

KDG

Thames series self-powered contents gauges

Data sheet
0012

Features

- No floats or probes
- Completely automatic
- Remote or local indication
- Twin indicators available
- Calibration - to user's requirements
- Models to suit most requirements
- Requires no external power

Widely used to measure:

Fuel oils (up to 3500 secs
Redwood No. 1)
Diesel oil
Gas oil
Petroleum
Motor oils
Oil and water tanks on road vehicles
and locomotives
Aircraft - refuellers and tenders, etc.

Solvents
Lub oil
Fresh water
Anti-freeze



Description

The Thames Series hydrostatic tank contents gauge is suitable for installation on any shape or size of storage vessel that is freely vented to atmosphere. For closed tanks alternative installations are available upon request.

Transmitters are available for either external or internal tank mounting and are connected to the indicator by a predetermined length of PVC armoured capillary. External transmitters Types EI or SI are supplied complete with a 3/4" BSP non-return valve whereby the instrument may be removed from the tank without first draining the contents. A comprehensive range of indicators is available all of which have been designed to present clear, easy to read data. The indicator shown on the front of this leaflet is the popular 150mm 'Polyrad' styled enclosure. This unit is completely weatherproof and is fitted with a strong window manufactured in an ultra violet ransparent polycarbonate.

The power required to operate the Thames Series hydrostatic tank contents gauge is derived from the pressure exerted by the head of liquid within the storage vessel.

This pressure is sensed by a metallic capsule within the transmitter and conveyed by a length of capillary to a

diaphragm within the indicator causing it to deflect and, by means of a precision mechanism, rotate a pointer over a calibrated scale.

The capsule, capillary and indicator diaphragm together form a pressure transfer system which, prior to being charged with an inert gas, is thoroughly examined on electronic leak detection equipment.

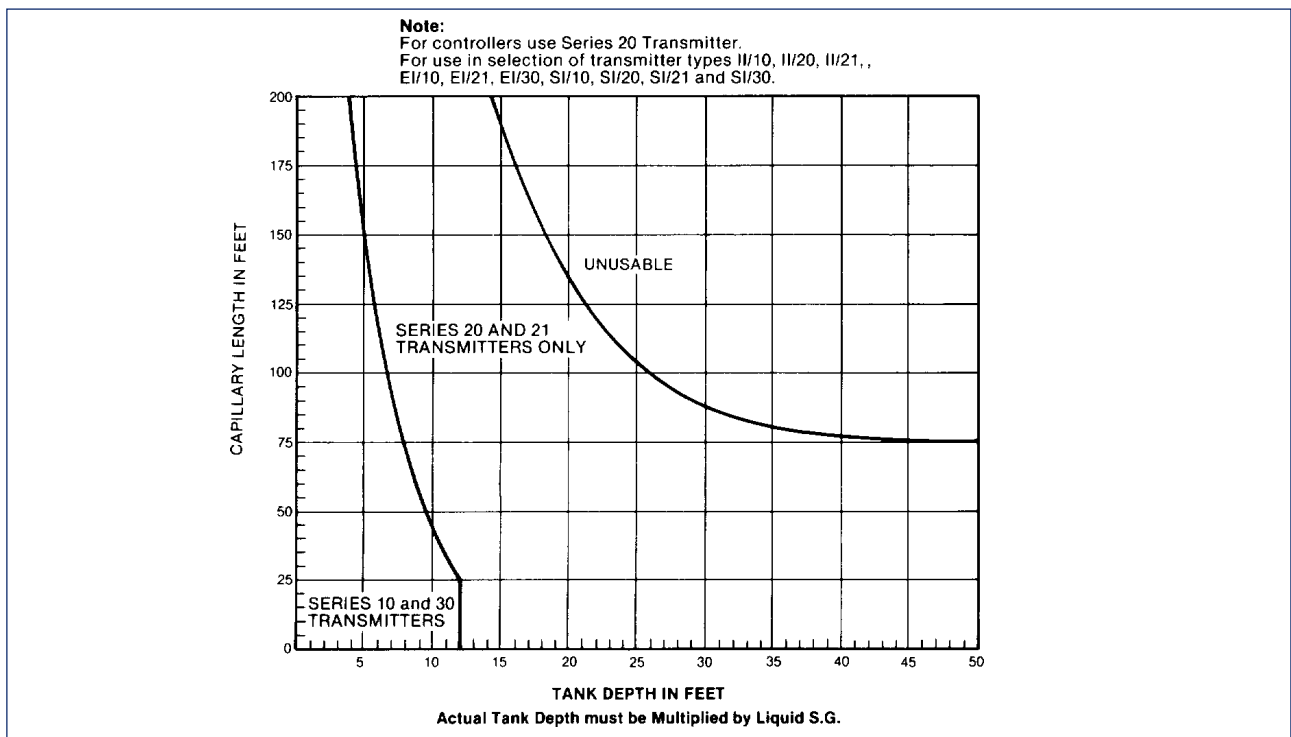
Operational Data (Reference conditions)

