WOODWARD

IKD 1

Digital I/O Expansion Board

APPLICATIONS

The IKD 1 is a smart solution to increase numbers of digital I/O's to Woodward easYgen and DTSC-200 series controllers.
It is possible to connect one or more IKD 1 units to the power management controllers (see table *Related Products* below).

Each of the inputs can be assigned a name, alarm class, NO/NC configuration and time delay. The name and class are displayed on the connected genset controller's display.

The IKD 1 output relays are controlled over the CAN bus connection from the main genset controller. Configuration of the IKD 1 is performed through the relay manager in the main controller and transmitted to the IKD 1.

A direct configuration cable (DPC) and software can be purchased for use with a PC or laptop and may be advisable for extensive configuration applications or where several similar units are to be set up.

Related Products

	max. # of IKD 1
• easYgen-1000 series	2
• easYgen-2000 series	2
• easYgen-3100P1/3200P1	2
easYgen-3100P2/3200P2	4
• easYgen-3400/3500P1	4
• easYgen-3400/3500P2	2
• easYgen-3000XT (GC-3400XT-P1)	4(2)
• DTSC-200 and -200A	2

- Digital output expansion module **IKD-OUT-16** (Product Spec #37954): P/N 8440-2305

- Digital input expansion module **IKD-IN-16** (Product Spec #37955): P/N 8440-2304

[1] Use software *LeoPC* for configuration

DESCRIPTION

Features

- 8 configurable discrete alarm inputs
- 8 configurable FORM C relays with potential free contacts
- Configurable delays for each input
- CAN bus communication
- The discrete inputs transfer their status via CAN bus to the control unit.
- The control unit evaluates the status of these discrete inputs coming from the IKD 1 and depending on the configuration of the control unit, will take the appropriate action.
- The control unit can send commands via the CAN bus to remotely control the output relays of the IKD 1.
- The IKD 1 can be used with other manufacturer's controllers. Consult product manual 37135 for information regarding the address assignments of the CAN bus interface.

Product Number P/N

- 8440-2116

- 8 discrete inputs
- 8 relay outputs FORM C
- PC configurable[1)]
- CAN bus communication
- Microprocessor technology for accurate, repeatable and reliable operation
- CE marked
- UL/cUL Listing

SPECIFICATIONS

Power supply ..... 12/24 Vdc (6 to 36 Vdc)
Intrinsic consumption .....max. 3 W
Ambient temperature .....-40 to 85 °C
Ambient humidity ..... 95 %, non-condensing

Discrete inputs..... isolated
Input range..... 12/24 Vdc (6 to 32 Vdc)
Input resistance ..... approx. 6.8 kΩ

Relay outputs ..... isolated
Contact material.....AgCdO
Load (GP) .....2.00 Aac@250 Vac
.... 2.00 Adc@24 Vdc / 0.36 Adc@125 Vdc / 0.18 Adc@250 Vdc
Pilot duty (PD).....
.... 1.00 Adc@24 Vdc / 0.22 Adc@125 Vdc / 0.10 Adc@250 Vdc

Service interface .....
Version.....RS-232

CAN interface ..... isolated
Insulation voltage (continuously)..... 100 Vac
Insulation test voltage (≤ 5 s) ..... 1,000 Vac
Version..... CAN bus

