



## Main

|                                |                                                                                                                                                                                                                                                                                                                         |
|--------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Range of product               | Advantys Telefast ABE7                                                                                                                                                                                                                                                                                                  |
| Product or component type      | Solid state input relay sub-base                                                                                                                                                                                                                                                                                        |
| [Us] rated supply voltage      | 24 V DC (sensor end)<br>24 V DC (PLC end)                                                                                                                                                                                                                                                                               |
| Number of channels             | 16                                                                                                                                                                                                                                                                                                                      |
| Number of terminal per channel | 2                                                                                                                                                                                                                                                                                                                       |
| Connections - terminals        | Spring terminal, clamping capacity: 1 x 0.14...1 x 2.5 mm <sup>2</sup> AWG 26...14 flexible without cable end<br>Spring terminal, clamping capacity: 1 x 0.14...1 x 2.5 mm <sup>2</sup> AWG 26...12 solid<br>Spring terminal, clamping capacity: 1 x 0.09...1 x 1.5 mm <sup>2</sup> AWG 28...16 flexible with cable end |

## Complementary

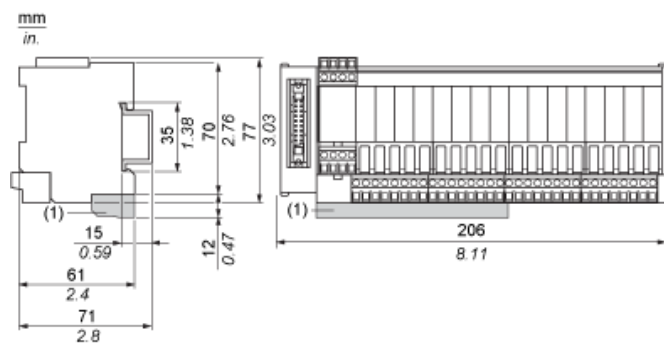
|                                        |                                                                                                                            |
|----------------------------------------|----------------------------------------------------------------------------------------------------------------------------|
| Terminal block type                    | Removable                                                                                                                  |
| Supply voltage limits                  | 19...30 V DC (PLC end) conforming to IEC 61131-2<br><= 30 V DC (sensor end) conforming to IEC 61131-2                      |
| Isolation PLC/operative part           | Yes                                                                                                                        |
| Protection type                        | Internal fuse of 1 A (5 x 20 mm) , fast blow type at PLC end<br>Adjustable by external fuse , fast blow type at sensor end |
| Fixing mode                            | By screws on solid plate with fixing kit<br>By clips on 35 mm symmetrical DIN rail                                         |
| [Ie] rated operational current DC      | <= 0.012 A                                                                                                                 |
| Current state 0 guaranteed             | <= 2 mA (sensor end)                                                                                                       |
| Voltage state 0 guaranteed             | <= 5 V (sensor end)                                                                                                        |
| Current state 1 guaranteed             | >= 2 mA (sensor end)                                                                                                       |
| Voltage state1 guaranteed              | >= 15 V (sensor end)                                                                                                       |
| Maximum switching current              | 15 mA (PLC end)                                                                                                            |
| Minimum switching current              | 1 mA (PLC end)                                                                                                             |
| Residual current                       | <= 0.1 mA at state 0 (PLC end)                                                                                             |
| Voltage drop                           | <= 1 V at state 1 (PLC end)                                                                                                |
| Response time                          | <= 0.4 ms from state 1 to 0<br><= 0.05 ms from state 0 to 1                                                                |
| Switching frequency                    | <= 1000 Hz duty cycle: 50 %                                                                                                |
| [Uimp] rated impulse withstand voltage | 2.5 kV conforming to IEC 60947-1                                                                                           |
| [Ui] rated insulation voltage          | 2000 V                                                                                                                     |
| Installation category                  | II conforming to IEC 60664-1                                                                                               |
| Tightening torque                      | 0.6 N.m (with flat Ø 3.5 mm)                                                                                               |
| Product weight                         | 0.37 kg                                                                                                                    |

