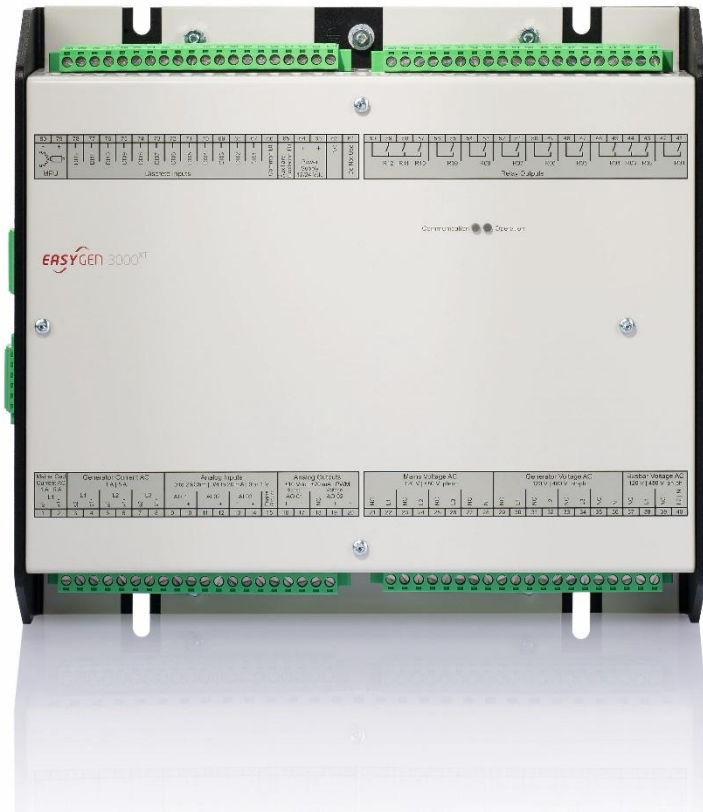




easYgen- 3100XT/3200XT(-LT)

Introduction Presentation

Overview



easYgen-3100XT-P1



easYgen-3200XT-P1

CE marked



61010, 6200



easYgen-3200XT series controls benefits

- **High Flexibility and Reduced Efforts** for variants at different applications. One device fits most applications
- **Save Cost** for additional PLC as logical/analog operations can be handled by the controls LogicsManager / AnalogManager
- **Ensure High Robustness** against external disturbances by galvanic isolation of the measuring inputs, relay contacts, biasing outputs and communication interfaces
- **Simplified Configuration and Commissioning** through Ethernet & USB connectivity, On-board documentation and system update function
- **Drop-In Replacement** extends system longevity
- **Full** Mains, Generator and Engine **Protection** avoids additional protection relays
- **Enable Your Genset** to speak your local language at the touch of a button with 14 built-in languages

easYgen-3200XT – Product Features

- 3 Systems measurement (gen-set, utility and bus bar)
- Paralleling applications of up to 32 gen-sets in – Peak Shaving Operation, Stand-by Operation, AMF (Automatic Mains Failure) Operation, Emergency Operation, or Import/Export operation
- Master or slave control capability for diesel and gas gen-sets in island and utility parallel modes
- Open or closed transition control of up to 2 circuit breakers
- Load/var sharing and load dependent start/stop for genset fleet with same or different sizes
- Full mains, generator and engine protection
- LogicsManager and AnalogManager to create customized control commands
- 3 freely configurable PID governors for e.g. heating circuits
- Multi-lingual capability, supports 14 languages

easYgen-3200XT – Important Functions (1/2)

- True RMS measurement with 0,5% accuracy for voltage and current
- Automatic, manual, Test and Stop modes
- Synchronization
 - Slip frequency (Positive or Negative)
 - Phase matching
- Vector group adjustment to synchronize across transformers
- DynamicsLCD screen adapts to the configured application
- 2 programmable screens to visualize frequently used values
- 6 programmable alarm classes and 16 freely configurable alarms

