



# 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 series controllers and GCP-31/32 packages equipped with option SC10 or SC09. It is possible to connect one or more IKD 1 units to the genset 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
• GCP-3... XPQ+SC09	2
• GCP-3... XPQ+SC10	2
• easYgen-1000 series	2
• easYgen-2000 series	2
• easYgen-3100P1/3200P1	2
• easYgen-3100P2/3200P2	4
• easYgen-3400/3500P2	4

### 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

- 8440-2028

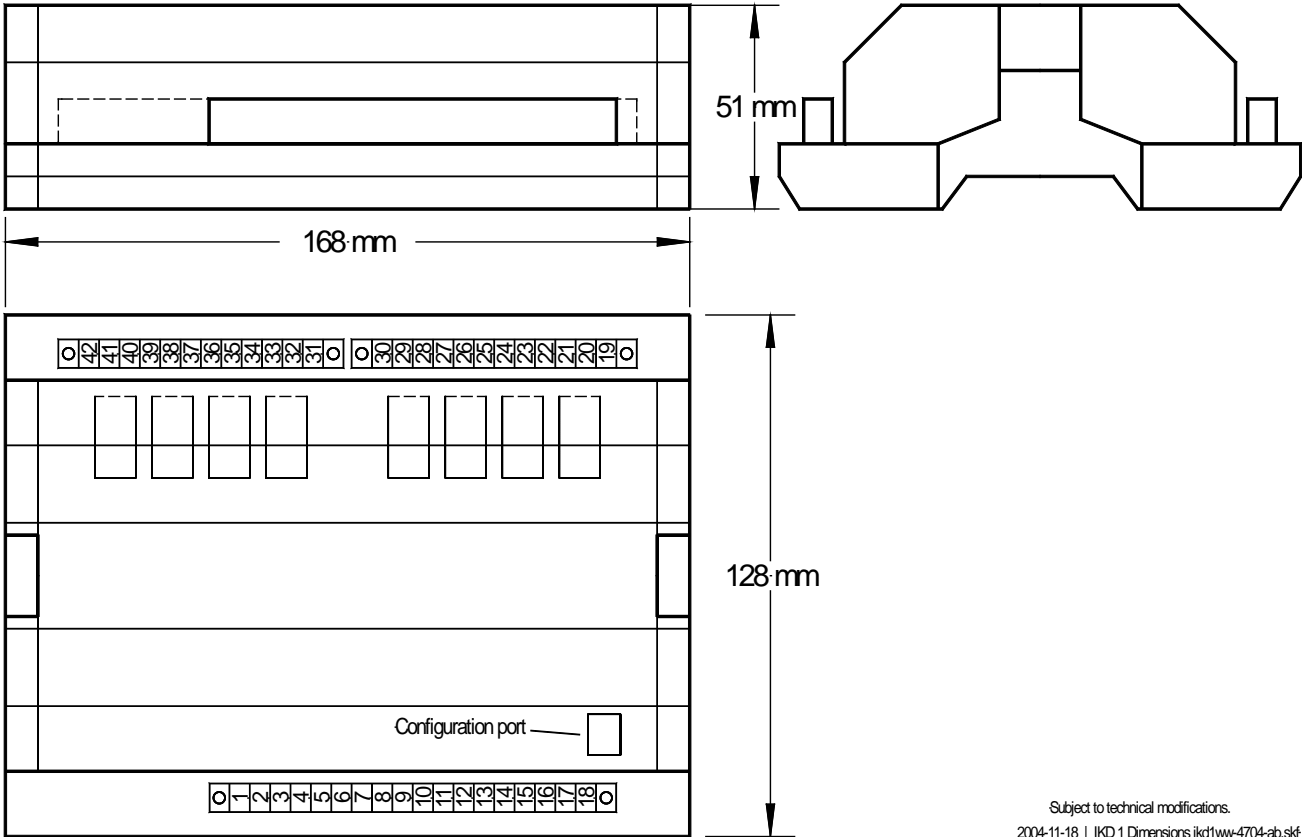
- 8 discrete inputs
- 8 relay outputs FORM C
- PC configurable<sup>1)</sup>
- CAN bus communication
- Microprocessor technology for accurate, repeatable and reliable operation
- CE marked
- UL/cUL Listing

