

## MCG 1030 Analog Output Level Probe

### Accurate and Reliable

The construction of this probe makes it ideal for severe service installation where reliable performance is essential. The explosion-proof housing is approved for use in Class I, Division 1, Group C and D environments, allowing the MCG 1030 to be used in application where the distance from the probe to the receiver is too great to utilize an intrinsically-safe barrier.

### Multi-Purpose

The operating length of the probe (up to 25 feet) permits installation into nearly any type of liquid storage vessel: above ground or underground. The standard mounting is accomplished with a 7/8" NPS connector. Flanged connections are also available.

### Level Measurement and Point Switch, All in One

Because of the probe's packaging and high degree of repeatability, the MCG 1030 can provide both level gauging data and act as a point switch for process vessels overflow alarms. When interfaced to an L&J Engineering MCG 1200M or MCG 1010M Receiver, the level data can be viewed at tank side.

### Proven Technology

The magnetostrictive technology of the MCG 1030 has been proven to be extremely reliable. The probe is comprised of a wave guide, a float with permanently embedded magnets, a motion or stress sensing device, and a probe housing.



## Features

- Magnetostrictive Technology
- Accuracy of +/- 1/8" with a High Resolution (+/- 1/32") Option Available
- Up to 25' Measuring Range
- 4-20 mA or 1-5 Volt Output
- Combines with MCG 1010M for Local Indication and Digital Level Transmission
- High Pressure Applications

## Applications

- Level gauging on LPG bullet-style tanks
- Level measurement of waste water treatment tanks
- Inventory control of crude oil collection tanks
- Level control in the plating process
- High-level alarm for tanks and process vessels

# MCG 1030

## Analog Output Level Probe

### Specifications

**Output:**  
4-20mA or 1-5 Volt

**Resolution:**  
Standard +/- 1/8"  
(Optional +/- 1/32")

**Accuracy:**  
+/- 1/8" (optional +/- 1/32")

**Tank Connection:**  
7/8" NPS, flange (opt.)

**Standard Float:**  
2" diameter, 316 SS Float

**Power Requirements:**  
24VDC

**Measuring Range:**  
Up to 25 feet

**Surge Protection:**  
Yes

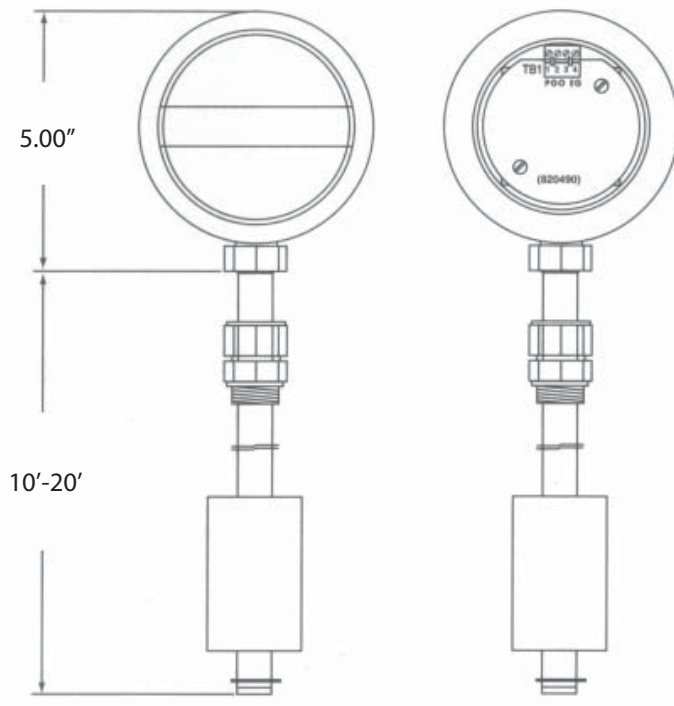
**Probe Construction:**  
316SS  
(Other Materials Available)

**Safety Approvals:**  
CSA-Explosion proof  
Class I, Div.1 Groups C&D  
CENELEC / ATEX  
II 1/2 G, EEX d IIB T6

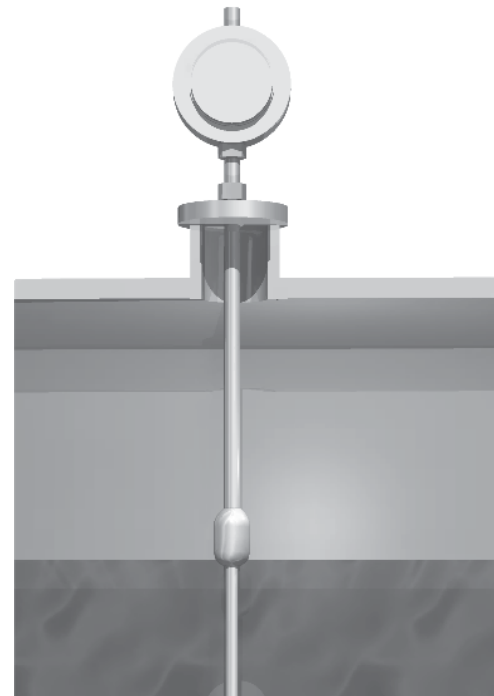
**Installation Methods:**  
Inside Tank through riser or flanged opening.  
Outside tank via bridal or float chamber

Local Display Available via MCG 1200M or MCG 1010M

### Dimensions



### Typical System Layout



All designs subject to change. Certified dimensions and specifications available upon request.

