



FLUEREX flow sensor

WFK3000S Series

(Compact/equipment integrated sensor)



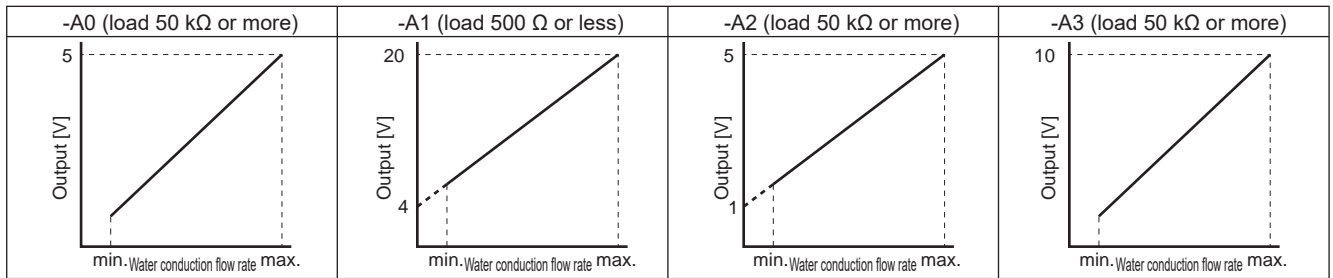
Specifications

Model No.	WFK3004S-10	WFK3004S-15	WFK3012S-10	WFK3012S-15	WFK3032S-10	WFK3032S-15	WFK3060S-20	WFK3060S-25	
Item									
Flow rate range L/min	0.5 to 4.0		1.5 to 12		4.0 to 32		8.0 to 60		
Port size Rc	3/8	1/2	3/8	1/2	3/8	1/2	3/4	1	
Port material	Stainless steel: SCS13								
Working conditions	Applicable fluid	Pure water, industrial water							
	Max. working pressure MPa	1.0							
	Proof pressure MPa	1.5							
	Ambient temperature °C	0 to 50 (85%RH or less)							
	Fluid temperature °C	1 to 70							
Accuracy	±2.5% F.S.								
Temperature characteristics	±5% F.S. (10 to 50°C, base temperature 20°C)								
Pressure loss MPa	0.06 or less (at 4.0 L/min)	0.05 or less (at 12 L/min)	0.06 or less (at 32 L/min)	0.05 or less (at 60 L/min)					
Response time	1 sec (*1)								
Output	Display	No							
	Analog output	Standard: 0 to 5 VDC/option: 4 to 20 mADC, 1 to 5 V, 0 to 10 V							
Power supply voltage	12 to 24 VDC ±10% (MAX 80 mA) Option A3 is 15 to 24 VDC								
Cable	3 m, 4-conductor, finished O.D. 4.8mm, core wire 0.2mm ² , insulator O.D. 1.3mm								
Mounting	Mounting orientation	Vertical/Unrestricted lateral							
	Straight piping section	Without (*2)						IN side: 10 D, OUT side 5 D	
	Degree of protection	IP 65 or equiv.							
Weight g	380	410	380	410	380	410	470	510	
Bracket weight g	28 (including screws)								

*1: The time to attain 70% of the original output after the normal flow rate (used) drops instantly to 0.

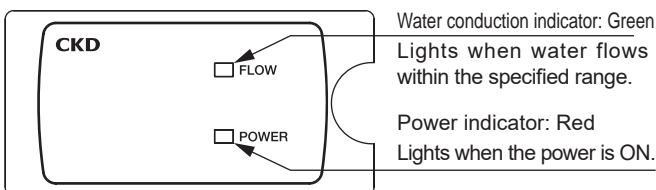
*2: Installing straight pipes (10D on the IN side and 5D on the OUT side) is recommended so that the piping conditions do not affect the performance.

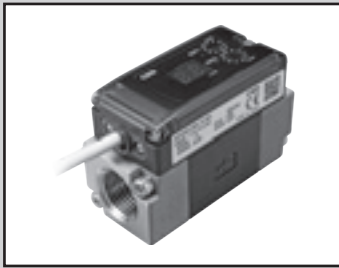
Analog output



* min. is the minimum value and max. is the maximum value in the flow rate range.

Functions





FLUEREX flow sensor

WFK3000M Series

(Compact/equipment integrated switch)



