

1 SUPPLEMENT

according to Directive 94/9/EC Annex III.6

to EC-TYPE-EXAMINATION CERTIFICATE PTB 09 ATEX 2046

(Translation)

Equipment: Relay Barrier Typ EB3N

Marking:  II (1) G [Ex ia] IIC or II (1) D [Ex ia Da]

Manufacturer: IDEC Corp.

Address: 7-31 Nishimiyahara 1-chome, Yodogawa-ku, Osaka, 532-8550, Japan

Description of supplements and modifications

The basis for the standard for the Relay Barrier changes as follows:

EN 60079-0:2009

EN 60079-11:2012

With regard to the changing of the basis for the standard the marking changes as following:

 II (1) G [Ex ia] IIC or II (1) D [Ex ia] IIC

The Relay Barrier will be supplemented with three new variations. These new variations will be entitled Relay Barrier of type EB3C-N and type EB3L-N and type EB3S-N.

The Relay Barriers of type EB3C-N and type EB3L-N and type EB3S-N are intrinsically safe associated apparatus intended for connection to passive intrinsically safe circuits. The Relay Barrier is provided with intrinsically safe I/O-circuits, which can differ in the number from 1 channel up to a maximum of 16 channels. The intrinsically safe circuits are electrically isolated by opto coupler from the non-intrinsically safe circuits with means of relay contacts or transistor switches.

The maximum permissible ambient temperature is: +60 °C.

Electrical data

Power input
(Terminal + , -)

24V (DC) rated voltage

$U_m = 250V$

Power input
(Terminal N , L)

100 to 240V (AC) rated voltage

$U_m = 250V$

Barrier type EB3C-N

Signal output, potentialfree contacts (Terminal An, Cn)	250 V (AC/DC) , 3 A $U_m = 250 \text{ V}$
Signal output, open collector (Terminal An, Cn)	24 V (DC) , 0.1 A $U_m = 250 \text{ V}$
Signal output, open collector (Terminal An, Cn)	220 V (AC/DC) , 80 mA $U_m = 250 \text{ V}$
Signal output, connector (Connector An, Cn)	30 V (DC) , 1 A $U_m = 250 \text{ V}$

Barrier type EB3L-N

Signal input (Terminal Sn, Cn)	24 V (DC) , 10 mA $U_m = 250 \text{ V}$
Signal input, connector (Connector Sn, Cn)	24 V (DC) , 10 mA $U_m = 250 \text{ V}$

Barrier type EB3S-N

Signal output, potentialfree contacts (Terminal An, Cn)	250 V (AC/DC) , 3 A $U_m = 250 \text{ V}$
Signal output, open collector (Terminal An, Cn)	24 V (DC) , 0.1A $U_m = 250 \text{ V}$
Signal output, open collector (Terminal An, Cn)	220 V (AC/DC) , 80 mA $U_m = 250 \text{ V}$

Barrier type EB3S-N

Signal inputs type A (Terminal Pn, Sn, Nn)	in type of protection Intrinsic Safety Ex ia IIC; maximum values for each output: $U_o = 8.7 \text{ V}$ $I_o = 123 \text{ mA}$ $P_o = 406 \text{ mW}$ Trapezoidal characteristic C_i negligibly small L_i negligibly small
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Signal inputs type B
(Terminal Pn, Sn, Nn)

in type of protection Intrinsic Safety Ex ia IIC; maximum values for each output: $U_o = 13.2 \text{ V}$ $I_o = 56 \text{ mA}$ $P_o = 185 \text{ mW}$ Linear characteristic C_i negligibly small L_i negligibly small
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The signal inputs of the barrier type EB3S-N are to be connected individually and shall be not interconnected. The respective maximum external capacitances C_o and inductances L_o are shown in the manual.

Barrier type EB3C-N, EB3L-N

Signal outputs
(Terminal Pn, Nn)

in type of protection Intrinsic Safety Ex ia IIC;
maximum values for each output:

$$U_o = 13.2 \text{ V}$$

$$I_o = 14.2 \text{ mA}$$

$$P_o = 46.9 \text{ mW}$$

Linear characteristic

C_i negligibly small

L_i negligibly small

Common line
(Terminals Nn)

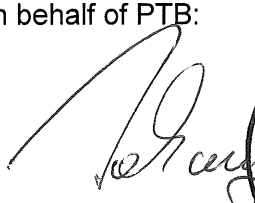
in type of protection Intrinsic Safety Ex ia IIC;
Ground

The intrinsically safe circuits of one or several Relay Barriers type EB3C-N and type EB3L-N may be interconnected and fed back via a common conductor and/or individual conductor. When several Relay Barriers are interconnected the intrinsically safe ground terminals (N) shall be interconnected as well. In each case the rules for the interconnection of intrinsically safe circuits have to be complied with. The respective maximum external capacitances C_o and inductances L_o are shown in the manual.

Test report: PTB Ex 12-21216

Zertifizierungssektor Explosionsschutz
On behalf of PTB:

Braunschweig, July 5, 2012


Dr.-Ing. U. Johannsmeyer
Direktor und Professor