Maximum Error	At reference conditions the maximum error will not exceed $\pm 1.0\%$ of full scale deflection
Ranges	See ordering information
Weatherproof protection	Polyrad IP65 to BS5490
Operating temperature	Indicator : -20°C to +50°C
Transmitter	-20°C to +100°C (order)
Humidities	Indicators : 5% to 95% RH
Overload	25% above maximum range
Tank depths	From 1 to 16 metres (at S.G. 1.0). (Max. depth for internal transmitters : 7 metres)
Capillary lengths (approx.)	For tank depths of 1 metre : up to 65 metres For tank depths of 16 metres : up to 25 metres

Construction Data

Transmitter	Capsule : Pure silver / brass / grade 'A' solder. Capsule housing : Transmitter Series No. 10 and 21 Brass; Transmitters Series 30 glass loaded polyester / brass. Note : Series 10 and 30 transmitters are generally used for installations involving tanks up to a depth of 4 metres having relatively short capillary run. The larger Series 20 and 21 transmitters will be used on deep tanks and installations with long capillary runs. The Series 21 unit is used when twin indicators are required.
Standard accessories	Chrome bezel.
Indicators	Mounting - wall or flush panel. Diameters - 4, 6, 7, 12 inch and 150mm. Construction - 4, 6, 7 and 12 inch diecast aluminium alloy. 150mm glass loaded polyester with polycarbonate window and bezel.
Weight	5 kg approx. (with 3 metres of capillary tubing and 150mm indicator).
Calibration	Individually calibrated to customer's requirements. complete questionnaire form.

Thames Series Transmitter Selection Chart

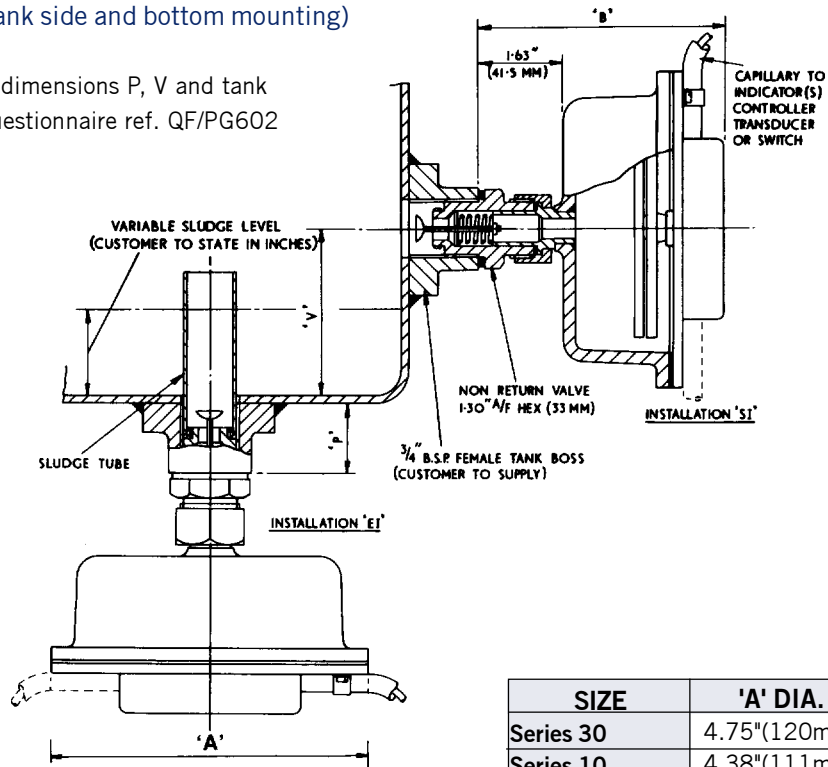


Outline/Installation dimensions

Transmitter (tank side and bottom mounting)

