

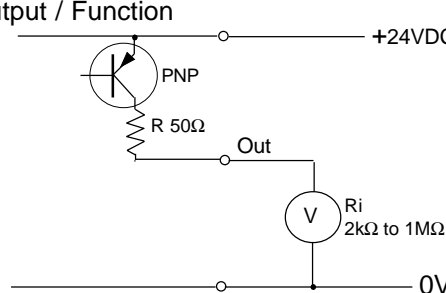
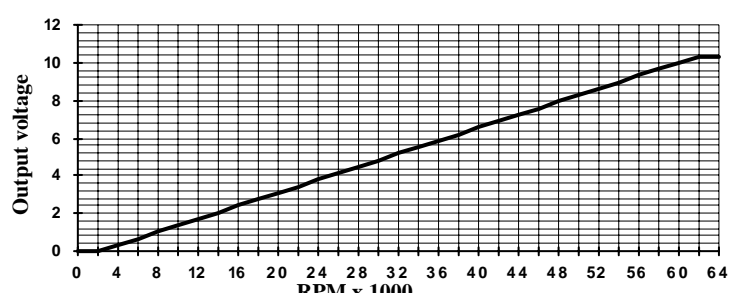
RPM/Voltage Converter IAN-TD-RV



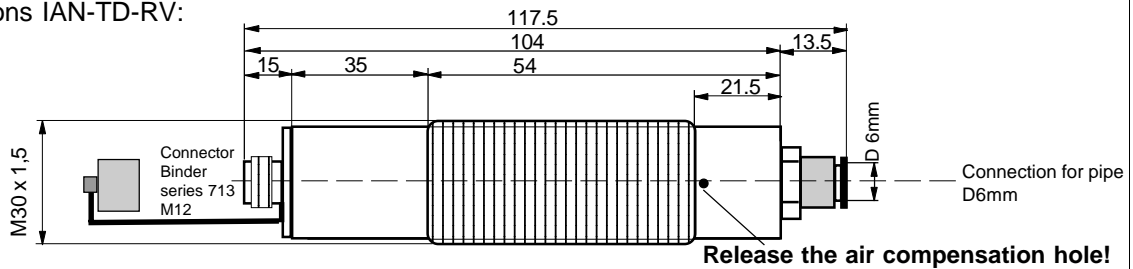
EEx nA IIC T6

II 3 G

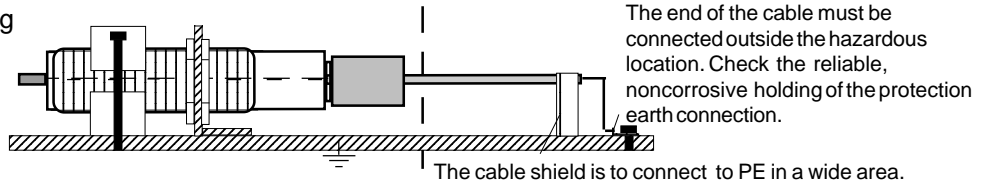
- applicable only in Ex Zone 2
- for rotation speed detection at Sames sprayers PPH607 from 2000 RPM up to 60'000 RPM
- analog voltage output 0 to 10VDC

Type	IAN-TD-RV
Technical Data	
Type of ex protection	EEx nA IIC T6
Applicable in Ex Zone	Zone 2
Category / Grouping	II 3 G
Compressed-air supply for rotation speed detection:	140 kPa to 300 kPa (at the sprayer) (must be adjusted to the sprayer)
Length of compressed-air piping (D=4/6mm)	minimum 1.8m to maximum 2.5m (Sprayer to sensor)
absolute max. air pressure at the sensor	500 kPa
Range of rotation speed control	2000 RPM to 60'000 RPM
Output rise and fall time	<30us
Supply voltage	24 VDC (20 to 28VDC)
maximum supply voltage	Um ≤ 30VDC
Current consumption	25mA
maximum power dissipation	0.7W
Type analog output	PNP, 0 to 10VDC
Output resolution	12 Bit = 15RPM/Step
Output impedance	appr. 50Ω
Output load	RL: 2kΩ to 1MΩ , short circuit protected, maximum 20mA
Housing	M30, yellow brass, nickel plated
Enclosure rating at EN 60529	IP 54, compressed-air supply connected
Ambient operating temperature TA	0°C < TA < +50°C
Electrical connection	Connector: Binder Series 714, 09 0541 00 05
Compressed-air supply connection	for pipes D6mm/4mm
Accessories included	- Safety lock devices, mount at the cable connection, for locking the connections. (black synthetic devices) - Warning plate "Do not open/close when supply voltage connected", self-sealing, for gluing on the cable connectors. - Protection cap for the sensor connectors.
Accessories not included	- Cable connector Binder Series 713, M12, 4 terminals
Adjustment of the air pressure supply to the sprayer:	- Preset the compressed-air supply at 100 kPa. - Set the sprayer rotation speed at 2'000RPM. - Increment the compressed-air supply for the A/E-converter to a stable function of the speed controlling unit. - Check the range of rotation speed detection from 2'000RPM to 60'000RPM.
ATEX related designations	CE Device type TA: 0°C < TA < 50°C Electrical data according to the chart Date of construction: Numeral 4 and 5 of the serial number
Output / Function	 

