ANSI/(NFPA)T3.28.9 R1-1989
(R2004)
Second edition
16 January 1989

Fluid power systems and products – Moving parts fluid controls – Method of diagramming

(Revision and redesignation of ANSI/B93.38-1976)

A NATIONAL INDUSTRY STANDARD FOR FLUID POWER

Approved by Committee ASC B93,
accredited by the American National Standards Institute (ANSI)

Descriptors: accessory devices and logic systems, fluid controls, fluid logic systems, input devices, interface devices, sensing devices

Developed and published by

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Published by
NATIONAL FLUID POWER ASSOCIATION, INC.

Printed in USA

Foreword

This Foreword is not part of American National Standard *Fluid power systems and products — Moving parts fluid controls — Method of diagramming, ANSI/(NFPA) T3.28.9 R1-1989*, (revision and redesignation of ANSI/B93.38-1976).

It was decided at the T3.28 Section meeting on 17 November 1978 that the areas of exploration in the proposed revision of ANSI/B93.38 would be solenoid, attached or detached counters, predetermined counters and mechanical timers. These proposed additions were forwarded to Headquarters 21 June 1978.

The proposed additions and revisions to ANSI/B93.38 (NFPA/T3.28.9) were discussed at length by Section T3.28 on 8 November 1979. A TSP for the project was prepared by the Project Group. Headquarters assigned the Project Number NFPA/T3.28.9 R1 to the project.

The TSP was forwarded to and granted approval by the Technical Board on 7 May 1980.

On 23 October 1980 the proposed revisions and additions to NFPA/T3.28.9 were submitted to the Section for discussion. Other proposed revisions and additions were circulated among the Fluid Logic Devices Section on 27 September 1980.

While revisions to NFPA/T3.28.9 (ANSI/B93.38) were underway, Section T3.28 recommended reaffirmation of ANSI/B93.38. This recommendation was forwarded to the Technical Board where it received unanimous approval on 11 February 1979.

The Project Group reviewed comments received on the proposed additions and revisions. NFPA/T3.28.9 R1 was forwarded to Headquarters for General Review.

Headquarters Staff prepared the document for First General Review on 14 May 1982. The First General Review closed with comments 14 June 1982.

On 29 September 1982 it was reported to the T3.28 Fluid Logic Device Section that negative comments were received and were being resolved.

After the resolution of the negative comments the document was forwarded to the Technical Board where approval to ballot was granted on 17 May 1984.

The document was forwarded to Headquarters and the Technical Staff prepared T3.28.9 R1 for ballot on 27 July 1984.

On 16 May 1985 the Technical Board voted unanimously to recommend to the Board of Directors that NFPA/T3.28.9 R1, be approved as an NFPA Recommended Standard and that after approval it be submitted to ANSI/B93 for promulgation as an ANSI Standard.

The Board of Directors concurred with the recommendations and granted final approval to NFPA/T3.28.9 R1 on 5 June 1985.

Project Group members who developed this standard:

Bruce McCord
Project Chairman & Section Vice Chairman
Aro Corp.

Ralph Culbertson *
Section Chairman
Dynamco Inc.

Paul Olson
Section Secretary
WABCO Fluid Power Div.

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Parker Hannifin Corp.

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Parker Hannifin Corp.

J. Fischer, Jr. **
Schrader Bellows Div.

* Company affiliation has changed.
** Retired.

On 12 August 1988, ANSI/(NFPA) T3.28.9 R1 was submitted to ANSI Committee B93 for Ballot. There were no negative comments.

ANSI/(NFPA) T3.28.9 R1 was approved by ANSI's Board of Standards Review on 16 January 1989.

The membership roster of Standards Committee B93 at the time of ballot:

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Fluid Controls Institute
Jude Pauli
E. C. Rutter (alternate)

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Thomas Neff

Fluid Power Society
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Robert Firth
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Frank Yeaple

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On 18 May 2004, ANSI/(NFPA)T3.28.9 R1-1989 (R1996) was submitted to ANSI Committee B93 for ballot to reaffirm the document. Balloting closed on 2 July 2004 with no negative votes.

ANSI/(NFPA)T3.28.9 R1-1989 (R2004) was approved by ANSI's Board of Standards Review on 15 December 2004.

The membership roster of Standards Committee B93 at the time of ballot:

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Jenna Wetzel
Secretary

American Society of Agricultural Engineers
Scott Cedarquist

Compressed Air & Gas Institute
John Addington

Eaton Corporation
Jerry Carlin

Fluid Power Society
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/jw

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0 Introduction

In fluid power systems, power is transmitted and/or controlled through a fluid (liquid or gas) under pressure within an enclosed circuit.

Moving parts fluid controls achieve control thru the use of devices having moving parts.

With the growth of technology, there has arisen within the technology of fluid power a major field of controls endeavor involving the use of air and and other fluids as the operating media for logic controls systems.

1 Scope and field of application

1.1 This Standard is intended to include the updating of existing graphic symbols for fluid logic devices and circuits by developing symbols for the following:

a) sensing and input devices commonly used with fluid logic systems;

b) interface devices commonly used with fluid logic systems;

c) accessory devices commonly used with fluid logic systems;

d) logic symbols.

1.2 This Standard is intended to select those symbols for publication with this revised standard along with the proper reference to existing standards in cases where symbols already exist in other standards.

1.3 This Standard is intended to provide standard graphic symbols whereby complete fluid logic systems can be represented.

2 References

ANSI/Y14.17, *Drafting practices for fluid power diagrams.*

ISO 1219, *Fluid power systems and components — Graphic symbols.*

ANSI/B93.2, *Fluid power systems and products — Glossary*

3 Terms and definitions

For definitions of other terms used, see ANSI/B93.2.

3.1 circuit, logic control: A circuit which gathers and processes information to signal power controls and interfaces.

3.2 circuit, power control: A circuit which directs and regulates fluid power to working devices.

3.3 control diagram: A schematic showing control devices and their connections.