

# Scale signal amplifier

# WV157

suitable for mounting in hazardous area  
TÜV 01 ATEX 1694



- ☛ Scale signal amplifier to connect directly up to 4 weight cells (sum resistance bigger than  $85 \Omega$ ) in hazardous area
- ☛ Solid aluminium housing protection class IP65
- ☛ High Disturbance immunity through digital signal tranceiving to batch controller DC155
- ☛ Power supply directly with net voltage, a EEx i power supply is not necessary

## Description

The combination of the dosing controller DC155 and the scale signal amplifier WV157 is a dosing system which works with a scale signal in hazardous area. The personnel starts the batch per „start“ key on the DC155. The growing weight of the good is recognised by a scale (working with a strain gauge) When the preselected weight is reached the DC155 stops the filling process automatically. The DC155 works with a decreasing weight signal too.

The scale signal amplifier is used to transform the weight signal. The small difference signal of the strain gauge will be amplified, transformed to digital and sent to the Dosing controller.

Correct mounting of the WV157 in hazardous area is close to the scale to reduce disturbances. The even more disturbance safe digital output signal can be transmitted via a longer distance to the DC155 in hazardous area.

## Type code

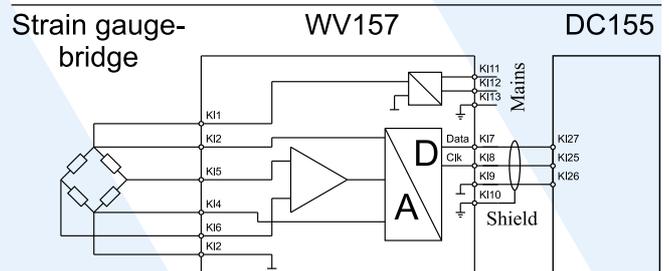
W V 1 5 7 . x	
M a i n s :	
2 3 0 V A C	. 0
1 2 0 V A C	. 2
2 4 V D C	. 6

Further voltages on demand

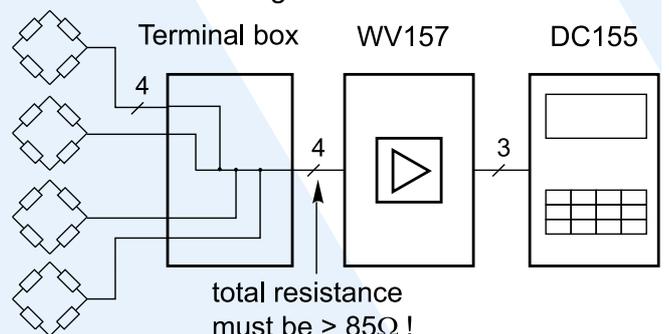
## Technical Details

Ex- protection	E Ex e m i b IIC T4
Device group	II 2 G
EC- type examination c.	TÜV 01 ATEX 1694
Ambient temperature	-20°C ...+50°C T4
Mounting	Hazardous area, Zone1
Dimensions H x B x T	175 mm x 80 mm x 57 mm
Material	Aluminium, lacquered
Protection	IP65
Mains: Kl. 11,12	AC: 230 V, 120 V, DC: 24 V U <sub>m</sub> = 253 V
Kl 13	PE
Scale terminal (intrinsically safe) Kl. 1 ..6	U <sub>0</sub> = 5,9V, I <sub>0</sub> = 153mA, P <sub>0</sub> = 225 mW, C <sub>0</sub> = 1,5 µF I <sub>0</sub> = 1,7 mH
Serial interface (intrinsically safe) Kl. 7 ..9	U <sub>0</sub> = 5,9V, I <sub>0</sub> = 13mA, P <sub>0</sub> = 19 mW, C <sub>0</sub> = 575 nF I <sub>0</sub> = 40 mH
Kl 10	PE, shield terminal
further limits	see EC- type examination certificate
Sample rate	8 Hz
Precision	0,03% <sub>VE</sub> at 2mV/V
Temperature coefficient	0,015 % <sub>VE</sub> each 10 K

