GENSET
220V   220V   220V
26A   23A   25A
0.0Hz   4.3bar
630kW   30°C
1.00cos   96%
1500rpm   12.0Vdc

LOAD   ON

ON

G   ENGINE
RUNNING

MAN

Generator Set Controllers Protection, Control and Metering

Generator Set Controllers

Remote Control & Visualisation

Gencharger

EMKO energy

Index

	Trans-AMF.SYNCRO	Trans-MAINS	Trans-SYNCRO	Trans-AMF	Trans-Midi.AMF	Trans-Mini.AMF
Dimensions	276x189mm	276x189mm	276x189mm	229x152mm	158x111mm	111 x 81mm
Synchronising	Mains & Gen	Mains	Gen	Synchronization Check	Synchronization Check	-
Mains Voltage	3Ph	3Ph	-	3Ph	3Ph	3Ph
Gen Voltage	3Ph	-	3Ph	3Ph	3Ph	1Ph
Current	3Ph Gen 1Ph Mains	3Ph Mains 1Ph Load	3Ph Gen	3Ph Gen	3Ph Gen	1Ph Gen
Mag.PickUp	+	-	+	+	/+	/+
CanBus J-1939	+	-	+	+	/+	/+
Configurable Inputs	13	13	13	7	5	3
Remote Start Input	conf	-	conf	conf	conf	conf
Oil Pressure Input	Sender or Alarm	-	Sender or Alarm	Sender or Alarm	Sender or Alarm	Sender or Alarm
Temperature Input	Sender or Alarm	-	Sender or Alarm	Sender or Alarm	Sender or Alarm	Sender or Alarm
Aux. Sender Input	2	-	2	2	1	1
Charg.Alt.Input	+	-	+	+	+	+
Configure Outputs	7	9	7	4	4	4
Crank output	+	-	+	1	1	1
Solenoid output	+	-	+	1	1	1
MCB out	+	+	-	+	+	+
GCB out	+	-	+	+	+	+
Communication	USB, Ethernet RS485	USB, CanOpen Ethernet,RS485	USB, CanOpen Ethernet,RS485	USB	RS232 RS485	RS-232
I/O Expansion Module	/+	/+	/+	/+	-	-
Remote monitoring Modules	Messenger WEB-Ethernet WEB-GPRS GPRS	Messenger WEB-Ethernet WEB-GPRS GPRS	Messenger WEB-Ethernet WEB-GPRS GPRS	Messenger WEB-Ethernet WEB-GPRS GPRS RS-485	N/A	N/A

Trans-Auto	Trans-Midi.Auto	Trans-Mini.Auto	Trans-Mini Auto++	Trans-ATS	Trans-Mini.ATS	Trans-MiniPump
229x152mm	158x111mm	111x81mm	111x81mm	229x152mm	111x81mm	111x81mm
-	-	-	-	-	-	-
N/A	N/A	N/A	N/A	3Ph	3Ph	-
3Ph	3Ph	1Ph	3Ph	3Ph	1Ph	-
3Ph Gen	3Ph Gen	1Ph Gen	3Ph Gen	3Ph Load	1Ph Load	-
+	/+	/+	/+	-	-	+
+	/+	/+	/+	-	-	-
7	5	3	3	8	5	3
conf	conf	conf	conf	-	-	1
Sender or Alarm	Sender or Alarm	Sender or Alarm	Sender or Alarm	N/A	N/A	Sender or Alarm
Sender or Alarm	Sender or Alarm	Sender or Alarm	Sender or Alarm	N/A	N/A	Sender or Alarm
2	1	1	1	-	-	1
+	+	+	+	N/A	N/A	1
4	4	4	4	6	6	5
1	1	1	1	N/A	N/A	1
1	1	1	1	N/A	N/A	1
N/A	N/A	N/A	N/A	+	+	-
+	+	conf	+	+	+	-
USB	RS-232 RS-485	RS-232	RS-232	USB	RS-232	RS-232
/+	-	-	-	/+	-	-
Messenger WEB-Ethernet WEB-GPRS GPRS RS-485	N/A	N/A	N/A	Messenger WEB-Ethernet WEB-GPRS GPRS RS-485	N/A	N/A

Automatic Gen-Set Controller with Transfer Switching & Load Sharing

Mains voltages and frequency measurements

Generator voltages and frequency measurements

Peak lopping (mains or genset)

Power export to mains

Mains de-coupling protection with R.O.C.O.F and vector shift methods

Manual voltage/frequency adjustment

Direct/Reverse Governor and AVR control

Auto adjust feature for Governor and AVR

Volts, frequency and phase matching

Synchroscope display

Logic Controller functionality for PLC

▶ **Pre-Alarm**
  Engine temperature
  Oil pressure
  Fuel level
  Over / Under voltage
  Over / Under frequency
  Over / Under speed

▶ **Warning & Electrical trip**
  Earth fault
  Over current
  Short circuit
  Mains rocof
  Mains vector shift

▶ **Alarm**
  Generator breaker not opened
  Generator breaker not closed
  Mains breaker not opened
  Mains breaker not closed

▶ **Controls**
  Fuel and Stop solenoid
  ECU power and stop
  Starter motor
  Automatic generator start
  Preheat
  External alarm horn
  Engine cooling
  Idle mode
  Mains supply
  Load transfer
  Load sharing

▶ **Fail Monitoring**
  Mains failure
  Emergency stop
  Failed to start
  Low oil pressure
  High temperature
  Speed failure
  Voltage failure
  Charging fail
  Shutdown
  Warning

▶ **Error**
  Synchronising
  Over / Under speed
  Speed loss
  Earth fault
  Fuel level
  Battery low
  Battery high
  Maintenance
  Over current
  Short circuit
  Engine stop
  CanBus
  Charge alternator

Diagram

D+(W.L.)
Charge Gen.
-Vbat
E.Stop
-Vbat
12
7

| Digital inputs | | | | | USB HOST for Data logging | 8-32Vdc Supply voltage (Peak: 36Vdc) | Optional **Expansion Modules** Communication |

13 configurable digital inputs

7 configurable transistor outpus

+BAT

Trans
AMF
SYNCRO

Engine Control

| Transistor outputs | Analogue inputs |
| Start | Solenoid | Temperature | Oil Pressure | Level | Conf. Input | Battery Voltage | Magnetic Pickup (RPM) | CanBus J1939 ECU communication | Governor | AVR |

Communication
ModBus ASCII / RTU

RS-485 Serial

USB   **ETHERNET SNMP Port**

Generator
L1, L2 L3,N   IL1,IL2 II3

Mains
Contactor outputs   IL1   L1, L2 L3,N

G

M

Load

Web Server   **GSM**

GPRS   **Expansion I/O Board**

Dimensions   : 276 mm x 189 mm x 45 mm. (including connectors). Plastic housing for panel mounting.
Panel Cut-Out   : 223mm x 162mm.
Protection   : IP65 at front panel.
Weight   : Approximately 0,82 Kg.
Environmental Rating   : Standard, indoor at an altitude of less then 2000 meters with non-condensing   humidity.

Operating/Storage Temperature   : -20°C to +70°C / -30°C to +80°C
Operating/Storage Humidity   : 95% max. (non-condensing)
DC Battery Supply Voltage   : 8 to 32 Vdc (Peak: 36Vdc) Max. operating current is 860 mA.
CT Secondary   : 5A.
Sender Measurement   : 0 to 1300 ohm, accuracy: 1 % FS, resolution: 1 ohm.
Communication Interface   : USB programming and communication port, Ethernet, RS485.

Order Information	
Trans-AMF.SYNCRO	Synchronising & Automatic Mains Failure Unit for Generators with J1939 ECU communication

Automatic Transfer & Load Share Unit with Mains

Load sharing with genset (up to 32 gensets)

Busbar voltages and frequency measurements

Bus failure detection

Peak lopping (mains or genset)

Power export to mains

Mains de-coupling protection with R.O.C.O.F and vector shift methods

Volts, frequency and phase matching

Synchroscope display

Logic Controller functionality for PLC

Warning & Electrical Trip
Mains rocof
Mains vector shift
Minimum genset

Fail Monitoring
Emergency stop
Mains failure
Bus failure

Alarm
Bus breaker not opened
Bus breaker not closed
Mains breaker not opened
Mains breaker not closed

Error
Battery low
Battery high
Can open
Synchronization
Minimum genset

Controls
Mains supply
Automatic genset start
Load transfer
Load sharing

EMKO energy

Web Server

GSM

GPRS

Expansion I/O Board

Digital inputs		Multi Link Communication for Synchronization	USB HOST for Data logging	8-32Vdc Supply voltage (Peak: 36Vdc)	Optional **Expansion Modules** Communication
13 configurable digital inputs	9 configurable transistor outpus				

-Vbat -Vbat
E.Stop **12** **9**

Tran s MAINS

Communication
ModBus ASCII / RTU

RS-485 Serial

USB **ETHERNET**

Bus			Mains	
L1, L2 L3,N	IL1	Contactor outputs	II1, IL2 IL3	L1, L2 L3,N

G1
G2
G32

Load

M

Dimensions : 276 mm x 189 mm x 45 mm. (including connectors). Plastic housing for panel mounting.
Panel Cut-Out : 223mm x 162mm.
Protection : IP65 at front panel.
Weight : Approximately 0,82 Kg.
Environmental Rating : Standard, indoor at an altitude of less then 2000 meters with non-condensing   humidity.

