



## "COAT-SAFE" Integrated RF Level Switch, 116 - for Solids

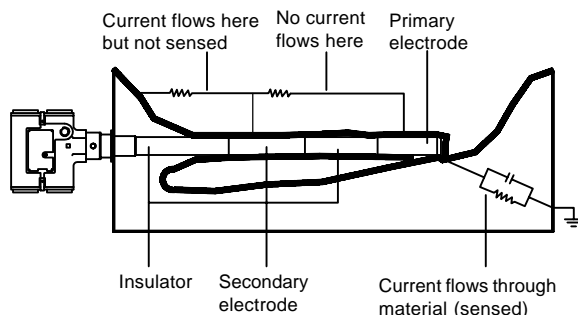
"Coat-safe" Integrated R.F. Level Switch, 116 has been specially designed for detecting level of dry / moist powders / solids (e.g. fly ash in ESP hoppers). The integrated electronics housed in weatherproof Cast Aluminium case can be isolated from the high temperature process by use of insulating arrangement, High Temperature Stand Off (HTSO). The entire arrangement fits on the vessel minimising cost of installation.

### FEATURES

- Compact size due to electronics integrated with electrode
- Adjustable time delay (optional)
- Transducer operation at radio frequency minimises the effect of moisture in material
- Sturdy electrode to withstand accidental clinker impacts
- Special alumina insulated electrode capable of withstanding 200°C
- Built-in static charge protection

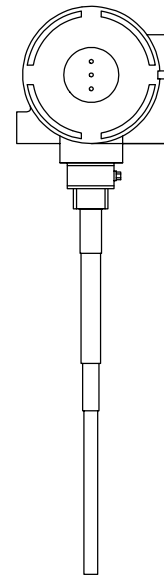
### 'COAT-SAFE' PRINCIPLE

Most electrodes may not perform satisfactorily if the process material builds up on it to a significant degree. The 'coat-safe electrode' is designed to overcome this problem. Here, in addition to the primary sensing electrode, a secondary 'coat-shield' electrode, insulated from ground & primary electrode is used. The secondary electrode prohibits any flow of current from primary electrode to ground, due to build-up. The same flows only when material level touches the primary electrode. Thus the effect of build-up / coating (i.e. false alarm) is ignored.



### SPECIFICATIONS

- Input : DC voltage from built in transducer
- Local Indications : Green LED for Mains, Red LED for Alarm & Yellow LED for Level above setpoint (optional)



- Setpoint : User adjustable with 20 turn potentiometer
- Relay Contacts : 5A @ 240 VAC/2A @28 VDC (resistive)
- Failsafe Features : Fail-Safe High (FSH) or Fail-Safe Low (FSL) - Selectable through DIP switch
- Time Delay (optional) : Externally adjustable 0-100 sec with 20 turn potentiometer (for version B & H only) - Delay on rising or falling level selectable through DIP switch
- Power Consumption : < 4 VA ( 230/115 VAC  $\pm$  10% ) < 5 W ( 24 VDC )
- Ambient conditions : Temperature - 0 to 55°C Relative Humidity - 95% max (non condensing)
- Cable Entry (2 Nos.) : 3/4" UNF/ET - standard 1/2" NPT - optional
- Termination : Suitable for maximum 2.5 mm<sup>2</sup> conductor size
- Enclosure : Weatherproof, cast aluminium polyurethane painted, conforming to IP-65 as per IS:2147-1962
- Weight : 3 kgs. (approx.) without electrode & process connection
- Process Connection : As per "Electrode Selection Guide"

