

ECHOTEL® 919

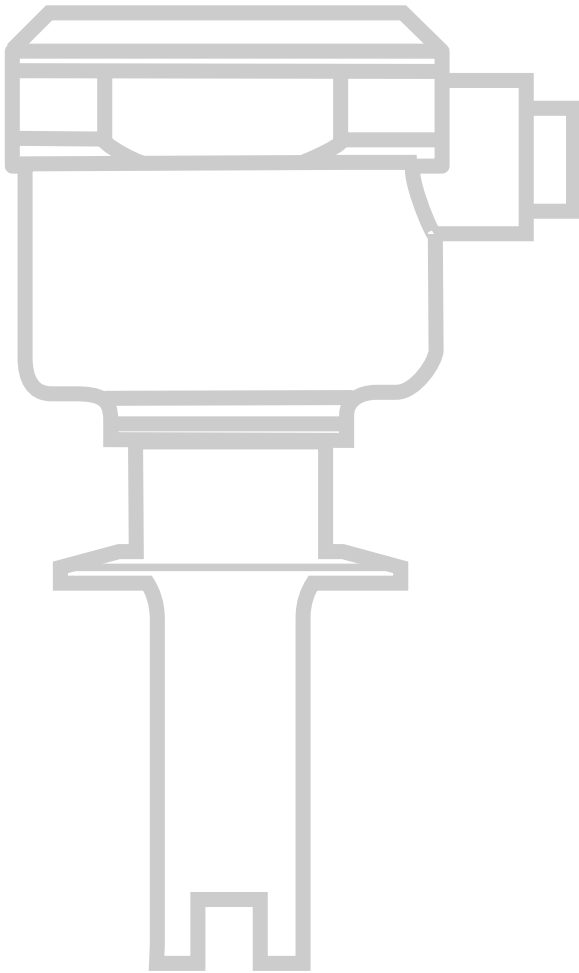


Installation and Operating Manual

Universal

Ultrasonic

Level Switch



7xxx

6xxx

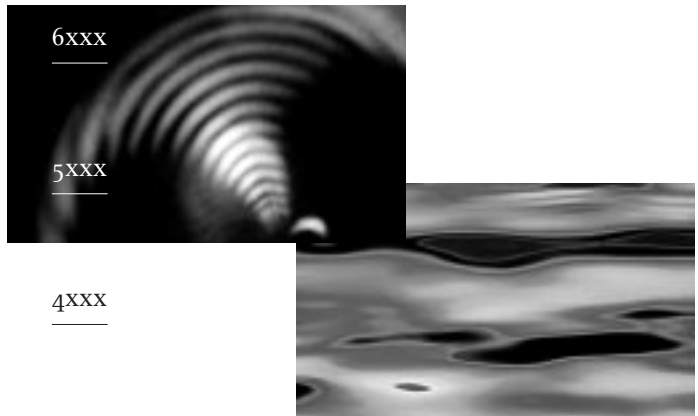
5xxx

4xxx

3xxx

2xxx

1xxx



UNPACKING

Unpack the instrument carefully. Make sure all components have been removed from the foam protection. Inspect all components for damage. Report any concealed damage to the carrier within 24 hours. Check the contents of the carton/crates against the packing slip and report any discrepancies to Magnetrol. Check the nameplate model number (Model number/approvals as per inserted separate sheet) to be sure it agrees with the packing slip and purchase order. Check and record the serial number for future reference when ordering parts.