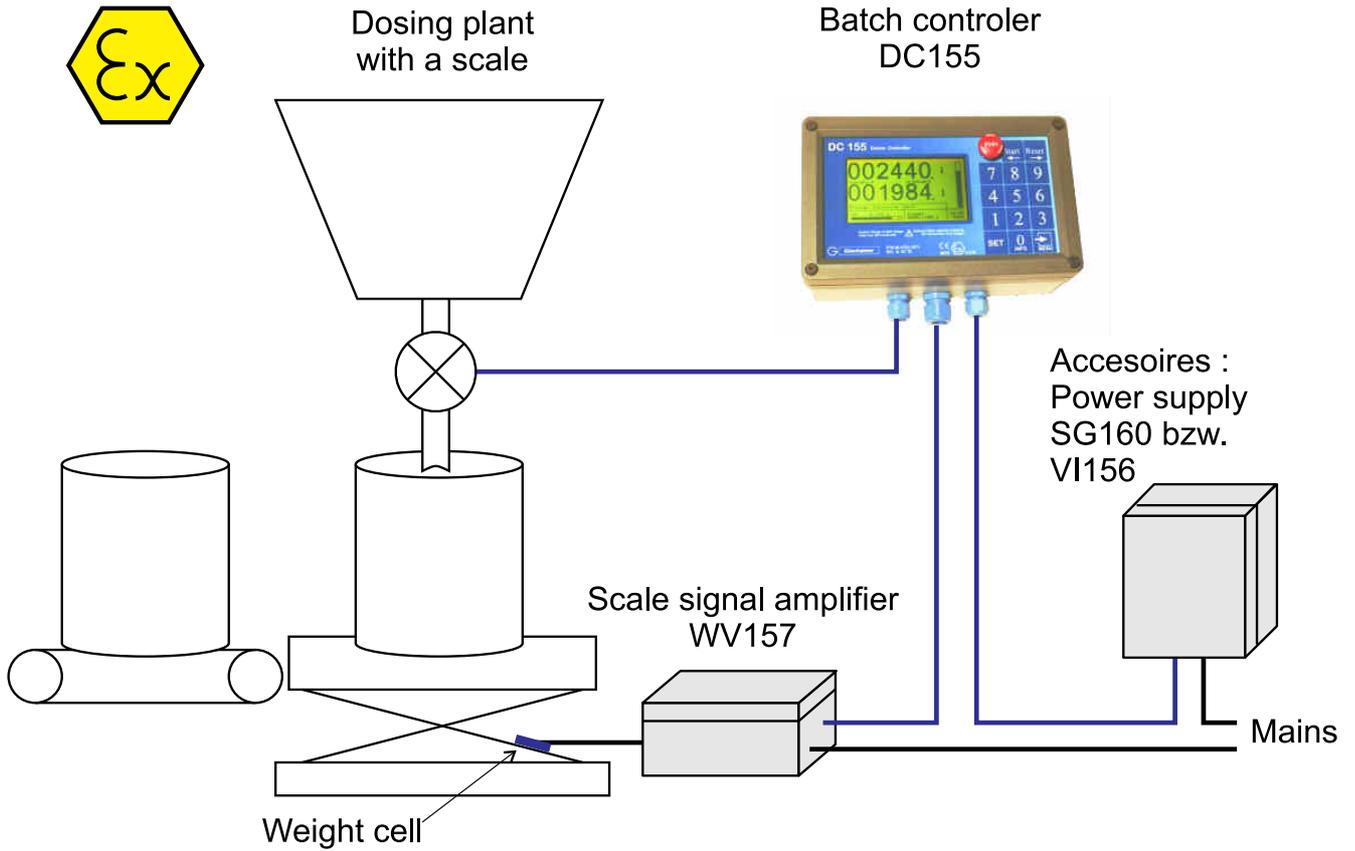
## Block diagram



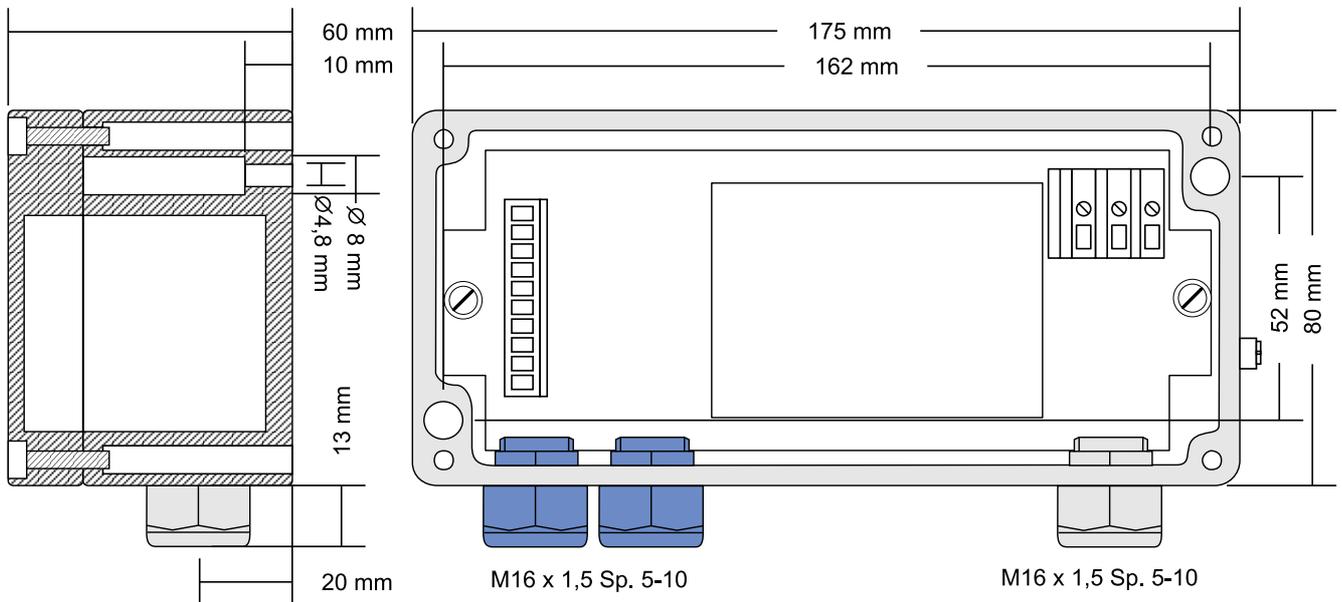
## Connection of 4 weight cells



## Application



## Dimensions





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Zertifiziertes

**Qualitäts-**  
Managementsystem  
nach  
DIN EN ISO 9001

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