

## **SERIES 16, 26 & 18 – MICROSWITCH**

### **SERIES 16 & 26 FEATURES**

- Form Z contacts – to cover all switching requirements
- Snap action – for positive switching
- Solder terminals – for superior electrical contact
- Choice of contacts – gold and silver
- Choice of actuators – to fit many applications

### **NON-STANDARD OPTIONS**

- PCB and solder/faston terminals
- Other contact forms X, Y & C
- Custom brackets and levers
- Special operating forces

### **SERIES 18 FEATURES**

- Form Z contact – covers all switching requirements
- Snap action – uses high integrity butterfly action
- Solder terminals – for superior electrical contact
- Gold plated contacts and terminals – for all applications
- Diaphyll phalate body – wide temperature range
- Various actuators available – to assist in application

### **NON-STANDARD OPTIONS**

- PCB terminals
- Custom brackets and actuators

## Series 16 & 26 – Technical Information

### Description

The series 16 is a popular microswitch offering the unique self cleaning butterfly action. The centrally positioned actuating button offers the ability to mount easily into a pushbutton switch, something that ITW Switches has taken advantage of by incorporating the microswitch in our series 76-94 and flexibutton. The series comes with gold or silver contacts and solder terminals as standard. PCB, solder/faston terminals, choice of contact forms and custom brackets and actuators are available as non-standard options. A two pole version is available in the form of the series 26. Switches also have UL, CSA and MIL-Specification approvals according to the version.

### Features

- Form Z contacts – to cover all switching requirements
- Snap action – for positive switching
- Solder terminals – for superior electrical contact
- Choice of contacts – gold and silver
- Choice of actuators – to fit many applications

### Non-Standard Options

- PCB and solder/faston terminals
- Other contact forms X, Y & C
- Custom brackets and levers
- Special operating forces

### Mechanical

Pretravel	1,27mm
Overtravel	0,15mm (min)
Movement differential	0,5mm (nominal)
Operating point	10,31mm $\pm$ 0.40mm (series 16) 10,05mm $\pm$ 0,35mm (series 26)
Life (min)	10 <sup>7</sup> cycles
Operating force	2,2N (series 16); 4,5N (series 26)

### Electrical

Current (max) silver contacts	10A resistive 250 VAC (series 16) 8A resistive 250 VAC (series 26)
Current (min) silver contacts	10mA resistive 5 VDC (series 16, 26)
Life (min)	100,000 cycles at 20°C 50,000 cycles at 70°C
Dielectric strength (min)	1 KVAC, 1minute
Insulation resistance (min)	1G $\Omega$ at 500 VDC
Contact resistance (max. initial)	25m $\Omega$

### Environmental & Physical

Ingress protection	Equivalent to IP40
Shock (min)	50g
Temperature (ambient)	-55°C to +135°C

## Series 16 & 26 – Ordering Information

### Ordering Information

Part Number	Description
16-4044	10A, silver contacts, solder terminals through the bottom of the case
16-40441	5A, gold contacts, solder terminals through the bottom of the case
16-488051	10A, gold contacts, MIL-SPEC approved, solder terminals through the bottom of the case
16-104	10A, silver contacts, solder terminals through the side of the case
16-304	10A, silver contacts, solder terminals through the front of the case
26-804	2 pole, 8A, silver contacts, solder terminals through the side of the case
26-904	2 pole, 8A, silver contacts, solder terminals through the front of the case

Part Number	Actuators
76-1210/*	Standard leaf lever
76-1200/*	Standard roller lever
Substitute * for switch part number to be fitted, e.g. 76-1200 fitted to 16-4044 = 76-1200/4044. These are standard parts for this series. If you should require a non-standard option please contact the Sales Office.	