Operating/Storage Temperature : -20°C to +70°C / -30°C to +80°C
Operating/Storage Humidity : 95% max. (non-condensing)
DC Battery Supply Voltage : 8 to 32 V dc (Peak: 36Vdc) Max. operating current is 860 mA.
CT Secondary : 5A.
Sender Measurement : 0 to 1300 ohm, accuracy: 1 % FS, resolution: 1 ohm.
Communication Interface : USB programming and communication port, CanOpen, Ethernet, RS485.
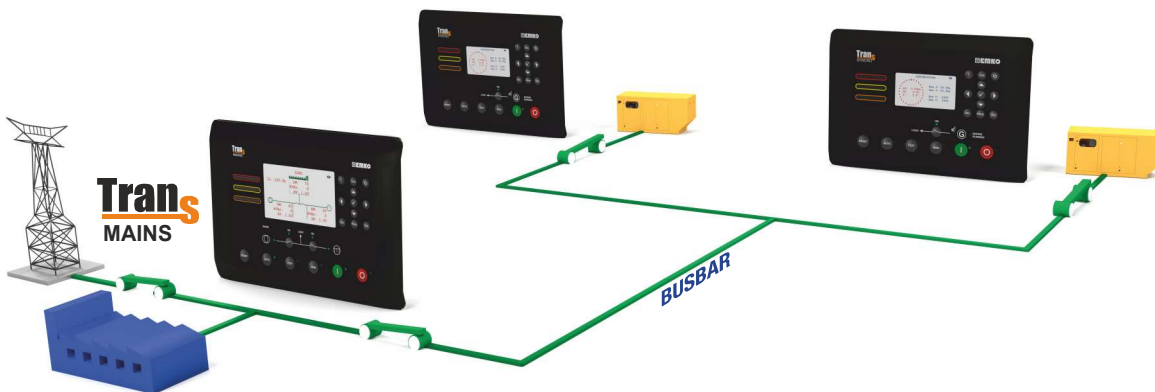
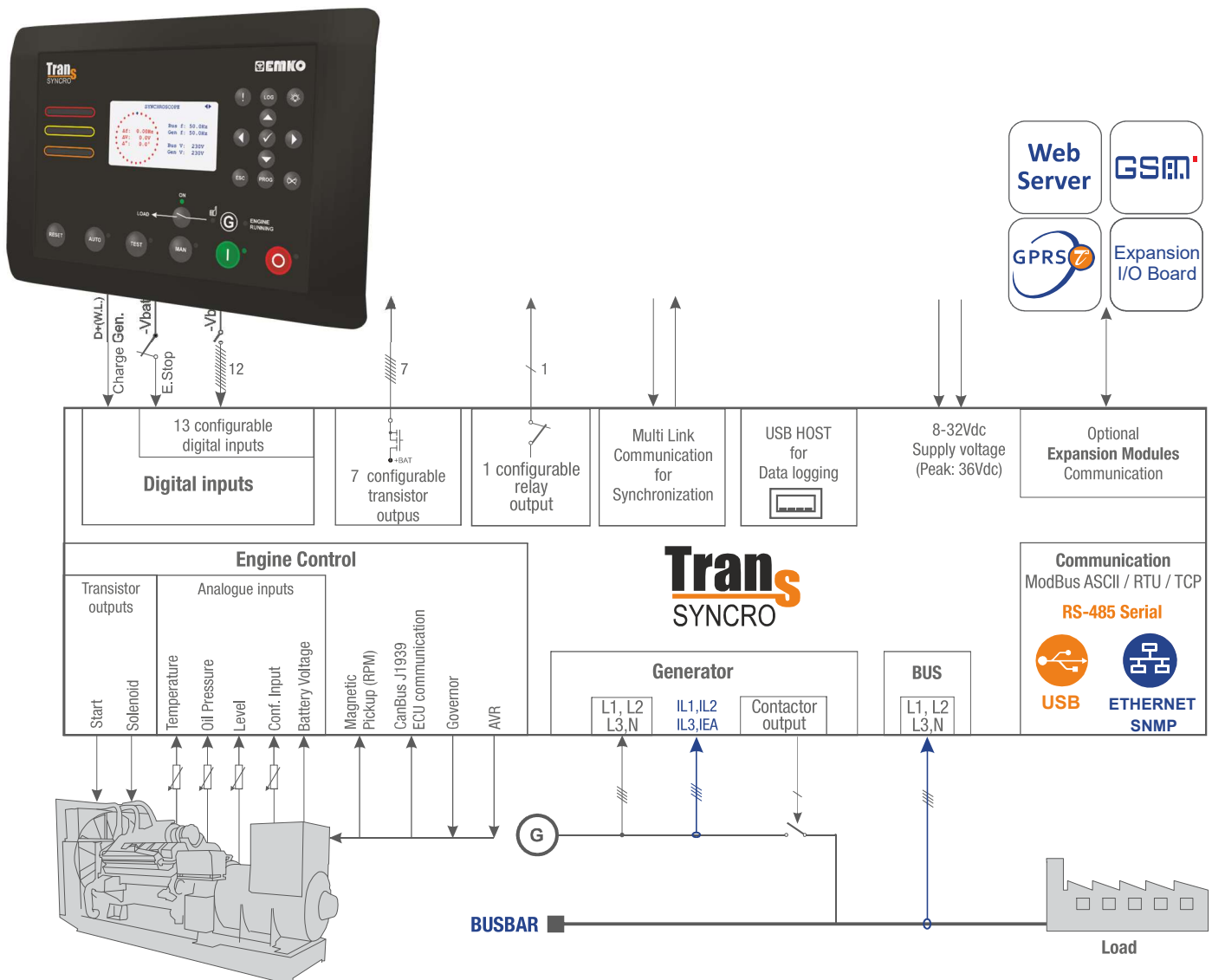| Order Information	
Trans-MAINS	Synchronising & Automatic Transfer Switch

Auto Start
Load Share Unit

Multi genset load sharing (up to 32 gensets)
kW and kVAr load sharing
Busbar voltages and frequency measurements
Dead bus sensing
Bus failure detection
Sequential set start
Manual voltage/frequency adjustment
Load dependent automatic Start/Stop
Equal aging of gensets
Direct/Reverse governor and AVR control
Volts, frequency and phase matching
Synchroscope display
Logic Controller functionality for PLC
SNMP feature for ethernet communication

▶ **Pre-Alarm**
Engine temperature
Oil pressure
Fuel level
Over / Under voltage
Over / Under frequency
Over / Under speed

▶ **Warning & Electrical trip**
Earth fault
Over current
Short circuit

▶ **Alarm**
Generator breaker not opened
Generator breaker not closed

▶ **Controls**
Fuel and Stop solenoid
ECU power and stop
Starter motor
Automatic generator start
Preheat
External alarm horn
Engine cooling
Idle mode

▶ **Fail Monitoring**
Emergency stop
Failed to start
Low oil pressure
High temperature
Speed failure
Voltage failure
Charging fail
Shutdown
Warning

▶ **Error**
Over / Under speed
Speed loss
Earth fault
Fuel level
Battery low
Battery high
Maintenance
Over current
Short circuit
Engine stop
CanBus
Charge alternator

Web Server

GSM

GPRS

Expansion I/O Board

Digital inputs	7 configurable transistor outpus	1 configurable relay output	Multi Link Communication for Synchronization	USB HOST for Data logging	8-32Vdc Supply voltage (Peak: 36Vdc)	Optional **Expansion Modules** Communication
13 configurable digital inputs						

Engine Control

Transistor outputs — Analogue inputs

Start, Solenoid, Temperature, Oil Pressure, Level, Conf. Input, Battery Voltage, Magnetic Pickup (RPM), CanBus J1939 ECU communication, Governor, AVR

Tran**s** SYNCRO

Generator
L1, L2 L3,N | IL1,IL2 IL3,IEA | Contactor output

BUS
L1, L2 L3,N

Communication
ModBus ASCII / RTU / TCP
RS-485 Serial

USB | **ETHERNET SNMP**

BUSBAR

Load

Dimensions	: 276 mm x 189 mm x 45 mm. (including connectors). Plastic housing for panel mounting.
Panel Cut-Out	: 223mm x 162mm.
Protection	: IP65 at front panel.
Weight	: Approximately 0,82 Kg.
Environmental Rating	: Standard, indoor at an altitude of less then 2000 meters with non-condensing humidity.
Operating/Storage Temperature	: -20°C to +70°C / -30°C to +80°C
Operating/Storage Humidity	: 95% max. (non-condensing)
DC Battery Supply Voltage	: 8 to 32 V dc (Peak: 36Vdc) Max. operating current is 860 mA.
CT Secondary	: 5A.
Sender Measurement	: 0 to 1300 ohm, accuracy: 1 % FS, resolution: 1 ohm.
Communication Interface	: USB programming and communication port, CanBus communication with 1939 ECU, CanOpen, Ethernet, RS485.