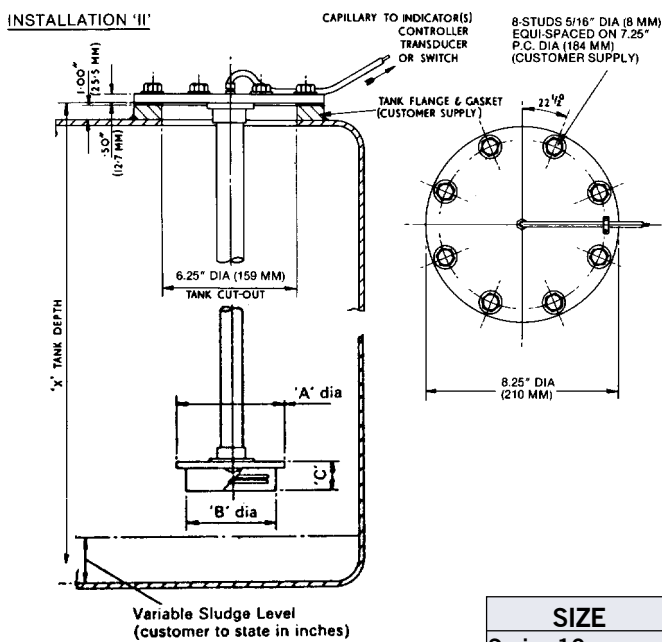
Notes:

1. Please state dimensions P, V and tank thickness on questionnaire ref. QF/PG602



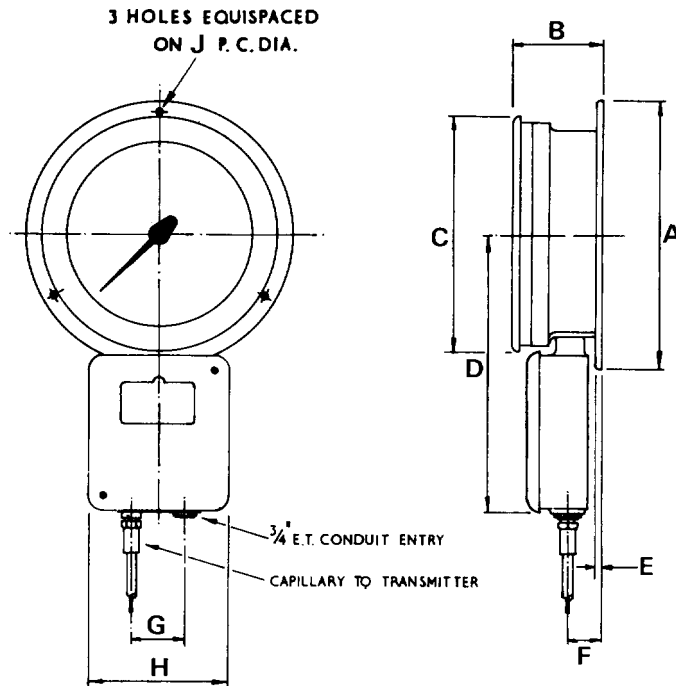
SIZE	'A' DIA.	'B' DIA.
Series 30	4.75"(120mm)	4.70"(119mm)
Series 10	4.38"(111mm)	4.00"(102mm)
Series 20 and 21	5.94"(151mm)	4.56"(116mm)

Transmitter (in-tank mounting)