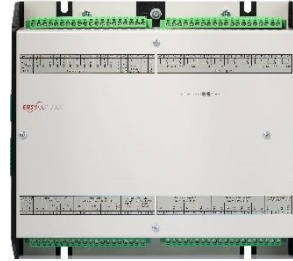
easYgen-3200XT – Important Functions (2/2)

- 2 CAN interfaces for field and engine bus
- Modbus-TCP interface via RJ-45 and Modbus-RTU interface via RS-485
- USB connectivity to the Woodward service tool ToolKit (CANopen and Ethernet support also)
- Up to 19 analog inputs (3 on-board, 16 via external expansion cards)
- Up to 6 analog outputs (2 on-board, 4 via external expansion cards)
- Display and evaluation of J1939 analog values, “supported SPNs”
- Direct support of common ECU like ADEC, Deutz, E3, EMS2, MAN, MTU, Scania, Volvo.
- In-field ECU support through sequencer files

easYgen-3200XT – Mains Protection

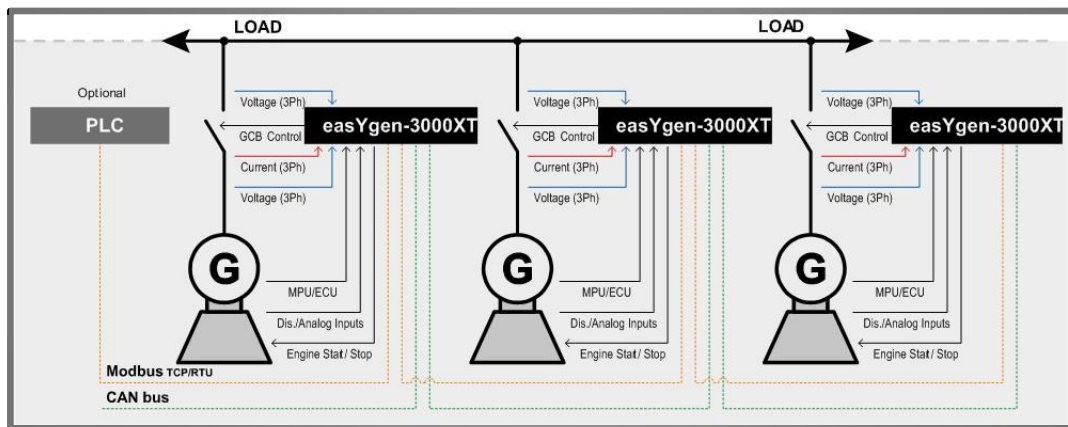
Protection	#of trip levels	ANSI #
Over-voltage	2	59
Under-voltage	2	27
Over-frequency	2	81O
Under-frequency	2	81U
Voltage asymmetry	1	47
Phase shift	1	78
df/dt (ROCOF)	1	81
Sync-Check	1	25
Time dependent voltage (FRT)	2	According to some EU countries MV guidelines
Mains voltage increase	1	According to German Low Voltage Directive VDE-AR-N 4105