Order Information

Trans-SYNCRO	Synchronising & Load Sharing Unit For Gas/Diesel/Gasoline Generators with J1939 ECU communication

Tran_s AMF

Automatic Gen-Set Controllers with Transfer Switching

CanBus J1939 ECU communication

Parameter configuration via USB port of your notebook

Authorised access, secure communication

Selectable second language

Log last 500 events & alarm information with measured values

Statistics records

Mains and Generator phase sequence control

Remote Start/Stop, Speed and Idle mode control via J1939

Power factor measurement for 3 phases

4 resistive sender inputs for Level, Temperature, Oil Pressure and Spare

Selectable Resistive sender types; Pt-100, VDO, US, GM, Ford, Datcon, etc..

Speed sensing from alternator voltage or magnetic pickup

3 phase Load current and earth current measurement

Configurable 7 inputs and 4 outputs

ECU power, ECU stop, Stop or Fuel solenoid selection

Programmable weekly working permit calendar

Maintenance warning, Red (Shutdown) and Yellow (Warning) alarm lights

Navigation and Shortcut buttons for easy use

Exercise at daily programmed time intervals

Load Test selection

Automatic transfer switching control and engine control

Compatible to Diesel or Gas generators

Auto, Manual and Test modes

Active, Reactive, Apparent power measurement

Adjustable Start and Stop timers

SPN, FMI and OC values reading from engines via J1939

▶ Pre-Alarm
Engine temperature
Oil pressure
Fuel level
Over / Under voltage
Over / Under frequency
Over / Under speed

▶ Warning & Electrical trip
Earth fault
Over current
Short circuit

▶ Alarm
Mains breaker not opened
Mains breaker not closed
Generator breaker not opened
Generator breaker not closed

▶ Controls
Fuel and Stop solenoid
ECU power and stop
Starter motor
Automatic generator start
Load transfer to mains
Preheat
External alarm horn
Engine cooling
Idle mode

▶ Fail Monitoring
Emergency stop
Failed to start
Low oil pressure
High temperature
Speed failure
Voltage failure
Charging fail
Shutdown
Warning

Error
▶ Over / Under speed
Speed loss
Earth fault
Fuel level
Battery low
Battery high
Maintenance
Over current
Short circuit
Engine stop
CanBus
Charge alternator

EMKO energy

Trans AMF

Web Server	RS-485 Serial	Dual working
ETHERNET	GSM
GPRS	Expansion I/O Board

Trans AMF

D+(W.L.) Charge Gen.
-Vbat
E.Stop
-Vbat
6

7 configurable digital inputs

Digital inputs

2 configurable relay outputs

2 configurable transistor outputs

+BAT

2

2

8-32Vdc Supply voltage (Peak: 36Vdc)

Optional **Expansion Modules** Communication

Engine Control

Transistor outputs
- Start
- Solenoid

Analogue inputs
- Temperature
- Oil Pressure
- Level
- Spare Sender
- Battery voltage

Magnetic Pickup (RPM)

CanBus J1939 ECU communication

Communication **USB or RS485** ModBus ASCII / RTU

USB

| Generator | Mains |
| L1, L2 L3,N | IL1,IL2 IL3,IEA | Contactor outputs | L1, L2 L3,N |

G

M

Load

Dimensions	: 229mm x 152mm x 41mm
Panel Cut-Out	: 182mm x 135mm
Protection	: Ip65 at front panel
Weight	: Approximately 0,53Kg
Operating/Storage Temperature	: -20°C to +70°C / -30°C to +80°C
Operating/Storage Humidity	: 95% max. (non-condensing)
DC Battery Supply Voltage	: 8 to 32Vdc (Peak: 36Vdc), max. operating current is 360mA
CT Secondary	: 5A
Sender Measurement	: 0 to 1300 ohm, accuracy: 1%FS, resolution: 1 ohm

Order Information	
Trans-AMF	Automatic Gen-Set controller with transfer switching, LCD display, J1939 ECU communication
Trans-AMF.RS485	Automatic Gen-Set controller with transfer switching, LCD display, J1939 ECU communication, RS485 communication

Tran**s** midi
AMF

Automatic Gen-Set Controllers with Transfer Switching

Local Remote Control

Parameter configuration via RS-232 port of your notebook
Authorised access, secure communication
Selectable second language
Log last 50 events & alarm information wiht measured values
Statistics records
Mains & Generator phase sequence control
3 phase mains voltage measurement
Power factor measurement for 3 phases
3 resistive sender inputs for Level, Temperature, Oil Pressure
Selectable Resistive sender types; Pt-100 VDO, US, GM, Ford, Datcon, etc...
Speed sensing from alternator voltage or magnetic pickup
CanBus J1939 ECU communication
SPN, FMI and OC values reading from engines via J1939
Remote Start/Stop Speed and Idle mode Control via J1939
Load Test selection
Compatible to Diesel, Gas or Gasoline generators
Auto, Manual and Test modes
Active, Reactive, Apparent power measurement
Adjustable Start and Stop timers
3 phase Load current measurement
Configurable 5 inputs and 4 outputs
Local Remote Control and Visualisation function

Dimensions	: 158mm x 111mm x 67mm
Panel Cut-Out	: 120mm x 94mm
Protection	: Ip65 at front panel
Weight	: Approximately 0,26Kg
Operating/Storage Temperature	: -20°C to + 70°C / -30°C to +80°C
Operating/Storage Humidity	: 95% max. (non-condensing)
DC battery supply voltage	: 8 to 32Vdc (Peak: 36Vdc), max. operating current is 370mA
CT Secondary	: 5A
Sender Measurement	: 0 to 1300 ohm, accuracy: 1%FS, resolution: 1 ohm

▶ **Pre-Alarm**
Engine temperature
Oil pressure
Fuel level
Over / Under voltage
Over / Under frequency
Over / Under speed

▶ **Warning & Electrical trip**
Over current
Short circuit

▶ **Alarm**
Mains breaker not opened
Mains breaker not closed
Generator breaker not opened
Generator breaker not closed

▶ **Controls**
Fuel and Stop solenoid
ECU power and stop
Starter motor
Automatic generator start
Load transfer to mains
Preheat
External alarm horn
Engine cooling
Idle mode

▶ **Fail Monitoring**
Emergency stop
Failed to start
Low oil pressure
High temperature
Speed failure
Voltage failure
Charging fail
Shutdown
Warning

Error
▶ Over / Under speed
Speed loss
Fuel level
Battery low
Battery high
Maintenance
Over current
Short circuit
Engine stop
CanBus
Charge alternator

D+(W.L.)
Charge Gen.

-Vbat

5

4

8-32Vdc
Supply voltage
(Peak: 36Vdc)

Optional
Expansion Modules
Communication

5 configurable
digital inputs

Digital inputs

+BAT
4 configurable
transistor
outputs

Communication
RS-232 or RS-485
ModBus ASCII

Local Remote Control
Via ModBus RS-485

Engine Control

Transistor
outputs

Analogue
inputs

Start
Solenoid

Temperature
Oil Pressure
Level

Battery voltage

CanBus J1939
ECU communication
for Trans-MidiAMF.CAN

Magnetic
Pickup (RPM)
FOR Trans-MidiAMF.MPU

Tran**S** midi **AMF**

| **Generator** | | **Mains** |
| L1, L2 L3,N | IL1, IL2 IL3 | Contactor outputs |

L1, L2
L3,N

G

M

Load

Order Information	
Trans-midiAMF.MPU.232	Automatic GenSet controller with transfer switching, speed sensing from Magnetic Pickup,RS-232 communication
Trans-midiAMF.CAN.232	Automatic GenSet controller with transfer switching, CanBus J1939 ECU communication,RS-232 communication
Trans-midiAMF.MPU.485	Automatic GenSet controller with transfer switching, speed sensing from Magnetic Pickup,RS-485 communication
Trans-midiAMF.CAN.485	Automatic GenSet controller with transfer switching, CanBus J1939 ECU communication,RS-485 communication
Trans-midiAMF.MPU.232.GPRS	Automatic GenSet controller with transfer switching, speed sensing from Magnetic Pickup,RS-232 communication, GSM-GPRS feature
Trans-midiAMF.CAN.232.GPRS	Automatic GenSet controller with transfer switching, CanBus J1939 ECU communication,RS-232 communication, GSM-GPRS feature
Trans-midiAMF.MPU.485.GPRS	Automatic GenSet controller with transfer switching, speed sensing from Magnetic Pickup,RS-485 communication, GSM-GPRS feature
Trans-midiAMF.CAN.485.GPRS	Automatic GenSet controller with transfer switching, CanBus J1939 ECU communication,RS-485 communication, GSM-GPRS feature
Trans-midiAMF.MPU.232.GPRS+GPS	Automatic GenSet controller with transfer switching, speed sensing from Magnetic Pickup,RS-232 communication, GSM-GPRS+GPS feature
Trans-midiAMF.CAN.232.GPRS+GPS	Automatic GenSet controller with transfer switching, CanBus J1939 ECU communication,RS-232 communication, GSM-GPRS+GPS feature
Trans-midiAMF.MPU.485.GPRS+GPS	Automatic GenSet controller with transfer switching, speed sensing from Magnetic Pickup,RS-485 communication, GSM-GPRS+GPS feature
Trans-midiAMF.CAN.485.GPRS+GPS	Automatic GenSet controller with transfer switching, CanBus J1939 ECU communication,RS-485 communication, GSM-GPRS+GPS feature

Automatic Gen-Set Controllers with Transfer Switching

CanBus J1939 ECU communication

Parameter configuration via RS-232 serial communication

Log last 50 events & alarm information with measured values

Statistics records

Remote Start/Stop, Speed and Idle mode control via J1939

Power factor measurement for 1 phases

3 resistive sender inputs for Temperature, Oil Pressure and Fuel Level

Selectable Resistive sender types; Pt-100, VDO, US, GM, Ford, Datcon, etc...