### 2 Pole Version

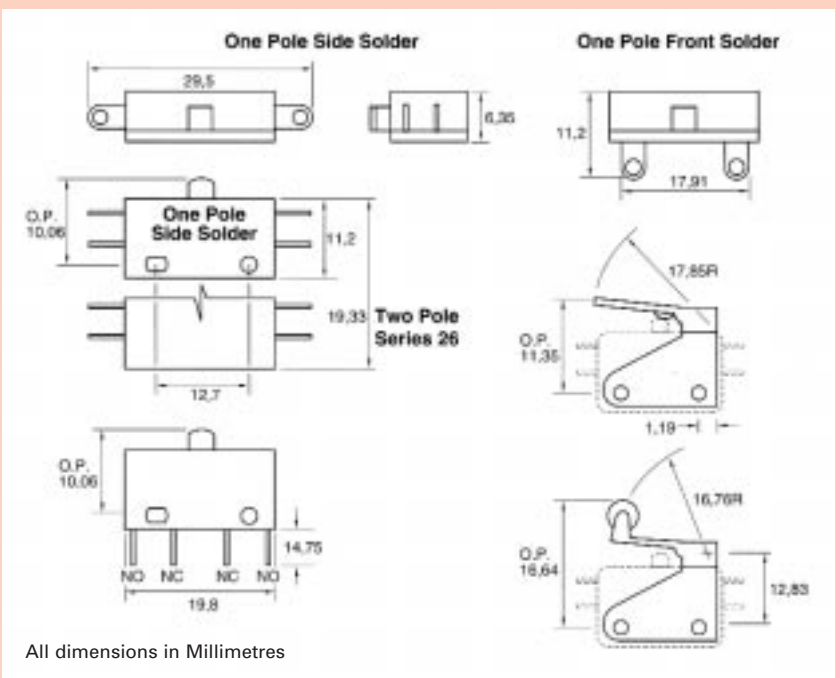
The 2 pole version is available in the form of the series 26. This has the same self cleaning butterfly action as the series 16, but has a higher operating force due to switching a number of poles. Applications for these include requirements for auxiliary back up switches for additional safety and the need for a switch with a high operating force to safeguard against accidental actuation. Similar to the series 16, the 26 can be used as the switching mechanism in the 76-94 pushbutton range.

### Actuation Information

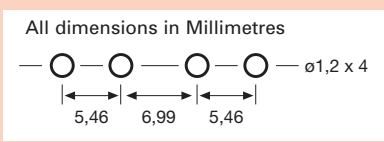
There are a number of additional actuators including leaf, roller levers and pushbuttons that fit both series 16 and 26. If you require any of these actuators, please contact the Sales Office.

# Series 16 & 26 – Technical Information

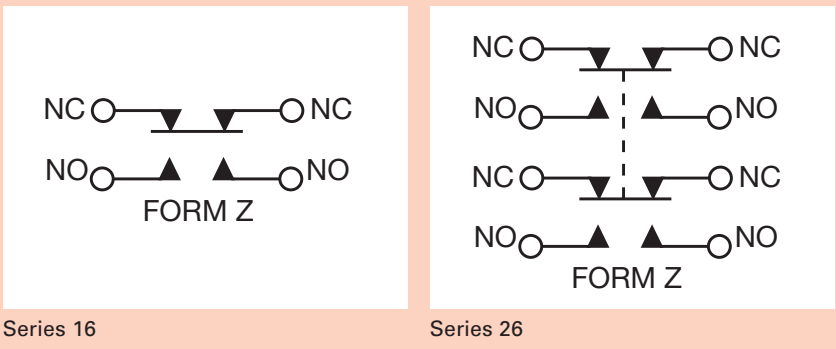
## Contact Loading



## PCB Pin Layout (viewed from either side)



## Circuit Form



## Application references for both Series 16 & 18

- Process control limit switching
- Aerospace applications
- Telecommunications
- Military control systems
- Elevator systems
- Missile systems

## Series 18 – Technical Data

### Description

The series 18 is ITW Switches' smallest microswitch. It is a single pole with a self cleaning 'butterfly' mechanism. This gives a high performance switch in terms of life and load ability, switching from logic loads to 8A max. The series comes in gold double break, snap action contacts with gold solder terminals as standard. PCB terminals and custom brackets and actuators are available as non-standard options. The terminals are inserts moulded into the base, this coupled with the lid being bonded to the base gives a totally sealed switch up to the button opening. Its small size, high performance and high temperature rating, provide a switch that is suitable for many demanding applications. The switch has UL and MIL-Specification approval according to version.