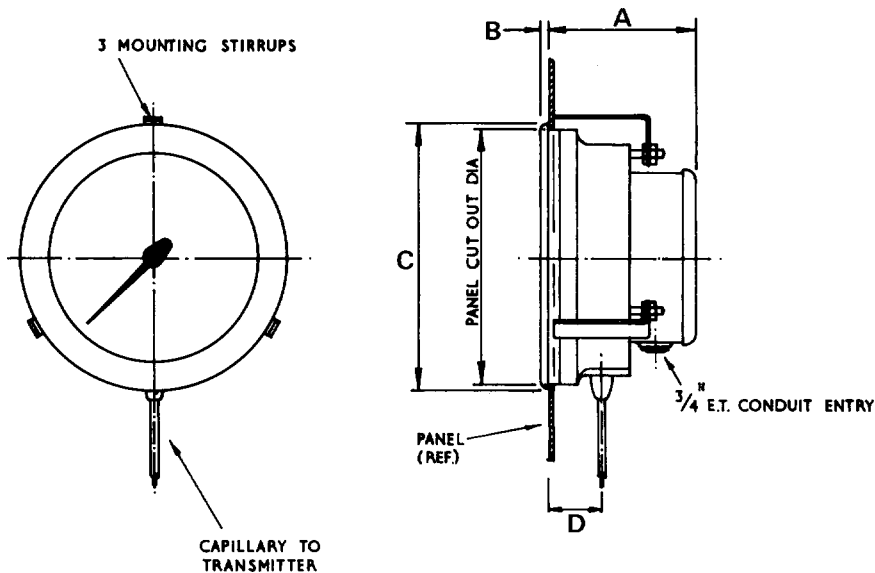
SIZE	'A' DIA.	'B' DIA.	'C'
Series 10	4.38" (111mm)	3.94"(100mm)	1.50" (38mm)
Series 20 and 21	5.94" (151mm)	4.094"(126mm)	2.00" (51mm)

Wall mounting controller indicators



	A	B	C	D	E	F	G	H	J
Size	in mm	in mm	in mm	in mm	in mm	in mm	in mm	in mm	in mm
7"	9.75 248	3.23 82	8.63 219	10.06 256	0.31 8	1.25 32	1.88 48	5.0 127	8.87 226
12"	14.75 375	3.06 78	13.75 349	12.75 324	0.38 10	1.22 31	1.88 48	5.0 127	14.0 356

