

# Flow Switches Catalogue

Flow Switches



Overview

Control  
Control  
every move

**Barksdale**<sup>®</sup>  
CONTROL PRODUCTS  
**CRANE** Barksdale, Inc./Barksdale GmbH  
A Subsidiary of Crane Co.

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# Flow Switches

# BFS-10-N / BFS-10-O

for monitoring liquids,  
with or without optical display

## Features

set point continuously adjustable  
rugged, low hysteresis, any mounting position,  
high accuracy and functional safety,  
ship approvals available for N-versions

## Measuring ranges

0,005...0,06 l/min to 60...150 l/min for water

## Applications

Measuring and monitoring of liquids,  
e. g. in cooling systems, test beds, pumps etc.



## Technical Data

BFS-10-N (without indication)				
Measuring principle:	variable aera flow meter			
<b>Materials:</b> Var. aera flow meter:	brass version	stainless steel vers.		
	brass	1.4571		
	Spring:	1.4571	1.4571	
	Fitting:	brass, nickel-plated	1.4571	
Housing:	brass, nickel-plated			
Magnets:	ferrite			
<b>Operating pressure:</b> BFS-10-N G1/4: BFS-10-N G1/2: BFS-10-N G1:	brass	MS GL	SS	Pressure drop
	300 bar	100 bar	350 bar	0,02...0,2 bar
	300 bar	100 bar	350 bar	0,02...0,3 bar
	250 bar	100 bar	300 bar	0,02...0,4 bar
Operating temp.:	100 °C (standard), 160 °C (option HT)			
Accuracy:	±10% f. s.			
Electrical connection:	plug acc. to DIN EN 175301-803 (DIN 43650C)			
Contact rating: BFS-10-N G1/4  BFS-10-N G1/2  BFS-10-N G1	200 V / 1 A / 20 VA	(NO)		
	200 V / 1 A / 20 VA	(SPDT)		
	230 V / 3 A / 60 VA	(NO)		
250 V / 1,5 A / 50 VA	(SPDT)			
250 V / 3 A / 100 VA	(NO)			
250 V / 1,5 A / 50 VA	(SPDT)			
Protection class:	IP65 (plug acc. to DIN EN 175301-803 formaly DIN 43650C) IP67 (with moulded cable)			
Approvals:	e.g. ATEX, GL, BV,... see <a href="http://www.barksdale.de">www.barksdale.de</a>			

## Switch ranges

(water in l/min)

BFS-10-N G1/4:	BFS-10-N G1/2:	BFS-10-N G1:
0,005...0,06	0,02...0,2	10...30
0,04...0,13	0,2...0,6	15...45
0,1...0,6	0,4...1,8	20...60
0,2...1,2	0,8...3,2	30...90
0,4...2,0	2,0...7,0	60...150
0,5...3,0	3,0...13	
1,0...5,0	4,0...20	
	8,0...30	

## Technical Data

BFS-10-O (with optical indication)			
Measuring principle:	variable aera flow meter		
<b>Materials:</b> Var. aera flow meter:	brass version	stainless steel vers.	
	brass	1.4571	
	Spring:	1.4571	1.4571
	Fitting:	brass, nickel-plated	1.4571
Display Housing:	alumin., anodized		
Glass:	Duran 50		
Magnets:	ferrite		
<b>Operating pressure:</b> BFS-10-O G1/4: BFS-10-O G1/2: BFS-10-O G1:	brass	SS	Pressure drop
	16 bar	16 bar	0,02...0,2 bar
	16 bar	16 bar	0,02...0,3 bar
	10 bar	10 bar	0,02...0,4 bar
Operating temp.:	100 °C (standard), 160 °C (option HT)		
Accuracy:	±10% f. s.		
Electrical connection:	plug acc. to DIN EN 175301-803 (formaly DIN 43650C)		
Contact rating: BFS-10-O G1/4  BFS-10-O G1/2  BFS-10-O G1	200 V / 1 A / 20 VA	(NO)	
	200 V / 1 A / 20 VA	(SPDT)	
	230 V / 3 A / 60 VA	(NO)	
250 V / 1,5 A / 50 VA	(SPDT)		
250 V / 3 A / 100 VA	(NO)		
250 V / 1,5 A / 50 VA	(SPDT)		
Protection class:	IP65 (plug acc. to DIN EN 175301-803 formaly DIN 43650C) IP67 (with moulded cable)		
Approvals:	e.g. ATEX, see <a href="http://www.barksdale.de">www.barksdale.de</a>		

## Switch ranges

(water in l/min)

BFS-10-O G1/4:	BFS-10-O G1/2:		BFS-10-O G1:
0,005...0,06	0,2...0,5	8,0...20	8,0...30
0,025...0,13	0,3...1,0	9,5...24	15...45
0,1...0,6	0,7...2,0	12...28	30...90
0,2...1,2	1,6...4,0		60...150
0,4...2,0	3,0...8,0		
0,5...3,0	4,5...12		
1,0...5,0	6,0...15		

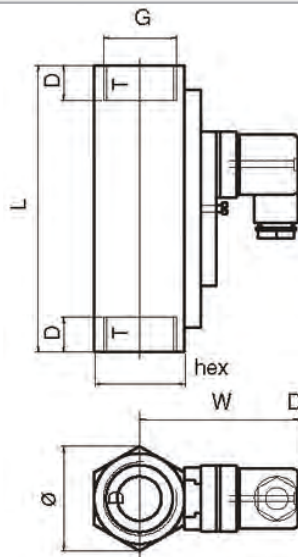
## Flow Switches

## BFS-10-N / BFS-10-O

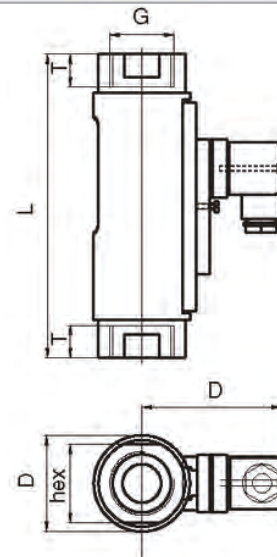
### Dimensions (mm / inch)

