Operating Instructions: AS-Interface
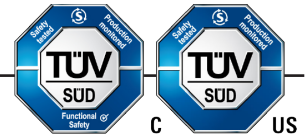
Description

AS-interface base elements are used when you want to connect all of the features of tGard to an AS-i bus.

• **TEBB4** Element - Connect up to 4 inputs, 4 outputs and 1 dual channel safety circuit to the bus in one stack.

• **TEBB8** Element - Connect up to 8 inputs, 8 outputs and 2 dual channel safety circuits to the bus in one stack.

• Each node address can handle either 4 inputs and 4 outputs, or 1 dual channel safety circuits; you only get the nodes you need to maximise available bus addresses.

• Extended addressing is used for I/O nodes allowing 62 nodes on a bus; double the number possible on a standard bus.

• Connections are made by the standard M12 5 pin QD.

• Mating cables are available, part no. Cable-_M-TQ1;2,5,10 and 20m lengths.

• Most elements are powered directly from the bus meaning only two wires are necessary to run the whole stack; the Aux power supply is required if a solenoid lock is included in the stack.

• The element takes one bay to house the AS-i electronics and includes the base connection element.

tGard AS-i Base Technical Specifications

Housing Materials	Painted die cast aluminium
Colour	Dark Grey
Ingress Protection	IP65*
Electrical Life	1,000,000 Operations
Connection	M12 5 Pin
Ambient Temperature	-25°C to 40°C (-13°F to 104°F)
AS-i Current	≤135mA
AS-i Supply	26.5 - 31.6V
Aux Current	≤400mA
Aux Supply	24V +/- 10% (PELV or SELV)

*IP protection is to the tGard stack that this module attaches to, when correctly fitted according to installation and maintenance instructions.

Safety Related Data

Certified	CE marked for AS-i Safety at Work
Category	Control functionality can be used as part of a PLe/Cat 4/SIL 3 System. tGard Guard lock & switches are suitable for CAT 3/PLd (EN/ISO 13849-1)

AS-i Profiles

	IO	ID	ID1	ID2
Safety	7	B	-	F
I/O	7	A	7	7

tGard AS-i Base Element Part Number Options

Description	Part No.
Up to 4 inputs, 4 outputs & 1 dual safety circuit	TEBB4
Up to 8 inputs, 8 outputs & 2 dual safety circuits	TEBB8

Pin Out

Pin	Connection	Colour (Cable-_M-TQ1)
1	AS-i +	Brown
2	Aux -	White
3	AS-i -	Blue
4	Aux +	Black
5	Earth (optional)	Grey

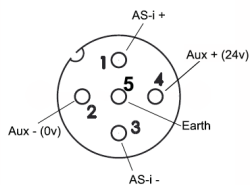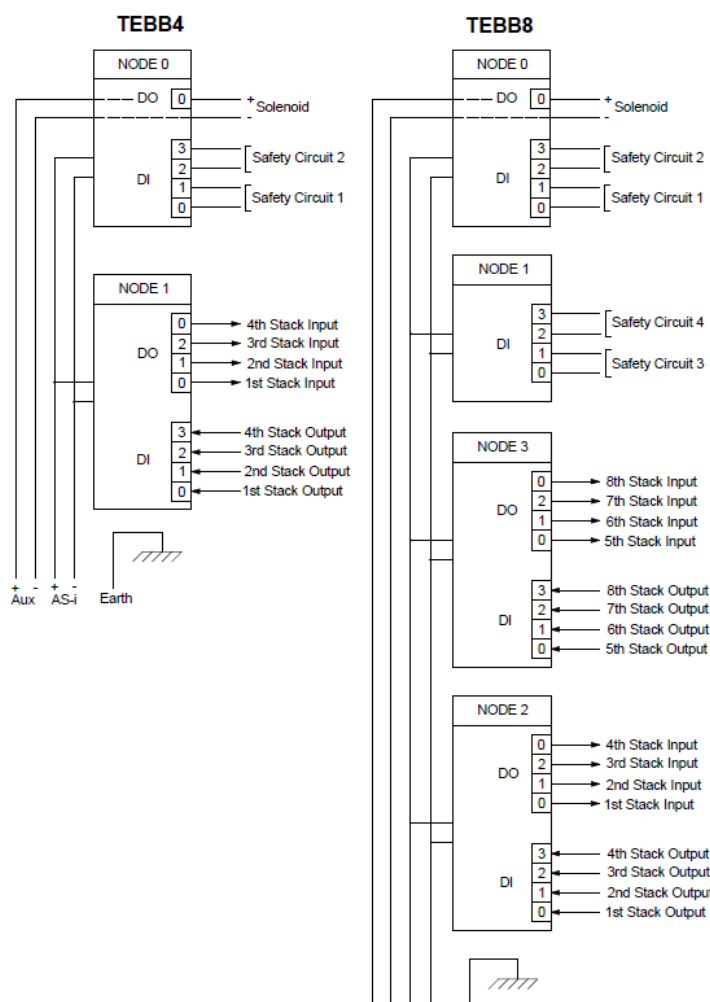## Figure 1: Wiring Diagrams -

Note:
"Stack Output" is for example a stack pushbutton.
"Stack Input" is for example a stack lamp.

Figure 2: Dimensional Drawing - AS-i Base Connector (shown in two way unit)

Ø 5.1THRU
WITH C/BORE Ø 9 x 5 DEEP
(2 PLACES)