

ROBUST HIGH QUALITY FLOW MONITORS

Elettas alternative for replacement of
ABB TIVG Flow Indicator



Robust Flow Monitors with alarm for controlling the flow in pipes



The Flow Monitor is a protective device which controls that the given flow of the liquid in a pipe is at a correct rate and controls any deviations with pre-set micro-switches.

The Eletta TIVG-S series is replacing the old TIVG-F and -R series with updated materials and functions. The upgrade gives a higher quality monitor allowing higher flow rates and wider flow turndown.

The Eletta TIVG-S comes with one or two microswitch setpoints which are adjustable within the chosen measuring range. They can be set for high and/or low flow alarms for example to protect expensive equipment such as; coolant in transformers, induction coils of furnaces, generators, diesel engine and compressors. It can supervise the supply of fuel oil to central heating boilers and lubricating oil to gear units and bearings. It can cope with almost anything that flows, high and low viscous liquids, contaminated or clean and for many different flow ranges up to 20 000 l/min.

The monitor is insensitive to surrounding magnetic fields and it combines the long-standing proven mechanical function with outstanding reliability. The products are manufactured with all wetted parts in Stainless Steel except for threaded 1 1/2" BSP-F in brass.

- The new TIVG-S is designed to one-to-one replacement without modifications to your system.
- TIVG-S has a much higher flow measurement capability
- TIVG-S has a better material of construction
- TIVG-S has a higher flow measurement turndown
- TIVG-S has a higher pressure rating and standard
- TIVG-S has an option for higher temperature limit if required in certain cases of lube oil circuits
- Insensitive to magnetic fields
- Shows flow without external power

In 1994, Eletta Flow acquired the exclusive rights for the ABB Flow Indicator TIVG in order to add this product to our existing offer of Eletta Flow Monitors. Over the years, we have seen limitations in specifications and as a result, a decline in sales for this original ABB product. We have therefore developed an updated version where we combine the Eletta Flow Monitors with the TIVG functions and measures in order to create a direct replacement to the old TIVG. This updated version is called TIVG-S and

we have actually included more options and features into their new model than we were able to offer before. The aim was of course to keep all important measures of the old model so you can direct replace the old version with the new TIVG-S, without any modifications to the existing pipe configuration at site. We have added a schematic picture below to describe how easy the replacement is.



Old TIVG-R with one microswitch
Threaded connection



Replaced by TIVG-V15R
One microswitch and indicating window
Threaded connection



Old TIVG-R with two microswitches
Threaded connection



Replaced by TIVG-S25R
Two microswitches and large dial
Threaded connection



Old TIVG-F with two microswitches
Flanged connection



Replaced by TIVG-S25F
Two microswitches and large dial
Flanged connection



Technical specification



TIVG-V15R Series

Flow Monitor with aluminium housing and threaded stainless steel pipe connection 1/2" and 1" BSP-F. One microswitch. Small indication window.

Replaces old TIVG-15 and 25R series with one microswitch.



TIVG-V15R Series

Flow Monitor with aluminium housing and threaded pipe connection in brass 1 1/2" BSP-F. One microswitch. Small indication window.

Replaces old TIVG-40R with one microswitch.



TIVG-S25R Series

Flow Monitor with aluminium housing and threaded pipe connection in brass 1 1/2" BSP-F. Two microswitches. Large dial.

Replaces old TIVG40R with two microswitches.



TIVG-S25R Series

Flow Monitor with aluminium housing and threaded stainless steel pipe connection 1/2" and 1" BSP-F. Two microswitches. Large dial.

Replaces old TIVG15 and 25 with two microswitches.



TIVG-S25F Series

Flow Monitor with aluminium housing and flanged stainless steel pipe connection except for DN350 and 400 which comes in painted carbon steel. Available in DIN from 15-400 mm. Two microswitches. Large dial.

Replaces old TIVG15-400F with double microswitches.

Flow range	0,2 – 20 000 l/min (liquid), to choose the right range, please refer to table of Measuring ranges page 4.
Flow turndown	1:5
Wetted Material	Stainless steel 316L/1.4404, DN40 threaded comes in brass.
Rubber Parts	Nitrile (HNBR), EPDM or Fluorinated rubber (FPM)
Min. pressure	Aprx. 700 – 1000 mbar (0,7 – 1 bar)
Max. pressure	16 bar, DN250-400 10 bar.
Max. temp. Control Unit	90°C standard, 120°C optional
Max. temp. Pipe Section	V15R/S25R brass 1 1/2" BSP-F: 120°C V15R/S25R in SS: 250°C
Enclosure	IP65 (NEMA4)
Electrical terminal	Ceramic
Indicating window	Acrylic
Dial	Large 120 mm diameter with linear scale and front glass of PC
Process Connection	1/2", 1" and 1 1/2" BSP-F thread DN15 – 400 DIN flange
Alarm Contacts	TIVG-V15 one microswitch and TIVG-S25 two microswitches independently adjustable within the ordered flow range.
Micro switch spec	Contact surfaces are silver plated as standard. Type: SPDT Hystereses: 10% Rated voltage: 480 VAC / 15A Breaking current: 15@125, 250, 480 VAC Resistive load: 2A@30 VDC, 0,4A@125 VDC, 0,2A@230 VDC
Accuracy	<+/- 5% F.S within 20-80% of Flow range <+/- 10% F.S within 100% of Flow range
Repeatability	<2% actual

