ComAp®
The heart of smart control

InteliSys Gas

Order code: **IS2GASXXBAB**

Gen-set controller for Gas application
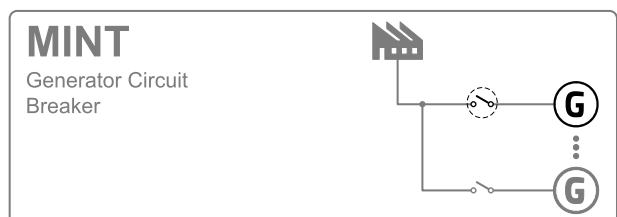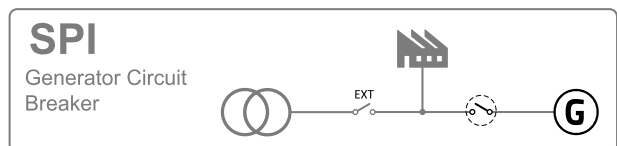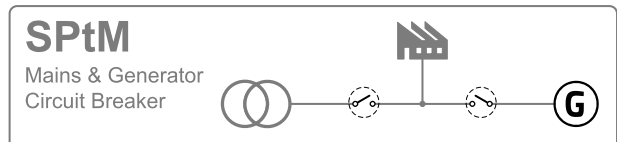
Datasheet

Product description

> The InteliSys Gas is an industrial grade controller for power generation applications.

> Preconfigured functions, scalable and configurable I/Os, broad communication capabilities and an easy-to-change software allows to adapt the controller to various applications without greater efforts.

> Baseload, Imp / Exp, TempByPower, Peak shaving, Voltage and PF control (AVR bias output)

> Event-based and PreMortem history with customer-selectable list of stored values; RTC; statistic values

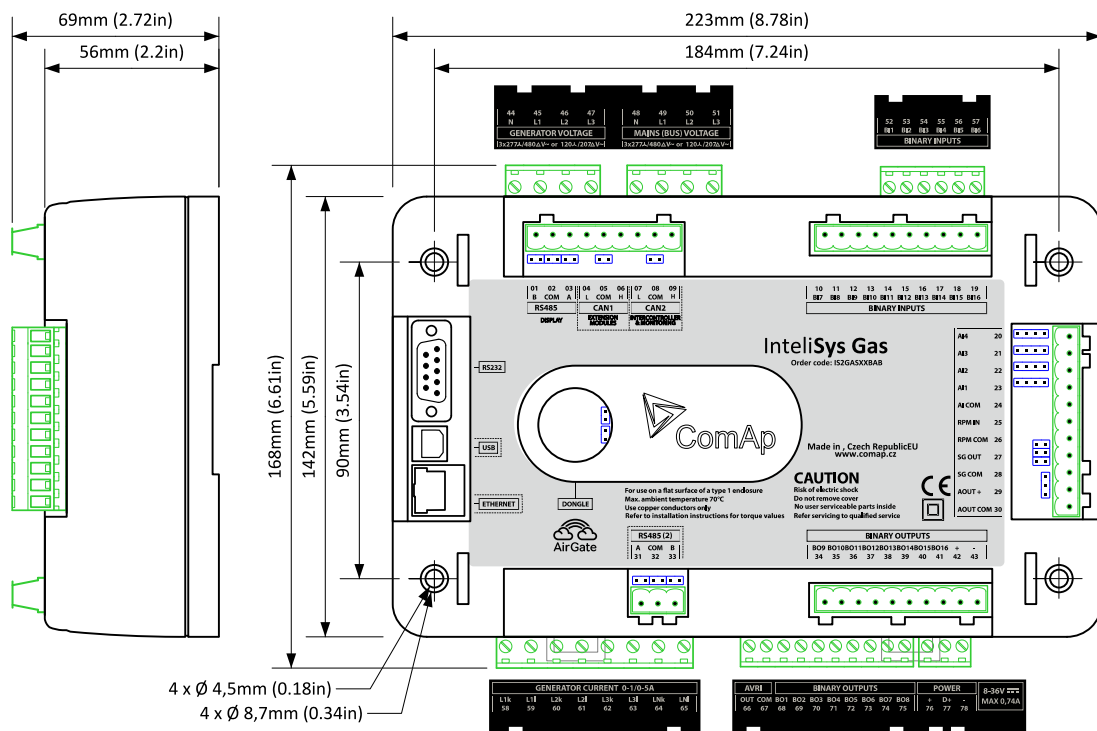> Overspeed and Emergency stop detection

Key features

> Predefined adjustable functions for gen-set

> Large built-in PLC interpret to suit individual needs and design demanding applications like CHPs