<sup>1)</sup> Use software *LeoPC* for configuration

# SPECIFICATIONS

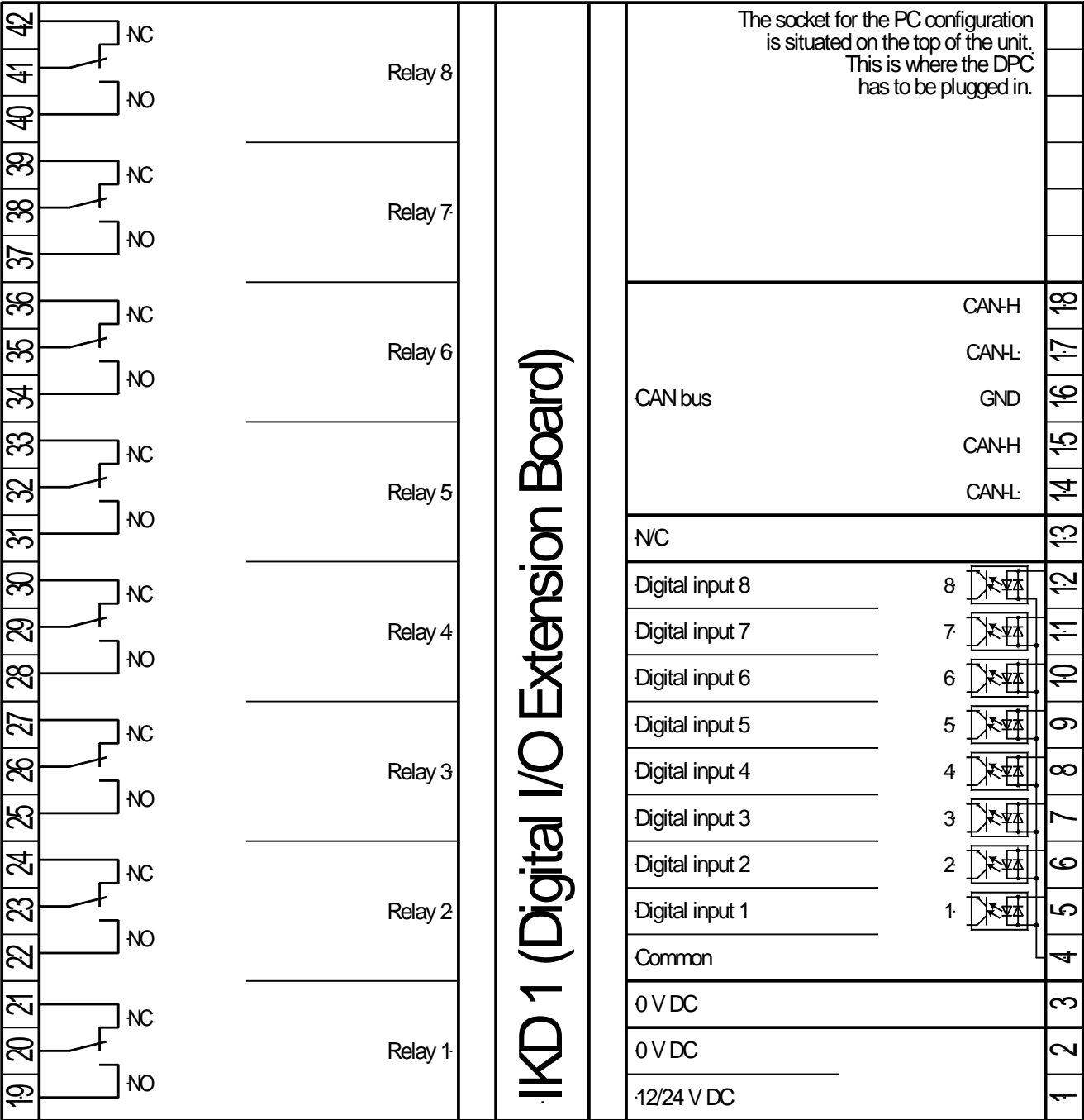
Power supply .....	12/24 Vdc (6 to 36 Vdc)	<b>CAN interface</b> .....	isolated
Intrinsic consumption .....	max. 3 W	Insulation voltage (continuously) .....	100 Vac
Ambient temperature .....	-40 to 85 °C	Insulation test voltage (≤ 5 s) .....	1,000 Vac
Ambient humidity .....	95 %, non-condensing	Version .....	CAN bus
<b>Discrete inputs</b> .....	isolated	<b>Housing</b> .....	
Input range .....	12/24 Vdc (6 to 32 Vdc)	DIN-rail mounting .....	extrusion profile Um 122
Input resistance .....	approx. 6.8 kΩ	..... to snap-on on a DIN rail/C-profile	
		.....	168 × 128 × 51 mm
<b>Relay outputs</b> .....	isolated	<b>Connection</b> .....	screw/plug terminals 2.5 mm²
Contact material .....	AgCdO	Weight .....	approx. 360 g
Load (GP) .....	2.00 Aac@250 Vac	Protection system .....	IP 20
.... 2.00 Adc@24 Vdc / 0.36 Adc@125 Vdc / 0.18 Adc@250 Vdc		<b>Disturbance test (CE)</b> .....	tested according to
Pilot duty (PD) .....		.....	applicable EN guidelines
.... 1.00 Adc@24 Vdc / 0.22 Adc@125 Vdc / 0.10 Adc@250 Vdc		<b>Listings</b> .....	UL/cUL, GHOST-R
<b>Service interface</b> .....			
Version .....	RS-232		

# DIMENSIONS

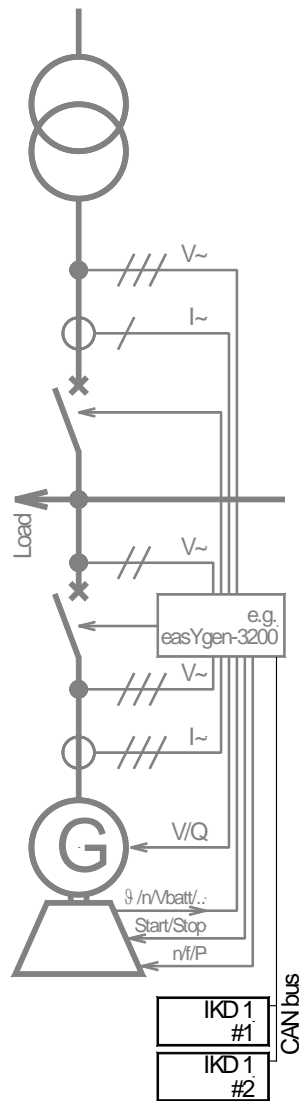


Subject to technical modifications.  
2004-11-18 | IKD 1 Dimensions ikd1ww-4704-ab.skf

WIRING DIAGRAM



## 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.