esserbus FCT transponder 12-24 V / 230 V

- **Flexible fire control system and programmable monitoring functions**
- **Comprehensive fail-safe function**
- **Monitoring of external PSU**
- **Feedback checking of external equipment**
- **Programmable service life monitoring and time-limited activations**
- **Connection of 12-24 V AC / DC and 230 V mains voltage**
- **Optional IP base for use in harsh conditions**

Efficient Protection of People and Property

Fire and smoke protection systems are invaluable in emergencies and help minimize or, in the best case, prevent damage to buildings and peo-ple. In the event of a fire, the parts of the building that are not affected are kept free and the escape and rescue routes remain unobstructed. Machines can be switched off during a fire if requi-red and help to protect facilities and to contain the seat of the fire.

The FCT as Interface to Fire Control System

The esserbus FCT transponder (fire control transponder) now enables fire control systems to be controlled in an application-optimized manner. The fire control system is monitored using feed-back contacts that regis-ter the activa-tion of an alarm. The comprehensive fail-safe function of the transponder provides the security of knowing that should the fire alarm control panel (FACP) and/or the field bus fail, the full function of the trans-

ponder as an inde-pendent relay output will remain intact. Even if the po-wer supply to a fire damper (FD) fails, the incorrect damper position will continue to be indicated.

The esserbus Transponder in Detail

The esserbus FCT transponder 12-24 V / 230 V (Part No. 808600.24 / 808600.230) can be equipped with up to two IQ8FCT electronic modules (Part No. 804981) and connected to the loop of the fire alarm systems. Plug-in connections between the transponder and the electronic module repla-ce the wiring. The transponder is fitted with a surface-mounted housing (IP 30) as standard. The optional base attachment provides IP 65 protection against the ingress of moisture or solid particles to permit use under harsh operating conditions.

Modular Design – Maximum Flexibility

The transponder consists of a 12-24 V (Part No. 808600.24) or 230 V (808600.230) control module with 2 relays (230 V / 4 A). The esserbus/esserbus-PLus is connected using plug-in IQ8FCT elec-tronic modules. To facilitate individual addressing, each electronic module is assigned an address. Up to two electronic modules can be plugged into the transpon-der control board.

esserbus FCT transponder with 2 slots
① ②
IQ8FCT electronic modules
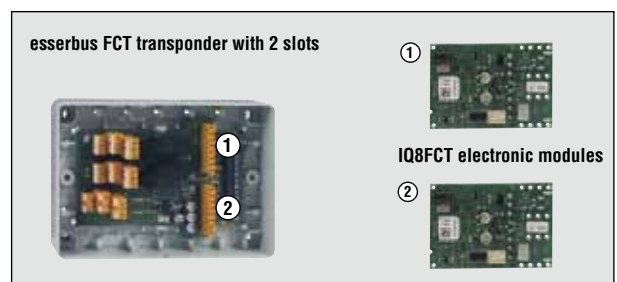
Modular construction

Important Features of New FCT Transponder

Control of fire dampers (FD)
- Permanent monitoring of FD status
- Monitoring of FD service life

Control of smoke extraction flaps
- Permanent monitoring of status of smoke extraction flaps

Elevator control
- Initiation of evacuation travels
- Monitoring of unexpected travel in alarm situations

Operation of barriers
- Opening of fire service access points in alarm situations
- Monitoring of the required final positions

Activation of roller doors
- Additional activation for evacuation and / or fire protection purposes

Time-critical activations
- Depict and control interdependencies
- Programmable, timed control of systems

Machine shutdown
- Control of production sequences in alarm situations
- Feedback as a result of incorrect operation

Activation of a voice alarm
- Pulses that have occurred once are displayed permanently as activations on the fire alarm control panel

Unlocking of emergency exits
- Recording of locking and unlocking operations in alarm situations
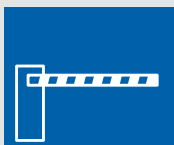
§ Observe configuration and commissioning information in accordance with national and local guidelines and requirements and applicable standards.