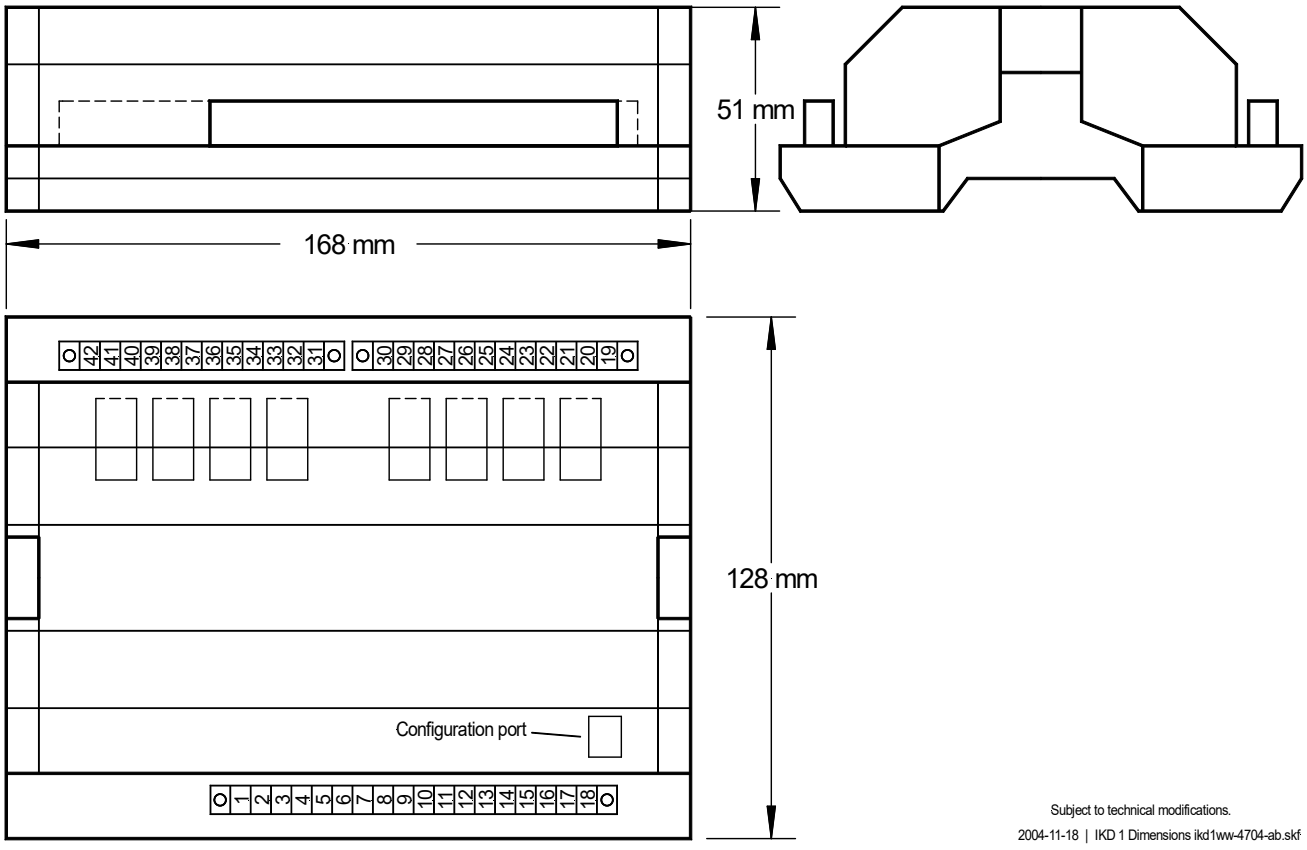
Housing.....
DIN-rail mounting .....extrusion profile Um 122
..... to snap-on on a DIN rail/C-profile
..... 168 × 128 × 51 mm