Dimensions (in mm)

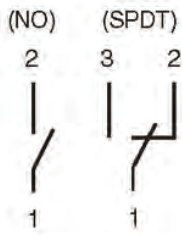
**BFS-10-N**



**BFS-10-O**



#### Wiring diagram



(G)	G 1/4	G 1/2	G 1
(hex)	17	27	41
(∅)	17	31	47
(W)	47	52	76
(D)	10	14	17
(L)	65	90	130
Weight (g)	140	350	1050

(G)	G 1/4	G 1/2	G 1
(hex)	17	27	41
(∅)	20	32	50
(W)	49	53	77
(D)	10	14	17
(L)	90	114	158
Weight (g)	140	300	900

### Order Numbers

BFS-10-N	BFS-10-O
Brass	Brass
0711-256 BFS-10-N-G1/4-MS-NO-ST	0711-250 BFS-10-O-G1/4-MS-NO-ST
0711-338 BFS-10-N-G1/4-MS-WE-ST	0711-332 BFS-10-O-G1/4-MS-WE-ST
0711-257 BFS-10-N-G1/2-MS-NO-ST	0711-347 BFS-10-O-G1/2-MS-NO-ST
0711-339 BFS-10-N-G1/2-MS-WE-ST	0711-348 BFS-10-O-G1/2-MS-WE-ST
0711-258 BFS-10-N-G1-MS-NO-ST	0711-252 BFS-10-O-G1-MS-NO-ST
0711-340 BFS-10-N-G1-MS-WE-ST	0711-334 BFS-10-O-G1-MS-WE-ST
Stainless Steel	Stainless Steel
0711-259 BFS-10-N-G1/4-SS-NO-ST	0711-253 BFS-10-O-G1/4-SS-NO-ST
0711-341 BFS-10-N-G1/4-SS-WE-ST	0711-335 BFS-10-O-G1/4-SS-WE-ST
0711-260 BFS-10-N-G1/2-SS-NO-ST	0711-349 BFS-10-O-G1/2-SS-NO-ST
0711-342 BFS-10-N-G1/2-SS-WE-ST	0711-350 BFS-10-O-G1/2-SS-WE-ST
0711-261 BFS-10-N-G1-SS-NO-ST	0711-255 BFS-10-O-G1-SS-NO-ST
0711-343 BFS-10-N-G1-SS-WE-ST	0711-337 BFS-10-O-G1-SS-WE-ST

Order number example: Order number + switching range = 0711-339, 2,0...7,0 l/min

### Description

NO = normally open	O = with indication	MS = brass	Please specify switching range (see table on page previous) additional to order number.
WE = change-over	N = without indication	SS = stainless steel	



# Flow Switches

for monitoring volume flow of gaseous media,  
with or without optical display

## Features

set point continuously adjustable, rugged, low hysteresis,  
any mounting position,  
high accuracy and functional safety

## Measuring ranges

0,2...1,3 NI/min to 200...650 NI/min for air

## Applications

Measuring and monitoring of gaseous media, e. g. in cooling  
systems, test beds, pumps etc.

# BFS-10-N-AIR / BFS-10-O-AIR



## Technical Data

BFS-10-N-AIR (without indication)			
Measuring principle:	variable aera flow meter		
<b>Materials:</b>	brass version	stainless steel vers.	
Var. aera flow meter:	brass	1.4571	1.4571
Spring:	brass, nickel-plated	1.4571	1.4571
Fitting:	brass, nickel-plated	1.4571	1.4571
Housing:	ferrite	ferrite	
<b>Operating pressure:</b>	brass	VA	Pressure drop
BFS-10-N G1/4:	PN 300 bar	350 bar	0,02...0,2 bar
BFS-10-N G1/2:	PN 300 bar	350 bar	0,02...0,3 bar
BFS-10-N G1:	PN 250 bar	300 bar	0,02...0,4 bar
Operating temp.:	100 °C (standard), 160 °C (option HT)		
Accuracy:	±10% f. s.		
Electrical connection:	plug acc. to DIN EN 175301-803-C (Ex DIN 43650C)		
<b>Contact rating:</b>		(NO)	
BFS-10-N-AIR G1/4	200 V / 1 A / 20 VA	(SPDT)	
BFS-10-N-AIR G1/2	230 V / 3 A / 60 VA	(NO)	
BFS-10-N-AIR G1	250 V / 1,5 A / 50 VA	(SPDT)	
	250 V / 3 A / 100 VA	(NO)	
	250 V / 1,5 A / 50 VA	(SPDT)	
Protection class:	IP65 (plug acc. to DIN EN 175301-803-C - Ex DIN 43650C) IP67 (with moulded cable)		
Approvals:	e.g. ATEX, GL, BV see www.barksdale.de		

## Switch ranges

(air in NI/min)

BFS-10-N-AIR G1/4:	BFS-10-N-AIR G1/2:	BFS-10-N-AIR G1:
0,6...2,2	2,5...10	60...180
1,7...6,0	5,5...20	100...300
2,5...8,0	8,0...30	200...650
3,0...12	10...35	
3,0...22	24...90	
7,0...24	55...220	
12...34	65...240	
16...56	80...300	

