Filling level sensor DIVELIX

Basic information:

DIVELIX 4 : = measuring range 0 ... 400 mbar
DIVELIX V : = measuring range 0 ... ? mbar (customer-specific)

The filling level sensor transmits an output signal proportional to the filling height. Whenever the volume is to be indicated, the filling level height must be converted into a filling volume (e.g. measurement evaluation system type UM 2.3).

DIVELIX . I

The output current is 4 mA when the immersion probe is not immersed in liquid, and 20 mA when the final value of the measuring range is reached. Balancing the output current is not possible. The electrical connection is made using a plastic housing with the protective system IP43.

DIVELIX . U

The electronic equipment of the measuring transducer DIVELIX . U is integrated in a plastic housing with the protective system IP43. This electronic equipment supplies the immersion probe DIVELIX with the necessary auxiliary power and converts its current output signal into a voltage output signal of 0 … 10 volts. The zero point and final value can be adjusted within a wide range so that, when the immersion probe is used in connection with the measuring transducer DIVELIX . U, it is capable of providing an output voltage of 0 … 10 volts. The amplification of the DIVELIX . U is pre-selected by means of four DIP switches and is then precisely adjusted using a trimmer.

Balancing:

Before the balancing operation is carried out, the immersion probe should be in operation for approx. 15 minutes, i.e. be supplied with voltage.
For the purpose of this balancing operation, a voltmeter with a measuring range of 20 volts is then parallel-connected to terminals 4 (signal +) and 7 (GND -).
Zero point adjustment [0 %]:
Do not immerse the immersion probe in the medium. Adjust to 0 volts using the trimmer labelled as zero (ex-works set to 0 volts).
Final value adjustment [100 %]:
Determining the filling height in %. The immersion probe is lowered to the bottom of the container. If the filling height is, e.g. 73 %, the output voltage must then be adjusted to 7.3 volts using the trimmer labelled as 100 %.

Switch positions for 10 volts of output voltage = 100 % filling height

Usable measuring range of the immersion probe:

%		mA	
9.3 ...	12.5	[5.5 ...	6.0] = all switches OFF [factory setting]
11.8 ...	17.5	[5.9 ...	6.8] = switch 1 ON
15.6 ...	26.2	[6.5 ...	8.2] = switch 2 ON
21.8 ...	50.0	[7.5 ...	12.0] = switch 3 ON
32.5 ...	100.0	[9.2 ...	20.0] = all switches ON

Example: immersion probe final value 400 mbar = 4 – 20 mA

tank height 1,800 mm; density of the liquid 0.85 kg/l

100 % filling height = 153 mbar = 38.25 % of the final value of the measuring range or ΔI = 6.12 mA + 4 mA = 10.12 mA of probe current at 100 % immersion depth.

The output current at 100 % immersion depth is 10.12 mA in the case of the DIVELIX 4 I.

In the case of the DIVELIX 4 U, switch the DIP switch 3 to ON and then adjust to 10 V using the 100 % trimmer with the probe completely immersed in liquid. If the tank is only filled up to 70 % , then adjust to 7 V using the 100 % trimmer.

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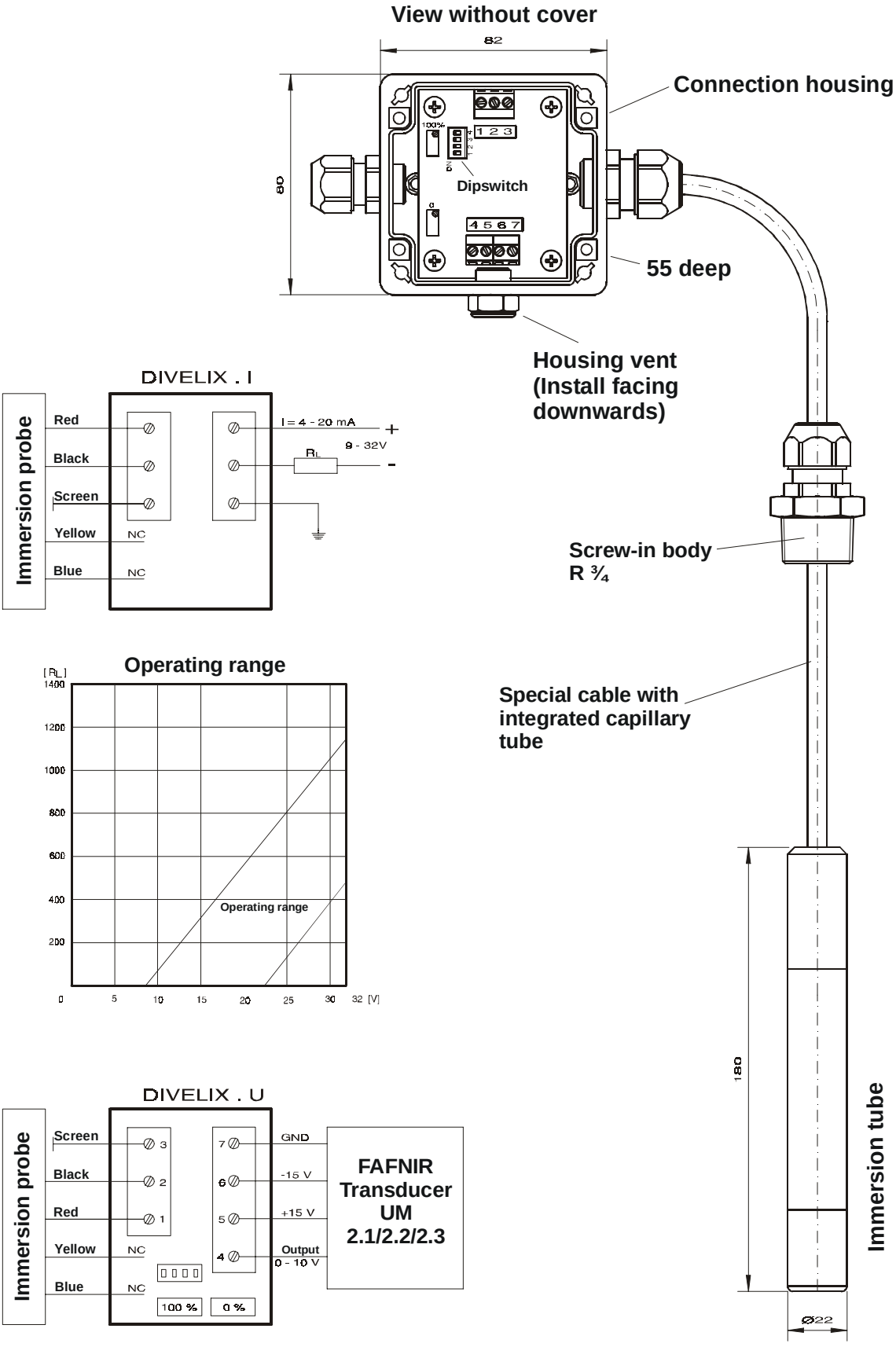

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