Software Functionality

The tools 8000 programming and service software is used to program various connection and control modes for optimal control and monitoring of the fire facilities.When activating fire dampers (FD), for instance, tools 8000 not only specifies the type of relay control (NC/NO contact), but also whether pulse triggering of the relay is desired and how long the pulse should last. This can be important and the key factor in deciding whether to activate certain types of fire damper. An FD usually has three states that are monitored and communicated to the fire alarm control panel: FD open, FD closing and FD closed. In the event of fire, this may lead to an enormous amount of data on the field bus, which in turn can adversely affect the performance of the entire fire alarm system. To prevent this, the transponder possesses the unique ability to filter the unwanted status information and reduce the levels of data traffic on the field bus.

Taking the FD as an example, it is thus possible to transmit only the specific technical alarm (TAL) information to the fire alarm control panel in the event of a delay in closing the FD. Reaction times are freely programmable, which means that a TAL will only be transmitted to the fire alarm control panel if the FD does not transmit the "FD closed" signal within a pre-defined time.
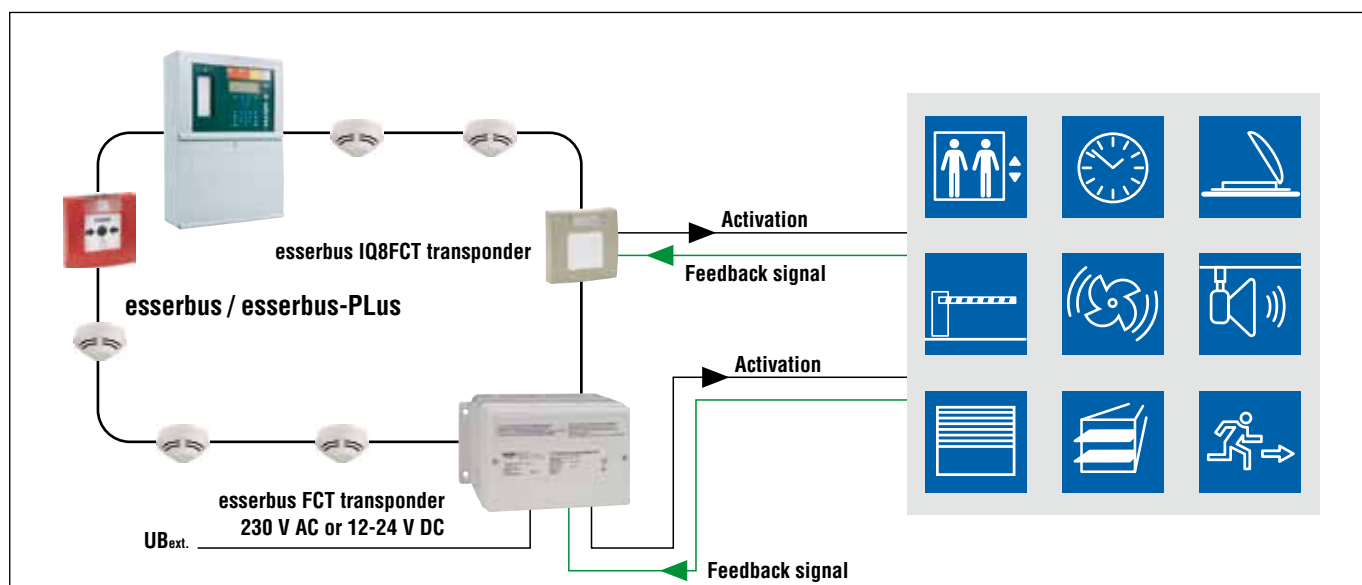
Feedback Inputs Ensure Safety