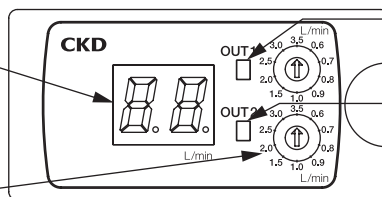
Specifications

Model No.	WFK3004M-10	WFK3004M-15	WFK3012M-10	WFK3012M-15	WFK3032M-10	WFK3032M-15	WFK3060M-20	WFK3060M-25	
Flow rate range L/min	0.5 to 4.0		1.5 to 12		4.0 to 32		8.0 to 60		
Port size Rc	3/8	1/2	3/8	1/2	3/8	1/2	3/4	1	
Port material	Stainless steel: SCS13								
Working conditions	Applicable fluid	Pure water, industrial water							
	Max. working pressure MPa	1.0							
	Proof pressure MPa	1.5							
	Ambient temperature °C	0 to 50 (85%RH or less)							
Fluid temperature °C	1 to 70								
Accuracy	±2.5% F.S. ±1 digit (1 digit = 0.1 L/min (less than 10 L/min), 1 L/min (10 L/min and over))								
Temperature characteristics	± 5% F.S. (10 to 50°C, base temperature 20°C)								
Pressure loss MPa	0.06 or less (at 4.0 L/min)	0.05 or less (at 12 L/min)	0.06 or less (at 32 L/min)	0.05 or less (at 60 L/min)					
Response time	1 sec (*1)								
Output	Display	Instantaneous flow rate 2-digit LED display							
	Switch output	Number of points	2PointTransistor output (NPN/PNP Selection)						
		Rating	MAX.DC50mA						
		Internal voltage drop	(NPN) 2.0 V or less (PNP) 2.5 V or less						
Power supply voltage	12 to 24 VDC ±10% (MAX 80 mA)								
Cable	3 m, 4-conductor, finished O.D. 4.8mm, core wire 0.2mm ² , insulator O.D. 1.3mm								
Mounting	Mounting orientation	Unrestricted in vertical/horizontal direction							
	Straight piping section	Without (*2)						IN side: 10D, OUT side: 5D	
	Degree of protection	IP 65 or equiv.							
Weight g	380	410	380	410	380	410	470	510	
Bracket weight g	28 (including screws)								

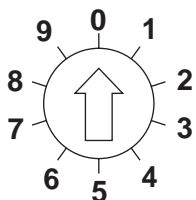
*1: When the switch output is set to 70% of the normal flow rate (used), the time until the switch output occurs after the flow rate drops instantly to 0.
 *2: Installing straight pipes (10D on the IN side and 5D on the OUT side) is recommended so that the piping conditions do not affect the performance.

Functions

- 2-digit digital display
Displays the instantaneous flow rate.
* Less than 10 L/min: Decimal fraction displayed
10 L/min and over: Integer displayed
- Rotary switch for output setting



- Output lamp: Green (OUT1)
Lights when switch output is ON.
- Output lamp: Red (OUT2)
Lights when switch output is ON.
- * OUT1: Lead wire (black)
OUT2: Lead wire (orange) supported



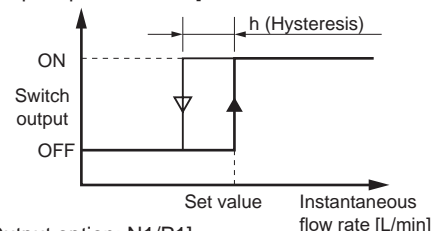
Allows you to set the switch output setting in 10 steps.
 * Set the rotary switch with a precision screwdriver, etc. Be extremely careful, since applying excessive force to the rotating part may result in contact failure.
 * Be sure to align the arrow with the scale mark. If it is forcibly set at an intermediate point, the output may become unstable.
 * Turn power OFF before setting switch output.
 * Close the cover after setting switch output to display the set flow rate.

Switch output set value [L/min]

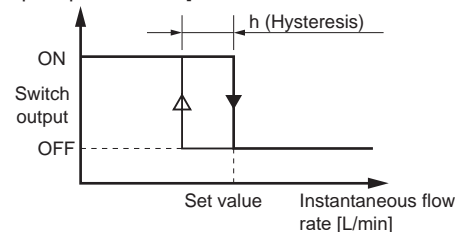
Rotary switch contact number	Model			
	WFK3004M	WFK3012M	WFK3032M	WFK3060M
1	0.6	2.0	5.0	10
2	0.7	3.0	9.0	15
3	0.8	4.0	12	20
4	0.9	5.0	14	25
5	1.0	6.0	16	30
6	1.5	7.0	18	35
7	2.0	8.0	21	40
8	2.5	9.0	24	45
9	3.0	10	27	50
0	3.5	11	30	55
Hysteresis	0.1	0.5	1.0	3.0

Switch output operation

[Output option: NO/PO]



[Output option: N1/P1]



F.R.L.
 F.R.
 F (Filtr)
 R (Reg)
 L (Lub)
 Drain Separ
 Mech Press SW
 Res press exh valve
 SlowStart
 Anti-bac/Bac-remove Filtr
 Film Resist FR
 Oil-ProhR
 Med Press FR
 No Cu/ PTFE FRL
 Outdris FRL
 Adapter Joiner Press Gauge
 CompFRL
 LgFRL
 PrecsR
 VacF/R
 Clean FR
 ElecPneuR
 AirBoost
 Speed Ctrl
 Silncr
 CheckV/ other
 Fit/Tube
 Nozzle
 Air Unit
 PresCompn
 Electro Press SW
 ContactSW
 AirSens
 PresSW Cool
 Air Flo Sens/Ctrl
 WaterR/Sens
 TotAirSys (Total Air)
 TotAirSys (Gamma)
 Gas generator
 RefrDry
 DesicDry
 HiPolymDry
 MainFiltr
 Dischrg etc
 Ending



FLUEREX flow sensor

WFK3000C Series

(Compact/equipment integrated sensor/switch)