Connection .....screw/plug terminals 2.5 mm²

Weight.....approx. 360 g
Protection system ..... IP 20

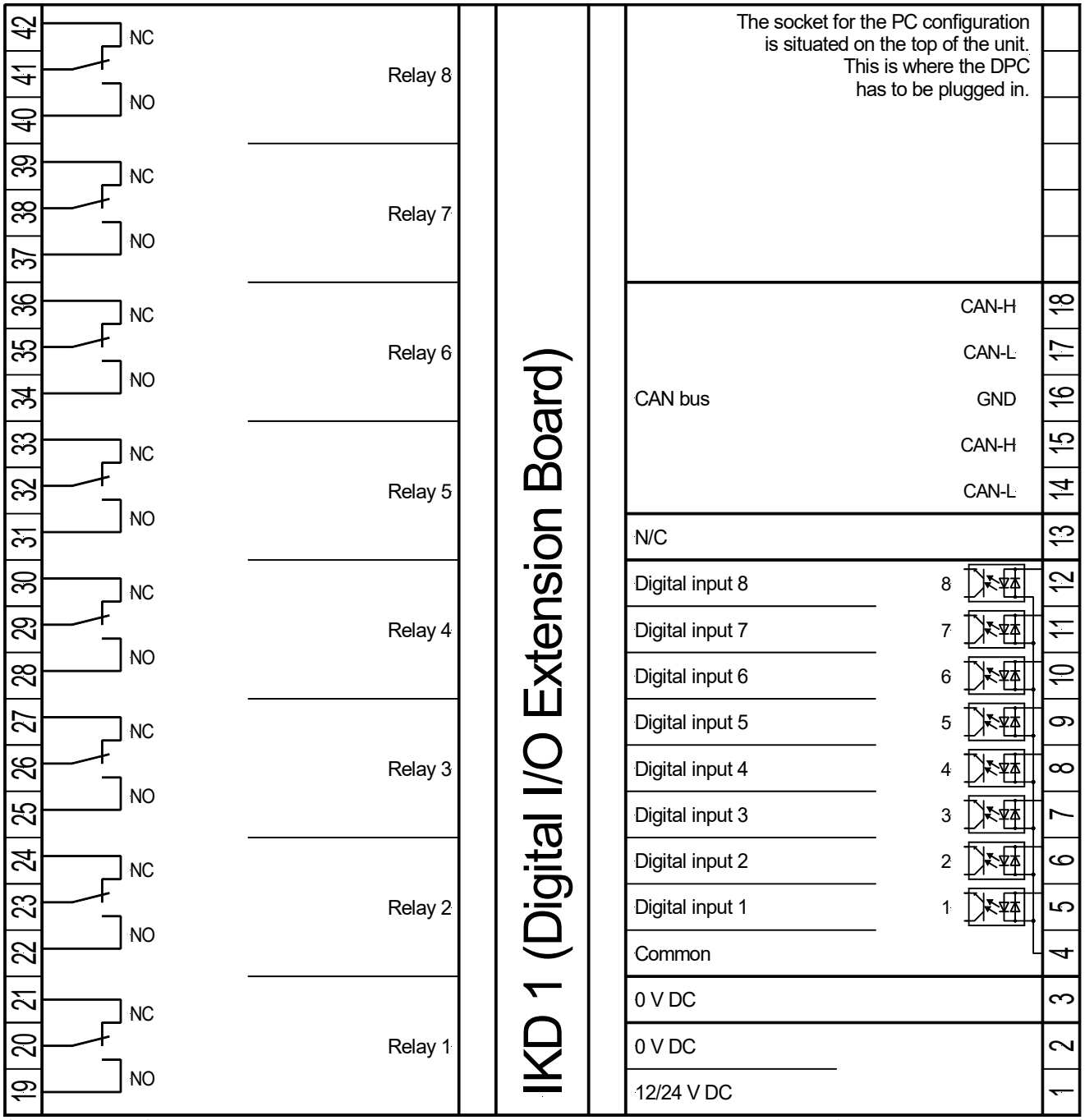
Disturbance test (CE)..... tested according to
..... applicable EN guidelines
Listings .....UL/cUL

DIMENSIONS



Subject to technical modifications.

WIRING DIAGRAM



Subject to technical modifications.

2002-11-07 | IKD 1 Wiring Diagram ikd1ww-4502-ap.skf

WOODWARD

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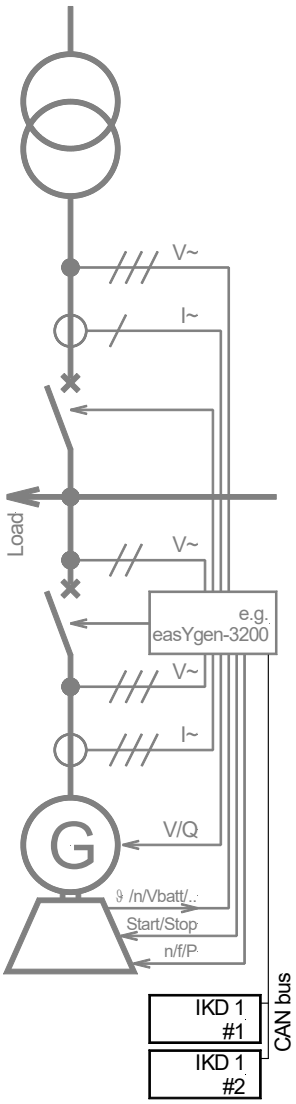
TYPICAL APPLICATIONS



The digital inputs are read by the IKD 1 and transferred via the CAN bus to the control unit (incl. alarm class). Each alarm input may have a delay as well as the control logic (NO/NC) configured individually during set up. The status of the alarm input is monitored in the control device and will show the alarm text in its display. The alarm class assigned in the control device evaluates the alarm input and reacts accordingly.

The control device's relay manager controls the IKD 1 relays. The control logic for each IKD 1 relay can be programmed individually in the control device. Logical commands can be configured using internal events as well as the status of the digital inputs coming from the IKD 1.

If a discrete input on the IKD 1 is enabled, the control device displays a text message and the control functions of the alarm class are executed (refer to all manuals relating to the control device). The control device must operate the IKD 1 relays.