### Features

- Form Z contact – covers all switching requirements
- Snap action – uses high integrity butterfly action
- Solder terminals – for superior electrical contact
- Gold plated contacts and terminals – for all applications
- Diaphyll phalate body – wide temperature range
- Various actuators available – to assist in application

### Non-Standard Options

- PCB terminals
- Custom brackets and actuators

### Mechanical

Pretravel (max)	0,9mm
Overtravel (min)	0,1mm to 0,15mm
Movement differential (nom)	0,4mm
Operating point	8,13mm ±0,4mm
Life (min)	10 <sup>7</sup> cycles
Operating force (max)	2,2N

### Electrical

Current (max)	8A resistive 250 VAC (18-488051) 2A resistive 250 VAC (18-40421)
Current (min)	5mA resistive 5 VDC
Life (min)	1 <sup>5</sup> cycles
Dielectric strength (min)	1 KVAC, 1 minute
Insulation resistance (min)	1GΩ at 500 VDC
Contact resistance (initial)	25mΩ

### Environmental & Physical

Ingress protection	IP40
Shock	50g
Temperature rating	-55°C to +180°C

### Actuation Information

The series 18 microswitch is incorporated in the popular 78-2510 pushbutton switch. There are also a number of actuators designed to fit directly onto the microswitch. These include leaf, roller levers and pushbuttons. If you have an application that requires an actuator with the series 18 microswitch then please contact the Sales Office.

# SERIES 16, 26 & 18 Microswitch

## Series 18 – Ordering Information

### Ordering Information

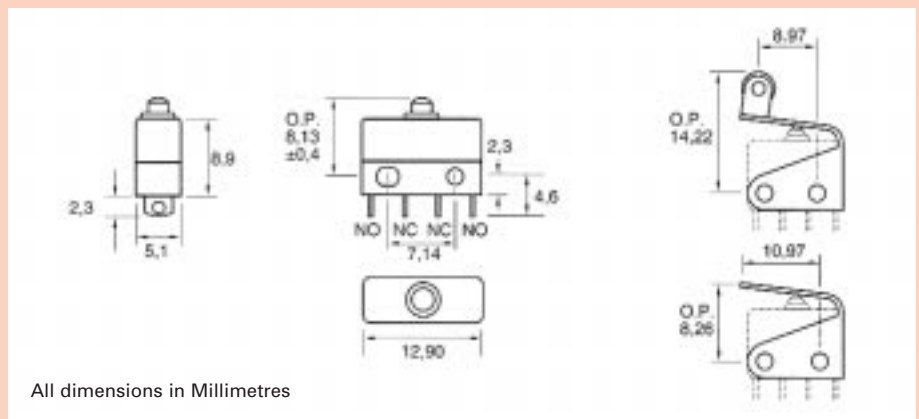
Part Number	Description
18-40421	2A, gold contacts, solder terminals through the bottom of the case
18-488051	8A, gold contact, MIL-SPEC approved, solder terminals through the bottom of the case

Part Number	Actuators
78-3000/*	Standard leaf lever
78-3100/*	Standard roller lever

Substitute \* for switch part number to be fitted,  
e.g. 78-3000 fitted to 18-40421 = 78-3000/40421.

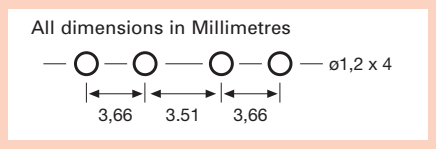
These are the standard parts for this series. If you should require a non-standard option please contact the Sales Office.

### Product Drawings

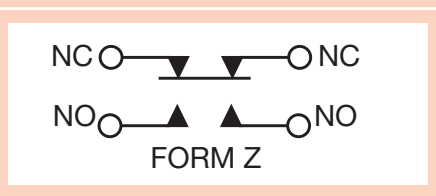


### PCB Pin Layout

(viewed from either side)



### Circuit Form



### Further Information

For further information on our complete range of switch products, please contact the Sales Office.

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- Поставка электронных компонентов под контролем ВП;
- Система менеджмента качества сертифицирована по Международному стандарту ISO 9001;
- При необходимости вся продукция военного и аэрокосмического назначения проходит испытания и сертификацию в лаборатории (по согласованию с заказчиком);
- Поставка специализированных компонентов военного и аэрокосмического уровня качества (Xilinx, Altera, Analog Devices, Intersil, Interpoint, Microsemi, Actel, Aeroflex, Peregrine, VPT, Syfer, Eurofarad, Texas Instruments, MS Kennedy, Miteq, Cobham, E2V, MA-COM, Hittite, Mini-Circuits, General Dynamics и др.);

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## JONHON

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