## Technical Data

BFS-10-O-AIR (with optical indication)			
Measuring principle:	variable aera flow meter		
<b>Materials:</b>	brass version	stainless steel vers.	
Var. aera flow meter:	brass	1.4571	1.4571
Spring:	brass, nickel-plated	1.4571	1.4571
Fitting:	brass, nickel-plated	1.4571	1.4571
Display Housing:	alumin., anodized	alumin., anodized	
Glass:	Duran 50	Duran 50	
Magnets:	ferrite	ferrite	
<b>Operating pressure:</b>	brass	VA	Pressure drop
BFS-10-O G1/4:	PN 16 bar	16 bar	0,02...0,2 bar
BFS-10-O G1/2:	PN 16 bar	16 bar	0,02...0,3 bar
BFS-10-O G1:	PN 10 bar	10 bar	0,02...0,4 bar
Operating temp.:	100 °C (standard), 160 °C (option HT)		
Accuracy:	±10% f. s.		
Electrical connection:	plug acc. to DIN EN 175301-803-C (Ex DIN 43650C)		
<b>Contact rating:</b>		(NO)	
BFS-10-O-AIR G1/4	200 V / 1 A / 20 VA	(SPDT)	
BFS-10-O-AIR G1/2	230 V / 3 A / 60 VA	(NO)	
BFS-10-O-AIR G1	250 V / 1,5 A / 50 VA	(SPDT)	
	250 V / 3 A / 100 VA	(NO)	
	250 V / 1,5 A / 50 VA	(SPDT)	
Protection class:	IP65 (plug acc. to DIN EN 175301-803-C - Ex DIN 43650C) IP67 (with moulded cable)		
Approvals:	e.g. ATEX, see www.barksdale.de		

## Switch ranges

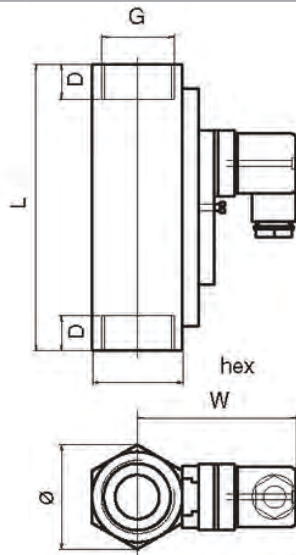
(air in NI/min) for:

BFS-10-O-AIR G1/4:	BFS-10-O-AIR G1/2:	BFS-10-O-AIR G1:
0,2...1,3	5,5...20	3,0...12
0,5...2,0	7,0...24	7,0...30
0,8...3,0	10...35	12...40
1,5...5,0	10...42	28...125
2,0...8,0		50...200
3,0...12		100...420
3,5...14		120...480

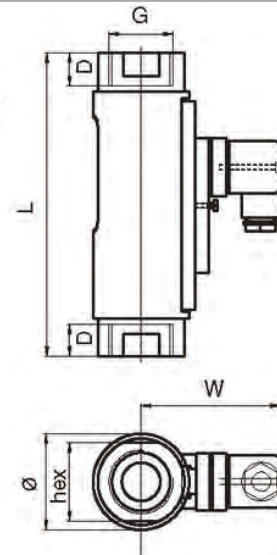
## Dimensions (mm / inch)

Dimensions (in mm)

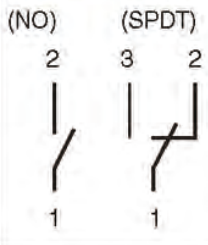
**BFS-10-N-AIR**



**BFS-10-O-AIR**



### Wiring diagram



	G 1/4	G 1/2	G 1
(G)	17	27	41
(hex)	17	31	47
(Ø)	47	52	76
(W)	10	14	17
(L)	65	90	130
Weight (g)	140	350	1050

	G 1/4	G 1/2	G 1
(G)	17	27	41
(hex)	20	32	50
(Ø)	49	53	77
(D)	10	14	18
(L)	90	114	158
Weight (g)	140	300	900

## Order Code

BFS-10-N-AIR	BFS-10-O-AIR
Brass	Brass
0710-007 BFS-10-N-G1/4-MS-NO-ST	0710-001 BFS-10-O-G1/4-MS-NO-ST
0710-019 BFS-10-N-G1/4-MS-WE-ST	0710-013 BFS-10-O-G1/4-MS-WE-ST
0710-008 BFS-10-N-G1/2-MS-NO-ST	0710-002 BFS-10-O-G1/2-MS-NO-ST
0710-020 BFS-10-N-G1/2-MS-WE-ST	0710-014 BFS-10-O-G1/2-MS-WE-ST
0710-009 BFS-10-N-G1-MS-NO-ST	0710-003 BFS-10-O-G1-MS-NO-ST
0710-021 BFS-10-N-G1-MS-WE-ST	0710-015 BFS-10-O-G1-MS-WE-ST
Stainless Steel	Stainless Steel
0710-010 BFS-10-N-G1/4-SS-NO-ST	0710-004 BFS-10-O-G1/4-SS-NO-ST
0710-022 BFS-10-N-G1/4-SS-WE-ST	0710-016 BFS-10-O-G1/4-SS-WE-ST
0710-011 BFS-10-N-G1/2-SS-NO-ST	0710-005 BFS-10-O-G1/2-SS-NO-ST
0710-023 BFS-10-N-G1/2-SS-WE-ST	0710-017 BFS-10-O-G1/2-SS-WE-ST
0710-012 BFS-10-N-G1-SS-NO-ST	0710-006 BFS-10-O-G1-SS-NO-ST
0710-024 BFS-10-N-G1-SS-WE-ST	0710-018 BFS-10-O-G1-SS-WE-ST

Order number example: Order number + switching range = 0710-012, 60...180 l/min

## Description

NO = normally open	O = with indication	MS = brass	Please specify switching range (see table on page previous) additional to order number.
WE = change-over	N = without indication	SS = stainless steel	

# Flow Switches

# BFS-20-O / BFS-20-OL

for liquids from 30 up to 600 cSt with optical display

## Features

viscosity compensated from 30 to 600 cSt, set point continuously adjustable, rugged, low hysteresis, any mounting position, high accuracy and functional safety, with 1/2" connection also available as low cost version

## Measuring ranges

0,1 ... 0,8 l/min to 30 ... 90 l/min for liquids up from 30 to 600 cSt.