## MCG 1030 Ordering Guide

### MCG 1030 Analog Output Level Probe

Includes: Single nystrophyl float for level only, 316 stainless steel probe material, explosion proof housing to Class I, Div. 1 Groups C&D. CSA Approved.

### Model Number Selection:

The model number will consist of a base number **MCG 1030** followed by 10 digits. These digits will represent 5 sets of option tables:

**MCG 1030 - AB - CD - EF - GH - IJ**

AB – Length			
Specify exact tank height on order. Probe will be 4 inches taller than the height of the tank.			
<b>21</b>	316 Stainless Steel Probe, Custom Length	<b>42</b>	316 Stainless Steel EP, 2'
<b>22</b>	316 Stainless Steel Probe, 2'	<b>43</b>	316 Stainless Steel EP, 3'
<b>23</b>	316 Stainless Steel Probe, 3'	<b>44</b>	316 Stainless Steel EP, 4'
<b>24</b>	316 Stainless Steel Probe, 4'	<b>45</b>	316 Stainless Steel EP, 5'
<b>25</b>	316 Stainless Steel Probe, 5'	<b>46</b>	316 Stainless Steel EP, 6'
<b>26</b>	316 Stainless Steel Probe, 6'	<b>47</b>	316 Stainless Steel EP, 7'
<b>27</b>	316 Stainless Steel Probe, 7'	<b>48</b>	316 Stainless Steel EP, 8'
<b>28</b>	316 Stainless Steel Probe, 8'	<b>49</b>	316 Stainless Steel EP, 9'
<b>29</b>	316 Stainless Steel Probe, 9'	<b>50</b>	316 Stainless Steel EP, 10'
<b>30</b>	316 Stainless Steel Probe, 10'	<b>51</b>	316 Stainless Steel EP, 11'
<b>31</b>	316 Stainless Steel Probe, 11'	<b>52</b>	316 Stainless Steel EP, 12'
<b>32</b>	316 Stainless Steel Probe, 12'	<b>53</b>	316 Stainless Steel EP, 13'
<b>33</b>	316 Stainless Steel Probe, 13'	<b>54</b>	316 Stainless Steel EP, 14'
<b>34</b>	316 Stainless Steel Probe, 14'	<b>55</b>	316 Stainless Steel EP, 15'
<b>35</b>	316 Stainless Steel Probe, 15'	<b>56</b>	316 Stainless Steel EP, 16'
<b>36</b>	316 Stainless Steel Probe, 16'	<b>57</b>	316 Stainless Steel EP, 17'
<b>37</b>	316 Stainless Steel Probe, 17'	<b>58</b>	316 Stainless Steel EP, 18'
<b>38</b>	316 Stainless Steel Probe, 18'	<b>59</b>	316 Stainless Steel EP, 19'
<b>39</b>	316 Stainless Steel Probe, 19'	<b>60</b>	316 Stainless Steel EP, 20'
<b>40</b>	316 Stainless Steel Probe, 20'	<b>99</b>	Custom Length/Material
<b>41</b>	316 Stainless Steel Electro Polish, Custom Length		

CD – Mounting Options/Approval	
00	Carbon Steel, 7/8" NPS Swagelock, CSA
01	Carbon Steel, 1" NPT Swagelock, CSA
03	Carbon Steel Housing, 3/4" NPT Swagelock, CSA
09	Carbon Steel Housing Only, CSA
20	304 S.S., 7/8" NPS Swagelock, CSA
21	304 S.S., 1" NPT Swagelock, CSA
23	304 S.S., 3/4" NPT Swagelock, CSA
29	304 S.S. Housing Only, CSA
30	304 S.S. Housing, 7/8" NPS Swagelock, ATEX
31	304 S.S. Housing/No Mounting, ATEX
32	304 S.S. Housing, 1" NPT Swagelock, ATEX
33	304 S.S. Housing, 3/4" NPT Swagelock, ATEX
36	Carbon Steel Housing, 7/8" NPS, ATEX
37	Carbon Steel Housing, 1" NPT, ATEX
38	Carbon Steel Housing, 3/4" NPT, ATEX
39	Carbon Steel Housing Only, ATEX
99	Custom

**NOTE:** Use options 09 and 29 when strapping probe external to bridal or float chamber.  
This configuration requires special floats. Consult Factory

EF – Signal Output	
10	24VDC/1-5V Out
11	24 VDC/4-20 MA Out
12	24VDC/1-5V Out (for cathodic application)
13	24VDC/4-20mA Out (for cathodic application)

GH – Signal Input	
00	None

IJ – Float (Standard float for 2" Opening)	
20	Nitrophyl S.G. > .45, < 100 PSI
40	SS316 S.G. > .65, < 200 PSI
41	SS316 S.G. > .65, < 500 PSI
99	Custom

**NOTE:** Standard model is CSA approved. Specify on order if CENELEC / ATEX approval is required.