

**Solenoid Coil (F-Coil)**

With Standard Socket

DC:  
Type MSFG-...

AC:  
Type MSFW-...

with Socket per DIN 43650 Design A

DC:  
Type MSFG-...-DS

AC:  
Type MSFW-...-DS

These solenoids can be mounted on the following solenoid-actuated valves:

- Type MFH, MOFH, JMFH
- Type CM-...-FH
- CJM-...-FH

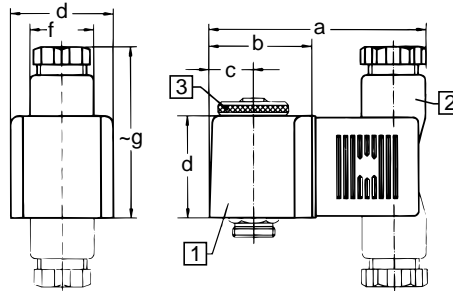
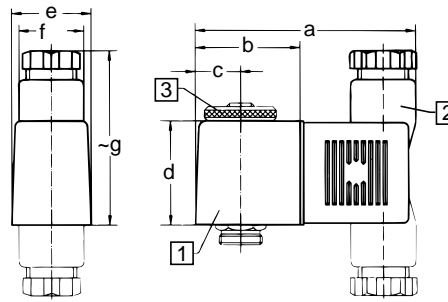
These valve actuator solenoids are characterized by their low power requirement and minimal heating.

AC Coils are suitable for both 50/60 Hz frequencies.

These solenoids comply with VDE Specification 0580, insulation Class F.

Solenoids may be changed without disturbing the pneumatic circuit.

Test certification: VDE



- 1 Solenoid can be rotated on plunger tube
- 2 Solenoid can be turned 180°
- 3 Torque for mounting nuts:  
8.85 to 13.28 in-lb/100 to 150 Ncm

**Dimensions**

- a 2.40 in / 61 mm
- b 1.16 in / 29.5 mm
- c 0.49 in / 12.5 mm
- d 1.14 in / 29 mm
- e 2.40 in / 22 mm
- f 0.71 in / 18 mm
- g 1.89 in / 48 mm

Order Number					
Direct Current			Alternating Current		
Part No.	Type	Voltage	Part No.	Type	Voltage
4526	MSFG-12	12V	4534	50/60 Hz MSFW-24-50/60	24V
4527	MSFG-24/42-50/60	24V	4527	MSFG-24/42-50/60	42V
13264	MSFG-24/42-50/60-DS	24V	6720	MSFW-110-50/60	110V
			4540	MSFW-230-50/60	230V
			13264	MSFG-24/42-50/60-DS	42V
			13265	MSFW-110-50/60-DS	110/120V
			13266	MSFW-230-50/60-DS	220/230V

Order Number (see table above)	Part No./Type	Type MSFG + Voltage	Type MSFW + Voltage
Design		DC solenoid	AC solenoid
Voltage	Standard	12, 24V	24, 42, 110, 230 V/50 to 60 Hz
	Available	12 to 230V	12 to 240 V/50 or 60 Hz
Permissible Voltage Variation		± 10%	± 10% at nominal frequency
Permissible Frequency Variation		–	± 5% at nominal voltage
Power Consumption For Standard Voltages (Other Voltages On Request)		4.1 W at 12V	Inrush: 7.5 VA Inrush 50 Hz: 12 VA Inrush 60 Hz: 10 VA
		4.5 W at 24V	Holding: 6 VA Holding 50 Hz: 9 VA Holding 60 Hz: 7.5 VA
Duty Cycle		100%	
Type Of Protection (DIN 4005)		IP 65	
Electrical Connection		MSFG and MSFW fits standard F-Coil, MSFG-DS and MSFW-DS conforms to DIN 43650	
Ambient Temperature		23 to 104° F / -5 to +40° C	
Medium Temperature		14 to 140° F / -10 to +60° C	
Minimum Energizing Time		10 ms	
Power Factor cos Ø		–	0.7
Weight		0.176 lb / 0.080 kg	0.154 lb / 0.070 kg

# Accessories

## Solenoid Coils without Sockets for F-Coils

### Solenoid Coil (F-Coil)

With Electrical Connection for Standard Sockets

DC:

Type MSFG-...-OD

AC:

Type MSFW-...-OD

With Electrical Connection for Sockets per DIN 43650 Design A

### Type MSFG-24-DS-OD

These solenoids can be mounted on the following solenoid-actuated valves:

Type MFH, MOFH, JMFH

Type CM-...-FH

CJM-...-FH

These valve actuator solenoids are characterized by their low power requirement and minimal heating.