> SIL2 certification for selected channels

> Compliant to the latest grid codes requirements as EU's EN 50549-1,-2:2019 (including German's VDE-AR-N 4105:2018, VDE-AR-N 4110:2018, UK's G99) and American IEEE 1547:2018

> Support wide range of applications – from single to multiple, from island to network parallel operation

> Power management function including new mode of effective engine run in network parallel operation

> Plug&Play support of ComAp InteliVision display family

> Automatic synchronization and power control (via speed governor or ECU)

Application overview

SPtM
Mains & Generator Circuit Breaker

SPI
Generator Circuit Breaker

MINT
Generator Circuit Breaker

Dimensions, terminals and mounting

Panel door mounting (InteliVision 5)

DIN rail mounting

① InteliVision 5
② InteliSys Gas
③ DIN rail
④ InteliVision 8
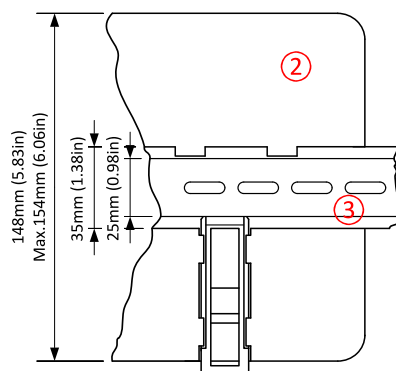
Panel door mounting (InteliVision 8)
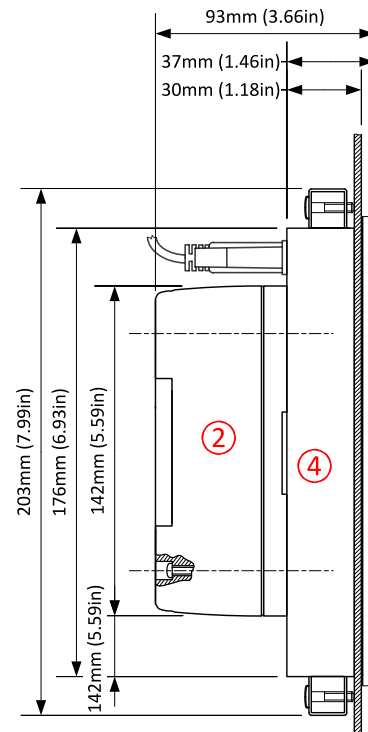
Technical data

Power supply

Power supply range	8-36 VDC
Power supply drop-out immunity	20 ms (from 8 V)
Power consumption	0.4 A / 8 VDC 0.15 A / 24 VDC 0.1 A / 36 VDC
RTC battery	10 years (replaceable by official service)
Fusing	2 A (without BOUT consumption)

Operating conditions

Operating temperature	-40 ˚C to +70 ˚C
Storage temperature	-40 ˚C to +80 ˚C
Max. operating altitude	2000 m above sea level 4000 m above sea level for max Ph-Ph voltage 400 VAC
Operating humidity	95 % non-condensing (EN 60068-2-30)
Vibration	5-25 Hz, ±1.6 mm 25-100 Hz, a = 4 g
Shocks	a = 200 m/s^2

Voltage measurement

Measurement inputs	3 ph-n Gen voltage 3 ph-n Mains voltage/Bus voltage
Measurement range	110 V / 277 V
Max allowed voltage	125 % ph-n
Accuracy	1 % of 110 V / 277 V
Frequency range	40-70 Hz (accuracy 0.1 Hz) 45-55 Hz (accuracy <0.01 Hz)
Input impedance	0.6 MΩ ph-ph , 0.3 MΩ ph-n

Current measurement

Measurement inputs	3 ph Gen current, 1 ph Mains current galvanically isolated
Measurement range	1 A / 5 A
Max allowed continuous current	10x Inom / 2x Inom
Accuracy	2 % of 1 A / 5 A
Input impedance	<0.1 Ω

Binary inputs

Number	16, non-isolated
Input resistance	4.7 kΩ
Close/Open indication	0-2 VDC close contact >4 VDC open contact

Binary outputs

Number	16, non-isolated
Max current	5 A (2 A per group) group1: BO1-8; group2: BO9-16
Switching to	negative/positive supply terminal

Analog inputs

Number	4, non-isolated
Type	Switchable (Voltage, Resistance, Current)
Resolution	10 bits, max 4 decimal
Range	0-5 VDC / 0-2500 Ω / 0-20 mA
Input impedance	>100 kΩ / >100 kΩ / 180 Ω
Accuracy	±1 % of meas. value ±5 mV ±2 % of meas value ±2 Ω ±1 % of meas value ±0.5 mA