Panel mounting controller indicators

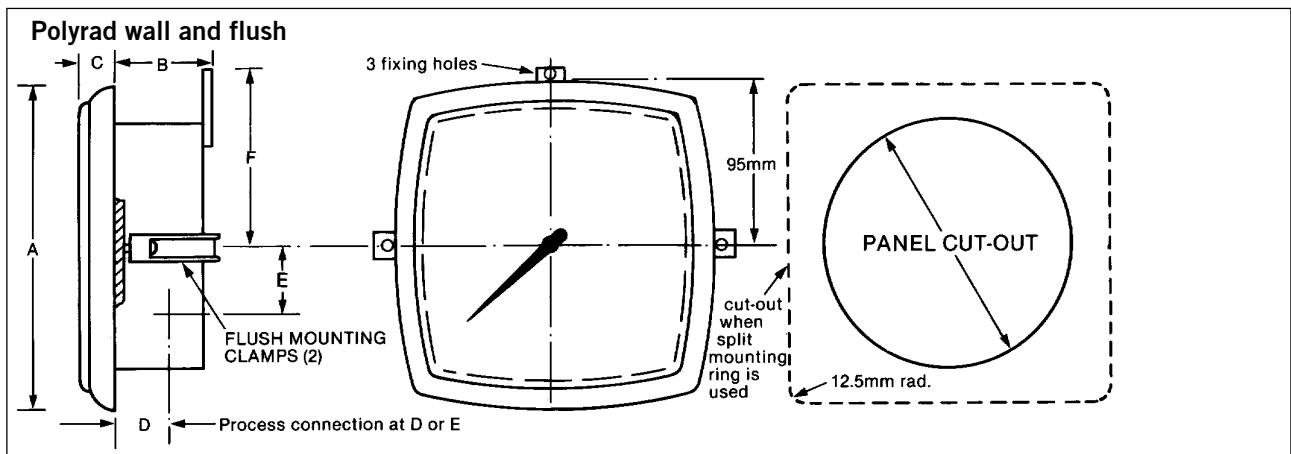
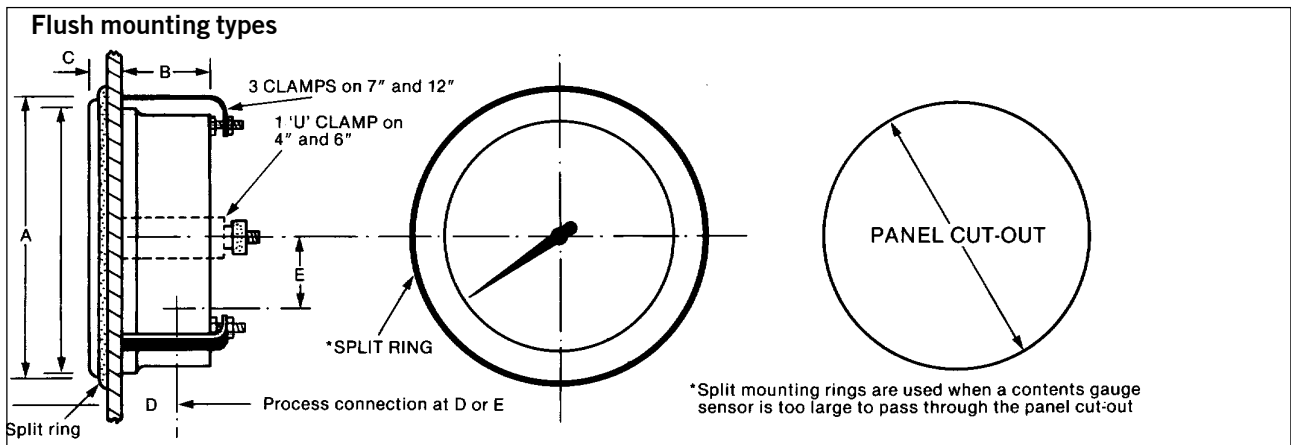
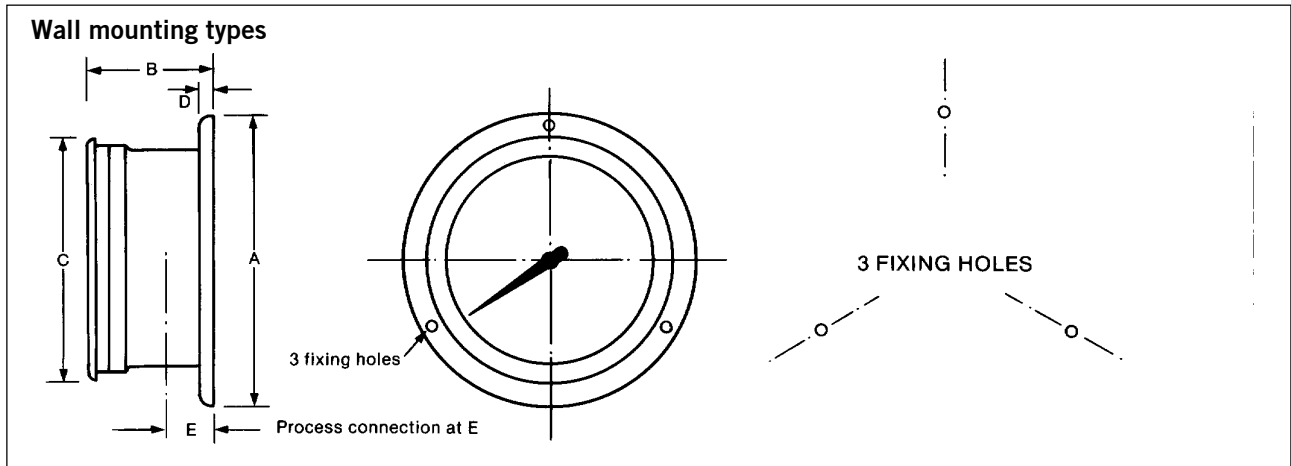


	A	B	C	D	Panel cut-out	Panel cut-out when transmitter is larger than indicator	
	in mm	in mm	in mm	in mm	in mm	in	mm
7"	5.19 132	0.28 7	8.63 219	1.70 43	8.38 213	8.83	225
12"	4.80 148	0.28 7	13.75 349	1.75 45	13.44 341		

Note :

Where transmitter is larger than panel cut-out, split mounting rings are supplied so that indicator can be installed without removal of bezel. The indicator is passed through cut-out from the rear, the split ring placed in position and the indicator set back into the panel