These solenoids comply with VDE Specification 0580, insulation Class F.

Solenoids may be changed without disturbing the pneumatic circuit.

Test certification: VDE

#### Accessories:

Standard Sockets

Order Number 34431 MSSD-F

Sockets with Cable

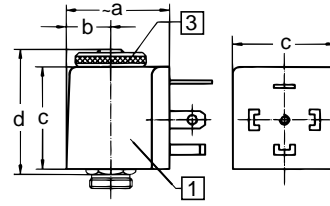
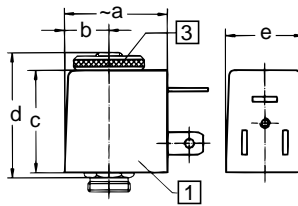
Type KMF, see page 555.

LED Gaskets, see pages 556-557.

MSFG-...-OD  
MSFW-...-OD



MSFG-24-DS-OD



1 Solenoid can be rotated on plunger tube

3 Torque for mounting nuts:  
8.85 to 13.28 in lb/100 to 150 Ncm

#### Dimensions

- a 1.16 in / 29.5 mm
- b 0.49 in / 12.5 mm
- c 1.14 in / 29 mm
- d 1.40 in / 35.5 mm
- e 0.87 in / 22 mm

Order Number					
Direct Current			Alternating Current		
Part No.	Type	Voltage	Part No.	Type	Voltage
34410	MSFG-12-OD	12V	34415	50/60 Hz MSFW-24-50/60-OD	24V
34411	MSFG-24/42-50/60-OD	24V	34411	MSFG-24/42-50/60-OD	42V
34413	MSFG-42-OD	42V	34418	MSFW-48-50/60-OD	48V
34414	MSFG-48-OD	48V	34420	MSFW-110-50/60-OD	110/120V
34412	MSFG-24/42-50/60-DS-OD	24V	34422	MSFW-230-50/60-OD	220/230V
			34412	MSFG-24/42-50/60-DS-OD	42V

Order Number (see table above)	Part No./Type	Type MSFG + Voltage + OD	Type MSFW + Voltage + OD
Design		DC solenoid	AC solenoid
Voltage	Standard	12, 24, 42, 48V	24, 42, 48, 110, 220, 240V/50 to 60 Hz
Permissible Voltage Variation		± 10%	± 10% at nominal frequency
Permissible Frequency Variation		–	± 5% at nominal voltage
Power Consumption For Standard Voltages		4.1 W at 12V	Inrush: 7.5 VA    Inrush 50 Hz: 12 VA Inrush 60 Hz: 10 VA
(Other Voltages On Request)		4.5 W at 24V	Holding: 6 VA    Holding 50 Hz: 9 VA Holding 60 Hz: 7.5 VA
Duty Cycle		100%	
Type of Protection (DIN 4005)		IP 65	
Electrical Connection		MSFG-...-OD and MSFW-...-OD fits standard F-Coils, MSFG-24-DS-OD conforms to DIN 43650	
Ambient Temperature		23 to 104° F / -5 to +40° C	
Medium Temperature		14 to 140° F / -10 to +60° C	
Minimum Energizing Time		10 ms	
Power Factor cos Ø		–	0.7
Weight		0.143 lb / 0.065 kg	0.121 lb / 0.055 kg

### Solenoid Coil (N1-Coil)

With Electrical Connection for sockets per DIN 43650 Design A

DC:

Type MSN1G-...

AC:

Type MSN1W-...

These solenoids can be mounted on the following solenoid valves:

Type JMN1H-...

MN1H-...

These coils comply with VDE Specification 0580, insulation Class F. They may be changed without disturbing the pneumatic circuit.

Mounting clips are included.

