

Conditioning Equipments / Pressure Gauge

Digital Pressure Sensors / Pressure Switches

Regulators with Pressure Gauge + Filters

MSFRAF
Regulators with Filter (5µm)
Air Filter (0.3µm)

Accessory: Pressure Gauge 1 pc.
Bracket 1 pc.

Structure Diagram

JIS Symbol

Part Number	No.	Rc (PT)	Nomi. Filtration Rating (µm)	Operating Pressure MPa	Pressure Setting Range MPa	Pressure Resistance MPa	Ambient Temperature Range (°C)	Applicable Fluid	Mass (g)	Unit Price
MSFRAF	8A 10A	1/4 3/8	5+0.3	0.05~1.0	0.05~0.85	1.5	5~60	Air	780	1 ~ 4 pc(s).

Characteristic Data
This graph shows that when the primary pressure is constant at 0.7 MPa, the secondary set pressure drops according to the flow rate used.

Component List

No.	Name	Material
①	Regulators with Filter	MSFR
②	Air Filters	MSAF 0.3µm
③	Bracket	ADC12
④	Attachment	ADC12
⑤	Hex Socket Head Cap Screw	SCM435
⑥	#1 Gasket	NBR
⑦	#2 Gasket	NBR

For orders larger than indicated quantity, please check with WOS.

Regulators with Filter + Lubricator

MSFRFR
Regulators with Filter (5µm)
Lubricator

Accessory: Pressure Gauge 1 pc.
Bracket 1 pc.

Structure Diagram

JIS Symbol

Part Number	No.	Rc (PT)	Nomi. Filtration Rating (µm)	Operating Pressure MPa	Pressure Setting Range MPa	Pressure Resistance MPa	Oil Capacity (cm ³)	Min. Dripping Flow Rate (µ/min)	Recommended Oil	Ambient Temperature Range (°C)	Applicable Fluid	Mass (g)	Unit Price
MSFRFR	8A 10A	1/4 3/8	5	0.05~1.0	0.05~0.85	1.5	55	50 60	Turbine Oil 1 Type (ISO VG32)	5~60	Air	780	1 ~ 4 pc(s).

Characteristic Data
This graph shows that when the primary pressure is constant at 0.7 MPa, the secondary set pressure drops according to the flow rate used.

Component List

No.	Name	Material
①	Regulators with Filter	MSFR
②	Lubricator	MSFR
③	Bracket	ADC12
④	Attachment	ADC12
⑤	Hex Socket Head Cap Screw	SCM435
⑥	Gasket	NBR

For orders larger than indicated quantity, please check with WOS.

Pressure Gauge - Straight

GPCS

Part Number Table:

Part Number	Type	No.	T	A	B	L	Mass (g)	Unit Price
GPCS	1	R1/8	8	21	17	8	16.5	10~20
	2	R1/4	11	24	18	8	16.5	10~20
	5	M5x0.8	3	16.5	13.5	6	16.5	10~20

Pressure Gauge - Union Straight

GPUS

Part Number Table:

Part Number	Type	Tube O.D.D	P	C	E1	E2	Mass (g)	Unit Price
GPUS	4	10	15	17	24.5	12.5	12.5	10~20
	6	13	17	20	26	15.5	15.5	10~20
	8	15	18.5	22	28	20	20	10~20

Specifications

Applicable Fluid	Air
Indicated Pressure Range	0~0.8MPa
Accuracy	±5% (Full Scale *)
Operating Temp. Range	0 ~ 60°C
Scale Angle	150°
Cap	Acrylic
Material	Metal Body: Brass (Nickel Plating) Resin Body: PBT

*Displayed position differences when the displayed pressure has suddenly changed from 0 to Max. value of 0.8MPa.

• GPUS can be changed in direction using the hexagonal part of its body.

Ordering Example

Part Number: MSFRAF8A
Part Number: GPCS2

Digital Pressure Sensors

MDPSA (Low Pressure Type)
MDPSB (High Pressure Type)

Specifications:

Part Number	Type	Rated Pressure Range	Min. Voltage	Resolution	Unit Price
MDPSA	Low Pressure Type	-100.0~+100.0kPa	0.1kPa	0.1kPa	
MDPSB	High Pressure Type	-0.100~+1.000MPa	1kPa	1kPa	

Features

- A compact type sensor with a size of 30x30mm.
- The current value and the threshold value are displayed on the sensor's dual screen panel, which allows to check or set both values smoothly without switching the display mode.
- The color of the main indication is displayed in 3 colors, which excels in operability and visibility.
- Response time can be set at 10 levels between 2.5ms and 5,000ms, which prevents chattering or malfunction due to rapid pressure change etc.

Precautions for Use

Do not use this product as the detector for the purpose of human body protection. (For human body protection, please use those products that satisfy laws and standards of human body protection made by each country, such as OSHA, ANSI and IEC.)