Speed sensing from alternator voltage or magnetic pickup

1 phase Load current measurement

3 phase mains and 1 phase alternator voltage measurement

Configurable 3 inputs and 4 outputs

ECU power, ECU stop, Stop or Fuel solenoid selection

Programmable weekly working permit calendar

Exercise at programmed time intervals

Automatic transfer switching control and engine control

Compatible to Diesel or Gas generators

Active, Reactive, Apparent power measurement

Adjustable Start, Load and Stop timers

SPN, FMI and OC values reading from engines via J1939

▶ Pre-Alarm
Engine temperature
Oil pressure
Over / Under voltage
Over / Under frequency
Over / Under speed

▶ Warning & Electrical trip
Over current
Short circuit

▶ Alarm
Mains breaker not opened
Mains breaker not closed
Generator breaker not opened
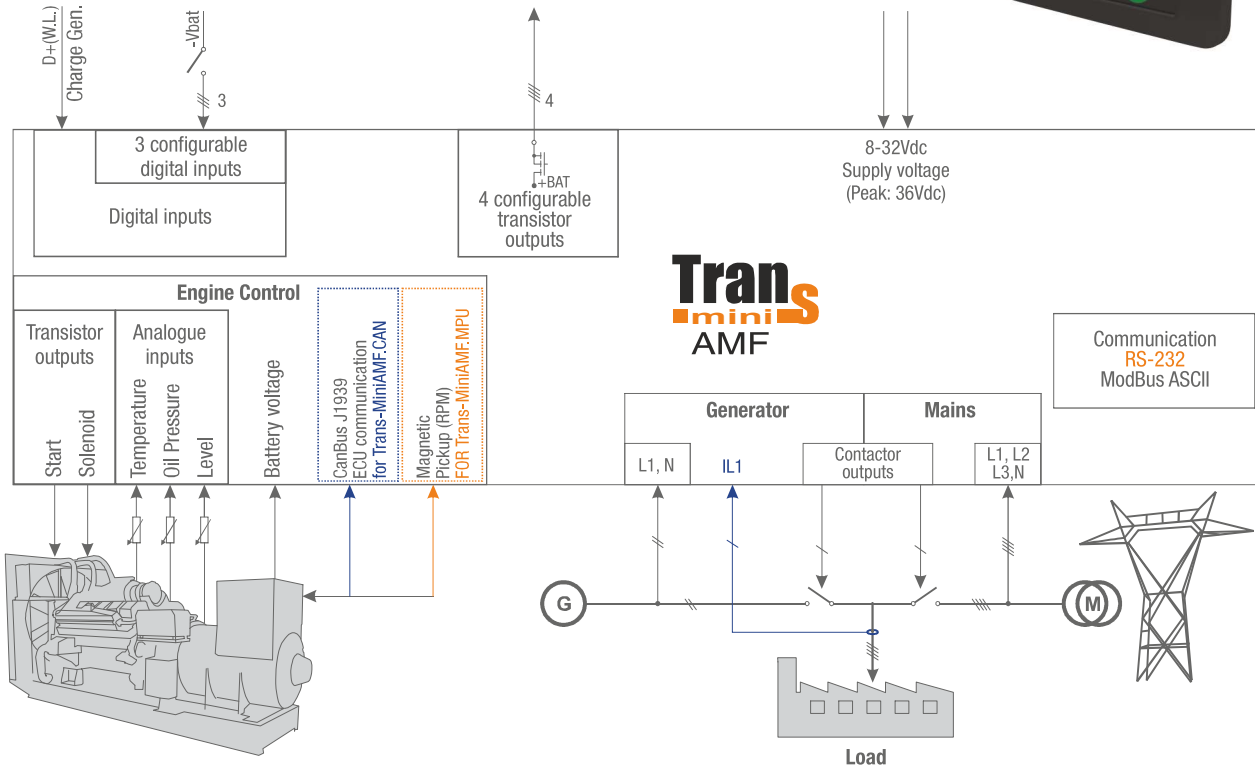Generator breaker not closed

▶ Controls
Fuel and Stop solenoid
ECU power and stop
Starter motor
Automatic generator start
Load transfer to mains
Preheat
External alarm horn
Engine cooling
Idle mode

▶ Fail Monitoring
Emergency stop
Failed to start
Low oil pressure
High temperature
Speed failure
Voltage failure
Charging fail
Shutdown
Warning

▶ Error
Over / Under speed
Speed loss
Battery low
Battery high
Maintenance
Over current
Short circuit
Engine stop
CanBus
Charge alternator

MAINS
V12:380V V1:220V
V23:380V V2:220V
V31:380V V3:220V
Wait for start

Diagram labels:

D+(W.L.) Charge Gen.

-Vbat

3

4

3 configurable digital inputs

Digital inputs

4 configurable transistor outputs

8-32Vdc Supply voltage (Peak: 36Vdc)

Engine Control

Transistor outputs | Analogue inputs

Start | Solenoid | Temperature | Oil Pressure | Level | Battery voltage

CanBus J1939 ECU communication for Trans-MiniAMF.CAN

Magnetic Pickup (RPM) FOR Trans-MiniAMF.MPU

Tran_s mini AMF

Communication RS-232 ModBus ASCII

Generator | Mains

L1, N | IL1 | Contactor outputs | L1, L2 L3,N

G

M

Load

Dimensions : 111mm x 81mm x 61mm
Panel Cut-Out : 81mm x 70mm
Protection : Ip65 at front panel
Weight : Approximately 0,3Kg
Operating/Storage Temperature : -20°C to +70°C / -30°C to +80°C
Operating/Storage Humidity : 95% max. (non-condensing)
DC battery supply voltage : 8 to 32Vdc (Peak: 36Vdc), max. operating current is 360mA
CT Secondary : 5A
Sender Measurement : 0 to 1300 ohm, accuracy: 1%FS, resolution: 1 ohm

Order Information	
Trans-MiniAMF.RTC	Automatic GenSet controller wiht transfer switching with real time clock
Trans-MiniAMF.CAN.RTC	Automatic GenSet controller wiht transfer switching,CanBus J1939 ECU comm.with real time clock
Trans-MiniAMF.MPU.RTC	Automatic GenSet controller wiht transfer switching, speed sensing from Magetic Pickup with real time clock

Automatic Gen-Set Controllers

Canbus J1939 ECU communication

Parameter configuration via USB port of your notebook

Authorised access, secure communication

Selectable second language

Log last 50 events & alarm information with measured values

Statistics records

Generator phase sequence control

Remote Start/Stop, Speed and Idle mode control via J1939

Power factor measurement for 3 phases

4 resistive sender inputs for Level, Temperature, Oil Pressure and Spare

Selectable Resistive sender types; Pt-100, VDO, US, GM, Ford, Datcon, etc..

Speed sensing from alternator voltage or magnetic pickup

3 phase Load current and earth current measurement

Configurable 7 inputs and 4 outputs

ECU power, ECU stop, Stop or Fuel solenoid selection

Maintenance warning, Red (Shutdown) and Yellow (Warning) alarm lights

Navigation and Shortcut buttons for easy use

Load Test selection

Engine control

Compatible to Diesel or Gas generators

Auto, Manual and Test modes

Active, Reactive, Apparent power measurement

Adjustable Start, Load and Stop timers

SPN, FMI and OC values reading from engines via J1939

▶ Pre-Alarm
Engine temperature
Oil pressure
Over / Under voltage
Over / Under frequency
Over / Under speed