Analog outputs

Number	1
Type	Switchable (Voltage, Current)
Range	0-10 VDC / 0-20 mA
Max current/load	5 mA / 500 Ω
Accuracy	±0.5 % of output value ±20 mV ±0.5 % of output value ±100 µA

Magnetic pick-up

Voltage input range	2 Vpk-pk to 50 Veff
Frequency input range	4 Hz to 15 kHz
Frequency measurement tolerance	0.2 % from range above

Voltage regulator output

Type	5 V TTL PWM / ±10 VDC with IG-AVRi interface

Speed governor output

Voltage output	±10 VDC / max 10 mA
Voltage output via resistor	±10 VDC via 10 kΩ resistor / max 1 mA
PWM	500÷3000 Hz / 5 V / max 10 mA

Communications

RS232	Direct / Modbus, non-isolated
RS485(1)	Direct / Modbus, non-isolated
RS485(2)	Direct / Modbus, isolated
Display port	Non-isolated RS485, only terminal connection
USB port	Direct, Isolated
Ethernet port	galvanically isolated LAN/Internet, Modbus TCP, SNMP, AirGate
CAN1	External modules, 250 kbps, max 200 m, Isolated
CAN2	Intercontroller and comm extensions, 250 / 50 kbps, max 200 / 1000 m, Isolated

Available extension modules

Product	Description	Order code
Inteli IO8/8	8 Binary inputs, 8 Binary outputs and 2 Analog outputs in a small unit (HW switchable to IO16/0)	I-IO8/8
Inteli IO8/8	HW switchable to IO16/0 – 16 Binary inputs packed in a small unit	I-IO8/8
Inteli AIN8	8 Analog inputs (R, I, V) and 1 pulse/frequency input in a small unit	I-AIN8
Inteli AIN8TC	8 Thermocouple Analog inputs in a small unit	I-AIN8TC
Inteli AIO9/1	9 Analog inputs (4× DC, 4× thermocouples, 1× R) in a small unit	I-AIO9/1
IS-AIN8	8 Analog inputs packed in a rugged metal unit	IS-AIN8
IGS-PTM	8 Binary inputs, 8 Binary outputs, 4 Analog inputs and 1 Analog output in a unit	IGS-PTM
IGL-RA15	15 Binary LED output (3 colors) packed in a rugged metal unit	EM2IGLRABAA
I-AOUT8	8 Analog outputs packed in a rugged metal unit	I-AOUT8
InternetBridge-NT	Multiple Internet connections (PC and Modbus) to all controllers on CAN2 or RS485	CM2IB4GABFB, CM2IB4GEBFB
I-LB+	Direct connection (PC) to all controllers on CAN2 or RS485	I-LB+

Related products

Product	Description	Order code
InteliVision 5	Color 5.6" display for monitoring and control	INTELIVISION 5 InteliVision 5 CAN InteliVision 5 CAN Backlit
InteliVision 8	Color 8" display for advanced monitoring, control & trending, USB capable	INTELIVISION 8 InteliVision 8 Marine
InteliVision 12Touch	12.1" Color Display Unit	RD112OEMBZH
InteliVision 18Touch	Color 18" touchscreen display designed for complete monitoring and control of multiple controllers or co-generation installation.	RD31840PBIE
ECON-4	Digital speed governor dedicated for speed control of gas or diesel engines.	ECON-4
I-Step	Stepper motor driver module	I-Step

Functions and protections

Description	ANSI code	Description	ANSI code	Description	ANSI code	Description	ANSI code
Synchronism check	25	Excitation loss	40	Overcurrent (IDMT)	51	AC reclosing	79
Undervoltage	27	Current unbalance	46	Earth fault current IDMT	51N+64	Overfrequency	81H
Overload	32	Voltage asymmetry and phase sequence	47	Power factor	55	Underfrequency	81L
Load shedding	32P	Temperature monitoring	49T	Overvoltage	59	ROCOF	81R
Reverse power	32R	Generator overcurrent	50	Gas (fuel) level	71		
Undercurrent	37	Earth fault current	50N+64	Vector shift	78		

Certifications and standards

This product is CE compliant.

- EN 50549-1:2019
- EN 50549-2:2019
- EN 60068-2-6 ed.2:2008
- EN 60068-2-27 ed.2:2010
- EN 60068-2-64
- EN 61010-1:2003
- EN 60068-2-30:2005 25/55°C, RH 95%, 48hours

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List of standards is available on: https://webstore.iec.ch/