IECEx Certificate of Conformity

INTERNATIONAL ELECTROTECHNICAL COMMISSION
IEC Certification Scheme for Explosive Atmospheres

for rules and details of the IECEx Scheme visit www.iecex.com

Certificate No.: IECEx LCIE 18.0016X

Issue No: 0

Certificate history:
Issue No. 0 (2018-06-08)

Status: **Current**

Date of Issue: **2018-06-08**

Applicant: **ASCO SAS**
53, rue de la Beauce
28110 Lucé
France

Equipment: **Pneumatic manifold - Type : *501AV****0****

Optional accessory:

Type of Protection: **Ex ec**

Marking:

Ex ec IIC T4 Gc

(Refer to attachment for full marking)

Approved for issue on behalf of the IECEx Certification Body: Julien Gauthier

Position: Certification Officer

Signature:
(for printed version)

Date: 2018-06-08

LABORATOIRE CENTRAL DES INDUSTRIES ELECTRIQUES
S.A.S au capital de 15.745.984 €
RCS Nanterre B 408 363 174
33 avenue du Général Leclerc
F - 92266 FONTENAY AUX ROSES

1. This certificate and schedule may only be reproduced in full.
2. This certificate is not transferable and remains the property of the issuing body.
3. The Status and authenticity of this certificate may be verified by visiting the Official IECEx Website.

Certificate issued by:

Laboratoire Central des Industries Electriques (LCIE)
33 Avenue du General Leclerc
FR-92260 Fontenay-aux-Roses
France

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Manufacturer: **ASCO SAS**
53, rue de la Beauce
28110 Lucé
France

Additional Manufacturing location(s):

This certificate is issued as verification that a sample(s), representative of production, was assessed and tested and found to comply with the IEC Standard list below and that the manufacturer's quality system, relating to the Ex products covered by this certificate, was assessed and found to comply with the IECEx Quality system requirements. This certificate is granted subject to the conditions as set out in IECEx Scheme Rules, IECEx 02 and Operational Documents as amended.

STANDARDS:

The apparatus and any acceptable variations to it specified in the schedule of this certificate and the identified documents, was found to comply with the following standards:

IEC 60079-0 : 2011 Explosive atmospheres - Part 0: General requirements
Edition:6.0

IEC 60079-7 : 2015 Explosive atmospheres – Part 7: Equipment protection by increased safety "e"
Edition:5.0

*This Certificate **does not** indicate compliance with electrical safety and performance requirements other than those expressly included in the Standards listed above.*

TEST & ASSESSMENT REPORTS:

A sample(s) of the equipment listed has successfully met the examination and test requirements as recorded in

Test Report:

FR/LCIE/ExTR18.0034/00

Quality Assessment Report:

FR/LCI/QAR07.0006/10

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Schedule

EQUIPMENT:

Equipment and systems covered by this certificate are as follows:

Pneumatic manifold, type *501AV****0****, is based on electrical spool valves assembly with centralized electrical and pneumatical connections. The electrical connection is made by a direct connection module, called Multipol, or by a fieldbus electronic type P580AE***010*** (IECEx LCIE 18.0018X) or type G3******0*** (IECEx LCIE 18.0019X).

The subbases are used for centralizing pneumatic and electrical connections. Spool valves outlets are directly connected to these subbases.

Specific accessories can be added, such as electrical input and Output modules, and additional pneumatic features, as a pneumatic shut-off accessory (for stopping the inlet pressure of a spool valve during maintenance phases) and a blank plate (to close all pneumatic ports of a spool valve).

(Refer to attachment for range details)

Instructions:

Installation and Maintenance Instructions, 501, Ref. 531322-001

SPECIFIC CONDITIONS OF USE: YES as shown below:

- The equipment shall only be used in an area of at least pollution degree 2, as defined in IEC 60664-1 standard.
- For final installation, the pneumatic manifold must be connected in compliance with IEC 60079-14 standard requirements, providing and maintaining an enclosure with minimum ingress protection of IP 54.
- Transient protection shall be provided that is set at a level not exceeding 140 % of the peak rated voltage value at the supply terminals to the equipment.
- The equipment shall be installed according to the instruction manual provided by the manufacturer.

Annex:

IECEx LCIE 18.0016X - Issue 00 - Annex 01 - ASCO SAS.pdf

Annex 01 to Certificate
IECEx LCIE 18.0016X issue 00

MARKING

ASCO™ or NUMATICS™ or ASCO-NUMATICS™
Address : …
Type : *501AV****0****
Serial number : …
Year of construction : …
Ex ec IIC T4 Gc
IECEx LCIE 18.0016X
-10°C ≤ T_{amb} ≤ +50°C
U = 24 V DC ; P = 1 to 108 W

WARNINGS –
DO NOT SEPARATE PLUGS AND SOCKETS WHEN ENERGIZED.
POTENTIAL ELECTROSTATIC CHARGING HAZARD: REFER TO INSTRUCTIONS.

RANGE DETAILS

The main part below, defined as the type of the certificate, described the functional unit.

