

# SERIES 8 GENIO



Modular Input/Output Device



**EKE**



The EKE-Trainnet® SERIES 8 GENIO is a remotely controllable Train Real-Time Data Protocol (TRDP) end device for safety and non-safety related Inputs/Outputs. GENIO is a modular I/O system that supports a wide range of analogue and digital inputs and outputs, as well as interfaces for temperature sensors, serial links, frequency inputs and satellite positioning. GENIO uses Ethernet connection with 100 Mbps data transfer rate, implements Ethernet Ring Protection Switching (ERPS) and Train Real-Time Data Protocol (TRDP). GENIO is designed to be located close to sensors or applications to minimize cabling thus providing cost savings.



Wide range of easily configurable modular I/O interfaces



Designed for reliable and fast data transfer with low latency



Minimised cabling, small size



Robust design, self enclosed rugged structure, IP30



Cyber security built in



Slots and modules are coded to prevent misconfiguration



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# TECHNICAL SPECIFICATIONS

## Physical Interfaces

2 x Ethernet, M12 D-coded

1 x For Electronic Serial Number (ESN) dongle

1 x Safety relay, M12 A-coded (NO/NC)

LED status

Status for each IO module

Status for system (ST and SE)

Status for link activity (LA1 and LA2)

Maintenance interface, USB

Power supply interface

24-110 V DC, 25 watts continuous

PoE as an option

I/O Module interfaces

5-slot version or 10-slot version

## Software

Linux based operating system

Train Real-Time Data Protocol (TRDP) end device

Ethernet Ring Protection Switching (ERPS)

## Dimensions

5-slot: 260 x 61 x 189 mm (W x H x D)

10-slot: 260 x 89 x 189 mm (W x H x D)

## Weight

5-slot: 2.4 kg (fully equipped)

10-slot: 3.6 kg (fully equipped)

## Temperature Range

-40 °C...+70 °C

Standards: EN 45545-2, EN 50121-3, EN 50124, EN 50126, EN 50128, EN 50129, EN 50153, EN 50155, EN 50657, EN 60068, EN IEC 61000, IEC 61131-3, EN 61373

Digital output modules	DO 4 x 1	DO 2 x 4
Number of outputs	4	8
Isolated groups	4	2
Nominal output voltage range	24 – 150 V	24 – 150 V
Output current (continuous)	1.3 A (@ +85°C)	0.5 A (@ +85°C)
Output current (single pulse)	40 A, 850 µs	15 A, 850 µs
Overload protection	Peak & RMS current	Peak & average current
Power supply method	External	External

Digital input modules	DI 24 – 36 V	DI 72 – 110 V
Number of inputs	8	8
Isolated groups	2	2
Input type	Current sink	Current sink
Nominal input voltage range	24 – 36 V	72 – 110 V
Wetting current	Fixed RC, peak 20 mA	Fixed RC, peak 20 mA
Threshold	3 steps selectable	3 steps selectable
Power supply method	External	External

Configuration example: Having a DO 4 x 1 digital output module in each slot of a 10-slot GENIO device provides a maximum of 40 fully isolated digital outputs per one GENIO device. Selecting ten DO 2 x 4 modules increases the maximum amount already to 80 digital output channels per one GENIO.



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