The bus-powered feedback inputs of the IQ8FCT electronic modules enable any application to be monitored and status signals sent to the fire alarm control panel. Even if the external PSU should fail, operation of the feedback inputs continues uninterrupted.
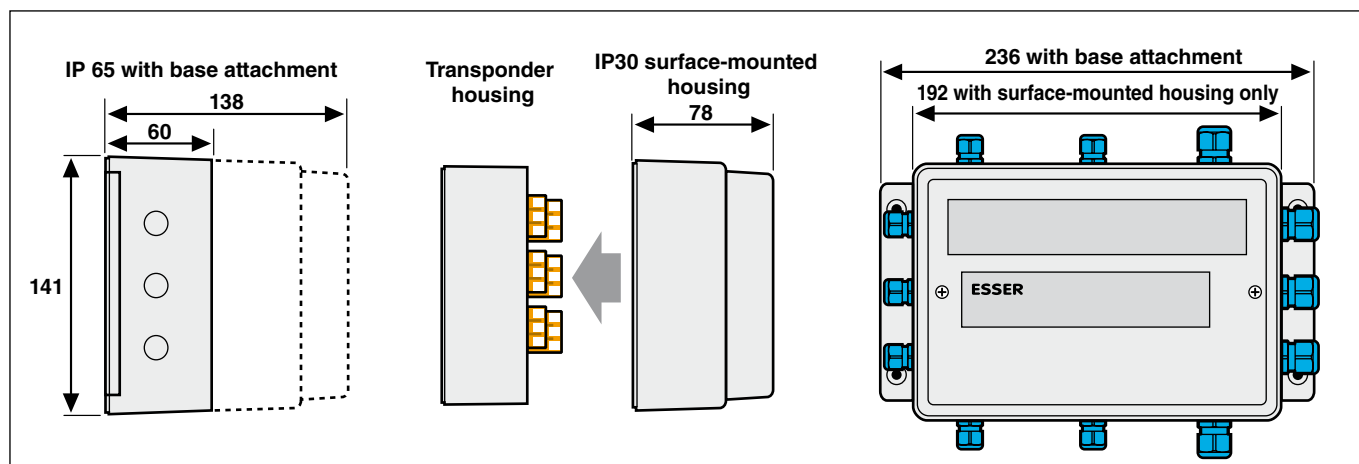
The PSU of the transponder can also be programmed as monitored. Boolean logic is being used for the first time with the esserbus transponder range to allow not only the cable runs, but also the proper operation of the PSU to be monitored.

Wide Rated Voltage Range

The transponder can be operated with the following voltages as required: 12 V AC, 12 V DC, 24 V AC, 24 V DC, 230 V AC. Motors that are also to be monitored by the fire alarm system are often acti-vated from the mains supply. This 230 V supply can also be used to power the esserbus transponder (Part No. 808600.230) directly and at the same time connect the voltage via the relay on the control module with up to 4 A. The transponder also supports the parallel connection of 12 V, 24 V and 230 V supplies.

Example connection

IP 65 with base attachment
138
60
141

Transponder housing

IP30 surface-mounted housing
78

236 with base attachment
192 with surface-mounted housing only

ESSER

Dimensional drawings (figures in mm)

Specifications

esserbus FCT transponder	Set 12-24 V	Set 230 V
Rated voltage	10 to 30 V DC or 10 to 24 V AC	230 V AC
Current consumption	max. 200 mA	max. 10 mA
Switching voltage	max. 30 V DC / 230 V AC	max. 30 V DC / 230 V AC

Contact rating	max. 4 A per relay
Connection terminals	max. 2.5 mm²
Ambient temperature	-5 °C to +45 °C
Storage temperature	-10 °C to +50 °C
Protection rating	IP 30 (in housing) IP 55 with IP base adapter (Part No. 788655)

IQ8FCT electronic module (Part No. 804981)		IQ8FCT (Part No. 804867)
Operational voltage	8 V DC to 42 V DC	8 V DC to 42 V DC
Quiescent current @ 19 V DC	approx. 45 µA	approx. 45 µA
Number per loop	max. 127	max. 127
Connection terminals	max. 2.5 mm² (AWG 26-14)	max. 2.5 mm² (AWG 26-14)
Ambient temperature		-20 °C to +70 °C
Protection rating		IP 43 (in housing) IP 55 with IP base attachment
Housing		PC/ASA plastic
Color		gray, similar to RAL 7035
Dimensions (WxHxD)		88 x 88 x 21 mm
Dimensions with IP base attachment (WxHxD)		88 x 88 x 57 mm
Specification		EN 54-17 : 2005/ -18 : 2005
VdS approval		G 20138
CE certificate		0786-CPD-20792

FCT order data	Part No.
IQ8FCT electronic module	804981
FCT transponder surface-mounted housing	788656
IP base attachment for transponder housing	788655
IP67 M12 screw connection with nut	704147
IP67 M16 screw connection with nut	704148
esserbus FCT transponder Set 12-24 V	808600.24
esserbus FCT transponder Set 230 V	808600.230

IQ8FCT order data	Part No.
IQ8FCT in small module housing	804867
Installation in a surface-mounted housing	704988
Flush-mounted mounting frame	704967
IP55 kit	704965

Please refer to our Voice Alarm Systems catalog for more order data.