*	501	A	V	*	*	*	*	0	*	***

Port Type
8 = NPTF
G = ISO228/1-G
K = Push-in Fittings

Product Series
501 = 11 mm Valve

Revision
A = Initial Release

Product Type
V = Valve Manifold Assembly

Electronics
3 = G3 Fieldbus Electronics
J = 25 Pin Sub-D Connector
M = 37 Pin Sub-D Connector
Q = 19 Pin Round Connector
R = 26 Pin Round Connector
T = Terminal Strip 1-32
8 = 580 Series Electronics
D = CHARMs Electronics (580)

Number of Valve Stations (*)

A	=	NA/33/65/97	Q	=	17/49/81/113
B	=	NA/34/66/98	R	=	18/50/82/114
C	=	3/35/67/99	S	=	19/51/83/115
D	=	4/36/68/100	T	=	20/52/84/116
E	=	NA/37/69/101	U	=	21/53/85/117
F	=	6/38/70/102	V	=	22/54/86/118
G	=	7/39/71/103	W	=	23/55/87/119
H	=	8/40/72/104	X	=	24/56/88/120
I	=	9/41/73/105	Y	=	25/57/89/121
J	=	10/42/74/106	Z	=	26/58/90/122
K	=	11/43/75/107	2	=	27/59/91/123
L	=	12/44/76/108	3	=	28/60/92/124
M	=	13/45/77/109	4	=	29/61/93/125
N	=	14/46/78/110	5	=	30/62/94/126
O	=	15/47/79/111	6	=	31/63/95/127
P	=	16/48/80/112	7	=	32/64/96/128

(*) : Total number of coils must not exceed 128

Port Size
1 = 1/8
2 = 1/4
G = 5/16
H = 8 mm

Valve Station Adder
0 = No Adder
1 = 32+
2 = 64+
3 = 96+

Second Valve Series
0 = No Second Valve Series

End Plate Style
V = Vertical
P = Panel Mount - Vertical End Plates

Options
71W = Prepared for Ex approvals
D45 = 71W + DRM (Din Rail Mounting)
84S = 71W + 14X
72P = 71W + 14X + DRM (Din Rail Mounting)

The two others parts below are added to explain all the variations which can be combined to build the whole pneumatic manifold (Valves + Mounting).

Valves definition:

R	501	A	2	B	*	0	M	***	F1

Product Series
501 = 11 mm Valve

Revision
A = Initial Release

Valve Type
2 = Rubber Packed

Actuation
B = Solenoid Pilot with Flush Non-Locking Override

Function
1 = 2 Position 4-Way (5/2), Spring Return
4 = 2 Position 4-Way (5/2), Dual Solenoid
5 = 3 Position 4-Way (5/3), Open Center, Dual Pressure
6 = 3 Position 4-Way (5/3), Blocked Center
7 = 3 Position 4-way (5/3), Open to A & B in Center
A = Dual 3-way, A normally open - B normally open
C = Dual 3-way, A normally closed - B normally open
D = Dual 3-way, A normally closed - B normally closed
F = Dual 3-way, A normally open - B normally closed
N = Differential Air Return w/o Spring

Voltage
F1 = 24 DC

Options
71W = Prepared for Ex approvals
82L = 11B + 71W
84A = 11M + 71W

Electrical
M = Plug-in, w/ Light, VDC

Port Size
0 = No Port Size

Mounting definition:

*	501	A	*	**	*	*	***	1	0

Port Type
H = Metric Thread
K = Push-in Fittings

Product Series
501 = 11 mm Valve

Revision
A = Initial Release

Product Type
M = Manifold Sub Base
Z = Mid Station Supply
F = 32+ Solenoid Manifold Sub Base

Mounting
S3 = Manifold Sub Base, 3 Stations, Side Ports, Single Z-Board
M3 = Manifold Sub Base, 3 Stations, Side Ports, Double Z-Board
S4 = Manifold Sub Base, 4 Stations, Side Ports, Single Z-Board
M4 = Manifold Sub Base, 4 Stations, Side Ports, Double Z-Board
Q4 = Manifold Sub Base, 4 Stations, Side Ports, Single Z-Board, Panel Mount
P4 = Manifold Sub Base, 4 Stations, Side Ports, Double Z-Board Panel Mount
M8 = 32+ Solenoid Manifold Sub Base, 8 Stations, Side Ports, Double Z-Board

Interface
1 = Proprietary

Options
71W = Prepared for Ex approvals
85H = 71W + 96X

Wiring Option
M = Plug-in, Receptacle Assembly
T = 32+ Solenoid Auxiliary Power

Port Size
B = M7 (Threaded only)
D = 4 mm (5/32) (Push-in Fittings only)
F = 6 mm (Push-in Fittings only)
2 = 1/4 (Push-in Fittings only)

Accessories mounted on the pneumatic manifold :

Sandwich shut-off accessory
Blank plate
Blocking disc

RATINGS

Supply voltage : 24 V DC
Power : 1 to 108 W

ROUTINE TESTS

According to clause 7.1 of standard IEC 60079-7, each pneumatic manifold, type *501AV****0****, shall be submitted before delivery to a dielectric strength test (carried out in accordance with clause 6.1) under 500 V DC during 60 seconds.

APPARATUS OVERVIEW