Input/Output Circuit Diagram

Specifications

Part Number	MDPSA	MDPSB
Type / Application	Low Pressure Type / (Mainly) Negative-pressure Gauge Pressure	High Pressure Type / (Mainly) Positive-pressure Gauge Pressure
Pressure Resistance	500kPa	1.5MPa
Applicable Fluid	Noncorrosive Gas (not useable for liquid or corrosive gas)	
Power Supply Voltage	12 ~ 24V DC±10% Ripple P-P 10% or less	
Power Consumption	Normal Times: 840mW or less (Supply Voltage: 24V, consumption current: 35mA or less) NPN Transistor / Open Collector Maximum Inflow Current: 100mA	
Comparative Output	Applied Voltage: 30V DC or less (Between comparative output and 0V) Residual Voltage: 2V or less (Inflow current 100mA)	
Output Operation	Select NO or NC by key operation	
Response Differential (hysteresis)	1 digit minimum (variable)	
Repeatability	±0.1%FS (±2 digits or less)	
Response Time	Select from (2.5, 5, 10, 25, 50, 100, 250, 500, 1,000, 5,000) ms	
Short Circuit Protection	Provided	
External Input	Not Applicable	
Analog Voltage Output	Not Applicable	
Display	4 digits + 4 digits and 3 colors LCD display (display update cycle: select from 250, 500 and 1,000ms)	
Indicated Pressure Range	-100.0~+100.0kPa	-0.100~+1.000MPa
Indicator Light	Orange LED	
Protection Structure	IP40(IEC)	
Ambient Operating Temperature	-10~+50°C, for storage: -10~+60°C	
Ambient Operating Humidity	35 ~ 85% RH (However, no dewing and no freezing), for storage: 35 ~ 85% RH	
Withstand Voltage	1,000VAC 1 minute between Charged parts and Case	
Insulation Resistance	50MΩ or more with 500VDC mega between Recharger and Case	
Vibration Resistance	Endurance 10 ~ 500Hz Double Amplitude of 3mm 2 Hours, in X, Y, Z Directions Each	
Impact Resistance	Endurance 100m/s ² (Approx. 10G) 3 times for XYZ direction each	
Temperature Properties	within ±0.5% F.S. within ±1% F.S.	
Pressure Port	M5 Tapped +R (PT) 1/8 Threaded	
Connection Method	Connector	
Wire Length	100m long cable with sectional area of 0.3 square millimeter or more Case: PBT, LCD Display: Acrylic, Switch: Silicon Rubber Pressure Port: SUS303 Screw, Brass (Nickel Plating) Mounting Metal: SPCC (Trivalent Bright Chromate)	
Material		
Body Mass	Approx. 40g	

* The ambient operating temperature is +20°C for the measurement conditions without any specification.

Specifications

Part Number	MDPSA	MDPSB
Type / Application	Low Pressure Type / (Mainly) Negative-pressure Gauge Pressure	High Pressure Type / (Mainly) Positive-pressure Gauge Pressure
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Power Consumption	Normal Times: 840mW or less (Supply Voltage: 24V, consumption current: 35mA or less) NPN Transistor / Open Collector Maximum Inflow Current: 100mA	
Comparative Output	Applied Voltage: 30V DC or less (Between comparative output and 0V) Residual Voltage: 2V or less (Inflow current 100mA)	
Output Operation	Select NO or NC by key operation	
Response Differential (hysteresis)	1 digit minimum (variable)	
Repeatability	±0.1%FS (±2 digits or less)	
Response Time	Select from (2.5, 5, 10, 25, 50, 100, 250, 500, 1,000, 5,000) ms	
Short Circuit Protection	Provided	
External Input	Not Applicable	
Analog Voltage Output	Not Applicable	
Display	4 digits + 4 digits and 3 colors LCD display (display update cycle: select from 250, 500 and 1,000ms)	
Indicated Pressure Range	-100.0~+100.0kPa	-0.100~+1.000MPa
Indicator Light	Orange LED	
Protection Structure	IP40(IEC)	
Ambient Operating Temperature	-10~+50°C, for storage: -10~+60°C	
Ambient Operating Humidity	35 ~ 85% RH (However, no dewing and no freezing), for storage: 35 ~ 85% RH	
Withstand Voltage	1,000VAC 1 minute between Charged parts and Case	
Insulation Resistance	50MΩ or more with 500VDC mega between Recharger and Case	
Vibration Resistance	Endurance 10 ~ 500Hz Double Amplitude of 3mm 2 Hours, in X, Y, Z Directions Each	
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Temperature Properties	within ±0.5% F.S. within ±1% F.S.	
Pressure Port	M5 Tapped +R (PT) 1/8 Threaded	
Connection Method	Connector	
Wire Length	100m long cable with sectional area of 0.3 square millimeter or more Case: PBT, LCD Display: Acrylic, Switch: Silicon Rubber Pressure Port: SUS303 Screw, Brass (Nickel Plating) Mounting Metal: SPCC (Trivalent Bright Chromate)	
Material		
Body Mass	Approx. 40g	

Pressure Switch

MPSS

Configuration of Parts

Component List:

No.	Name	Quantity	Material
①	Main Body	1	ZDC2
②	Head Cover	1	ZDC2
③	Joint	1	ZDC2
④	Handle	1	A2017
⑤	Lock Nut	1	A2017
⑥	Lead Wire	1m	Vinyl

Features

- A contact type pressure switch with a built-in lead switch.
- Operating Pressure can be easily set by handle rotating operation.
- LED display allows easy checking of ON/OFF operation.

Specifications

Applicable Fluid	Air
Set Pressure (Mpa)	0.1~0.7
Max. Operating Pressure (Mpa)	0.8
Pressure Resistance (Mpa)	1.0
Operating Temp. Range (°C)	5~60
Pipe Connection Bore Dia.	R1/8
Sensor Switches	Lead Switches (Contact Type) Normally Open / LED Lights when ON Lead Wire Length 1m Contact Capacity : 85 ~ 115VAC / 5 ~ 30VDC, 25mA or less
Mass	185g

Ordering Example

Part Number: MPSS 6A

Ordering Example

Part Number: MDPSA
Part Number: MPSS6A

Example

Steel Pipe SGGP (R1265)
Pipe Fitting SGPPT (R1273)