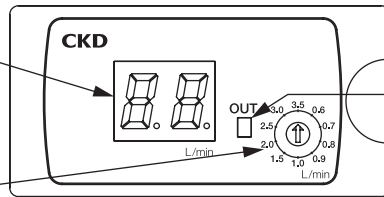
Specifications

Model No.	WFK3004C-10	WFK3004C-15	WFK3012C-10	WFK3012C-15	WFK3032C-10	WFK3032C-15	WFK3060C-20	WFK3060C-25	
Flow rate range L/min	0.5 to 4.0		1.5 to 12		4.0 to 32		8.0 to 60		
Port size Rc	3/8	1/2	3/8	1/2	3/8	1/2	3/4	1	
Port material	Stainless steel: SCS13								
Working conditions	Applicable fluid	Pure water, industrial water							
	Max. working pressure MPa	1.0							
	Proof pressure MPa	1.5							
	Ambient temperature °C	0 to 50 (85% RH or less)							
	Fluid temperature °C	1 to 70							
Accuracy	±2.5% F.S. ±1 digit (1digit = 0.1 L/min (less than 10 L/min), 1 L/min (10 L/min and over))								
Temperature characteristics	± 5% F.S. (10 to 50°C, base temperature 20°C)								
Pressure loss MPa	0.06 or less (at 4.0L/min)	0.05 or less (at 12L/min)	0.06 or less (at 32L/min)	0.05 or less (at 60L/min)					
Response time	1 sec (*1)								
Output	Display	Instantaneous flow rate 2-digit LED display							
	Analog output	Standard: 0 to 5 VDC/Option: 4 to 20mA, 1 to 5VDC, 0 to 10VDC							
	Switch output	Number of points	1-point transistor output (select NPN/PNP)						
		Rating	MAX.DC50mA						
	Internal voltage drop	(NPN) 2.0 V or less (PNP) 2.5 V or less							
Power supply voltage	12 to 24 VDC ±10% (MAX 80 mA) Option A3 is 15 to 24 VDC								
Cable	3 m, 4-conductor, finished O.D. 4.8mm, core wire 0.2mm ² , insulator O.D. 1.3mm								
Mounting	Mounting orientation	Unrestricted in vertical/horizontal direction							
	Straight piping section	Without (*2)						IN side: 10D, OUT side: 5D	
	Degree of protection	IP 65 or equiv.							
Weight g	380	410	380	410	380	410	470	510	
Bracket weight g	28 (including screws)								

*1: When the switch output is set to 70% of the normal flow rate (used), the time until the switch output occurs after the flow rate drops instantly to 0.
 *2: Installing straight pipes (10D on the IN side and 5D on the OUT side) is recommended so that the piping conditions do not affect the performance.

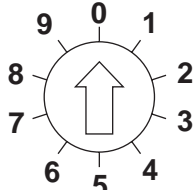
Functions

- 2-digit digital displaydisplay
Displays the instantaneous flow rate.
*Less than 10 L/min: Decimal displayed, 10 L/min and over: Integer displayed
- Rotary switch for output setting



- Output lamp: Orange (OUT)
Lights when switch output is ON.

*OUT: Lead wire(Black)is supported by T6C0/1.



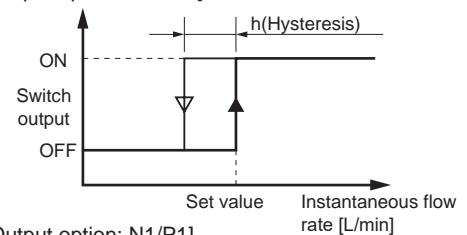
Allows you to set the switch output setting in 10 steps.
 * Use a precision screwdriver or similar tool to set the rotary switch. Be extremely careful, since applying excessive force to the rotating part may result in contact failure.
 * Be sure to align the arrow with the scale mark. If it is forcibly set at an intermediate point, the output may become unstable.
 * Turn OFF the power before setting the switch output.
 * After switch output setting, close the cover to display the set flow rate it will be .

Switch output setting value [L/min]

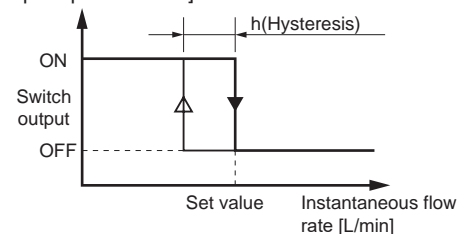
Rotary switch contact number	Model			
	WFK3004C	WFK3012C	WFK3032C	WFK3060C
1	0.6	2.0	5.0	10
2	0.7	3.0	9.0	15
3	0.8	4.0	12	20
4	0.9	5.0	14	25
5	1.0	6.0	16	30
6	1.5	7.0	18	35
7	2.0	8.0	21	40
8	2.5	9.0	24	45
9	3.0	10	27	50
0	3.5	11	30	55
Hysteresis	0.1	0.5	1.0	3.0

Switch output operation

[Output option: NO/PO]

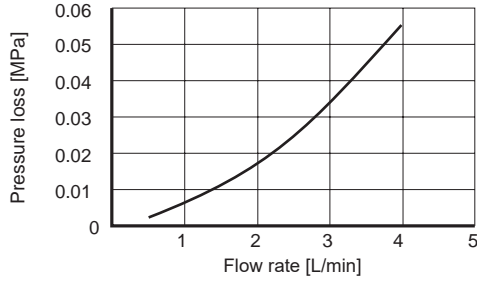


[Output option: N1/P1]

