



Type 2280 Tuning Forks are suitable for level detection of liquids or granular, powdered solids. Mounted on tanks filling / emptying can be controlled using these devices just as well they can generate fail-safe alarms providing overflow- or dry run protection.

The operation principle is based on the electronic circuit exciting the fork probe making it vibrate. As the medium reaches and covers the fork its vibration changes. The electronics senses the change of vibration and gives output signal after a selected delay.

## Features

- Maintenance free vibrating principle
- Independent of the liquid conductivity, dielectric constant, viscosity, pressure and temperature
- Selectable sensitivity
- Relay or electronic output
- Temperatures up to 130 degrees
- ATEX and WHG approvals
- IP67, 65/68 protection

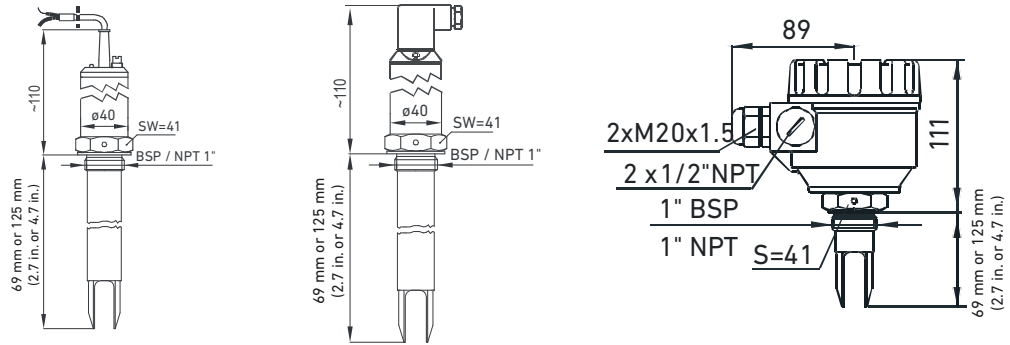
## CE, WHG, ATEX

## Applications

- Potable Water
- River Water
- Cooling Water
- Demineralized Water
- Water/Glycol Solutions
- Chemicals



## Dimensions



## Specifications

### General

Type	2280-Y-YYYYC-Y	2280-Y-YYYYO-Y	2280-Y-YYYYT-Y
Probe Length	69 mm or 125 mm (2.7 in. or 4.9 in.)		
Operation mode indicator	Bi-color LED		

### Environmental

Process Temperature	-40 °C to +130 °C (-40 °F to +266 °F)		
Ambient Temperature	-40 °C to +70 °C (-40 °F to +158 °F) / -30 °C to +70 °C (-22 °F to +158 °F)		
Process Pressure (absolute)	4 MPa (40 bar) 580 psi		
Min Medium Density	≥ 0.7 kg/dm <sup>3</sup>		
Max Medium Viscosity	≤10'000 mm <sup>2</sup> /s (cSt)		

### Enclosure

Sensor	Stainless Steel DIN 1.4571	
Housing	Stainless Steel DIN 1.4571	PBT
Ingress protection	IP67	
Process Connection	1 " BSP / NPT	

### Electrical

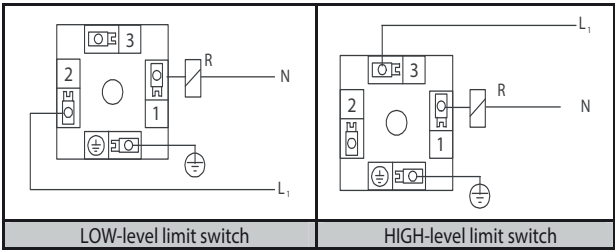
Switching Function	2-wire AC; 3-wire PNP-NPN		1 SPDT relay
Output Voltage / -Current	AC 9 mA free, 14 mA immersed 3-wire max. 350mA, <4.5V (on)		250V AC, 8A AC1
Power Supply	12...55 V DC or 20		20 ... 255 V AC and 20 ... 60 V DC
Response Time	≤ 0.5 s		
Power Consumption	0.6 W		AC: 1.2 ... 17 VA; DC: <3 W
Connection	Cable PVC 5x0.5mm², 3m	DIN Connector	Terminal
Protection	Class III		Class I

### Standards and Approvals

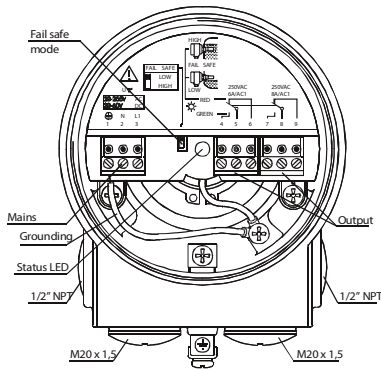
ATEX approval	ATEX II 1 G Ex ia IIC T6, IP68		
General Approvals	CE		