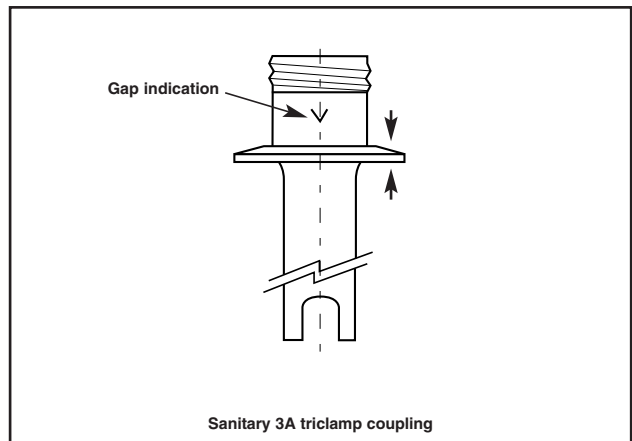
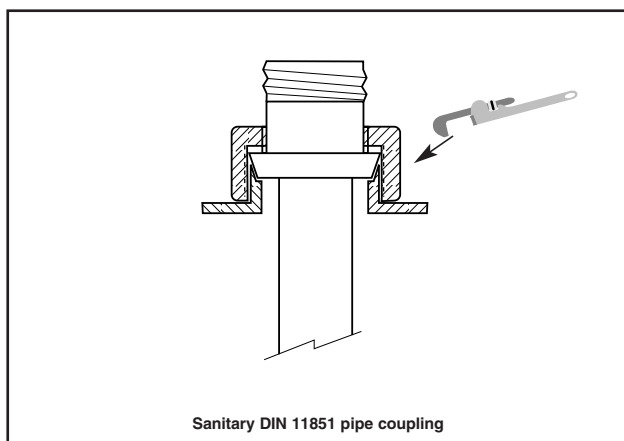
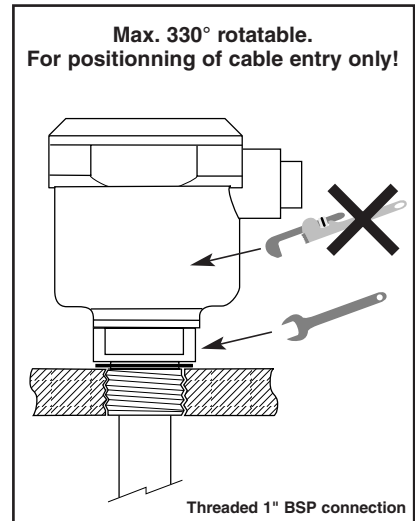
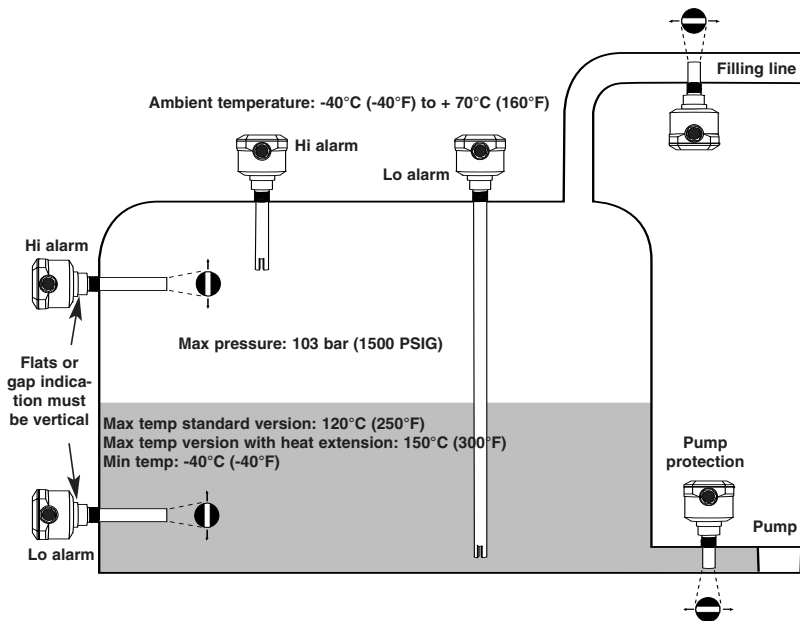
These units are in compliance with:

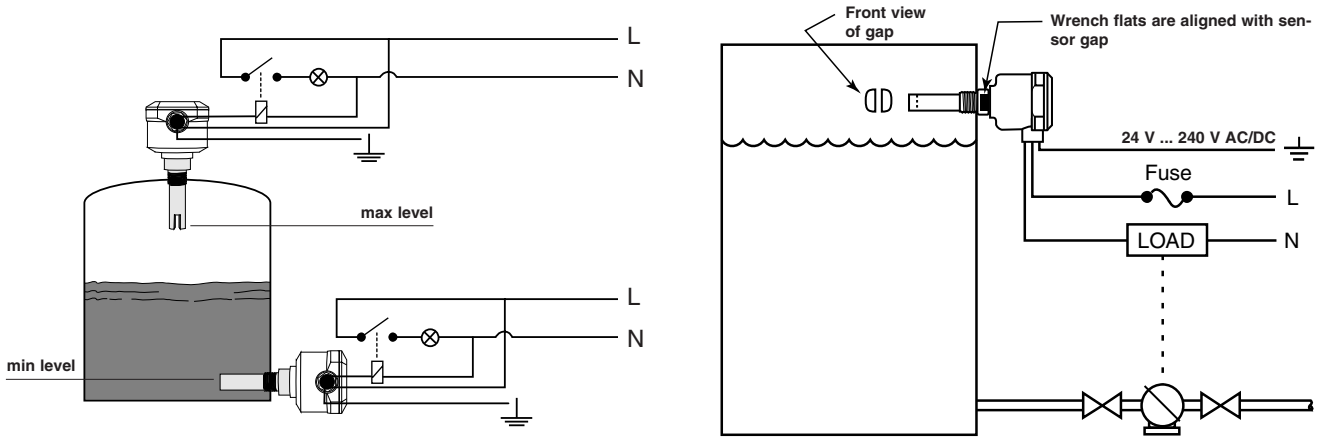
1. The EMC directive 89/336/EEC. The units have been tested to EN 61000-6-4 and EN 61000-6-2.