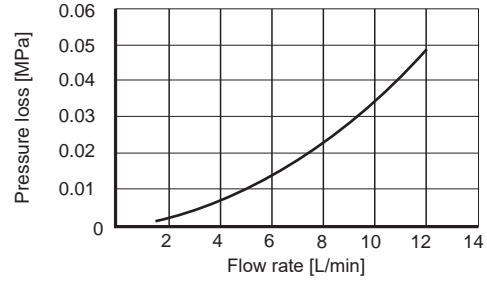


Pressure loss

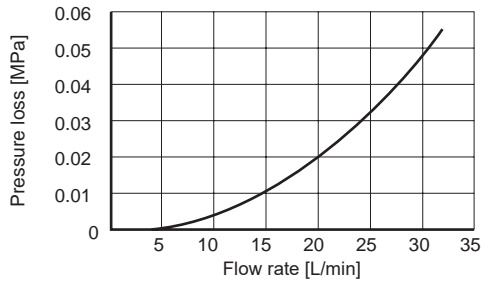
● WFK3004



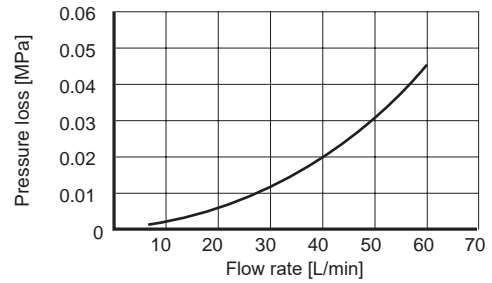
● WFK3012



● WFK3032



● WFK3060



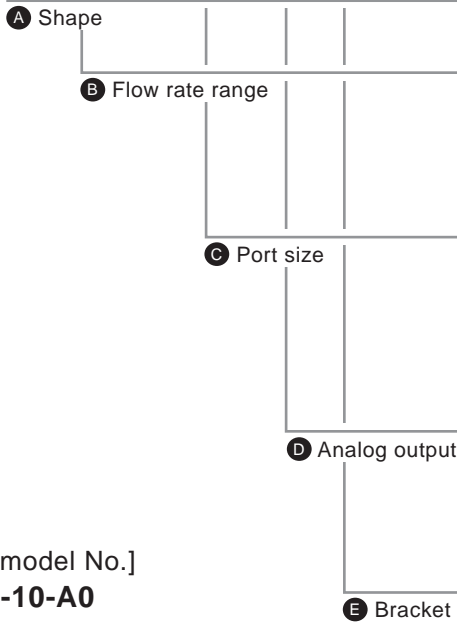
F.R.L.
F.R.
F (Filtr)
R (Reg)
L (Lub)
Drain Separ
Mech Press SW
Res press exh valve
SlowStart
Anti-bac/Bac-remove Filtr
Film Resist FR
Oil-ProhR
Med Press FR
No Cu/ PTFE FRL
Outdrs FRL
Adapter Joiner
Press Gauge
CompFRL
LgFRL
PrecsR
VacF/R
Clean FR
ElecPneuR
AirBoost
Speed Ctrl
Silncr
CheckV/ other
Fit/Tube
Nozzle
Air Unit
PresCompn
Electro Press SW
ContactSW
AirSens
PresSW Cool
Air Flo Sens/Ctrl
WaterR/Sens
TotAirSys (Total Air)
TotAirSys (Gamma)
Gas generator
RefrDry
DesicDry
HiPolymDry
MainFiltr
Dischrg etc
Ending

F.R.L. How to order (Set model No.)

- F.R.
- F (Filtr)
- R (Reg)
- L (Lub)
- Drain Separ
- Mech Press SW
- Res press exh valve
- SlowStart
- Anti-bac/Bac-remove Filtr
- Film Resist FR
- Oil-ProhR
- Med Press FR
- No Cu/PTFE FRL
- Outdrs FRL
- Adapter Joiner
- Press Gauge
- CompFRL
- LgFRL
- PrecsR
- VacF/R
- Clean FR
- ElecPneuR
- AirBoost
- Speed Ctrl
- Silncr
- CheckV/other
- Fit/Tube
- Nozzle
- Air Unit
- PrecsCompn
- Electro Press SW
- ContactSW
- AirSens
- PresSW Cool
- Air Flo Sens/Ctrl
- WaterRtSens
- TotAirSys (Total Air)
- TotAirSys (Gamma)
- Gas generator
- RefrDry
- DesiccDry
- HiPolymDry
- MainFiltr
- Dischrg etc
- Ending

● Sensor

WFK **3** **012** S- **10** - **A0** **B**



[Example of model No.]

WFK3004S-10-A0

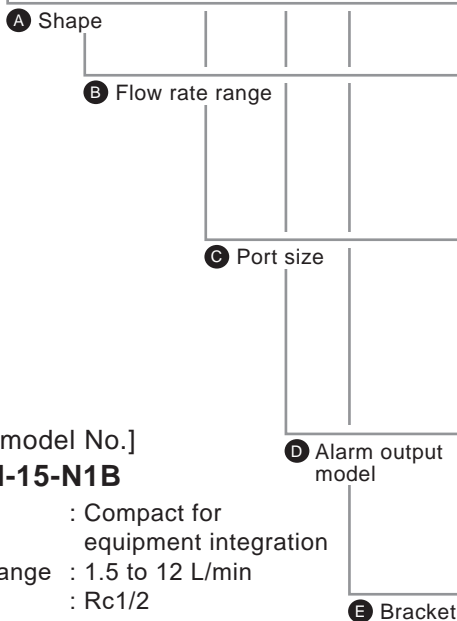
- A** Shape : Compact for equipment integration
- B** Flow rate range : 0.5 to 4 L/min
- C** Port size : Rc3/8
- D** Analog output : 0 to 5 VDC
- E** Bracket : None