General outline dimension of indicators



Case Size	Ref. No.	A	B	C	D	E	F	Dia. of fixing hole	PCD of fixing hole	Panel cut-out dia.	Cut-out for split ring
		mm in	mm in	mm in	mm in	mm in	mm in	mm in	mm in	mm in	mm in
4in wall	M4W	130 5.13	71 2.79	108 4.25	8 0.31	25 1.0		5.2 0204	116 4.56		
6 in wall	M6W	183 7.17	70 2.76	162 6.38	8 0.31	30 1.19		5.0 0197	168 6.62		
7in wall	M7W	248 9.75	82 3.23	219 8.63	8 0.31	32 1.25		7.0 0280	226 8.87		
12in wall	M12W	375 14.75	78 3.06	349 13.75	10 0.38	28 1.09		9.0 0360	356 14.00		
Polyrad	P150W	180 7.08	52 2.05	23 0.9	27 1.06	51 2.0	102 4.1	5.5 0220			
4in flush	M4F	121 4.75	57 2.23	9 0.34	40 0.56	33 1.3				111 4.38	125 4.94
6in flush	M6F	175 6.88	60 2.36	5 0.19	38 1.48	51 2.0				165 6.50	179 7.03
7in flush	M7F	219 8.63	67 2.64	7 0.28	43 1.70	- -				213 8.38	225 8.83
12in flush	M12F	349 13.75	68 2.68	7 0.28	45 1.75	- -				341 13.44	
Polyrad	P150F	180 7.08	52 2.05	23 0.9	27 1.06	51 2.0	102 4.1			165 6.50	184 7.25 x184x7.25

Ordering information

Model	'Thames' Series self-powered hydrostatic level/contents gauge					
EI	Transmitter mounted on tank bottom					
SI	Transmitter mounted on tank side					
II	Transmitter mounted in tank					
Code	Transmitter body					
1	Brass - low range - maximum tank depth 3.7 metres (see Note A)					
2	Brass - high range (see Note A)					
3	Glass filled polyester - maximum					
Code	Number of indicators					
0	Single indicator					
1	Twin indicators					
Code	Indicator					
4P	4" panel mounted - die cast aluminium					
4W	4" wall mounted - die cast aluminium					
6P	6" panel mounted - die cast aluminium					
6W	6" wall mounted - die cast aluminium					
Poly P	150mm panel mounted - glass filled polyester - weatherproof					
Poly W	150mm wall mounted - glass filled polyester - weatherproof					
7P	7" panel mounted - die cast aluminium - weatherproof					
7W	7" wall mounted - die cast aluminium - weatherproof					
12P	12" panel mounted - die cast aluminium					
12W	12" wall mounted - die cast aluminium					
Code	Indicator facia					
S	Standard black finish					-
C	Chrome finish					-
Code	Indicator mounting rings					
1	Standard black finish					-
2	Chrome finish					-
Code	Contacts for alarm or control					
C1	One contact (see Note B)*					-
C2	Two contact (see Note B)*					-
EI	3	0	Poly P	S	1	-

Typical ordering information

Extras :

Model II : Brass support tube.
Joint for support tube - 1 every 2.5 metres.

Model EI and SI : Non-return valve
- Brass
- Stainless steel
- Brass with 'T' piece

All Models : Indicator dials may be dual scaled
Capillary - PVC covered (3m included in price)
Capillary - Tinned braid covered
If used on pressurised tanks (max. 350 mbar). Extra for reference port (7" indicator only). For marine use circular bulkhead plates can be supplied : BM30 Gunmetal
BM40 Aluminium.

Notes :

- A. Transmitter ranges are limited by the length of capillary. Before specifying consult graph.
B. Contacts can drive relays to provide alarm lamps, klaxons, etc. Consult factory for relay price. See Leaflet No. ALARM / 0020 for alarm units.
C. Tank questionnaire and calibration form must be completed.
* Price includes brass high range transmitter.

Solartron Mobrey Limited

158 Edinburgh Avenue Slough Berks England SL1 4UE
Tel: 01753 756600 Fax: 01753 823589
e-mail: sales@solartron.com www.solartron.com
a Roxboro Group Company

Bestobell Mobrey GmbH Deutschland tel: 0211/99 808-0
Solartron Mobrey Ltd China tel: 021 6353 5652
Mobrey sp z o o Polska tel: 022 871 7865
Mobrey AB Sverige tel: 08-725 01 00
Mobrey SA France tel: 01.34.30.28.30
Mobrey SA-NV Belgium tel: 02/465 3879
Solartron Mobrey USA tel: (281) 398 7890