## Applications

Measuring and monitoring of liquids, e. g. in cooling or hydraulic systems, test beds, pumps etc.



## Technical Data

BFS-20-O			
Measuring principle:	variable aera flow meter		
<b>Materials:</b> Flow meter: Spring: Fitting: Display Housing: Glass: Magnets:	brass version	stainless steel vers.	
	brass	1.4571	
	1.4571	1.4571	
	brass, nickel-plated	1.4571	
	alumin, anodized	alumin, anodized	
Duran 50	Duran 50		
ferrite	ferrite		
<b>Operating pressure:</b> BFS-20-O:	brass	VA	Pressure drop
	PN 10 bar	10 bar	0,02...0,4 bar
Operating temp.:	120 °C (standard), 160 °C (option HT)		
Accuracy:	±10% f. s.		
Electrical connection:	plug acc. to DIN EN 175301-803-C (Ex DIN 43650C)		
<b>Contact rating:</b> BFS-20-O G1	250 V / 3 A / 100 VA	(NO)	
	250 V / 1,5 A / 50 VA	(SPDT)	
<b>Protection class:</b>	IP65 (plug acc. to DIN EN 175301-803-C - Ex DIN 43650C)		
	IP67 (with moulded cable)		
Approvals:	e.g. ATEX, see www.barksdale.de		

## Technical Data

BFS-20-OL			
Measuring principle:	variable aera flow meter		
<b>Materials:</b> Flow meter: Spring: Fitting: Display Housing: Glass: Magnets:	brass version	stainless steel vers.	
	brass, nickel-plated	1.4571	
	1.4571	1.4571	
	brass, nickel-plated	1.4571	
	alumin, anodized	alumin, anodized	
Duran 50	Duran 50		
ferrite	ferrite		
<b>Operating pressure:</b> BFS-20-OL:	brass	VA	Pressure drop
	PN 16 bar	16 bar	0,2...0,4 bar
Operating temp.:	120 °C (standard), 160 °C (option HT)		
Accuracy:	±10% f. s.		
Electrical connection:	plug acc. to DIN EN 175301-803-C (Ex DIN 43650C)		
<b>Contact rating:</b> BFS-20-OL G1	250 V / 3 A / 100 VA	(NO)	
	250 V / 1,5 A / 50 VA	(SPDT)	
<b>Protection class:</b>	IP65 (plug acc. to DIN EN 175301-803-C - Ex DIN 43650C)		
	IP67 (with moulded cable)		
Approvals:	e.g. ATEX, see www.barksdale.de		

## Switch ranges

in l/min			
BFS-20-O G1/4:	BFS-20-O G1/2:	BFS-20-O G3/4:	BFS-20-O G1:
	0,5...1,5		
	1,0...4,0		
		2,0...8	
		3,0...10	
		5,0...15	
		8,0...24	
		10...30	
		15...45	
		20...60	
		30...90	

## Switch ranges

in l/min
BFS-20-OL G1/2:
0,5...1,7
1,3...4,0
2,5...8,0



## Dimensions (mm / inch)

**Dimensions (in mm)**

**BFS-20-O**

**BFS-20-OL**

**Wiring diagram**

(NO)	(SPDT)
2	3 2
1	1

	G 1/4	G 1/2	G 3/4	G 1		G 1/2
(G)					(G)	
(hex)	41	41	41	41	(hex)	27
(Ø)	50	50	50	50	(Ø)	32
(W)	77	77	77	77	(W)	53
(D)	17	17	17	17	(D)	14
(L)	145	145	139	158	(L)	114
Weight (g)	850	850	850	850	Weight (g)	300

## Order Code

BFS-20-O	BFS-20-OL
Brass	Brass
0712-263 BFS-20-O-G1-MS-NO-ST	0712-262 BFS-20-OL-G1/2-MS-NO-ST
0712-345 BFS-20-O-G1-MS-WE-ST	0712-344 BFS-20-OL-G1/2-MS-WE-ST
Stainless Steel	Stainless Steel
0712-265 BFS-20-O-G1-SS-NO-ST	0712-264 BFS-20-OL-G1/2-SS-NO-ST
0712-347 BFS-20-O-G1-SS-WE-ST	0712-346 BFS-20-OL-G1/2-SS-WE-ST

The version BFS-20-O is also available with process connections, please see table on side before. To place an order please add the process connection to the order number.

Order number example: Order number + switching range = 0712-263, 3...10 l/min

## Description

NO = normally open	O = with indication	MS = brass	Please specify switching range (see table on page previous) additional to order number.
WE = change-over	N = without indication	SS = stainless steel	

# Flow Switches

## BFS-30-N / BFS-30-O

for liquids from 30 up to 600 cSt,  
with or without optical display

### Features

viscosity compensated from 30 up to 600 cSt,  
set point continuously adjustable,  
rugged, low hysteresis, any mounting position,  
high accuracy and functional safety,  
optional with pointer-indicating instrument,  
ship approvals available for N-versions

### Measuring ranges

0.5...1.5 l/min to 35...110 l/min  
for liquids from 30 up to 600 cSt.

### Applications

Measuring and monitoring of liquids, e. g. in cooling  
or hydraulic systems, test beds, pumps etc.