easYgen-3200XT – Differentiation

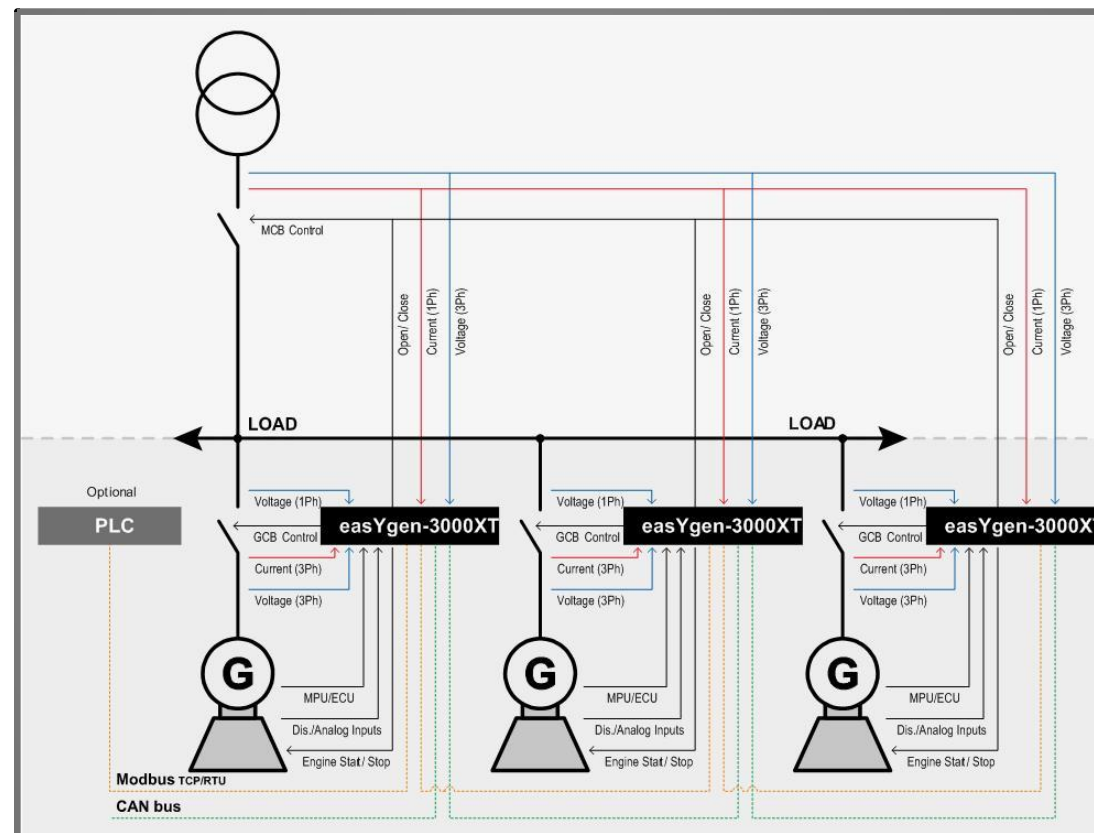


	easYgen-3100XT-P1	easYgen-3200XT-P1	easYgen-3200XT-P1-LT
Integrated Display	No	Color LCD	Color LCD
Operating Temperature	-20 to 70 °C	-20 to 70 °C	-40 to 70 °C
Freely Configurable PID Controllers	3	3	3
Cylinder Temperature Monitoring	Yes	Yes	Yes
External analog inputs / outputs	16/4	16/4	16/4
External discrete inputs / outputs	32/32	32/32	32/32