Code	Description				
A Shape					
3	Compact for equipment integration				
B Flow rate range					
004	0.5 to 4.0 L/min				
012	1.5 to 12 L/min				
032	4.0 to 32 L/min				
060	8.0 to 60 L/min				
C Port size					
	Flow rate range	004	012	032	060
10	Rc3/8	●	●	●	-
15	Rc1/2	●	●	●	-
20	Rc3/4	-	-	-	●
25	Rc1	-	-	-	●
D Analog output					
A0	0 to 5 VDC				
A1	4 to 20 mADC				
A2	1 to 5 VDC				
A3	0 to 10 VDC				
E Bracket					
Blank	None				
B	Bracket included (including mounting screws)				

*1: Contact CKD for G thread and NPT thread support.

● Switch type

WFK **3** **012** M- **10** - **N0** **B**



[Example of model No.]

WFK3012M-15-N1B

- A** Shape : Compact for equipment integration
- B** Flow rate range : 1.5 to 12 L/min
- C** Port size : Rc1/2
- D** Alarm output : NPN 2 output points (b contact)
- E** Bracket : Included

Code	Description				
A Shape					
3	Compact for equipment integration				
B Flow rate range					
004	0.5 to 4.0 L/min				
012	1.5 to 12 L/min				
032	4.0 to 32 L/min				
060	8.0 to 60 L/min				
C Port size					
	Flow rate range	004	012	032	060
10	Rc3/8	●	●	●	-
15	Rc1/2	●	●	●	-
20	Rc3/4	-	-	-	●
25	Rc1	-	-	-	●
D Alarm output model					
N0	NPN transistor output, 2 points (a contact)				
N1	NPN transistor output, 2 points (b contact)				
P0	PNP transistor output, 2 points (a contact)				
P1	PNP transistor output, 2 points (b contact)				
E Bracket					
Blank	None				
B	Bracket included (including mounting screws)				

*1: Contact CKD for G thread and NPT thread support.

How to order

● Sensor/switch

WFK **3** **004** **C-** **10** - **A0** **N0** **B**

A Shape

B Flow rate range

C Port size

D Analog output

E Alarm output

F Bracket

[Example of model No.]

WFK3004C-10-A0N0B

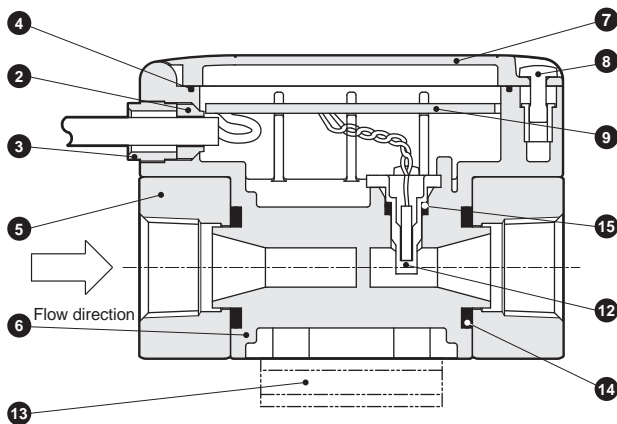
- **A** Shape: Compact for equipment integration
- **B** Flow rate range: 0.5 to 4L/min
- **C** Port size: Rc3/8
- **D** Analog output: DC0 to 5V
- **E** Alarm output: NPN1 points (a contact)
- **F** Bracket: included

Code	Description				
A Shape					
3	Compact for equipment integration				
B Flow rate range					
004	0.5 to 4.0 L/min				
012	1.5 to 12 L/min				
032	4.0 to 32 L/min				
060	8.0 to 60 L/min				
C Port size					
	Flow rate range	004	012	032	060
10	Rc3/8	●	●	●	—
15	Rc1/2	●	●	●	—
20	Rc3/4	—	—	—	●
25	Rc1	—	—	—	●
D Analog output					
A0	0 to 5 VDC				
A1	4 to 20 mA DC				
A2	1 to 5 VDC				
A3	0 to 10 VDC				
E Alarm output					
N0	NPN transistor output, 1 points (a contact)				
N1	NPN transistor output, 1 points (b contact)				
P0	PNP transistor output, 1 points (a contact)				
P1	PNP transistor output, 1 points (b contact)				
F Bracket					
Blank	None				
B	Bracket attached (including mounting screws)				

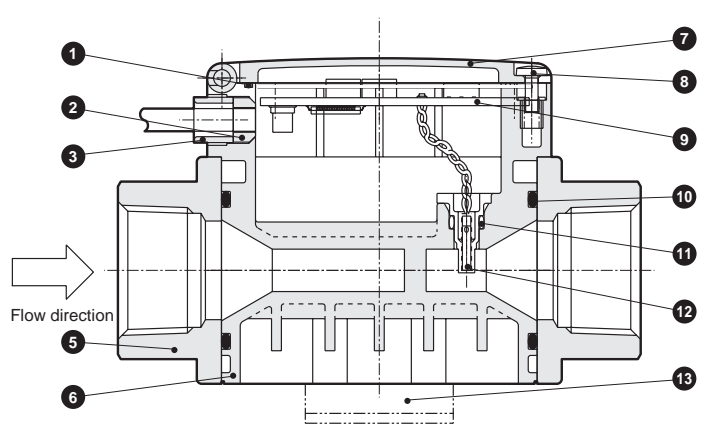
*1: Contact CKD for G thread and NPT thread information.