### Technical Data

BFS-30-N (without indication)				
Measuring principle:	variable aera flow meter			
Materials:	brass version		stainless steel vers.	
Flow meter:	brass		1.4571	1.4571
Spring:	1.4571		1.4571	1.4571
Fitting:	brass, nickel-plated		1.4571	
Housing:	brass, nickel-plated		1.4571	
Operating pressure:	brass	brass GL	VA	Press.drop
BFS-30-N, N E:	250 bar	100 bar	300 bar	0,02...0,4 bar
BFS-30-L:	300 bar	100 bar	350 bar	0,02...0,2 bar
Operating temp.:	120 °C (standard), 160 °C (option HT)			
Accuracy:	±10% f. s.			
Electrical connection:	plug acc. to DIN EN 175301-803 (Ex DIN 43650C)			
Contact rating:				
BFS-30-L	230 V / 3 A / 60 VA	(NO)		
	250 V / 1,5 A / 50 VA	(SPDT)		
BFS-30-N, N E	250 V / 3 A / 100 VA	(NO)		
	250 V / 1,5 A / 50 VA	(SPDT)		
Protection class:	IP65 (plug acc. to DIN EN 175301-803 - Ex DIN 43650C)			
	IP67 (with moulded cable)			
Approvals:	e.g. ATEX, GL, BV,...see www.barksdale.de			

### Technical Data

BFS-30-O (with optical indication)			
Measuring principle:	variable aera flow meter		
Materials:	brass version		stainless steel vers.
Flow meter:	brass		1.4571
Spring:	1.4571		1.4571
Fitting:	brass, nickel-plated		1.4571
Housing:	brass, nickel-plated		1.4571
Display Housing:	Makrolon		Makrolon
Operating pressure:	brass	VA	Press. drop
BFS-30-O, O E:	250 bar	300 bar	0,02...0,4 bar
Operating temp.:	120 °C (standard), 160 °C (option HT)		
Accuracy:	±10% f. s.		
Electrical connection:	plug acc. to DIN EN 175301-803 (Ex DIN 43650C)		
Contact rating:			
BFS-30-O, O E	250 V / 3 A / 100 VA	(NO)	
	250 V / 1,5 A / 50 VA	(SPDT)	
Protection class:	IP65 (plug acc. to DIN EN 175301-803 - Ex DIN 43650C)		
	IP67 (with moulded cable)		
Approvals:	see www.barksdale.de		

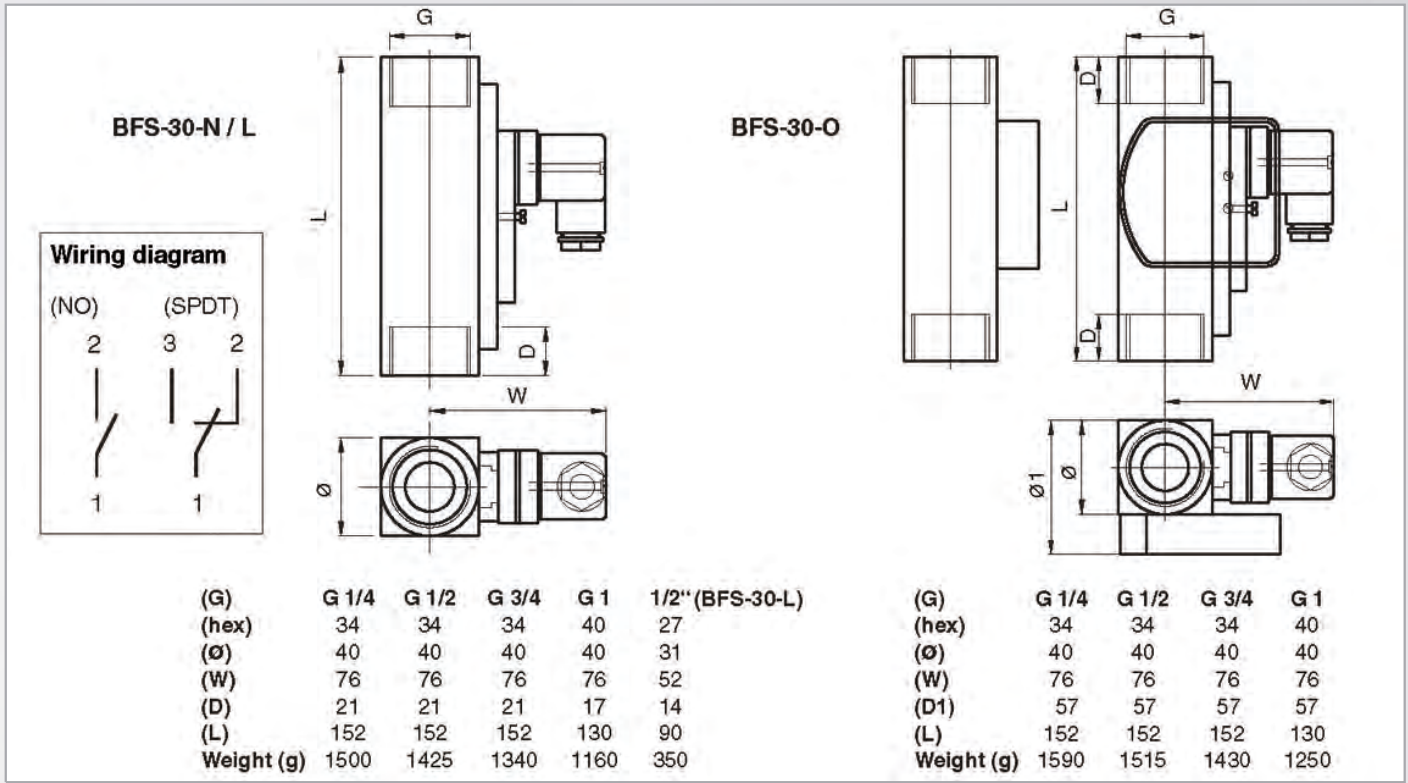
### Switch ranges

versions	in l/min	Process connections
BFS-30-L:	0,5...1,6	G1/2
	0,8...3,0 / 2,0...7,0	
BFS-30-N:	0,5...1,5 / 1,0...4,0	G1
	2,0...8,0 / 3,0...10	
	5,0...15 / 8,0...24	
	10...30 / 15...45	
	20...60 / 30...90	
	35...110	
BFS-30-N E:	1,0...20 / 4,0...40	G1
	5,0...50 / 8,0...60	
	12...70 / 15...80	