Certificates



Measuring Ranges Eletta Flow Monitor TIVG-S



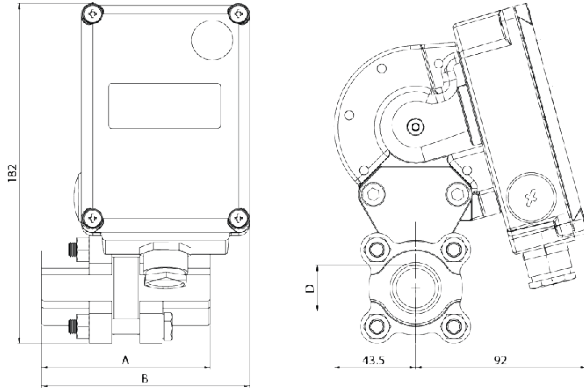
	"Old" TIVG-R	TIVG- SR	
	l/min	l/min	
Model	<i>Actual range</i>	TIVG-S threaded	MC x (S25)
15 R	0,2-6	0,2 -1	0,2
	0,4 - 1,2	0,3 - 1,5	0,3
	0,8-2,5	0,5-2,5	0,5
	1,6-4,8	1 -5	1
	3 - 9	2- 10	2
	5 - 15	4 - 20	4
	10 - 30	6 - 30	6
25 R	16-48	12-60	12
	24 - 72	16 - 80	16
	40-120	24-120	24
40 R	40-120	24-120	24
	70-210	50-250	50

	"Old" TIVG-F	TIVG- SF	
	l/min	l/min	
Model	<i>Actual range</i>	TIVG-S flanged	MC x (S25)
15 F	4,5 - 15	4-20	4
	9-20	5-25	5
	9-30	6-30	6
25F	15-50	10-50	10
	21-70	15-75	15
	30-100	20-100	20
40F	45-150	40-200	40
	60-200	50-250	50
50F	60-200	50-250	50
	90-300	70-350	70
65F	90-300	70-350	70
	150-500	100-500	100
80F	150-500	100-500	100
	210-700	160-800	160
100F	210-700	160-800	160
	300-1000	250-1 250	250
125F	450-1 500	400-2 000	400
	600-2 000	500-2 500	500
150F	600-2 000	500-2 500	500
	900-3 000	600-3 000	600
200F	1 200-4 000	1 000-5 000	1 000
250F	1 500-5 000	1 000-5 000	1 000
	1 800-6 000	1 200-6 000	1 200
300F	2 100- 7 000	1 500-7 500	1 500
	2 700-9 000	2 000-10 000	2 000
350F	3 600-12 000	2 400 - 12 000	2 400
400F	4 500 - 15 000	4 000 - 20 000	4 000

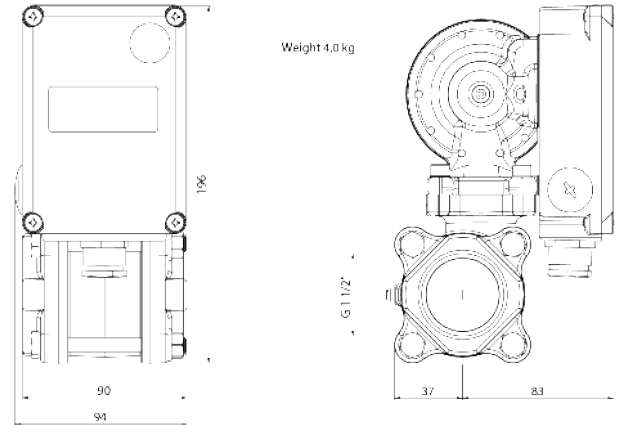
MC = Measuring constant (for S25)

TIVG-V15-...R for threaded connection

Nominal diameter	D Thread	A	B	Weight kg
DN15	G 1/2"	70	91	3,0
DN25	G 1"	90	111	3,0

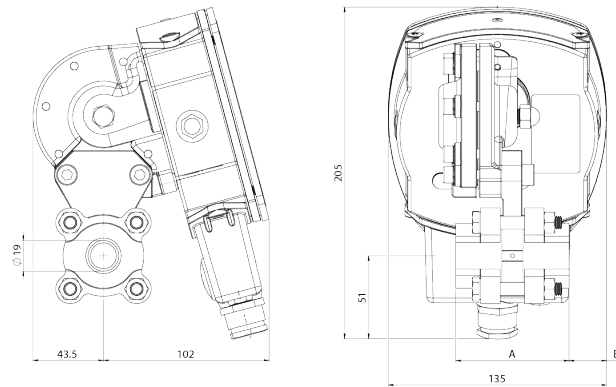


TIVG-V15-40R for threaded connection (brass)