Internal structure and parts list

● WFK3004□, WFK3012□, WFK3032□



● WFK3060□



Cannot be disassembled

No.	Part name	Material	Quantity	No.	Part name	Material	Quantity
1	Cover packing	NBR : Nitrile rubber	1	9	Wiring section		1
2	Cable packing	NBR : Nitrile rubber	1	10	O-ring	NBR : Nitrile rubber	2
3	Cable gland	PPS resin	1	11	O-ring	NBR : Nitrile rubber	1
4	Cover packing	FKM : Fluoro rubber	1	12	Karman's vortex street detection sensor	PPS resin (interior: piezo ceramic)	1
5	Attachment	SCS13 : Stainless steel casting	2	13	Bracket (option)	SPC : Steel	(1)
6	Body	PPS resin	1	14	O-ring	FKM : Fluoro rubber	2
7	Cover	PC resin	1	15	O-ring	FKM : Fluoro rubber	1
8	Screw for cover		1				

* Wetted parts are ⑤, ⑥, ⑩, ⑪, ⑫, ⑭ and ⑮.

F.R.L.
F.R.
F (Filtr)
R (Reg)
L (Lub)
Drain Separ
Mech Press SW
Res press exh valve
SlowStart
Anti-bac/Bac-remove Filtr
Film Resist FR
Oil-ProhR
Med Press FR
No Cu/ PTFE FRL
Outdrs FRL
Adapter Joiner Press Gauge
CompFRL
LgFRL
PrecsR
VacF/R
Clean FR
ElecPneuR
AirBoost
Speed Ctrl
Silncr
CheckV/ other
Fit/Tube
Nozzle
Air Unit
PresCompn
Electro Press SW
ContactSW
AirSens
PresSW Cool
Air Flo Sens/Ctrl
WaterRtSens
TotAirSys (Total Air)
TotAirSys (Gamma)
Gas generator
RefrDry
DesicDry
HiPolymDry
MainFiltr
Dischrg etc
Ending

