tensile load.

18 Essential Health and Safety Requirements

All relevant Essential Health and Safety Requirements are covered by the standards listed at item 9.

19 Drawings and Documents

Number	Issue	Date	Description
118410	L	12-06-03	General Arrangement Type NM6 Solenoid Operator
118411	J	12-06-03	General Arrangement Type NMXX Solenoid Operator
118412	J	12-06-03	General Arrangement Type NM12 Solenoid Operator
HVA 122266	E	12-06-03	Coil Assembly Type NM6 (AC version)
HVA 122267	E	12-06-03	Coil Assembly Type NMXX (AC version)
HVA 122268	E	12-06-03	Coil Assembly Type NM12 (AC version)
HVA 122297	E	23-06-03	Coil Assembly Type NM6 (DC version)
HVA 122298	D	23-06-03	Coil Assembly Type NMXX (DC version)
HVA 122299	D	12-06-03	Coil Assembly Type NM12 (DC version)
FV-122036	C	02-09-03	Connector
145931	-	02-09-03	Terminal Block Assembly
FV 122289	D	01-07-98	Thermal Cut-off