## ORDERING CODE

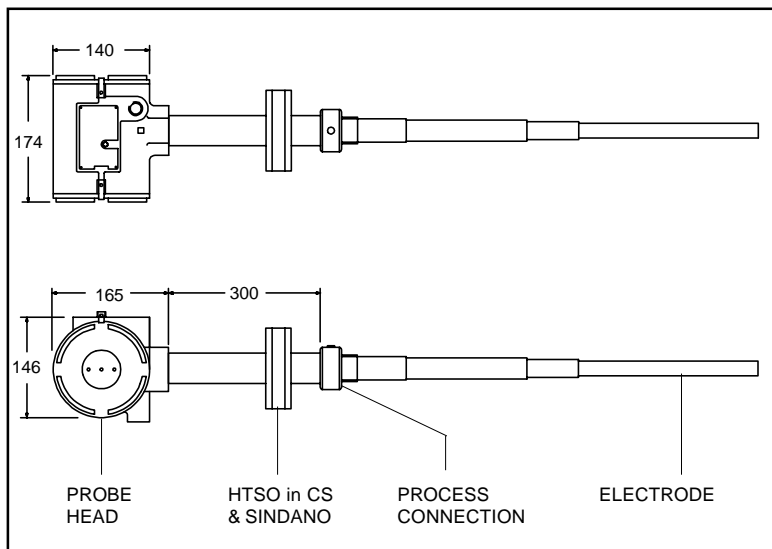
<b>1 1 6</b>	<b>H</b>	<b>0</b>	<b>2 0 0</b>	<b>L=</b>	<b>mm.</b>																																												
<b>SAFETY CLASS</b> H - Non Intrinsically Safe	<b>PROBE HEAD</b>	<b>PROCESS CONNECTION TYPE (NOTE 2)</b> T - Threaded I - Integral flange	<b>PROCESS CONNECTION MATERIAL</b> 1 - CS (for flanges only) 4 - SS304 6 - SS316	<b>MATERIAL OF ELECTRODE</b> 4 - SS304 6 - SS316																																													
<b>VERSIONS</b> A - Single point switch (1 C/O) B - Single point switch (1 C/O) with time delay G - Single point switch (2 C/O) H - Single point switch (2 C/O) with time delay	<b>PROCESS CONNECTION SIZE</b> 01 - 1" BSP (M) 02 - 1 1/2" BSP (M) <b>FLANGE TABLE</b> Pressure rating = 150 # (10 Kg/cm <sup>2</sup> )	<b>COATING / LINING</b> 0 - No coating	<b>SHEATHING / COATING</b> 0 - No coating	<b>MATERIAL OF OUTER PIPE</b> 0 - No outer pipe																																													
<b>ENCLOSURE (NOTE 1)</b> 1 - Weather proof (W/P) 7 - W/P with HTSO in CS & SINDANO	<table border="1" style="width:100%; border-collapse: collapse; text-align: center;"> <thead> <tr> <th></th> <th>ANSI</th> <th>BS</th> <th>DIN</th> <th>IS</th> </tr> </thead> <tbody> <tr><td>1"</td><td>11</td><td>12</td><td>13</td><td>14</td></tr> <tr><td>1 1/2"</td><td>16</td><td>17</td><td>18</td><td>19</td></tr> <tr><td>2"</td><td>21</td><td>21</td><td>23</td><td>24</td></tr> <tr><td>2 1/2"</td><td>26</td><td>27</td><td>28</td><td>29</td></tr> <tr><td>3"</td><td>31</td><td>32</td><td>33</td><td>34</td></tr> <tr><td>4"</td><td>41</td><td>42</td><td>43</td><td>44</td></tr> <tr><td>5"</td><td>51</td><td>52</td><td>53</td><td>54</td></tr> <tr><td>6"</td><td>62</td><td>62</td><td>63</td><td>64</td></tr> </tbody> </table>		ANSI	BS	DIN	IS	1"	11	12	13	14	1 1/2"	16	17	18	19	2"	21	21	23	24	2 1/2"	26	27	28	29	3"	31	32	33	34	4"	41	42	43	44	5"	51	52	53	54	6"	62	62	63	64	<b>TRANSUCER (SQUARE VERSION)</b> 2 - T912	<b>MATERIAL OF COUNTER WEIGHT</b> 0 - No counter weight	
	ANSI	BS	DIN	IS																																													
1"	11	12	13	14																																													
1 1/2"	16	17	18	19																																													
2"	21	21	23	24																																													
2 1/2"	26	27	28	29																																													
3"	31	32	33	34																																													
4"	41	42	43	44																																													
5"	51	52	53	54																																													
6"	62	62	63	64																																													
<b>POWER SUPPLY</b> 1 - 115VAC ±10%, 50Hz, 1 φ 2 - 230VAC ±10%, 50Hz, 1 φ 3 - 24VDC		<b>ELECTRODE CODE (NOTE 3)</b> XX - As per electrode selection guide																																															