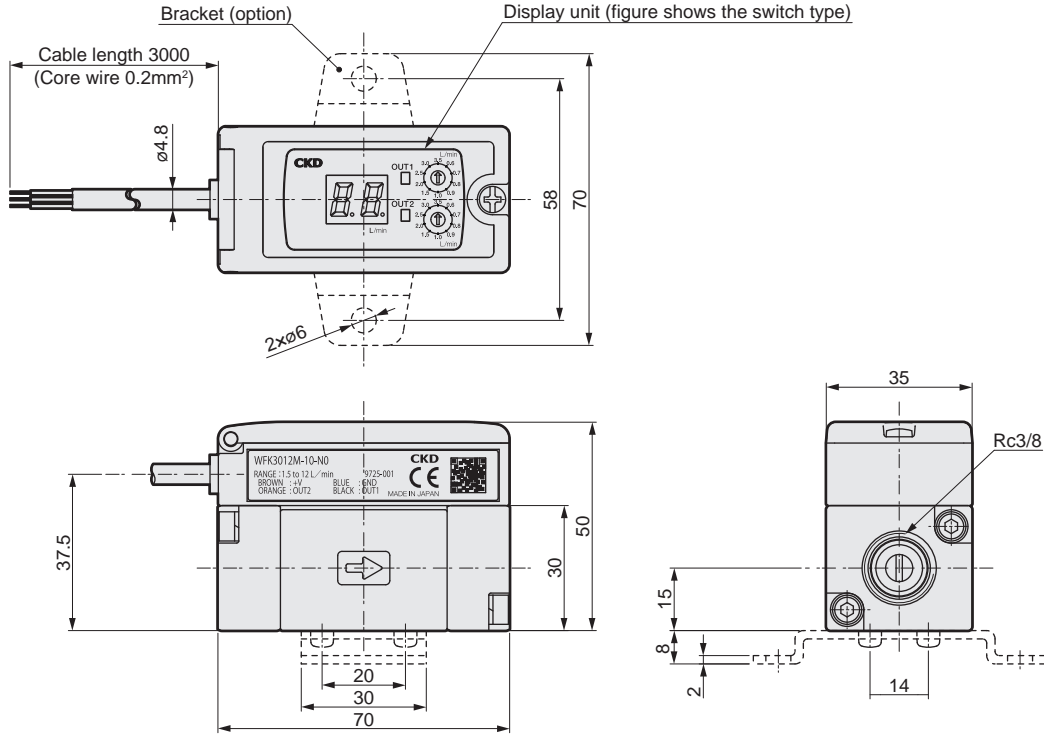
WFK3000 Series

F.R.L. Dimensions

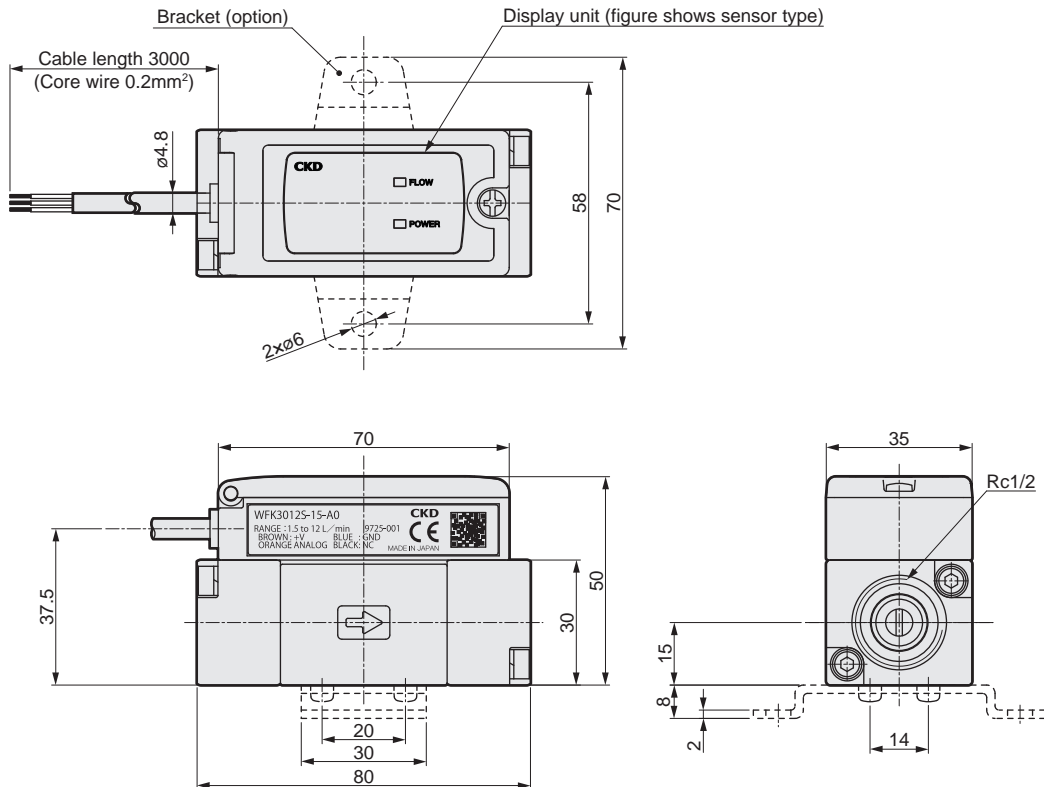
- F.R.
- F (Filtr)
- R (Reg)
- L (Lub)
- Drain Separ
- Mech Press SW
- Res press exh valve
- SlowStart
- Anti-bac/Bac-remove Filtr
- Film Resist FR
- Oil-ProhR
- Med Press FR
- No Cu/ PTFE FRL
- Outdrs FRL
- Adapter Joiner
- Press Gauge
- CompFRL
- LgFRL
- PrecsR
- VacF/R
- Clean FR
- ElecPneuR
- AirBoost
- Speed Ctrl
- Silncr
- CheckV/ other
- Fit/Tube
- Nozzle
- Air Unit
- PrecsCompn
- Electro Press SW
- ContactSW
- AirSens
- PresSW Cool
- Air Flo Sens/Ctrl
- WaterRtSens
- TotAirSys (Total Air)
- TotAirSys (Gamma)
- Gas generator
- RefrDry
- DesicDry
- HiPolymDry
- MainFiltr
- Dischrg etc
- Ending

● WFK3004□, WFK3012□, WFK3032□

- Port size: 10 (Rc3/8)



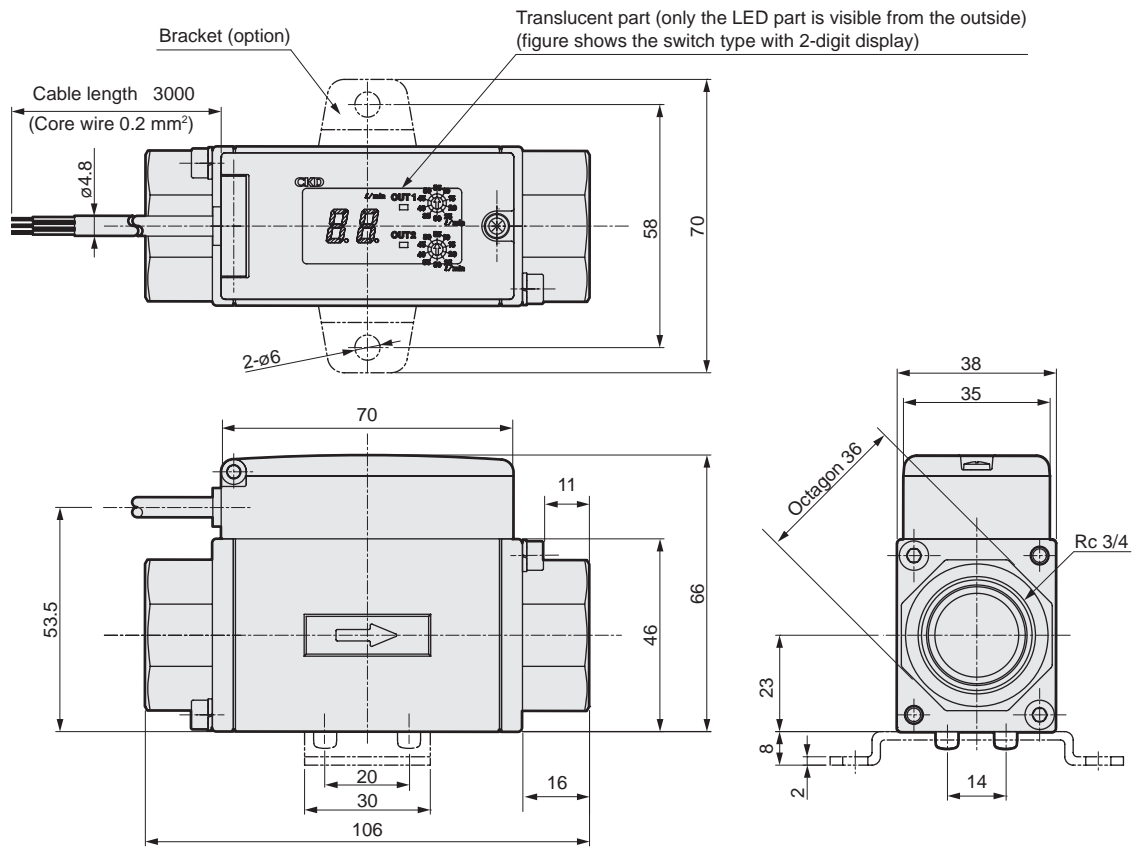
- Port size: 15 (Rc 1/2)



