



DATA SHEET: Ultrasonic flow meter system FLARESONIC-H

Flaresonic-H			901-07-02B001
item			product code
1	General	Meter system	Ultrasonic Gas flowmeter
		Meter model	Flaresonic-H
		Pipe diameter	max. 64"
		method	digital travel time
		Fluid	Gas
		Gas velocity	-30 m/s to + 30 m/s
		Gas temperature	-20°C...+80°C
		Gas pressure	0 - 5 barg
		T ambient	+60°C
		Inaccuracy	<= ± 5%of reading; ± 5mm/s, Re > 10e+5
		Repeatability	< 5 mm/s
		Resolution	< 1 mm/s
		Output	Volume Flow at line conditions
		Units	SI [m3/s]
		Communication protocol	Instromet standard
Required straight lengths	upstream 10 D, downstream 3D		
1	SPU-1 Signal processing unit		901-40-06B003
7	SPU EEx marking	EExd IIB T6 Tamb=+60°C ISSeP 95D.103.1207	
	SPU total weight	approx. 15 kg	
7	TIP-1		901-42-01F049
	TIP-1	Transducer Interface Processor	
	Power supply	12-30 Vdc (typical 24Vdc)	
	Power consumption	10 W	
	Storage temperature	max. +80°C	
	Frequency output	0 - 10 KHz	
	Digital I/O	RS485	
		Data valid signal	
		Flow direction signal	
8	SPU-1 housing		901-41-44A013
9	Ex-box		-
	Enclosure	CCA-03E	
	Enclosure material / IP class	Alluminium cast alloy / IP65	
	Enclosure EEx marking	EEx d IIC T6 Tamb=+60°C ISSeP no. 95D.103.1207	
	Weight (empty)	approx. 9 kg	
	Size	240 x 240 x 210 (L x W x H)	
10	Sensor glands		760-03-000211
	type	Hawke 501/453/UNIV/OS/M20	
	Inner Sheath	min. 3.0mm max. 8.1mm	
	Material / IP class	Brass / IP 66 with nylon sealing washer	
	Ambient temperature	-60°C / +80°C	
	Cable gland EEx marking	EEx d IIC and EEx e II BAS01ATEX2078X	
11	Signal glands		760-03-000611
	type	Hawke 501/453/UNIV/O/M20	
	Inner Sheath	min. 7.5mm max. 11.9mm	
	Material / IP class	Brass / IP 66 with nylon sealing washer	
	Ambient temperature	-60°C / +80°C	
	Cable gland EEx marking	EEx d IIC and EEx e II BAS01ATEX2078X	
2	Bracket		901-41-40B002
	Bracket CCA03E	240 x 240 x 120 mm (L x W x H)	
	Bracket material	ASTM A105 with 2.2 certificate	



3	SPU-1 mounting set		901-43-70B001
4	Sensor Assembly		901-07-41B003
13	EEx m Transducer		901-10-05B004
	Model	Ultrasonic Transducer model Zg	
	Type	Online retractable	
	Storage temperature	max.+100°C	
	Sensor material	Ceramic / Epoxy	
	Sensor head	SS 316 with 3.1.B certificate / NACE MPR 0175	
	Sensor pipe	SS 316 with 3.1.B certificate / NACE MPR 0175	
	Sensor EEx marking	EEx m II T6 Tamb=-20°C / +80°C Bas no. Ex 94C8128X	
14	EEx d Junction box		901-41-45B001
	Junction box	SL-14.1 ½" NPT	
	Junction box material / IP class	Alluminium cast alloy / IP 65	
	Ambient temperature	-20°C / +40°C	
15	EEx d Adapter plug		760-03-050200
	Adapter plug AD-D-10-29-04	½"NPT male - M20 female	
	Adapter material / IP class	Brass / IP 66 68	
	Ambient temperature	-50°C / +85°C	
16	EEx d Cable gland		760-03-000101
	Cable gland	Hawke A501/421/O/M20	
	Cable gland material / IP class	Brass / IP 66 67 68	
	Ambient temperature	-60°C / +100°C	
17	Earthing clamp		760-02-000400
	type	½" for pipediameter 21-22 mm	
	Material	nickel plated red copper	
18	Ground wire		680-00-012345
	type	standard wire yellow/green 6mm2	
19	Cable		901-11-57E001
	type	ZZ 2219 MSTR STR2	
	Ambient temperature	max. 90°C	
20	Sensor Holder		901-07-43B001
	Sensor holder connection size	1½" ANSI B16.5 150# RF	
	Sensor holder material	Flange: ASTM 316L with 3.1.B certificate/NACE MPR 0175	
		Holder: ASTM 316L with 3.1.B certificate/NACE MPR 0175	
	Tube fitting	1" NPT	
21	Gasket		900-06-001500
	Gasket size	1½" 150# RF ANSI B16.21	
	Gasket material	Novapress 815, asbestosfree	
22	Studbolt		901-07-46B001
	Studbolts	½" UNC x 70mm with 2.2 certificate	
5	Mounting Block		901-07-42B001
	Mounting block	1½" ANSI B16.5 150# RF	
	Mounting block material	ASTM A105 with 3.1.B certificate/NACE MPR 0175	