NOTE : 1. Please specify cable entry size. HTSO is applicable for high temperature (above 50°C) applications.  
 2. Slip on flanges of appropriate size can be supplied as an accessory for electrodes with threaded process connections.  
 3. All combinations are not possible. Please refer "Electrode Selection Guide" for compatible options.

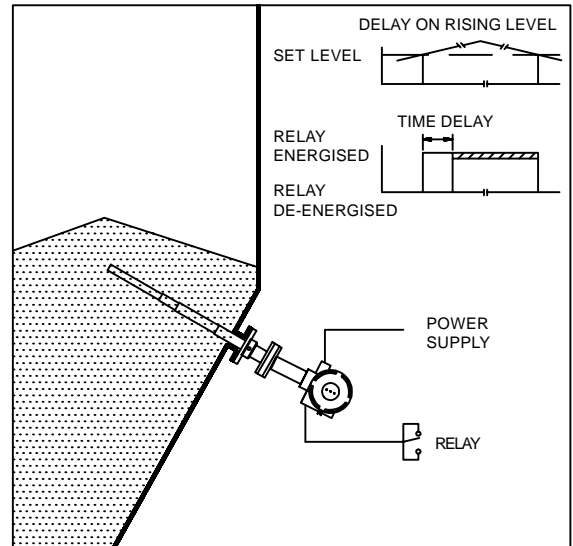
## ELECTRODE SELECTION GUIDE

CODE NO.	ELECTRODE DESCRIPTION	PROCESS CONNECTION		MATERIAL OF SENSING ELECTRODE	MOUNTING V / H	ELECTRODE LENGTH (L mm)	OPERATING CONDITIONS		SERVICE
		THD.	INT. FLGD. MIN.				TEMP. IN °C MAX.	PRESS. IN Kg/cm <sup>2</sup> MAX.	
92	COATSAFE PTFE INSULATED	01	1"	4,6	V / H	300 450 , 600	180	1 0	MOIST SOLIDS, CEMENT, FLY ASH
94	COATSAFE ALUMINA INSULATED	02	1 1/2"	4	V / H	300 450 , 600	300	ATM	FLY ASH, CLINKER

## DIMENSIONS



## APPLICATION



\*\*\* Continuous developments may necessitate changes without notice.

LF-116-0802 R01 (W) 05/99

## SBEM Pvt. Ltd.

39, Electronic Co-Operative Estate, Pune-Satara Road, Pune - 411 009 (INDIA)

Tel. - 91-20-4220505, 4223375 Fax - 91-20-4215670

Email - sales@sbem.co.in sbemsales@vsnl.com

Web: www.sbem-india.com

Works : Bibwewadi Industrial Estate, 691/A/2, Pune-Satara Road, Pune-411 037(India) Email : mfg@sbem.co.in

Office : MUMBAI

CHENNAI

NEW DELHI

VADODARA

Tele. : 91-22-2782 3601, 2782 3603

91-44-2445 1235, 2441 2947

91-11-2656 0647, 2696 9679

91-265-233 5196, 235 8184

Fax : 91-22-2782 3603

91-44-2441 2947

91-11-2696 9679

91-265-233 0906

Email : mumbai@sbem.co.in

chennai@sbem.co.in

newdelhi@sbem.co.in

vadodara@sbem.co.in