▶ Warning & Electrical trip
Earth fault
Over current
Short circuit

▶ Alarm
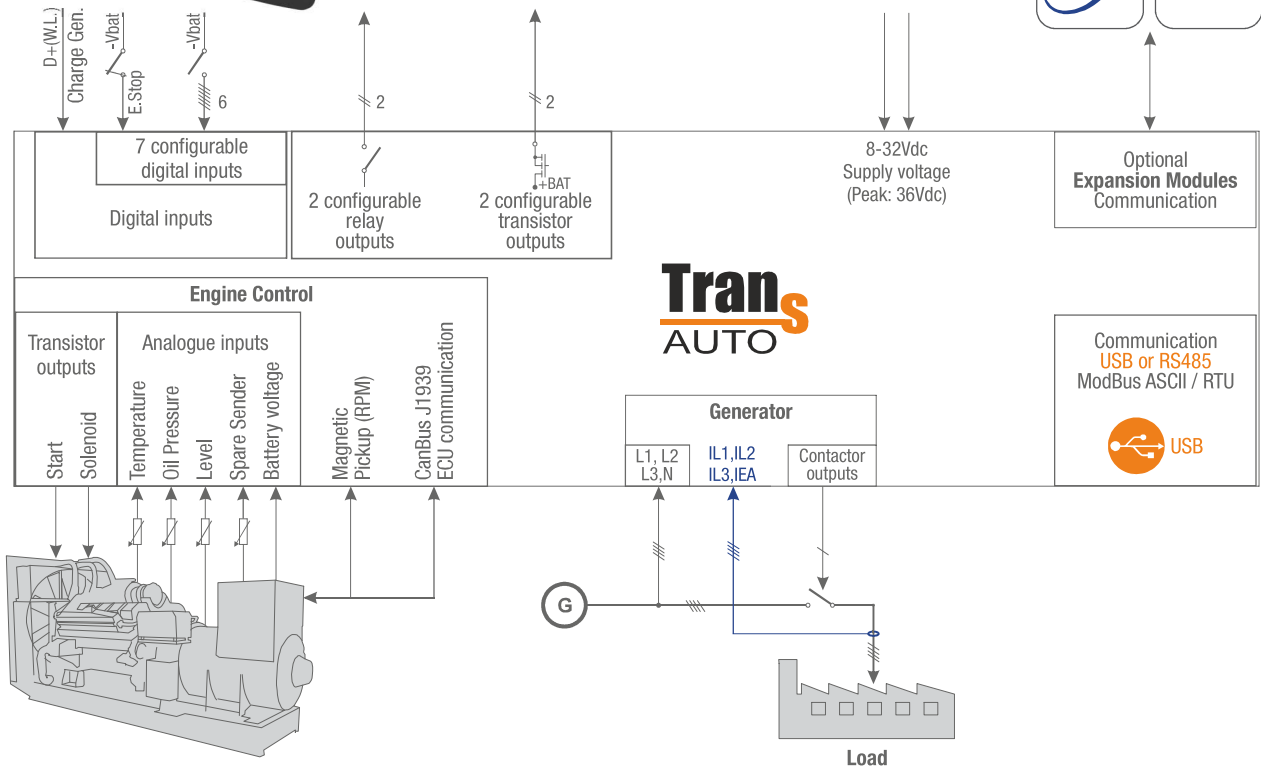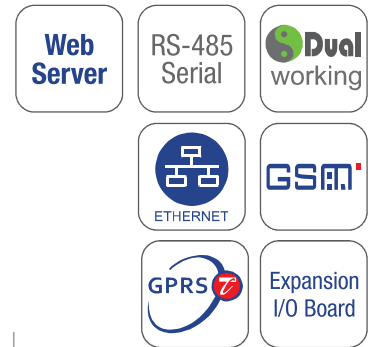Generator breaker not opened
Generator breaker not closed

▶ Controls
Fuel and Stop solenoid
ECU power and stop
Starter motor
Automatic generator start
Load transfer to mains
Preheat
External alarm horn
Engine cooling
Idle mode

▶ Fail Monitoring
Emergency stop
Failed to start
Low oil pressure
High temperature
Speed failure
Voltage failure
Charging fail
Shutdown
Warning

▶ Error
Over / Under speed
Speed loss
Battery low
Battery high
Maintenance
Over current
Short circuit
Engine stop
CanBus
Charge alternator

EMKO energy

Trans AUTO

Web Server | **RS-485 Serial** | **Dual working**

ETHERNET | **GSM**

GPRS | **Expansion I/O Board**

Diagram labels

D+(W.L.) Charge Gen.
-Vbat E.Stop
-Vbat
6
2
2

8-32Vdc
Supply voltage
(Peak: 36Vdc)

Optional
Expansion Modules
Communication

7 configurable digital inputs

Digital inputs

2 configurable relay outputs | +BAT | 2 configurable transistor outputs

Engine Control

Transistor outputs | Analogue inputs

Start | Solenoid | Temperature | Oil Pressure | Level | Spare Sender | Battery voltage | Magnetic Pickup (RPM) | CanBus J1939 ECU communication

Communication
USB or RS485
ModBus ASCII / RTU
USB

Generator
L1, L2 L3,N | IL1,IL2 IL3,IEA | Contactor outputs

G

Load

Specifications

Dimensions	: 229mm x 152mm x 41mm
Panel Cut-Out	: 182mm x 135mm
Protection	: Ip65 at front panel
Weight	: Approximately 0,53Kg
Operating/Storage Temperature	: -20°C to +70°C / -30°C to +80°C
Operating/Storage Humidity	: 95% max. (non-condensing)
DC Battery Supply Voltage	: 8 to 32Vdc (Peak: 36Vdc), max. operating current is 360mA
CT Secondary	: 5A
Sender Measurement	: 0 to 1300 ohm, accuracy: 1%FS, resolution: 1 ohm

Order Information

Order Information	
Trans-AUTO	Automatic Gen-Set controller, LCD display, J1939 ECU communication
Trans-AUTO.RS485	Automatic Gen-Set controller, LCD display, J1939 ECU communication, RS485 communication

Automatic Gen-Set Controllers

Local
Remote
Control

Parameter configuration via RS-232 port of your notebook
Authorised access, secure communication
Selectable second language
Log last 50 events & alarm information wiht measured values
Statistics records
Generator phase sequence control
Power factor measurement for 3 phases
3 resistive sender inputs for Level, Temperature, Oil Pressure
Selectable Resistive sender types; Pt-100 VDO, US, GM, Ford, Datcon, etc...
Speed sensing from alternator voltage or magnetic pickup
CanBus J1939 ECU communication
SPN, FMI and OC values reading from engines via J1939
Remote Start/Stop Speed and Idle mode Control via J1939
Load Test selection
Compatible to Diesel, Gas or Gasoline generators
Auto, Manual and Test modes
Active, Reactive, Apparent power measurement
Adjustable Start and Stop timers
3 phase Load current measurement
Configurable 5 inputs and 4 outputs
Local Remote Control and Visualisation function

▶ Pre-Alarm
Engine temperature
Oil pressure
Over / Under voltage
Over / Under frequency
Over / Under speed

▶ Warning & Electrical trip
Over current
Short circuit

▶ Alarm
Generator breaker not opened
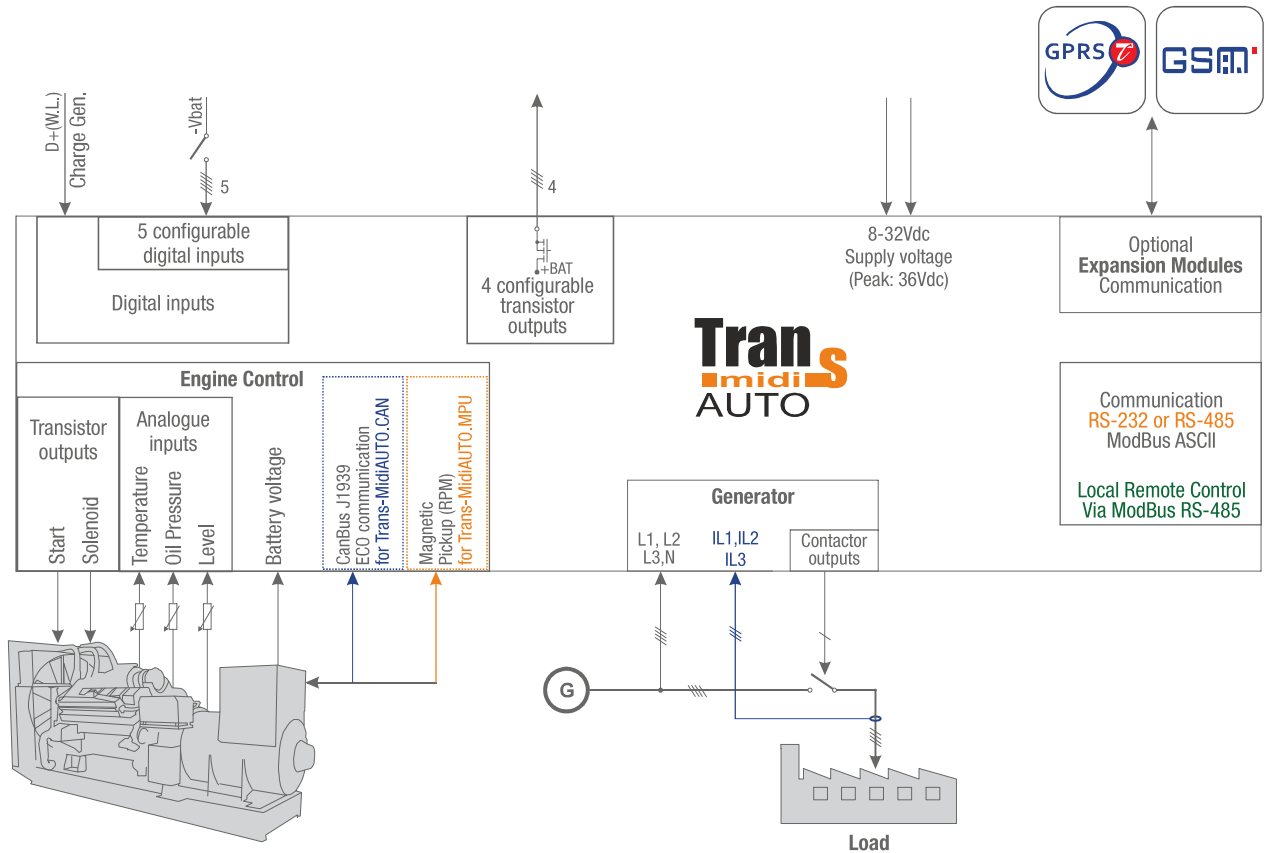Generator breaker not closed