Model and serial number

MOUNTING

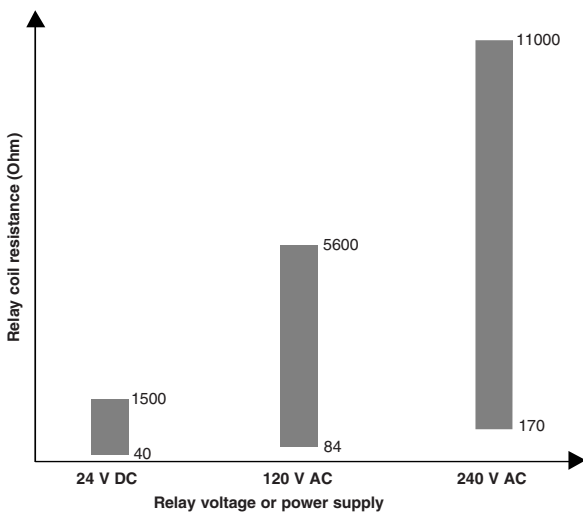


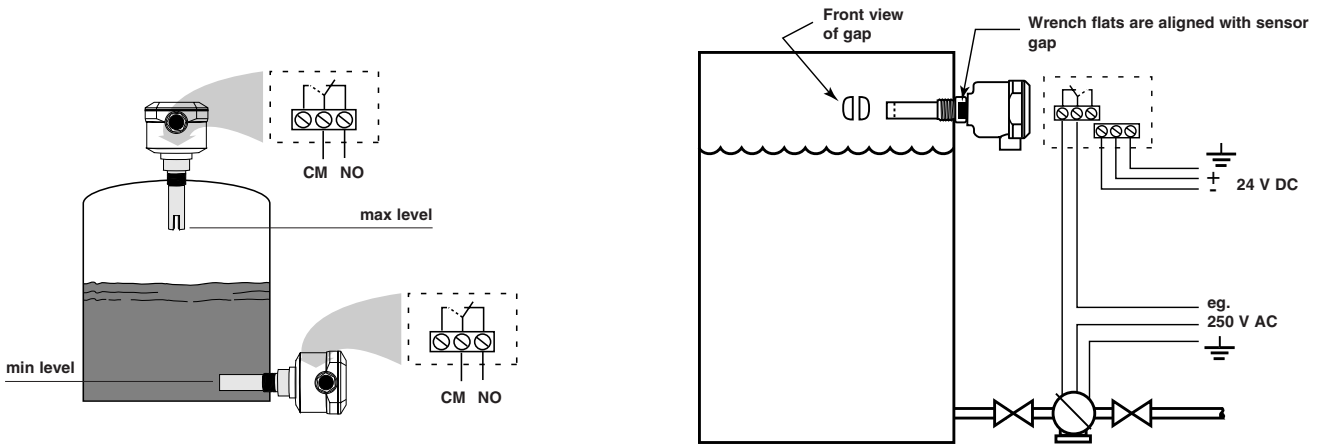


FAILSAFE – ALARM STATUS

Mode	Level	Load	Current	Alarm status
“Dry-On” (High level failsafe)		Energized	> 7 mA and < 500 mA	No alarm
		De-Energized	< 7 mA	Alarm
“Wet-On” (Low level failsafe)		Energized	> 7 mA and < 500 mA	No alarm
		De-energized	< 7 mA	Alarm

2-Wire, all voltage output graph (load always required)





FAILSAFE – ALARM STATUS

Mode	Level	Relay	Current	Alarm status
“HL” (High level failsafe)		Energized		No alarm
		De-energized		Alarm
“LL” (Low level failsafe)		Energized		No alarm
		De-energized		Alarm



SPECIFICATIONS

PERFORMANCE SPECIFICATIONS

Discription	Specification
Response time	0,5 s typical
Repeatability	± 2 mm (0.078")
Ambient Temperature	-40 °C up to +70 °C (-40 °F to +160 °F)
Humidity	0-99 %, non condensing
Electromagnetic Compatibility	Meets CE requirements (EN-61000-6-4, EN 61000-6-2) and in compliance with Directive 89/336/EEC

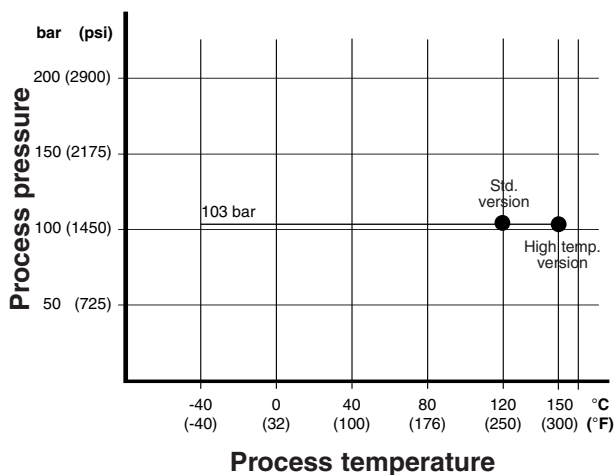
PHYSICAL/FUNCTIONAL SPECIFICATIONS

Discription	Specification
Input voltage	All voltage 919-C Relay 919-M
	From 24 ... 240 V AC/DC (± 10 % load always required) 24 V DC
Power consumption	0,1 VA maximum
Signal output	All voltage 919-C Relay 919-M
	max 500 mA (continuous) / min 7.5 mA (continuous) load SPDT: 3 A @ 24 V DC / 1 A @ 125/250 V AC switch rating
Housing material	VALOX® – can be cleaned with chlorine bleach
Approvals	DIBt/TÜV
	WHG § 19, Overfill prevention
Net Weight	510 gr (standard unit with 50 mm SST transducer)