### Switch ranges

versions	in l/min	Process connection
BFS-30-O:	0,5...1,5 / 1,0...4,0	G1
	2,0...8,0 / 3,0...10	
	5,0...15 / 8,0...24	
	10...30 / 15...45	
	20...60 / 30...90	
	35...110	
BFS-30-O E:	1,0...20 / 4,0...40	G1
	5,0...50 / 8,0...60	
	12...70 / 15...80	

## Dimensions (mm / inch)



## Order Code

Brass	Description	Stainless Steel	Description
0713-266	BFS-30-L-G1/2-MS-NO-ST	0713-269	BFS-30-L-G1/2-SS-NO-ST
0713-267	BFS-30-N-G1-MS-NO-ST	0713-270	BFS-30-N-G1-SS-NO-ST
0713-268	BFS-30-NE-G1-MS-NO-ST	0713-271	BFS-30-NE-G1-SS-NO-ST
0713-272	BFS-30-O-G1-MS-NO-ST	0713-274	BFS-30-O-G1-SS-NO-ST
0713-273	BFS-30-OE-G1-MS-NO-ST	0713-275	BFS-30-OE-G1-SS-NO-ST
0713-348	BFS-30-L-G1/2-MS-WE-ST	0713-351	BFS-30-L-G1/2-SS-WE-ST
0713-349	BFS-30-N-G1-MS-WE-ST	0713-352	BFS-30-N-G1-SS-WE-ST
0713-350	BFS-30-NE-G1-MS-WE-ST	0713-353	BFS-30-NE-G1-SS-WE-ST
0713-354	BFS-30-O-G1-MS-WE-ST	0713-356	BFS-30-O-G1-SS-WE-ST
0713-355	BFS-30-OE-G1-MS-WE-ST	0713-357	BFS-30-OE-G1-SS-WE-ST

### Adapter

Brass	Process connection	Stainless Steel	Process connection
0799-026	1"...1/4"	0799-029	1"...1/4"
0799-027	1"...1/2"	0799-030	1"...1/2"
0799-028	1"...3/4"	0799-031	1"...3/4"

Order number example: Order number + switching range = 0713-266, 0,8...3,0 l/min

## Description

NO = normally open	NE = without indication, enlarged meas. range	MS = brass	Please specify switching range (see table on page previous) additional to order number.
WE = change-over	OE = with indication enlarged meas. range	SS = stainless steel	
	L = without indication, low cost		
	O = with indication		
	N = without indication		

# Flow Switches

# BFS-40-N / BFS-40-O

or water monitoring, with or without optical display

## Features

large switching range, set point continuously adjustable, rugged, low hysteresis, any mounting position, high accuracy and functional safety, optional with pointer-indicating instrument, ship approvals available for N-versions

## Measuring ranges

0,2...4,0 l/min to 35...250 l/min for water

## Applications

Measuring and monitoring of liquids, e. g. in cooling or hydraulic systems, test beds, pumps etc.



## Technical Data

BFS-40-N (without optical indication)				
<b>Measuring principle:</b>	variable aera flow meter			
<b>Materials:</b>	brass version		stainless steel vers.	
Var. aera flow meter:	brass			1.4571
Spring:	1.4571			1.4571
Fitting:	brass, nickel-plated			1.4571
Housing:	brass, nickel-plated			1.4571
<b>Operating pressure:</b>	brass	brass GL	VA	Pressure drop
BFS-40-N	200 bar	100 bar	300 bar	0,02...0,8 bar
<b>Operating temp.:</b>	100 °C (standard), 160 °C (option HT)			
<b>Accuracy:</b>	±5% f. s.			
<b>Electrical connection:</b>	plug acc. to DIN EN 175301-803-C (Ex DIN 43650C)			
<b>Contact rating:</b>	250 V / 3 A / 100 VA		(NO)	
BFS-40-N	250 V / 1,5 A / 50 VA		(SPDT)	
<b>Protection class:</b>	IP65 (plug acc. to DIN EN 175301-803-C - Ex DIN 43650C) IP67 (with moulded cable)			
<b>Approvals:</b>	e.g. ATEX, GL, BV,...see www.barksdale.de			

## Technical Data

BFS-40-O (with optical indication)			
<b>Measuring principle:</b>	variable aera flow meter		
<b>Materials:</b>	brass version		stainless steel vers.
Var. aera flow meter:	brass		1.4571
Spring:	1.4571		1.4571
Fitting:	brass, nickel-plated		1.4571
Housing:	brass, nickel-plated		1.4571
Display Housing:	makrolon		
<b>Operating pressure:</b>	brass	VA	Pressure drop
BFS-40-O:	200 bar	300 bar	0,02...0,8 bar
<b>Operating temp.:</b>	100 °C (standard), 160 °C (option HT)		
<b>Accuracy:</b>	±5% f. s.		
<b>Electrical connection:</b>	plug acc. to DIN EN 175301-803-C (Ex DIN 43650C)		
<b>Contact rating:</b>	250 V / 3 A / 100 VA		(NO)
BFS-40-O	250 V / 1,5 A / 50 VA		(SPDT)
<b>Protection class:</b>	IP65 (plug acc. to DIN EN 175301-803-C - Ex DIN 43650C) IP67 (with moulded cable)		
<b>Approvals:</b>	see www.barksdale.de		

## Switch ranges

in l/min

BFS-40-N G1/4:	BFS-40-N G1/2:	BFS-40-N G3/4:	BFS-40-N G1:	BFS-40-N G1 1/4:	BFS-40-N G1 1/2:
0,2...4,0					
0,5...8,0					
0,6...5,0					
1,0...14					
1,0...28					
	2,0...40				
	4,0...55				
		1,0...70			
		8,0...90			
		5,0...110			
			10...150		
				35...220	
				35...250	