#### Accessories:

Standard Sockets

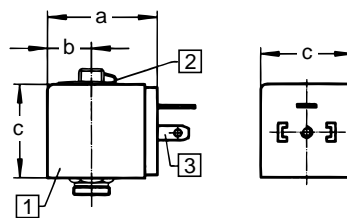
Order Number 34583 MSSD-C

Sockets with Cable

Type KMC, see page 555.

LED Gaskets

See pages 556-557.



- [1] Solenoid can be rotated on plunger tube
- [2] Mounting clip
- [3] Plug vanes

#### Dimensions

- a 1.40 in / 35.5 mm
- b 0.57 in / 14.5 mm
- c 1.18 in / 30 mm

Order Number	Part No./Type	123060 MSN1G-24 V	123061 MSN1W-110 V	123062 MSN1W-230 V
Design		DC	AC	
Voltage		24V	110V / 50 to 60 Hz 120V / 60 Hz	230V / 50 to 60 Hz
Permissible Voltage Variation		+10% -15%	50 Hz: 99 to 121V 60 Hz: 99 to 132V	207 to 253V
Permissible Frequency Variation		–	± 5% at nominal voltage	
Power Consumption		2.5 W	Inrush: 5 VA Holding: 3.7 VA	
Duty Cycle		S1 (100%)		
Type of Protection (DIN 4005)		IP 65 with socket		
Electrical Connection		Plug with connector in accordance with DIN 43650 Design A		
Ambient Temperature		14 to 122° F / -10 to +50° C		
Medium Temperature		14 to 122° F / -10 to +50° C		
Power Factor cos φ		–	0.7	
Materials		Housing: Thermoplastic, Steel, Cu		
Weight		0.176 lb / 0.080 kg		

# Accessories

## Sockets for Solenoid Coils for F-, N1-, and D-Coils

### Sockets

With Gasket

For N1-, D- solenoid coils and F-coils with DIN plugs

Per DIN 43650 Design A

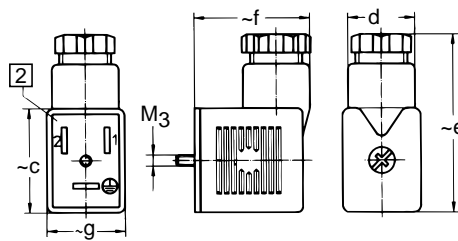
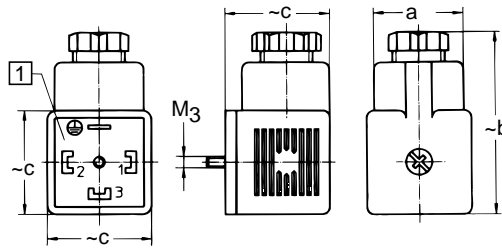
Type MSSD-C

For F-Solenoid Coils

Type MSSD-F

Type MS-F-1/2"

with 1/2" NPT conduit connection



### Dimensions

- a 0.94 in / 24 mm
- b 1.93 in / 49 mm
- c 1.10 in / 28 mm
- d 0.71 in / 18 mm
- e 1.89 in / 48 mm
- f 1.22 in / 31 mm
- g 0.82 in / 21 mm

- 1 Insert may be rotated 90°
- 2 Insert may be rotated 180°

Order Number	Part No./Type	34583 MSSD-C	34431 MSSD-F	13000235 MS-F-1/2"
Mounting	Central mounting screw M3			
Cable Dia.	0.24 to 0.31 in / 6 to 8 mm			
Conductor Size max.	16 gauge / 1.5 sq mm			
Temperature Range	-13 to 248° F / -25 to +90° C			
Materials	Polymer			
Type of Protection (DIN 40050)	IP 65			1/2" NPT conduit
Electrical Connection	MSSD-F fits standard F-Coils, MSSD-C conforms to DIN 43650			
Weight	0.049 lb / 0.022 kg		0.037 lb / 0.017 kg	

### Sockets With Cable

With cable molded into housing

For N1-, D- solenoid coils and F-coils  
With DIN plugs

For plugs per DIN 43650 Design A  
24V DC:

Type KMC-1-24-...-LED

Type KMC-1-220/230-...

For Standard Plugs, F-coil 24V DC:

Type KMF-1-24-...-LED

Type KMF-1-220/230-...

The socket can be provided with an  
8.2 ft / 2.5 m or 16.4 ft / 5 m cable.

