



(1) **EU-TYPE EXAMINATION CERTIFICATE**
(Translation)

(2) Equipment or Protective Systems Intended for Use in
Potentially Explosive Atmospheres - **Directive 2014/34/EU**

(3) EU-Type Examination Certificate Number:

PTB 07 ATEX 2020

Issue: 2

(4) Product: Remote I/O System, S900S, Power Supply Typ SA920S

(5) Manufacturer: ABB AB

(6) Address: 721 80 Västerås, Sweden

(7) This product and any acceptable variation thereto is specified in the schedule to this certificate and the documents therein referred to.

(8) The Physikalisch-Technische Bundesanstalt, notified body No. 0102 in accordance with Article 17 of the Directive 2014/34/EU of the European Parliament and of the Council, dated 26 February 2014, certifies that this product has been found to comply with the Essential Health and Safety Requirements relating to the design and construction of products intended for use in potentially explosive atmospheres, given in Annex II to the Directive.

The examination and test results are recorded in the confidential Test Report PTB Ex 22-22099.

(9) Compliance with the Essential Health and Safety Requirements has been assured by compliance with:

EN IEC 60079-0:2018+AC:2020 EN 60079-1:2014+AC:2018

EN IEC 60079-7:2015+A1:2018 EN IEC 60079-11:2012

(10) If the sign "X" is placed after the certificate number, it indicates that the product is subject to the Specific Conditions of Use specified in the schedule to this certificate.

(11) This EU-Type Examination Certificate relates only to the design and construction of the specified product in accordance to the Directive 2014/34/EU. Further requirements of the Directive apply to the manufacturing process and supply of this product. These are not covered by this certificate.

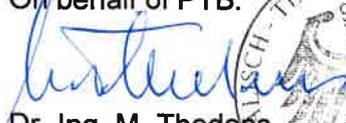
(12) The marking of the product shall include the following:

 **II 2 G Ex db eb [ib] IIC T4 Gb**

Konformitätsbewertungsstelle Sektor Explosionsschutz

Braunschweig, January 26, 2023

On behalf of PTB:


Dr.-Ing. M. Thedens
Direktor und Professor



sheet 1/4

EU-Type Examination Certificates without signature and official stamp shall not be valid. The certificates may be circulated only without alteration. Extracts or alterations are subject to approval by the Physikalisch-Technische Bundesanstalt. In case of dispute, the German text shall prevail.

SCHEDULE

(13)

(14) **EU-Type Examination Certificate Number PTB 07 ATEX 2020, Issue: 2**

(15) Description of Product

As a component of the system the power supply unit, type SA920S is used to supply the explosion protected remote I/O-fieldbus system S900 and shall be operated only as part of this system. Depending on the variant a multilayer connection is carried out by the termination unit, type TU ... – Ex certified under PTB 00 ATEX 2156 U.

The equipment is installed inside the hazardous area.

The permissible range of the ambient temperature is -20 °C ... +60 °C.

Electrical data

Maximum voltage for all circuits: $U_m = 60 \text{ V}$

I. Power supply

Supply circuit U_{in} type of protection Increased Safety Ex e
 (L+: z24, b24, d24 $U_{in} = 18...32 \text{ V DC}$ (residual ripple $\pm 10 \%$)
 L-: z28, b28, d28)

PE not connected

AC-output circuit U_{out} $U_{out} = 20 \text{ V}$ (amplitude)
 (z2, b2, d2, $P_{out} = 70 \text{ W}$
 z6, b6, d6) 300 ... 314 kHz (rectangular)

The AC-output circuit U_{out} is safely electrically isolated from the supply circuit U_{in} and from all other circuits up to a voltage value of 60 V. The external current limitation required for this circuit is provided for by the system S 900.

Multiple-spring wire plug PA (equipotential bonding)

II. System-internal circuits

(ineffective towards the outside)

Release circuit of the locking mechanism type of protection Intrinsic Safety Ex ib IIC
 Plug connector (z16, d16)

Maximum values:

$U_o = 6 \text{ V}$
 $I_o = 5.2 \text{ mA}$
 $C_i = 2.1 \mu\text{F}$
 L_i negligibly low

SCHEDULE TO EU-TYPE EXAMINATION CERTIFICATE PTB 07 ATEX 2020, Issue: 2

Connection to a second power supply unit (if existing)

Clock out type of protection Intrinsic Safety Ex ib IIC
Plug connector (z14, z18)

Maximum values:

$$U_o = 6 \text{ V}$$

$$I_o = 80.8 \text{ mA}$$

C_i negligibly low

L_i negligibly low

Clock in type of protection Intrinsic Safety Ex ib IIC
Plug connector (d14, d18)

Maximum values:

$$U_o = 6 \text{ V}$$

$$I_o = 32.3 \text{ mA}$$

C_i negligibly low

L_i negligibly low

Internal system connection to the type of protection Intrinsic Safety Ex ib IIC
communication interfaces
Plug connector (d12)

Maximum values:

$$U_o = 6 \text{ V}$$

$$I_o = 6.1 \text{ mA}$$

C_i negligibly low

L_i negligibly low

GND (Ex) The system-internal circuits clock out, clock
Plug connector (z12, b12, b14) in and the internal system connection to the
communication interfaces are electrically
interconnected by these terminals.

Changes in relation to previous editions:

The changes in the SA920S only concern the construction of the housing. The changes to the housing are as follows:

- Aluminum profile and styrofoam core have been removed
- New potting compound
- The light guide has been removed
- Removing the light guide hole, LED fins (mechanical light guide attachment) and LED fins/attachment of optional light guides
- An additional screw in the housing wall (M4)
- Change of manufacturer's address

SCHEDULE TO EU-TYPE EXAMINATION CERTIFICATE PTB 07 ATEX 2020, Issue: 2

(16) Test Report PTB Ex 22-22099

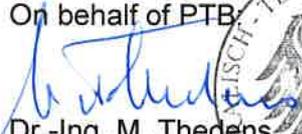
(17) Specific conditions of use

none

(18) Essential health and safety requirements

Met by compliance with the aforementioned standards.

Konformitätsbewertungsstelle, Sektor Explosionsschutz
On behalf of PTB


Dr.-Ing. M. Thedens
Direktor und Professor



Braunschweig, January 26, 2023