## Switch ranges

in l/min

BFS-40-O G1/4:	BFS-40-O G1/2:	BFS-40-O G3/4:	BFS-40-O G1:	BFS-40-O G1 1/4:	BFS-40-O G1 1/2:
0,2...4,0					
0,5...8,0					
0,6...5,0					
1,0...14					
1,0...28					
	2,0...40				
	4,0...55				
		1,0...70			
		8,0...90			
		5,0...110			
				10...150	
					35...220
					35...250

## Dimensions (mm / inch)

**Dimensions (in mm)**

**BFS-40-N**

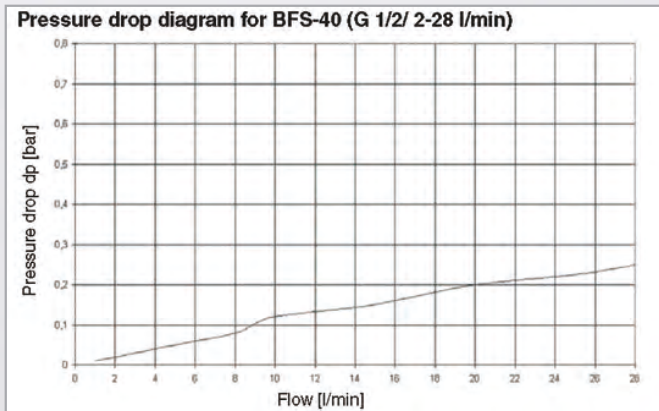
**BFS-40-O**

	G 1/4	G 1/2	G 3/4	G 1	1 1/4	1 1/2
(G)	27	27	27/34	40	40/50	60
(hex)	27	27	27/34	40	40/50	60
(Ø)	30	30	30/40	40	40/50	60
(W)	71	71	71/76	76	76/81	82
(D)	14	14/16	16/18	19	21	24
(L)	130	148	148/152	156	200	200
Weight (g)	130/ 148	850/ 900	900/ 1450	1100	2750/ 3000	3800

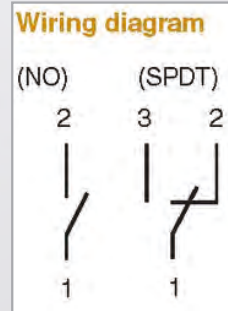
  

	G 1/4	G 1/2	G 3/4	G 1	1 1/4	1 1/2
(G)	27	27	27/34	40	40/50	60
(hex)	27	27	27/34	40	40/50	60
(Ø)	30	30	30/40	40	40/50	60
(Ø1)	47	47	47/57	57	57/67	77
(W)	71	71	71/76	76	76/81	82
(D)	14	14	16/18	19	21	24
(L)	130	130/148	148/152	156	200	200
Weight (g)	900	900/950	950/1450	1150	2800/ 3050	3850

## Pressure Drop Diagram



## Wiring Diagrams



## Order Numbers

Order numbers on request

# Electronic Flow Sensors

# UQS 7

Electronic flow sensor for flow and volume flow monitoring with ultrasonic sensor, digital display, 2 set points and analog output, linearity error 2.5 % m.v.

## Features

7-segment LED display, microprocessor-controlled, self monitoring with error display.

All parameters are configured by keypad, tamper proof, keypad lock, rugged construction, vibration- and shock-proof, long term stability, display unit rotatable in steps of 90°