▶ Controls
Fuel and Stop solenoid
ECU power and stop
Starter motor
Automatic generator start
Preheat
External alarm horn
Engine cooling
Idle mode

▶ Fail Monitoring
Emergency stop
Failed to start
Low oil pressure
High temperature
Speed failure
Voltage failure
Charging fail
Shutdown
Warning

▶ Error
Over / Under speed
Speed loss
Fuel level
Battery low
Battery high
Maintenance
Over current
Short circuit
Engine stop
CanBus
Charge alternator

Dimensions	: 158mm x 111mm x 67mm
Panel Cut-Out	: 120mm x 94mm
Protection	: Ip65 at front panel
Weight	: Approximately 0,26Kg
Operating/Storage Temperature	: -20°C to + 70°C / -30°C to +80°C
Operating/Storage Humidity	: 95% max. (non-condensing)
DC Battery Supply Voltage	: 8 to 32Vdc (Peak: 36Vdc), max. operating current is 370mA
CT Secondary	: 5A
Sender Measurement	: 0 to 1300 ohm, accuracy: 1%FS, resolution: 1 ohm

Diagram labels:

D+(W.L.) Charge Gen.
-Vbat
5
4

5 configurable digital inputs
Digital inputs

+BAT
4 configurable transistor outputs

8-32Vdc
Supply voltage
(Peak: 36Vdc)

Optional
Expansion Modules
Communication

Engine Control

Transistor outputs
Start
Solenoid

Analogue inputs
Temperature
Oil Pressure
Level

Battery voltage

CanBus J1939 ECO communication for Trans-MidiAUTO.CAN

Magnetic Pickup (RPM) for Trans-MidiAUTO.MPU

Tran s midi AUTO

Communication
RS-232 or RS-485
ModBus ASCII

Local Remote Control
Via ModBus RS-485

Generator
L1, L2 L3,N
IL1,IL2 IL3
Contactor outputs

G

Load

Order Information	
Trans-midiAUTO.MPU.232	Auto Start GenSet controller, speed sensing from Magnetic Pickup,RS-232 communication
Trans-midiAUTO.CAN.232	Auto Start GenSet controller, CanBus J1939 ECU communication,RS-232 communication
Trans-midiAUTO.MPU.485	Auto Start GenSet controller, speed sensing from Magnetic Pickup,RS-485 communication
Trans-midiAUTO.CAN.485	Auto Start GenSet controller, CanBus J1939 ECU communication,RS-485 communication
Trans-midiAUTO.MPU.232.GPRS	Auto Start GenSet controller, speed sensing from Magnetic Pickup,RS-232 communication, GSM-GPRS feature
Trans-midiAUTO.CAN.232.GPRS	Auto Start GenSet controller, CanBus J1939 ECU communication,RS-232 communication, GSM-GPRS feature
Trans-midiAUTO.MPU.485.GPRS	Auto Start GenSet controller, speed sensing from Magnetic Pickup,RS-485 communication, GSM-GPRS feature
Trans-midiAUTO.CAN.485.GPRS	Auto Start GenSet controller, CanBus J1939 ECU communication,RS-485 communication, GSM-GPRS feature
Trans-midiAUTO.MPU.232.GPRS+GPS	Auto Start GenSet controller, speed sensing from Magnetic Pickup,RS-232 communication, GSM-GPRS+GPS feature
Trans-midiAUTO.CAN.232.GPRS+GPS	Auto Start GenSet controller, CanBus J1939 ECU communication,RS-232 communication, GSM-GPRS+GPS feature
Trans-midiAUTO.MPU.485.GPRS+GPS	Auto Start GenSet controller, speed sensing from Magnetic Pickup,RS-485 communication, GSM-GPRS+GPS feature
Trans-midiAUTO.CAN.485.GPRS+GPS	Auto Start GenSet controller, CanBus J1939 ECU communication,RS-485 communication, GSM-GPRS+GPS feature

Automatic Gen-Set Controllers

Canbus J1939 ECU communication

Parameter configuration via RS-232 serial communication

Log last 50 events & alarm information with measured values

Statistics records

Remote Start/Stop, Speed and Idle mode control via J1939

3 resistive sender inputs for Temperature, Oil Pressure and Fuel Level

Selectable Resistive sender types; Pt-100, VDO, US, GM, Ford, Datcon, etc..

Speed sensing from alternator voltage, magnetic pickup or CanBus J1939

Configurable 3 inputs and 4 outputs

ECU power, ECU stop, Stop or Fuel solenoid selection

Engine control

Compatible to Diesel or Gas generators

Power measurement

Adjustable Start, Load and Stop timers

SPN, FMI and OC values reading from engines via J1939

For Trans-Mini Auto

Power factor measurement for 1 phases

1 phase alternator voltage measurement

1 phase Load current measurement

For Trans-Mini Auto++

Power factor measurement for 3 phases

3 phase alternator voltage measurement

3 phase Load current measurement

▶ **Pre-Alarm**
Engine temperature
Oil pressure
Over / Under voltage
Over / Under frequency
Over / Under speed

▶ **Warning & Electrical trip**
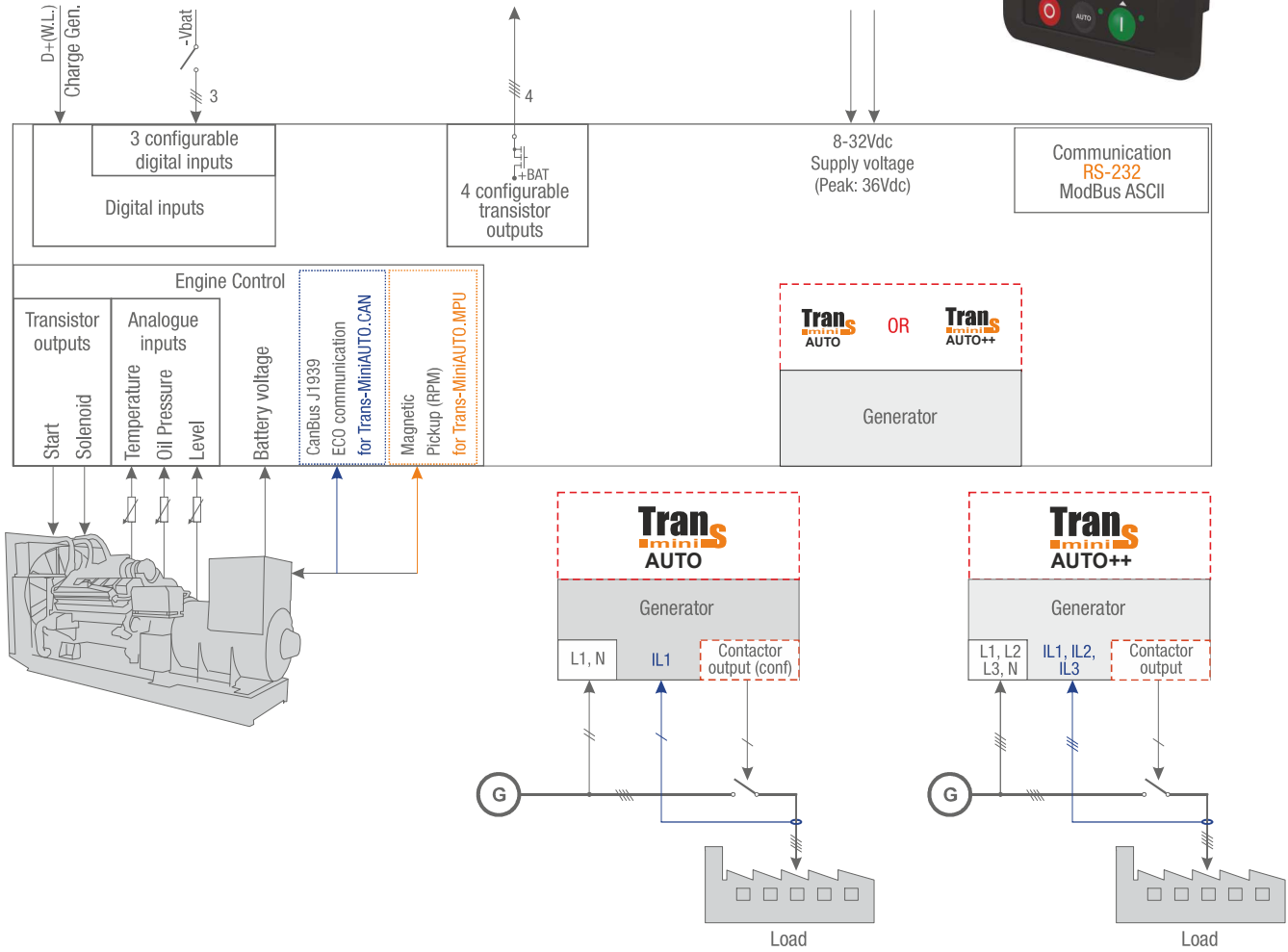Over current
Short circuit

▶ **Controls**
Fuel and Stop solenoid
ECU power and stop
Starter motor
Automatic generator start
Preheat
External alarm horn
Engine cooling
Idle mode

▶ **Fail Monitoring**
Emergency stop
Failed to start
Low oil pressure
High temperature
Speed failure
Voltage failure
Charging fail
Shutdown
Warning

▶ **Error**
Over / Under speed
Speed loss
Battery low
Battery high
Maintenance
Over current
Short circuit
Engine stop
CanBus
Charge alternator

D+(W.L.)
Charge Gen.

