0 Introduction

These instructions should aid the user in the attachment, operation, and maintenance of AMG feedback units.

1 Description of the Feedback Unit

The Type V215 feedback units are used as position sensors for the end or intermediate positions of pneumatic rotary actuators. They convert determined mechanical positions if the actuator into electrical signals.

The housing is made of shock-resistant, permanently antistatic polyamide 12 (Vestamid®). To prevent electrostatic charging, the surface resistance has been reduced to 10^6-10^9. The sealing measures used guarantee IP 65 type of protection. In this way, the installed explosion-proof components are optimally protected from hazardous influences.

2 Intended Use

The feedback units are intended for attachment to actuators using the DIN VDI/VDE 3845 interface or to fittings using a console.
The maximum values according to DIN EN 60947-5-6 (D.C. Interface for Proximity Sensors and Switching Amplifiers) must be observed since the maximum surface or operating temperature is guaranteed only in this way.
The temperature class of the switch box is definite on the one hand through the restriction of the allowed ambient temperature of the body (-20 C° til 80°C) and on the other hand through the ambient temperature of the installed approach switches and their temperature class. The each disadvantageous case will be definite by the allowed ambient temperature and by the temperature class. The most low allowed temperature is –20°C.
Type of protection: IP65

Special conditions:

Maximum permissible ambient temperature T_{Umax} ; Ui = 20V	
at Pi=34mW, Ii=25mA, T6	70°C
at Pi=34mW, Ii=25mA, T5	85°C
at Pi=34mW, Ii=25mA, T4-T1	100°C
at Pi=64mW, Ii=25mA, T6	66°C
at Pi=64mW, Ii=25mA, T5	81°C
at Pi=64mW, Ii=25mA, T4-T1	100°C
at Pi=169mW, Ii=52mA, T6	45°C
at Pi=169mW, Ii=52mA, T5	60°C
at Pi=169mW, Ii=52mA, T4-T1	89°C
at Pi=242mW, Ii=76mA, T6	30°C
at Pi=242mW, Ii=76mA, T5	45°C
at Pi=242mW, Ii=76mA, T4-T1	74°C

	The correlation between the type of the affiliated electric circuit of the highest allowed ambient temperature and the temperature class as well as the effective inside reactance of the installed sensor type is to be take from the respective the test certificate's art of the installed sensors.

3 Safety Notices 

3.1 The type of protection (IP65) for setup and operation is attained only in case of the proper use of certified cable and line bushings that have been tested for explosion protection. Unneeded openings for cable and line bushings are to be sealed off using suitable certified screw plugs that have been tested for explosion protection.

3.2 After the electrical connections have been made, the cover screws and threaded cable glands are to be mounted properly (air-tight).

3.3 For the operation of the limit switch, only isolated switching amplifiers that have their own intrinsically safe power supply circuit are permitted.
The actual electrical values are determined by the electrical equipment used

3.4 Electric connections and wiring may be carried out only by expert personnel.

3.5 The faulty switch box have not to be used, otherwise there is no garantie more of all electric characteristics.

4 Labelling of the Feedback Unit

Every feedback unit has the following label:

For	Label	Comment
Manufacturer	AMG - Pesch GmbH **logo**	For the company address, see Section 7 "Information."
Limit switch type	e.g. **SC 3.5**	See AMG data sheet.
Article no.	e.g. **113548**	Internal AMG product designation
Order no.	e.g. **1009803**	Internal AMG order number
Year of construction	e.g. **02**	End digits of the year 2002
Explosion protection according to 2014/34/EU	**Ⓔx II 2G EEx ib IIC T1-T6**	Category 2 = Classification according to Directive 2014/34/EU
Pay attention to the data of the sensors!		

5 Assembly and Disassembly

Before the disassembly of the feedback unit, the rotary actuator must be separated from the compressed-air mains.

When assembling the feedback unit, make sure that the switch position of the actuator corresponds with the preset switching function.
The M6x12 fastening screws included in delivery are to be properly mounted using plain washers.

The connecting terminals are labelled according to DIN 45140 and suited for a maximum wire cross-section of 2.5 mm² (single-wire, fine-wire, and multiple-wire).

By connecting of approach switch, you have to respect the right polarity as well as the correct assignement in the connecting terminal.

6 Trouble-Shooting

When eliminating a fault, you must observe Section 3 "Safety Instructions."

Note: *In case of fitting or supplementary subassembly faults, follow the corresponding instructions.*

Type of malfunction	Measure	Comments
Faulty switching point	Check the console fastening or tighten the screws.	DIN 45140
	Readjust the mounting bracket of the limit switch.	
No function	Check the electrical connections.	
	Check the voltage supply of the isolated switching amplifier:	

7 Additional Information

These instructions, other AMG documents, and additional information and data, even in other language versions, can be obtained under www.amg-pesch.com or from the following address:

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