TRANSDUCERS SPECIFICATIONS

Description	Specification
Materials transducer	316/316L SST (1.4401/1.4404) – industrial finish 316/316L (1.4401/1.4404) – sanitary finish (0,5 µm - Ra 20 surface finish) other materials at request
Mounting	Threaded (NPT-BSP) – Sanitary connections (3A / DIN 11.851) – others at request
Actuation length	From 25 mm up to 3300 mm (1" up to 130")
Operating process temp.	-40 °C up to +150 °C (-40 °F up to +300 °F) (standard version at max. 50 °C ambient)
Max pressure	103 bar @ +150 °C (1500 psi @ +300 °F). Flanged models are downrated to the design pressure of the selected flange.
Max viscosity	10.000 cP

TEMPERATURE/PRESSURE RATING



MODEL IDENTIFICATION

A complete measuring system consists of:

One code for electronics and transducer

BASIC MODEL NUMBER

9 1 9	Echotel 919, ultrasonic gap switch for high/low level alarm
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OUTPUT

C	All voltage version: 24 V AC ... 240 V AC / 24 V DC ... 240 V DC
M	Relay version: SPDT 3 A @ 24 V DC / 1 A @ 125/250 V AC switch rating

TEMPERATURE VERSION

1	Standard version: process temperature: -40 °C to +120 °C (ambient -40 °C to +70 °C) -40 °C to +150 °C (ambient -40 °C to +50 °C)
H	High temp version: process temperature: -40 °C to +150 °C (ambient -40 °C to +70 °C)

PROCESS CONNECTION

Threaded (always finished to industrial standard)

2 9	1" BSP (G1)
2 1	3/4" NPT
2 2	1" NPT

Sanitary connections (always finished to sanitary 0,5 µm (Ra 20) surface finish)

S 3	1 1/2"	3A, triclamp coupling
S 4	2"	3A, triclamp coupling
S 5	DN 25	DIN 11.851, pipe coupling
S 6	DN 32	DIN 11.851, pipe coupling
S 7	DN 40	DIN 11.851, pipe coupling
S 8	DN 50	DIN 11.851, pipe coupling

ACTUATION LENGTH^① – specify per cm (0,39") increments

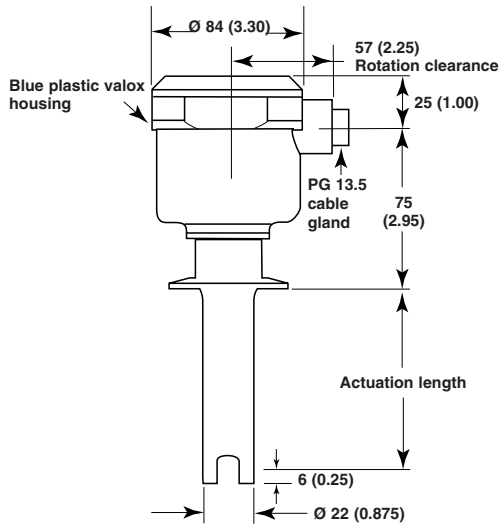
Total length = actuation length + 6 mm (0.25")

0 0 3	25 mm (1.0") - min actuation length for 3/4" NPT connection
0 0 4	40 mm (1.6") - min actuation length for sanitary connection
0 0 5	50 mm (2.0") - min actuation length for 1" BSP (G1) connection
3 3 0	3300 mm (130.0") - max actuation length for all connections

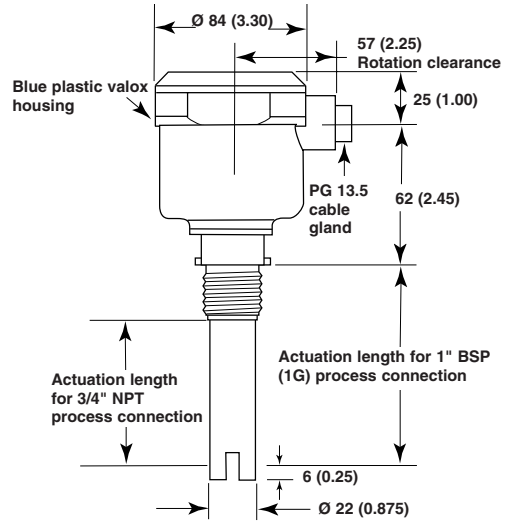
^① Actuation lengths are measured in accordance with process connection style.