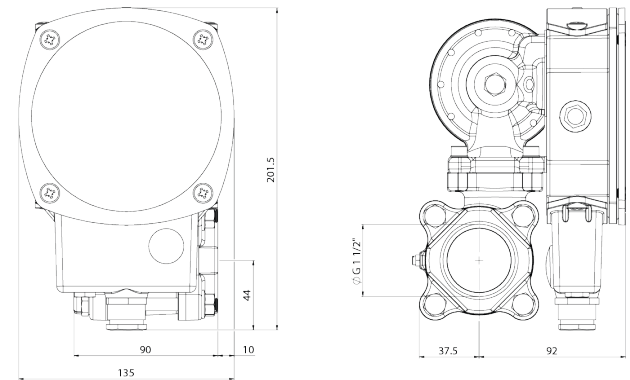


TIVG-S25-...R for threaded connection

Nominal diameter	D Thread	A	B	Weight kg
DN15	G 1/2"	70	23	3,5
DN25	G 1"	90	33	3,5

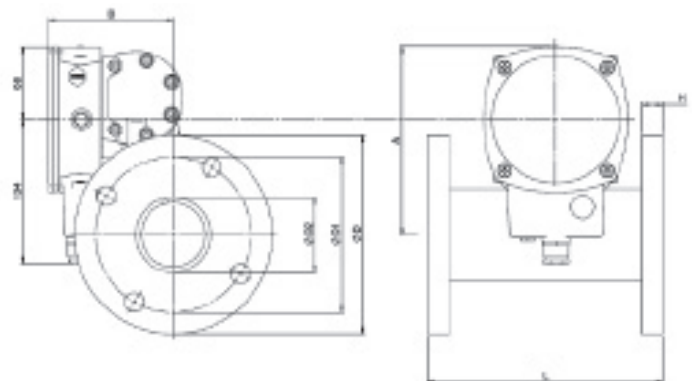


TIVG-S25-40R for threaded connection (brass)



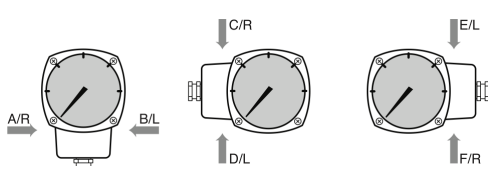
Type TIVG-S-F

DN	A	B	D	D1	D2	D3	H	L	n	Weight kg
15	140	106	95	65	20	15	14	220	4	4,5
25	145	108	115	85	32	15	14	220	4	5,7
40	162	112	150	110	44	18	14	220	4	9,1
50	166	114	165	125	50	18	14	220	4	10,7
65	176	116	185	145	70	18	14	220	4	12,4
80	181	118	200	160	80	18	18	220	4 (8)*	14,1
100	194	121	220	180	100	18	18	220	8	18,7
125	206	124	250	210	125	18	18	220	8	22,4
150	216	131	285	240	150	22	18	220	8	26,5
200	237	155	340	295	200	22	20	220	8	37,3
250	258	172	395	350	250	22	22	220	12	40,4
300	277	200	445	400	300	22	22	220	12	49,7
350	302	216	505	460	350	22	30	320	16	78,7
400	320	228	565	515	400	25	30	320	16	86,8



* DN80 will have flanges according to ISO 2084:1974, PN10, 4 holes as standard. Option with 8 holes must be specified when ordering (EN 1092.1).

Ordering code

Serie		
TIVG-		
Type		
V15	One microswitch, indicating window	
S25	Two microswitches, large dial	
Dimension		
15	1/2"	Thread R or Flange F, PN16
25	1"	Thread R or Flange F, PN16
40	1 1/2"	Thread R or Flange F, PN16
50	2"	Flange F, PN16
65	2 1/2"	Flange F, PN16
80	3"	Flange F, PN16
100	4"	Flange F, PN16
125	5"	Flange F, PN16
150	6"	Flange F, PN16
200	8"	Flange F, PN16
250	10"	Flange F, PN16
300	12"	Flange F, PN10
350	14"	Flange F, PN10
400	16"	Flange F, PN10
Process connection		
R	Thread, stainless steel	
F	Flange, stainless steel	
Media		
Water		
Oil		
Installation alternative / Flow direction		
A/R		A/R - Left to right in a horizontal pipe
B/L		B/L - Right to left in a horizontal pipe
C/R		C/R - Up to down, dial on right side of the pipe
D/L		D/L - Down to up, dial on right side of the pipe
E/L		E/L - Up to down, dial on left side of the pipe
F/R		F/R - Down to up, dial on left side of the pipe
Measuring range		
See separate table		

Example of Code

TIVG-S25-50F, Water, A/R, 50-250 l/min