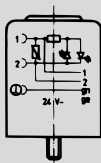
The 24V DC design is polarity protected and has protective circuitry to guard against voltage peaks to 100V. It also has an operating status indicator with yellow LED.

For 250V AC / 300V DC

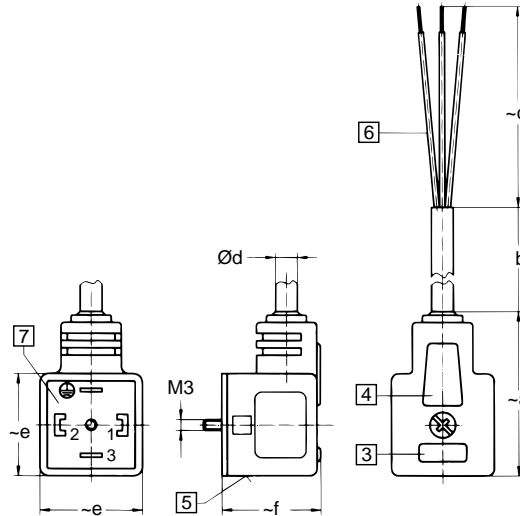
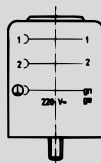
Type MSF-6'

Socket with 6 ft / 1.8 m cable length  
Without LED

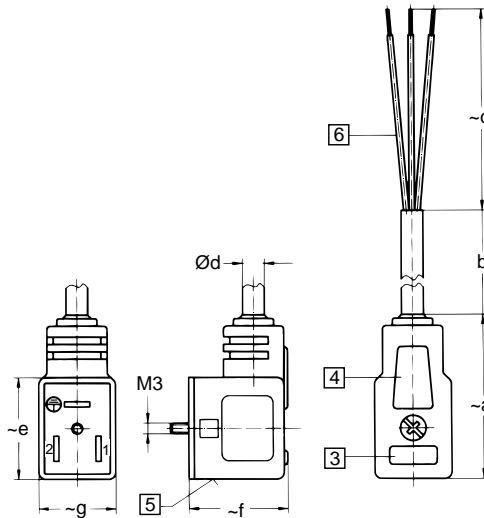
24V DC



0 to 240V



Type KMC



Type KMF

### Dimensions

- a 1.77 in / 45 mm
- b 98.43 in / 2500 mm
- c 2.17 in / 55 mm
- d 0.24 in / 6 mm
- e 1.10 in / 28 mm
- f 1.06 in / 27 mm
- g 0.83 in / 21 mm

### Accessories:

Label with letters  
(card has 35 letters)

Order number  
33362 KMC/F/V-BZ-35X

- 3 LED
- 4 Identification
- 5 Circuit diagram
- 6 Electrical leads (3 x 18 / 0.75 mm<sup>2</sup>)
- 7 Plug pins corresponding to DIN 43650, Design A

Order Number	Cable 8.2 ft / 2.5 m	30931 KMC-1-24-2.5-LED	30932 KMC-1-220-2.5	30935 KMF-1-24-2.5-LED	30936 KMF-1-220-2.5	13000253 MSF-6'
Part No./Type	Cable 16.4 ft / 5 m	30933 KMC-1-24-5-LED	30934 KMC-1-220-5	30937 KMF-1-24-5-LED	30938 KMF-1-220-5	—
Mounting	Central mounting screw, M3					
Permissible Voltage	24V DC	0 to 240V	24V DC	0 to 240V	250V AC / 300V DC	
Cable Wire Size	3 x 18 gauge / 0.75 mm <sup>2</sup> , 8.2 ft / 2.5 m and 16.4 ft / 5 m long					6 ft / 1.8 m
Temperature Range	-13 to 176° F / -25 to +80° C					
Materials	Housing: Polymer; Cable: PVC; Contacts: Cu Sn					
Type of Protection (DIN 40050)	IP 67 (mounted)					UL Standard 94 V-1
Electrical Connection	KMF fits standard F-coils, KMC conforms to DIN 43650					
Weight	Cable 8.2 ft / 2.5 m long	0.24 lb / 0.110 kg	0.37 lb / 0.170 kg	0.37 lb / 0.170 kg	0.37 lb / 0.170 kg	—
	Cable 16.4 ft / 5 m long	0.069 lb / 0.315 kg	0.70 lb / 0.317 kg	0.71 lb / 0.320 kg	0.71 lb / 0.320 kg	—