9 1 9 complete code for Echotel 919 sensor

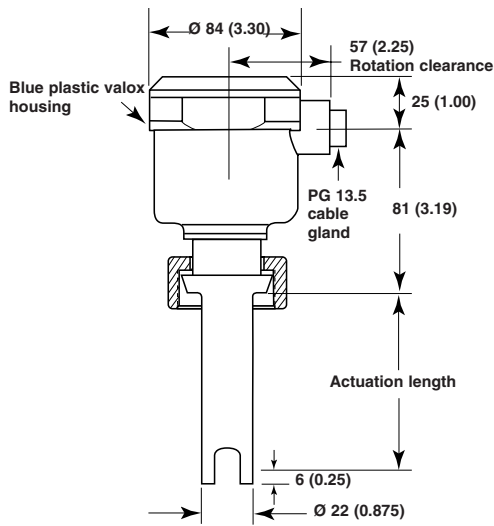
DIMENSIONS IN mm (inches)



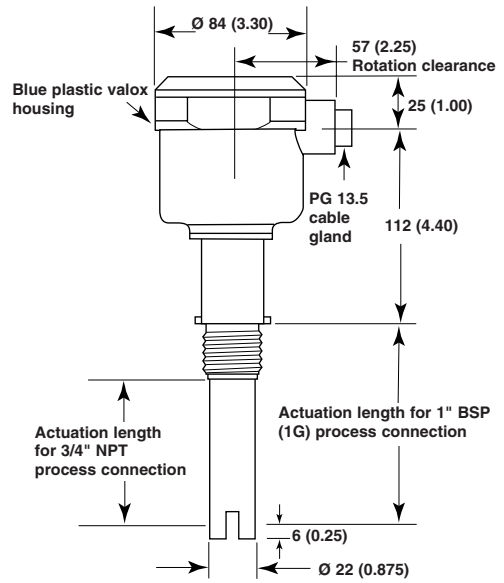
3A-triclamp coupling



Threaded connection



DIN 11.851 pipe coupling



Threaded connection with heat extension

IMPORTANT

SERVICE POLICY

Owners of Magnetrol products may request the return of a control; or, any part of a control for complete rebuilding or replacement. They will be rebuilt or replaced promptly. Magnetrol International will repair or replace the control, at no cost to the purchaser, (or owner) **other than transportation cost** if:

- a. Returned within the warranty period; and,
- b. The factory inspection finds the cause of the malfunction to be defective material or workmanship.

If the trouble is the result of conditions beyond our control; or, is **NOT** covered by the warranty, there will be charges for labour and the parts required to rebuild or replace the equipment.

In some cases, it may be expedient to ship replacement parts; or, in extreme cases a complete new control, to replace the original equipment before it is returned. If this is desired, notify the factory of both the model and serial numbers of the control to be replaced. In such cases, credit for the materials returned, will be determined on the basis of the applicability of our warranty.

No claims for misapplication, labour, direct or consequential damage will be allowed.

RETURNED MATERIAL PROCEDURE

So that we may efficiently process any materials that are returned, it is essential that a "Return Material Authorisation" (RMA) form will be obtained from the factory. It is mandatory that this form will be attached to each material returned. This form is available through Magnetrol's local representative or by contacting the factory. Please supply the following information:

1. Purchaser Name
2. Description of Material
3. Serial Number and Ref Number
4. Desired Action
5. Reason for Return
6. Process details

All shipments returned to the factory must be by prepaid transportation. Magnetrol **will not accept** collect shipments. All replacements will be shipped FOB factory.

BULLETIN N°: BE 51-627.7
EFFECTIVE: JULY 2002
SUPERSEDES: May 2002

UNDER RESERVE OF MODIFICATIONS



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