## Applications

OEM applications,  
Automotive,  
cooling,  
automobile industry

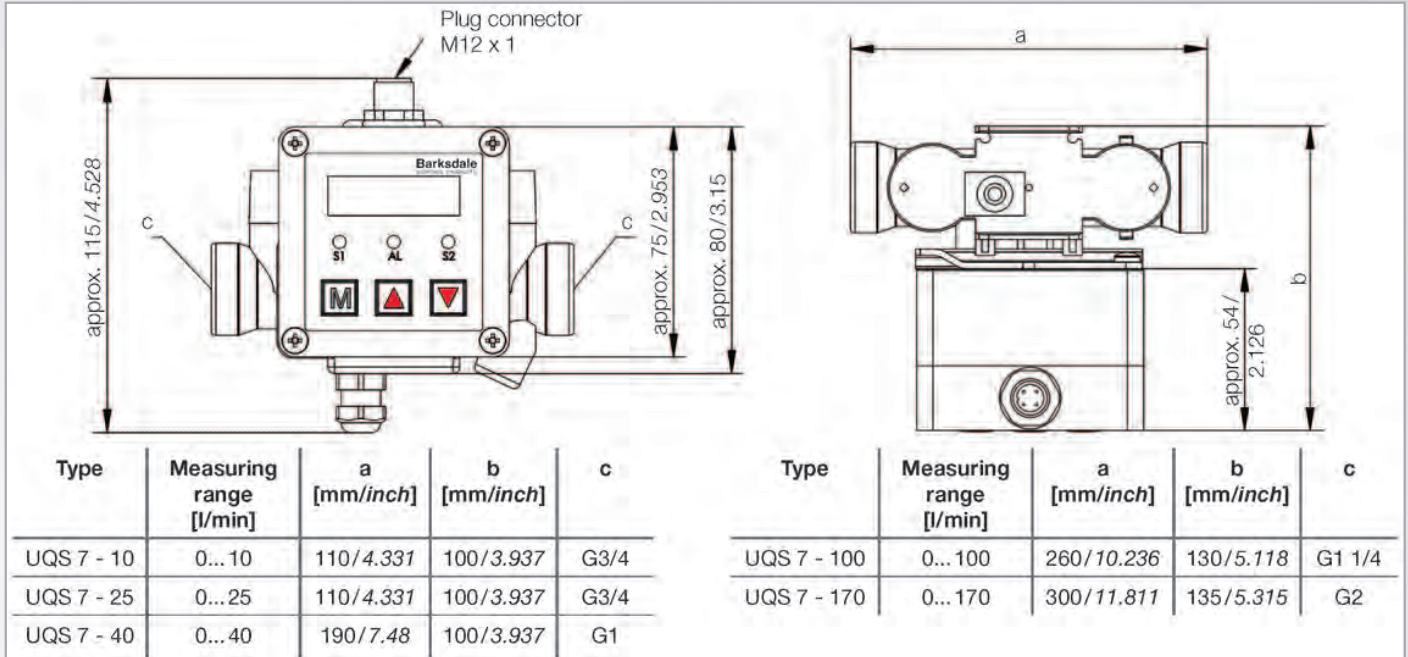


## Technical Data

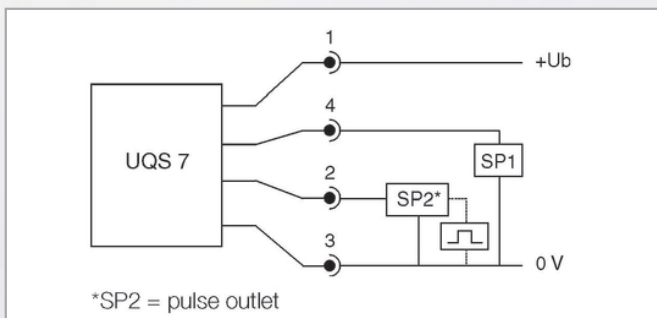
<b>Sensor element:</b>	ultrasonic sensor				
<b>Media:</b>	Water and similar media, max. pressure 25 bar (higher pressures on request)				
<b>Materials:</b>	Brass, pressed				
Wetted parts:	Aluminum die-cast				
Electronics housing:	Klingersil®				
seals (media):	Polyester				
Keypad:					
<b>Operating elements:</b>	3 easy-response pushbuttons				
<b>System of protection:</b>	IP65				
<b>Protection class:</b>	III				
<b>Process connection:</b>	G3/4, G1, G11/4, G2				
<b>Dimensions:</b>	100x140 mm				
<b>Weight [g]:</b>	850	850	1200	3000	4000
<b>Measuring range [l/min]:</b>	10	25	40	100	170
<b>Linearity error:</b>	±2,5% m.v. at 25 °C				
<b>A/D converter:</b>	500 ms				
Scanning rate:					
<b>Digital display:</b>	4-digit 7-segment LED display, red, digit height 12mm				
Display rate:	500 ms				
Error display:	LED yellow and alphanumeric display				
<b>Electrical connection:</b>	Plug M12x1, 4-/5-pin				
<b>Temperature influence:</b>	±0,2% m.v./10K				
<b>Compensation range:</b>	-10 °C...+70 °C				
<b>Repeatability:</b>	±0,1% m.v.				

<b>Temperature range:</b>	
Medium (enclosure separate from sensor):	+4 °C...+130 °C
Electronics:	-10 °C...+70 °C
Storage:	-30 °C...+80 °C
<b>Inlet - Outflow Zone:</b>	Integrated in the meas. device
<b>Power supply:</b>	15...32 V DC, reversed polarity protected (SELV, PELV)
<b>Power consumption:</b>	approx. 50 mA (without load)
<b>Analog output:</b>	
Current output:	4...20 mA
Load:	max. RI = (Ub-12 V)/20 mA
	RI = 600 Ohm at Ub = 24 V DC
Load influence:	0.3%/100 Ohm
Scanning rate:	500 ms
Resolution:	10 Bit (1024 steps per measuring span)
<b>Option</b>	
Voltage output:	0...10 V DC
Rating:	max. 10 mA, short-circuit proof
Adjustment range:	25%...100% m.v.
<b>Transistor switching outputs:</b>	
Switching function:	Normally open / normally closed, standard / window mode and diagnosis function adjustable
Adjustment range:	0 %...125 % m.v.
Switching frequency:	max. 100 Hz
Current rating:	max. 500 mA, short-circuit proof
Delay:	0,0s...9,9s adjustable
Display:	LED green
<b>Pulse output:</b>	on request
<b>Accessories:</b>	Plug connector

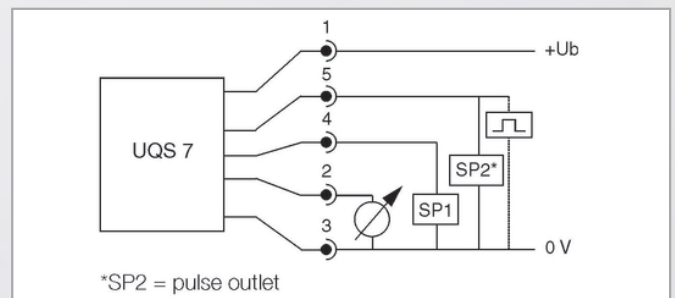
## Dimensions (mm / inch)



## Connection Diagram 1



## Connection Diagram 2



## Order Numbers

Type	UQS 7 - 10	UQS 7 - 25	UQS 7 - 40	UQS 7 - 100	UQS 7 - 170
Measuring range (Qn)*	0,04...10 l / min	0,1...25 l / min	0,16...40 l / min	0,4...100 l / min	0,68...170 l / min
Process connection	G3/4	G3/4	G1	G1 1/4	G2
2 switching outputs	0728-001	0728-003	0728-005	0728-014	0728-016
2 switching outputs, 1 analog output 4...20 mA	0728-002	0728-004	0728-006	0728-015	0728-017

\* Qmax = Qn x 2; in the range of Qmax the accuracy class is 3%.

# Experts

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and control of

- ▶ Pressure
- ▶ Temperature
- ▶ Level
- ▶ Flow

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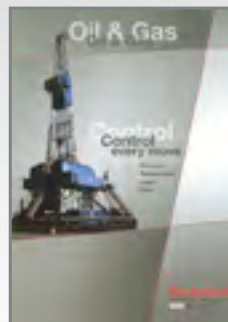
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Product overview



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