# Accessories

## LED Gaskets, 12 to 24 V for F-, N1-, and D-Coils

### LED Gasket

With integrated surge suppression

For Solenoid Types MSN1G, MSN1W  
MSFG-DS,  
MSFW-DS

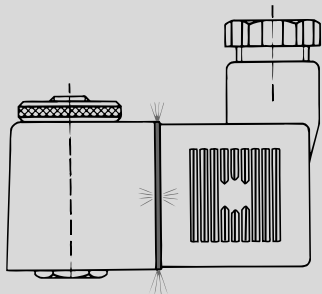
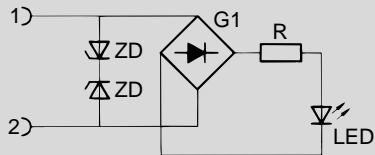
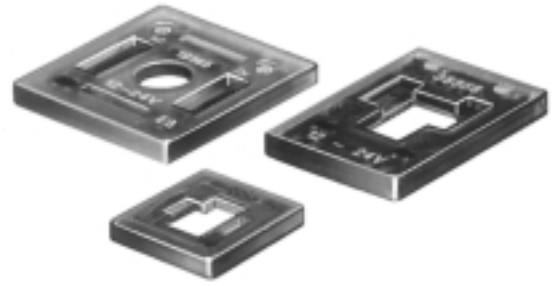
Type MC-LD-12...24

For Solenoid Types MSFG  
MSFW

Type MF-LD-12...24

The LED gasket is installed between the solenoid and socket. When power is applied, the gasket lights up with a yellow glow and is visible around the entire perimeter of the gasket.

Note: Remove existing gasket. Sealing edge must face coil.



Order Number	Part No./Type	19145 MC-LD-12...24	19143 MF-LD-12...24
Mounting		Central mounting screw (maximum torque 6.1 lb in / 60 Ncm)	
Voltage		12 to 24V AC and DC	
Power Consumption		0.25 W	
Type of Protection		IP 65 (when inserted and screwed in)	
Electrical Connection		MF-LD fits standard F-Coils, MC-LD conforms to DIN 43650	
Temperature Range		-13 to 194°F / -25 to +90°C	
Materials		Polyurethane (Silicone free)	
Weight		0.011 lb / 0.005 kg	

### LED Gasket

For Solenoid Types MSN1G, MSN1W  
MSFG-DS,  
MSFW-DS

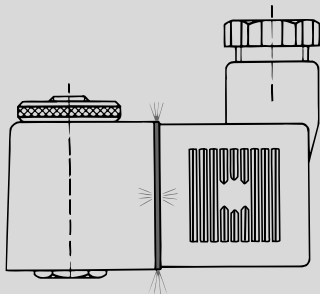
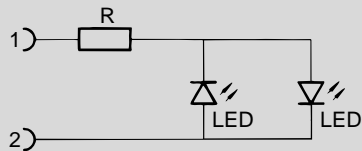
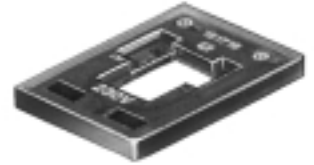
#### Type MC-LD-230

For Solenoid Types MSFG  
MSFW

#### Type MF-LD-220/230-50

The LED gasket is installed between the solenoid and socket. When power is applied, the gasket lights up with a yellow glow and is visible around the entire perimeter of the gasket.

Note: Remove existing gasket. Sealing edge must face coil.



Order Number	Part No./Type	19146 MC-LD-230	19144 MF-LD-220/230-50
Mounting		Central mounting screw (maximum torque 6.1 lb in / 60 Ncm)	
Voltage		220/230V ± 10% AC and DC	
Power Consumption		1.2 W	
Type of Protection		IP 65 (when inserted and screwed in)	
Electrical Connection		MF-LD fits standard F-Coils, MC-LD conforms to DIN 43650	
Temperature Range		-13 to 194°F / -25 to +90°C	
Materials		Polyurethane	
Weight		0.011 lb / 0.005 kg	

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