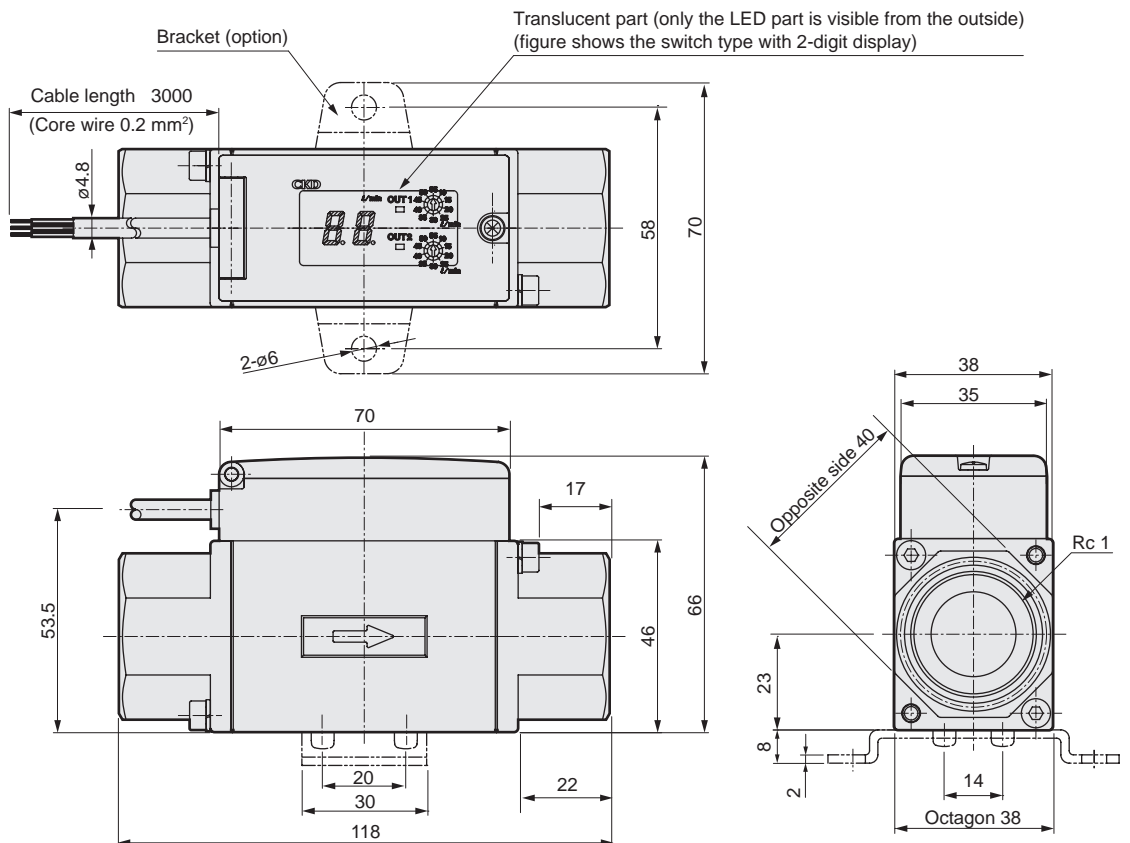
Dimensions

● WFK3060□

· Port size: 20 (Rc3/4)



· Port size: 25 (Rc1)



F.R.L.
F.R.
F (Filtr)
R (Reg)
L (Lub)
Drain Separ
Mech Press SW
Res press exh valve
SlowStart
Anti-bac/Bac-remove Filtr
Film Resist FR
Oil-ProhR
Med Press FR
No Cu/ PTFE FRL
Outdrs FRL
Adapter Joiner Press Gauge
CompFRL
LgFRL
PrecsR
VacF/R
Clean FR
ElecPneuR
AirBoost
Speed Ctrl
Silncr
CheckV/ other
Fit/Tube
Nozzle
Air Unit
PresCompn
Electro Press SW
ContactSW
AirSens
PresSW Cool
Air Flo Sens/Ctrl
WaterRtSens
TotAirSys (Total Air)
TotAirSys (Gamma)
Gas generator
RefrDry
DesicDry
HiPolymDry
MainFiltr Dischrg etc
Ending