easYgen-3200XT – Application Examples



Multi Gen Island Parallel



Multi Gen Single Utility Parallel

easYgen-3200XT – Wiring Diagram

Screw terminals		CAN#1		CAN#2		Screw terminals	
1. CAN_GND 2. CAN_SHIELD 4. CAN_H		CAN#1		RS485#1 CAN#2		1. RES485_A 2. RES485_B 3. CAN_SHIELD 4. RES485_Y 5. RES485_Z	
41	Relay [R02] isolated Fixed to Ready for operation			40	Busbar voltage (system1) L2/N	480 Vac	40
42	Relay [R01] isolated Fixed to Ready for operation			39	Busbar voltage (system1) L1	480 Vac	39
43	Relay [R02] ¹ Preconfigured to Centralized alarm			38	Generator voltage L1	480 Vac	38
44	Relay [R03] ¹ Preconfigured to Starter			37	Generator voltage L2	480 Vac	37
45	Relay [R04] ¹ Preconfigured to Fuel solenoid / gas valve			36	Generator voltage L3	480 Vac	36
46				35	Generator voltage N	480 Vac	35
47	Relay [R05] isolated ¹ Preconfigured to Proglog			34	Generator voltage L1	480 Vac	34
48				33	Generator voltage L2	480 Vac	33
49	Relay [R06] isolated ¹ Fixed to Command close GCB if GCB activated			32	Generator voltage L3	480 Vac	32
50				31	Generator voltage N	480 Vac	31
51	Relay [R07] isolated ¹ Fixed to Command open GCB if GCB activated otherwise preconfigured to Mains decoupling			30	Mains voltage L1	480 Vac	30
52				29	Mains voltage L2	480 Vac	29
53	Relay [R08] isolated ¹ Fixed to Command close MCB if MCB activated			28	Mains voltage L3	480 Vac	28
54				27	Mains voltage N	480 Vac	27
55	Relay [R09] isolated ¹ Fixed to Command open MCB if MCB activated otherwise preconfigured to Mains decoupling			26	Mains voltage L1	480 Vac	26
56				25	Mains voltage L2	480 Vac	25
57	Relay [R10] ¹ Preconfigured to Auxiliary services			24	Mains voltage L3	480 Vac	24
58				23	Mains voltage N	480 Vac	23
59	Relay [R11] ¹ Preconfigured to Alarm class A or B			22	Mains voltage L1	480 Vac	22
60	Relay [R12] ¹ Preconfigured to Alarm class C, D, E or F			21	Mains voltage L2	480 Vac	21
61	Earth			20	Mains voltage L3	480 Vac	20
62	NC			19	Mains voltage N	480 Vac	19
63	Power supply Isolated, 8 to 40 Vac ²			18	Mains voltage L1	480 Vac	18
64	Auxiliary excitation D+ Isolated			17	Mains voltage L2	480 Vac	17
65				16	Mains voltage L3	480 Vac	16
66	Common (terminals 67 to 78)			15	Mains voltage N	480 Vac	15
67	Discrete input [D01] isolated ¹ Emergency Stop			14	Analog output [AO 02] (+/-10Vdc / +/-20mA / PWM) Voltage Biasing	[AO 02]	14
68	Discrete input [D02] isolated ¹ Start in Auto			13	Analog output [AO 01] (+/-10Vdc / +/-20mA / PWM) Speed Biasing	[AO 01]	13
69	Discrete input [D03] isolated ¹ Low oil pressure			12	Analog input Type 1 (0 to 2000 Ohm / 0/4 to 20mA / 0 to 1V)	[AI 02]	12
70	Discrete input [D04] isolated ¹ Coolant temperature			11		[AI 01]	11
71	Discrete input [D05] isolated ¹ Alarm acknowledgement			10			10
72	Discrete input [D06] isolated ¹ Enable MCB			9			9
73	Discrete input [D07] isolated ¹ Rigby MCB open			8			8
74	Discrete input [D08] isolated ¹ Rigby GCB open			7			7
75	Discrete input [D09] isolated ¹ Alarm input			6			6
76	Discrete input [D10] isolated ¹ Alarm input			5			5
77	Discrete input [D11] isolated ¹ Alarm input			4			4
78	Discrete input [D12] isolated ¹ Alarm input or Neutral Connector			3			3
79				2			2
80				1			1

Terminals easYgen-3100XT/3200XT-P1

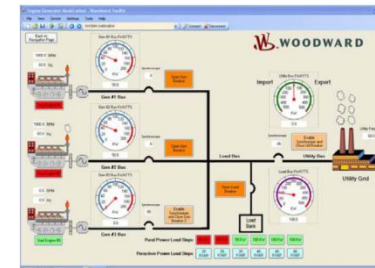
Subject to technical modifications

¹ configurable via LogicSkanager

easYgen-3000XT Series Wiring Diagram PCB1

easYgen-3200XT – Accessories

- Remote Panel RP-3000XT
- Digital Expansion Card IKD1
- ToolKit



easYgen-3200XT – Accessories

- Load Share Gateway -LSG



- EPU-100



- easYlite-100



easYgen-3200XT – Accessories

- ProfiBus Gateway
ESEPRO
- CAN-Fiber Optic
Gateway
- Remote Access Gateway