-Vbat

3

4

3 configurable
digital inputs

Digital inputs

+BAT
4 configurable
transistor
outputs

8-32Vdc
Supply voltage
(Peak: 36Vdc)

Communication
RS-232
ModBus ASCII

Engine Control

Transistor outputs
Analogue inputs

Start
Solenoid
Temperature
Oil Pressure
Level
Battery voltage
CanBus J1939 ECO communication for Trans-MiniAUTO.CAN
Magnetic Pickup (RPM) for Trans-MiniAUTO.MPU

Trans mini S AUTO OR Trans mini S AUTO++

Generator

Trans mini S AUTO

Generator

L1, N | IL1 | Contactor output (conf)

G

Load

Trans mini S AUTO++

Generator

L1, L2 L3, N | IL1, IL2, IL3 | Contactor output

G

Load

Dimensions	: 111mm x 81mm x 61mm
Panel Cut-Out	: 81mm x 70mm
Protection	: Ip65 at front panel
Weight	: Approximately 0,3Kg

Operating/Storage Temperature	: -20°C to + 70°C / -30°C to +80°C
Operating/Storage Humidity	: 95% max. (non-condensing)
DC Battery Supply Voltage	: 8 to 32Vdc (Peak: 36Vdc), max. operating current is 360mA
CT Secondary	: 5A
Sender Measurement	: 0 to 1300 ohm, accuracy: 1%FS, resolution: 1 ohm

Order Information	
Trans-MiniAUTO.RTC	Auto Start GenSet controller, LCD display wiht real time clock
Trans-MiniAUTO.CAN.RTC	Auto Start GenSet controller,CanBus J1939 ECU communication with real time clock
Trans-MiniAUTO.MPU.RTC	Auto Start GenSet controller, speed sensing from Magetic Pickup with real time clock
Trans-MiniAUTO++.RTC	Auto Start GenSet controller, LCD display wiht real time clock
Trans-MiniAUTO++.CAN.RTC	Auto Start GenSet controller,CanBus J1939 ECU communication with real time clock
Trans-MiniAUTO++.MPU.RTC	Auto Start GenSet controller, speed sensing from Magetic Pickup with real time clock

Tran**s** mini ATS   Tran**s** ATS

Automatic Transfer Switching Controllers

Configurable Load Generator and Engine running inputs

Mains voltage failure detection

Emergency backup and Test mode

Log last 50 events & alarm information with measured values
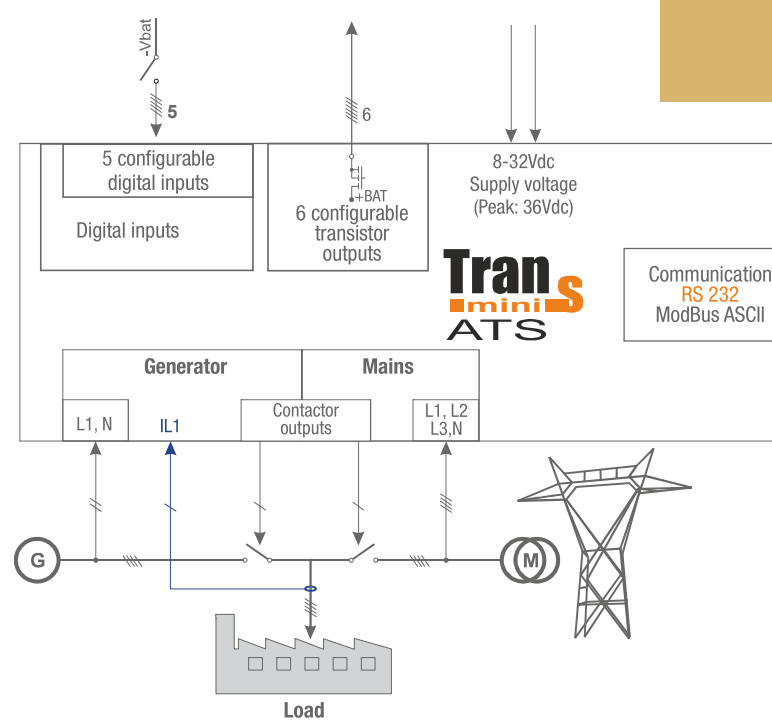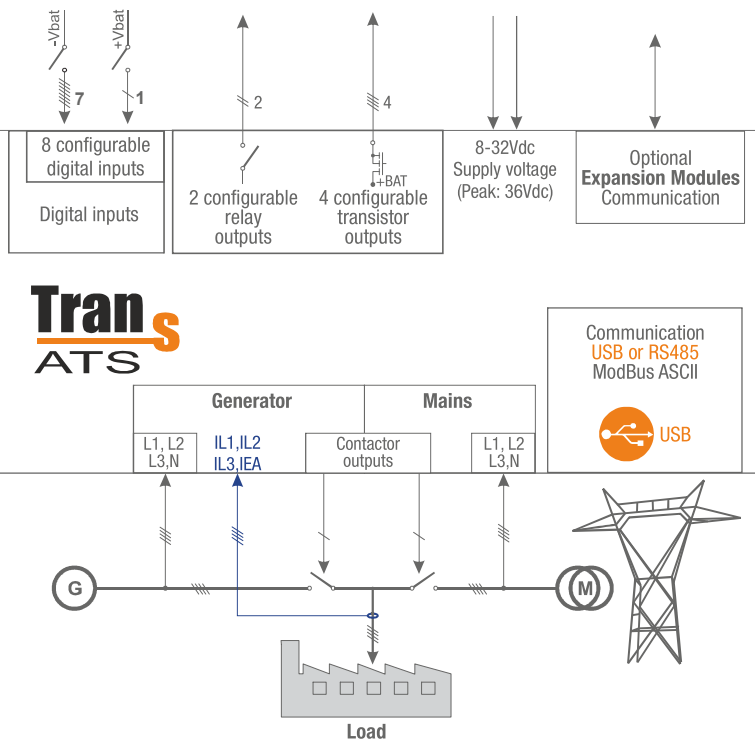
Statistics records

For Trans-ATS

Parameter configuration via USB port of your notebook

Authorised access, secure communication

Selectable second language

Mains and Generator phase sequence control

Power factor measurement for 3 phases

3 phase Load current and earth current measurement

Configurable 8 inputs and 6 outputs

Programmable weekly working permit calendar

Navigation and Shortcut buttons for easy use

Exercise at programmed time intervals

Load Test selection

Automatic transfer switching control

Auto, Manual and Test modes

Active, Reactive, Apparent power measurement

For Trans-MiniATS

Parameter configuration via RS-232 serial communication

Remote Start/Stop output

Configurable 5 digital inputs and 6 outputs

3 phase mains and 1 phase alternator voltage measurement

▶ **Pre-Alarm**
   Over / Under voltage
   Over / Under frequency
   Over / Under speed

▶ **Warning & Electrical trip**
   Over current
   Short circuit

▶ **Alarm**
   Mains breaker not opened
   Mains breaker not closed
   Generator breaker not opened
   Generator breaker not closed

▶ **Controls**
   Automatic generator start
   Load transfer to mains
   External alarm horn

▶ **Fail Monitoring**
   Emergency stop
   Speed failure
   Voltage failure
   Shutdown
   Warning

▶ **Error**
   Over / Under speed
   Battery low
   Battery high
   Over current
   Short circuit
   Engine stop
   CanBus (Trans - ATS)

Web Server
RS-485 Serial

ETHERNET
GSM

GPRS
Expansion I/O Board

–Vbat 7
+Vbat 1
2
4

8 configurable digital inputs	2 configurable relay outputs	4 configurable transistor outputs	8-32Vdc Supply voltage (Peak: 36Vdc)	Optional **Expansion Modules** Communication
Digital inputs				

Trans ATS

Communication
USB or RS485
ModBus ASCII

USB

Generator		Mains	
L1, L2 L3,N	IL1,IL2 IL3,IEA	Contactor outputs	L1, L2 L3,N

G   M

Load

–Vbat 5
6

5 configurable digital inputs	6 configurable transistor outputs	8-32Vdc Supply voltage (Peak: 36Vdc)
Digital inputs		

Trans mini ATS

Communication
RS 232
ModBus ASCII

Generator		Mains	
L1, N	IL1	Contactor outputs	L1, L2 L3,N

G   M

Load

Operating/Storage Temperature	: -20°C to + 70°C / -30°C to +80°C
Operating/Storage Humidity	: 95% max. (non-condensing)
DC Battery Supply Voltage	: 8 to 32Vdc (Peak: 36Vdc), max. operating current is 360mA

Dimensions	:229mm x 152mm x 41mm
Panel Cut-Out	: 182mm x 135mm
Protection	: Ip65 at front panel
Weight	: Approximately 0,53Kg
CT Secondary	: 5A

Dimensions	111mm x 81mm x 61mm
Panel Cut-Out	: 81mm x 70mm
Protection	: Ip65 at front panel
Weight	: Approximately 0,3Kg

Order Information	
Trans-ATS	Automatic transfer switching controller,LCD display
Trans-ATS.RS485	Automatic transfer switching controller,LCD display, RS485 communication
Trans-MiniATS.RTC	Automatic transfer switching controller, LCD display with real time clock

Tran**s** mini
pump

Auto Start Moto-Pump
Protection & Controllers

Parameter configuration via RS-232 serial communication

Log last 50 events & alarm information with measured values

Statistics records

3 resistive sender inputs for Temperature, Oil Pressure and Fuel Level

Selectable Resistive sender types; Pt-100, VDO, US, GM, Ford, Datcon, etc..