# Wiring

## DIN Connector 3 Wire DC Version:

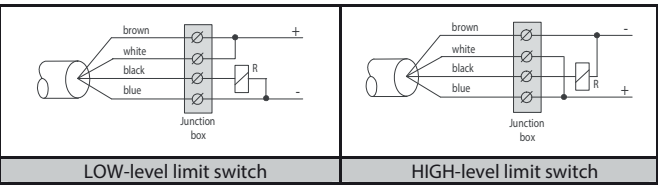


## PBT Enclosure Version:

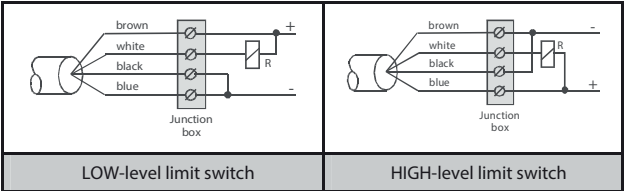


## DC Cable Version 3 Wire DC:

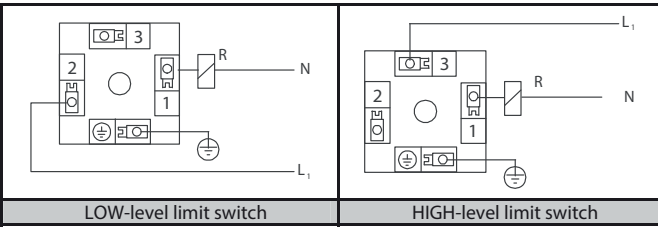
### PNP-wiring



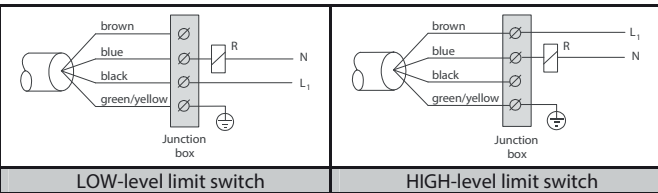
### NPN-wiring



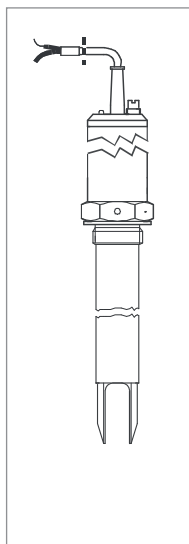
## DIN Connector 2 Wire AC Version:



## AC Cable Version 2 Wire AC:



## Ordering Information



Mfr. Part No.	Code	Description
2280-S-5WBO-1	<b>159 300 200</b>	Length 69 mm (2.72 in.), Stainless Steel, Output 3-wire PNP-NPN, DIN connector, BSP thread
2280-S-5WBC-1	<b>159 300 201</b>	Length 69 mm (2.72 in.), Stainless Steel, Output 3-wire PNP-NPN, cable, BSP thread
2280-S-5WBO-2	<b>159 300 202</b>	Length 125 mm (4.92 in.), Stainless Steel, Output 3-wire PNP-NPN, DIN connector, BSP thread
2280-S-5WBC-2	<b>159 300 203</b>	Length 125 mm (4.92 in.), Stainless Steel, Output 3-wire PNP-NPN, cable, BSP thread
2280-S-5XWBO-1	<b>159 300 210</b>	Length 69 mm (2.72 in.), Stainless Steel, Output 2-wire AC, DIN connector, BSP thread, ATEX
2280-S-5XWBC-1	<b>159 300 211</b>	Length 69 mm (2.72 in.), Stainless Steel, Output 2-wire AC, cable, BSP thread, ATEX
2280-S-5XWBO-2	<b>159 300 212</b>	Length 125 mm (4.92 in.), Stainless Steel, Output 2-wire AC, DIN connector, BSP thread, ATEX
2280-S-5XWBC-2	<b>159 300 213</b>	Length 125 mm (4.92 in.), Stainless Steel, Output 2-wire AC, cable, BSP thread, ATEX
2280-S-5WNO-1	<b>159 300 220</b>	Length 69 mm (2.72 in.), Stainless Steel, Output 3-wire PNP-NPN, DIN connector, NPT thread
2280-S-5WNC-1	<b>159 300 221</b>	Length 69 mm (2.72 in.), Stainless Steel, Output 3-wire PNP-NPN, cable, NPT thread
2280-S-5WNO-2	<b>159 300 222</b>	Length 125 mm (4.92 in.), Stainless Steel, Output 3-wire PNP-NPN, DIN connector, NPT thread
2280-S-5WNC-2	<b>159 300 223</b>	Length 125 mm (4.92 in.), Stainless Steel, Output 3-wire PNP-NPN, cable, NPT thread
2280-S-5XWNO-1	<b>159 300 230</b>	Length 69 mm (2.72 in.), Stainless Steel, Output 2-wire AC, DIN connector, NPT thread, ATEX
2280-S-5XWNC-1	<b>159 300 231</b>	Length 69 mm (2.72 in.), Stainless Steel, Output 2-wire AC, cable, NPT Gewinde, ATEX
2280-S-5XWNO-2	<b>159 300 232</b>	Length 125 mm (4.92 in.), Stainless Steel, Output 2-wire AC, DIN connector, NPT thread, ATEX
2280-S-5XWNC-2	<b>159 300 233</b>	Length 125 mm (4.92 in.), Stainless Steel, Output 2-wire AC, cable, NPT thread, ATEX
2280-S-5WBT-1	<b>159 300 240</b>	Length 69 mm (2.72 in.), Stainless Steel, PBT enclosure, 1 SPDT relay, BSP thread
2280-S-5WBT-2	<b>159 300 241</b>	Length 125 mm (4.92 in.), Stainless Steel, PBT enclosure, 1 SPDT relay, BSP thread
2280-S-5WNT-1	<b>159 300 242</b>	Length 69 mm (2.72 in.), Stainless Steel, PBT enclosure, 1 SPDT relay, NPT thread
2280-S-5WNT-2	<b>159 300 243</b>	Length 125 mm (4.92 in.), Stainless Steel, PBT enclosure, 1 SPDT relay, NPT thread