6 23	Ballvalve Assembly		901-07-46C001
	Ballvalve		901-07-44B001
	Ball valve connection size	1½" ANSI B16.5 150# RF	
	Ball valve material	Body: ASTM A216 with 3.1.B certificate/NACE MPR 0175	
		Ball: SS 316 with 3.1.B certificate/NACE MPR 0175	
	Stem: SS 316 with 3.1.B certificate/NACE MPR 0175		
		Seat: Virgin PTFE	
21	Gasket		900-06-001500
	Gasket size	1½" 150# RF ANSI B16.21	
	Gasket material	Novapress 815, asbestosfree	
22	Studbolt		901-07-46B001
	Studbolts	½" UNC x 70mm with 2.2 certificate	
	Studbolt material	ASTM A4-70	

OPTIONS

OPTION 1

	Analog ouput	4-20 mA	-
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OPTION 2

	Normalisation module	Volume flow at base conditions	-
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OPTION 3

8	SPU-1 housing		901-41-48C013
	Ex-box		-
	Enclosure	CCA-03	
	Enclosure material / IP class	Alluminium cast alloy / IP57	
	Enclosure EEx marking	EEx d IIB T6 Tamb=+40°C Inix no. 83.103.251	
	Weight (empty)	approx. 12 kg	
	Size	300 x 280 x 200 (L x W x H)	
	Sensor glands		760-03-000211
	type	Hawke 501/453/UNIV/OS/M20	
	Inner Sheath	min. 3.0mm max. 8.1mm	
	Material / IP class	Brass / IP 66 with nylon sealing washer	
	Ambient temperature	-60°C / +80°C	
	Cable gland EEx marking	EEx d IIC and EEx e II BAS01ATEX2078X	
	Signal glands		760-03-000611
	type	Hawke 501/453/UNIV/O/M20	
	Inner Sheath	min. 7.5mm max. 11.9mm	
	Material / IP class	Brass / IP 66 with nylon sealing washer	
	Ambient temperature	-60°C / +80°C	
	Cable gland EEx marking	EEx d IIC and EEx e II BAS01ATEX2078X	
	2	Bracket	
Bracket CCA03/GUB5		368 x 320 x 100 mm (L x W x H)	
Bracket material		ASTM A105 with 2.2 certificate	



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OPTION 4

8	SPU-1 housing		901-41-43D013
	Ex-box		-
	Enclosure	GUB-5	
	Enclosure material / IP class	Alluminium cast alloy / IP65	
	Enclosure EEx marking	EEx d IIB T6 Tamb=+40°C Inix 87.B.103.620	
	Weight (empty)	approx.15 kg	
	Size	300 x 280 x 200 (L x W x H)	
	Sensor glands		760-03-000800
	type	Hawke ICG 653/UNIV/OS/M20	
	Inner Sheath	min. 8.9 mm max. 10.0 mm	
	Material / IP class	Brass / IP 66 with nylon sealing washer	
	Ambient temperature	-60°C / +80°C	
	Cable gland EEx marking	EEx d IIC and EEx e II BAS01ATEX2080X	
	Signal glands		760-03-000801
	type	Hawke 501/453/UNIV/O/M20	
	Inner Sheath	min. 8.9 mm max. 10.0 mm	
	Material / IP class	Brass / IP 66 with nylon sealing washer	
	Ambient temperature	-60°C / +80°C	
	Cable gland EEx marking	EEx d IIC and EEx e II BAS01ATEX2080X	
	2	Bracket	
Bracket CCA03/GUB5		368 x 320 x 100 mm (L x W x H)	
Bracket material		ASTM A105 with 2.2 certificate	

OPTION 5

8	SPU-1 housing		on request
	Ex-box		-
	Enclosure	TNCD 28 28 15	
	Enclosure material / IP class	SS 316L / IP66	
	Enclosure EEx marking	EEx d IIB T6 Tamb=+40°C NEMKO cert. of elec. apparatus	
	Weight (empty)	approx. 28kg	
	Size	280 x 280 x 180 mm (L x W x H)	
	Sensor glands		760-03-000800
	type	Hawke ICG 653/UNIV/OS/M20	
	Inner Sheath	min. 8.9 mm max. 10.0 mm	
	Material / IP class	Brass / IP 66 with nylon sealing washer	
	Ambient temperature	-60°C / +80°C	
	Cable gland EEx marking	EEx d IIC and EEx e II BAS01ATEX2080X	
	Signal glands		760-03-000801
	type	Hawke 501/453/UNIV/O/M20	
	Inner Sheath	min. 8.9 mm max. 10.0 mm	
	Material / IP class	Brass / IP 66 with nylon sealing washer	
	Ambient temperature	-60°C / +80°C	
	Cable gland EEx marking	EEx d IIC and EEx e II BAS01ATEX2080X	
	2	Bracket	
Bracket Technor		306 x 306 x 100 mm (L x W x H)	
Bracket material		ASTM A105 with 2.2 certificate	

OPTION 6

Retraction tool		901-07-45B001
Threaded bar	M16 x 1000 St. 8.8	
Pressure plate	140 x 50 x 30 St. 37	
Balance clamp	50 x 25 x 22,5 St. 37	
Hex nut	M16 St. 8.8	
Hexagon head screw + nut	M6 x 60 St. 8.8	
Winged nut	M16 St. 8.8	