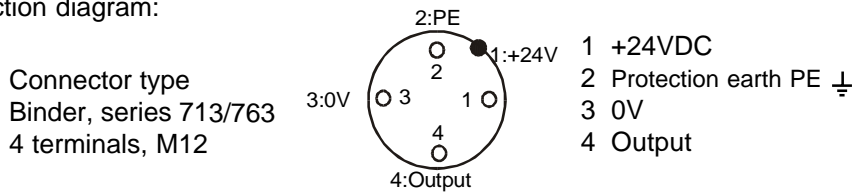
Dimensions IAN-TD-RV:



Equipotential Bonding prescription:



Connection diagram:



Operating Manual / EC - Declaration of Conformity:

Mounting prescriptions

Ex Protection:

Do not exceed the absolute maximum supply voltage ($U_m \leq 30VDC$). It is necessary to take into consideration the valid international and national rules and regulations. The local equipotential bonding have to be done. The protective earth (PE) is solid connected with the housing. The cable have to be installed and protected against damages. To connect cables inside hazardous locations only use certificated Ex e housings. All cable terminals must be connected outside hazardous locations.

The R/V Converter Type IAN-TD-RV is only applicable in the Ex zone 2. Do not open or close the connector when the supply voltage is connected to the cable. When installing the sensor, the safety lock device must be fitted at the cable connector. The additional adhesive warning label must be fixed to the connector housing at the connection cable. Only connectors, Binder series 713 or Lumberg RKTS/RKTW 5, are allowed. It is necessary to take into consideration the mounting prescription of the connector manufacturer.

General mounting prescriptions:

Do not cover the air decompression holes at the sensor housing. The length of the compressed-air pipes between the sensor and the sprayer must be 1.8m to 3.0m. Do not exceed the maximum ratings. The electrical connections must be exactly as shown in the connection diagram. The cable shield must be connected short. The cable shield should be connected to the protection earth, large-surfaced. Connection cables must not be installed parallel to high voltage cables.

Function

The turning sprayer lead to a compressed-air alteration. The sensor converts this alteration to an electrical analog output signal. The analog output has a resolution of 12 Bits, this gives a practical resolution of 15 RPM /Step. A compressed-air supply of 200kPa, at the sprayer, gives a safe function for pipes from 1.8m to 2.0m. Do

not exceed the absolute maximum pressure of 500kPa.

Maintenance

If the compressed-air supply is not connected, protect the compressed-air input and the decompression holes of the sensor against any pollution and liquids. If the sensor is contaminated, clean with alcohol. Do not use aggressive solvents. Equipment must only be repaired or serviced by the manufacturer.

Safety Informations

The R/V-Converter IAN-TD-RV must not be used for Accident-Prevention! When installing and operating with the sensor, it is necessary to take into consideration the relevant international and other national regulations. ATEX 118a, ElexV, TRbF, TRD, UVV, EX-RL(BGR 104), BetrSichV (ATEX 137), single directive 1999/92/EG.

Standards met:

- EN 50014, EN 50021
- EN 61000-6-1/-2, EN 61000-6-3/4, EN 60529
- Ex Protection: 94/9/EG (ATEX 100a)
- Machine directive: 98/37/EG
- Low voltage directive: 73/23/EWG, 93/68/EWG
- EMC: 89/336/EWG, 91/263/EWG, 92/31/EWG, 93/68/EWG

General Notes

We reserve the right to modify our equipment. Our equipment is designed such way, that it has the least possible adverse effect on the environment. It neither emit or contain any damaging or siliconized substances and use a minimum of energy and resources. No longer usable or irreparable units must be disposed of in accordance with local waste disposal regulations.

Declaration of conformity

The conformity of the devices with the EC standards and directives and the EC-type examination certificate and the observation of the Quality Safety System ISO 9001 with the ATEX module "Production", declares:


Hans Bracher, Matrix Elektronik AG