## Environment

|                                       |                                                                                                      |
|---------------------------------------|------------------------------------------------------------------------------------------------------|
| Dielectric strength                   | 2000 V 50/60 Hz conforming to IEC 60947-1                                                            |
| Standards                             | IEC 61131-2 Type 1                                                                                   |
| IP degree of protection               | IP2x conforming to IEC 60529                                                                         |
| Resistance to incandescent wire       | 750 °C, extinction time: <= 30 s conforming to IEC 60695-2-11                                        |
| Shock resistance                      | 15 gn for 11 ms conforming to IEC 60068-2-27                                                         |
| Vibration resistance                  | 2 gn (f = 10...150 Hz) conforming to IEC 60068-2-6                                                   |
| Resistance to electrostatic discharge | 8 kV (air) conforming to IEC 61000-4-2 level 3<br>4 kV (contact) conforming to IEC 61000-4-2 level 3 |

|                                       |                                                                       |
|---------------------------------------|-----------------------------------------------------------------------|
| Resistance to radiated fields         | 10 V/m (26000000...1000000000 Hz) conforming to IEC 61000-4-3 level 3 |
| Resistance to fast transients         | 2 kV conforming to IEC 61000-4-4 level 3                              |
| Ambient air temperature for operation | -5...60 °C conforming to IEC 61131-2                                  |
| Ambient air temperature for storage   | -40...80 °C conforming to IEC 61131-2                                 |
| Pollution degree                      | 2 conforming to IEC 60664-1                                           |

## Dimensions



(1) ABE7BV20 / ABE7BV20E

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Mounting

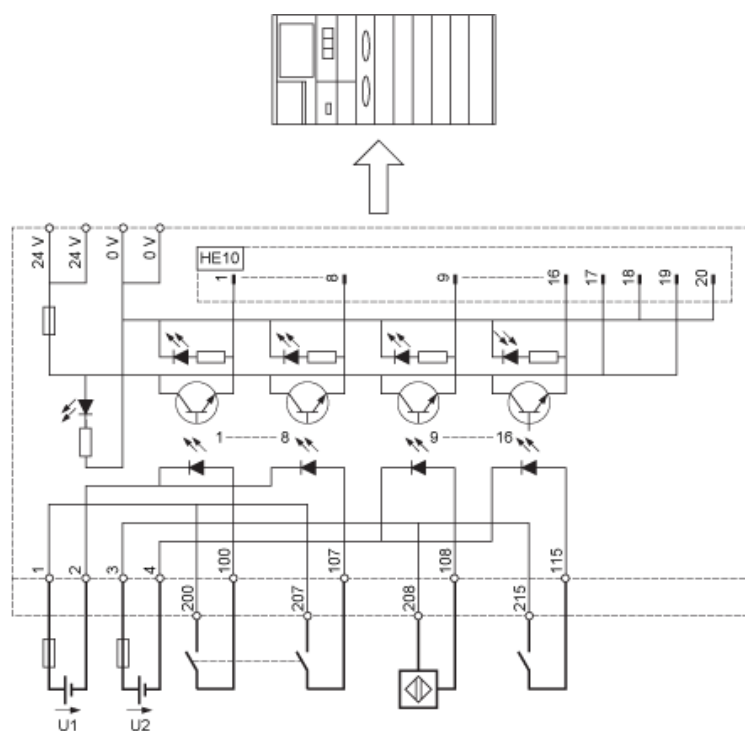
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## HE10 16 Channels



## Wiring Diagram



|                 |         |
|-----------------|---------|
| ABE7            | U1, U2  |
| S16E2B1 / E2B1E | 24 VDC  |
| S16E2E1 / E2E1E | 48 VDC  |
| S16E2E0 / E2E0E | 48 VAC  |
| S16E2F0 / E2F0E | 115 VAC |
| S16E2M0 / E2M0E | 230 VAC |

## Curves for Determining Cable Type and Length According to the Current

### 16-channel Sub-base



L Cable length

$I_T$  Total current per sub base (A)

$I_A$  Average current per channel (mA)

(1) TSXCDP••2 and ABFH20H••0 cables with c.s.a.  $0.08 \text{ mm}^2$  (AWG 28).

(2) TSXCDP••3 cables with c.s.a.  $0.34 \text{ mm}^2$  (AWG 22).

(3) Cables with c.s.a.  $0.13 \text{ mm}^2$  (AWG 26).

The curves are given for a voltage drop of 1 V in the cable. For n volts tolerance, multiply the length determined from the graph by n.