Speed sensing from magnetic pickup

Configurable 3 inputs and 3 outputs

Stop or Fuel solenoid selection

Engine control

Compatible to Diesel or Gas engines

Remote Start

▶ **Pre-Alarm**
   Engine temperature
   Oil pressure

▶ **Controls**
   Fuel and Stop solenoid
   Starter motor
   Remote Start / Stop
   Preheat
   External alarm horn

▶ **Fail Monitoring**
   Emergency stop
   Failed to start
   Low oil pressure
   High temperature
   Speed failure
   Charging fail
   Shutdown
   Warning

▶ **Error**
   Over / Under speed
   Speed loss
   Battery low
   Battery high
   Maintenance
   Engine stop
   Charge alternator
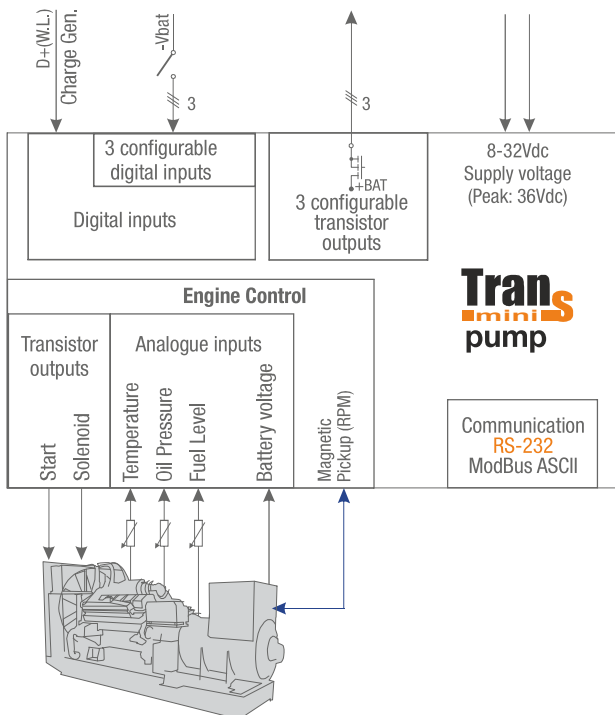
Dimensions	:111mm x 81mm x 61mm
Panel Cut-Out	: 81mm x 70mm
Protection	: Ip65 at front panel
Weight	: Approximately 0,3Kg
Operating/Storage Temperature	: -20°C to + 70°C / -30°C to +80°C
DC Battery Supply Voltage	: 8 to 32Vdc (Peak: 36Vdc), max. operating current is 360mA
Operating/Storage Humidity	: 95% max. (non-condensing)
Sender Measurement	: 0 to 1300 ohm, accuracy: 1%FS, resolution: 1 ohm

Order Information

Trans-MiniPump.RTC	Diesel and Gas engine Auto Start controller for pump applicationswith real time clock

**Manual Key Start & Engine
Protection with Key Switch**

Over / Under Voltage protection

Speed sensing from Magnetic pickup and alternator frequency

Selectable Generator, Pump and Fire Pump applications

Engine working hour counter

Configurable 1 outputs and 2 inputs

Single phase alternator voltage input

Stop or Fuel solenoid selection

Parameter configuration via RS-232 serial communication

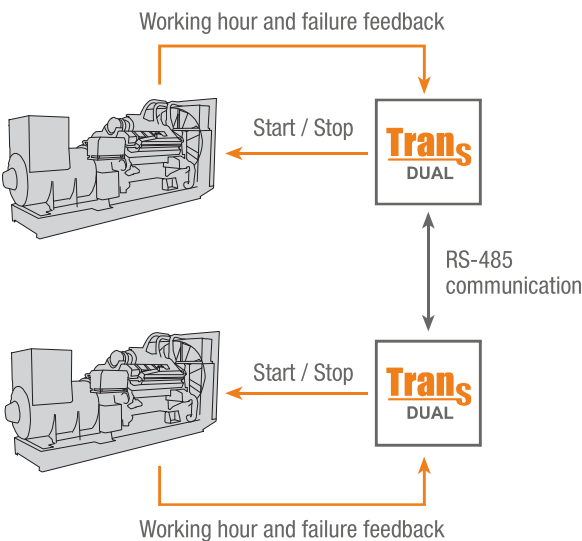|	
Dimensions	: 72mm x 72mm x 60mm
Panel Cut-Out	: 68mm x 68mm
Protection	: IP30 at front panel
Weight	: Approximately 0,3Kg
Operating/Storage Temperature	: -25°C to + 70°C / -40°C to +85°C
Operating/Storage Humidity	: 95% max. (non-condensing)
DC Battery Supply Voltage	: 8 to 32Vdc (Peak: 36Vdc), max. operating current is 360mA
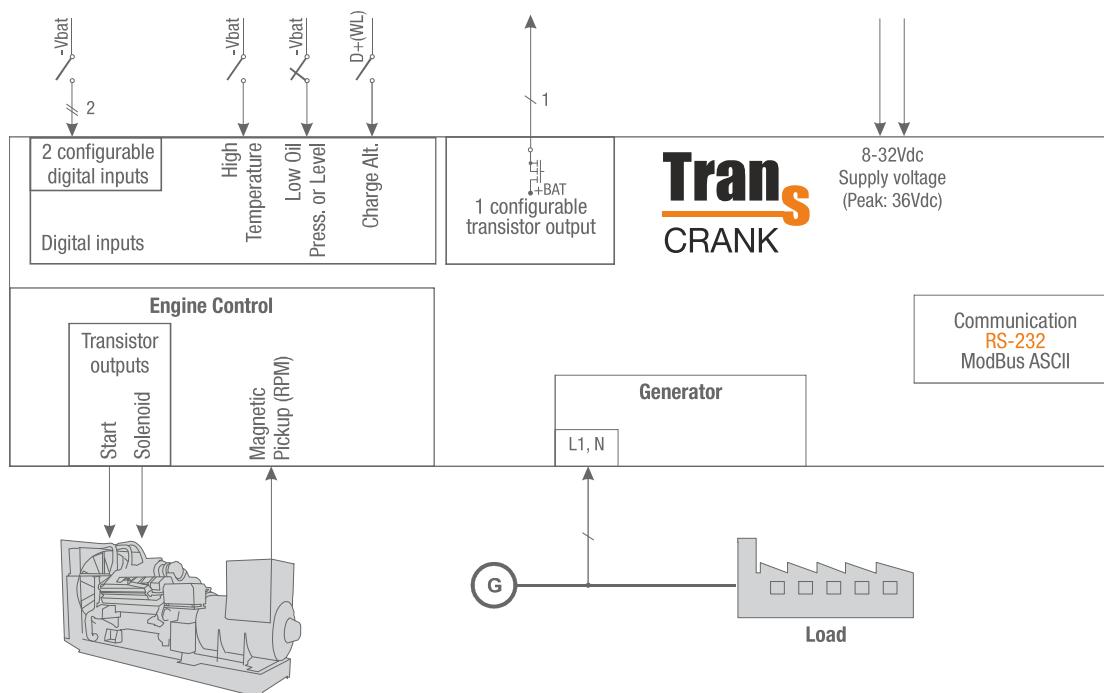
Order Information	
Trans-CRANK	Manual Start Unit wiht KEY Switch 72x72 mm. DIN size

![EMKO energy logo]

Manual Key Start & Engine Protection with Key Switch

Over / Under Voltage protection

Speed sensing from Magnetic pickup and alternator frequency

Suitable for Diesel or Gasoline engine

Selectable Generator, Pump and Fire Pump applications

Crank disconnection from, Alt. voltage, Charge Alt, Speed, Frequency and Oil pressure

Engine working hour counter for Trans-KEY.DISP model

Configurable Choke output and Choke time for Gasoline engine

Parameter configuration via RS-232 serial communication

Configurable 2 outputs and 2 inputs

Single phase alternator voltage input

Configurable Fail Safe mode

Stop or Fuel solenoid selection

Remote Start/Stop input

Dimensions	: 72mm x 72mm x 52mm
Panel Cut-Out	: 68mm x 68mm
Protection	: Ip65 at front panel
Weight	: Approximately 0,21Kg
Operating/Storage Temperature	: -25°C to + 70°C / -40°C to +85°C
Operating/Storage Humidity	: 95% max. (non-condensing)
DC Battery Supply Voltage	: 8 to 32Vdc (Peak: 36Vdc)
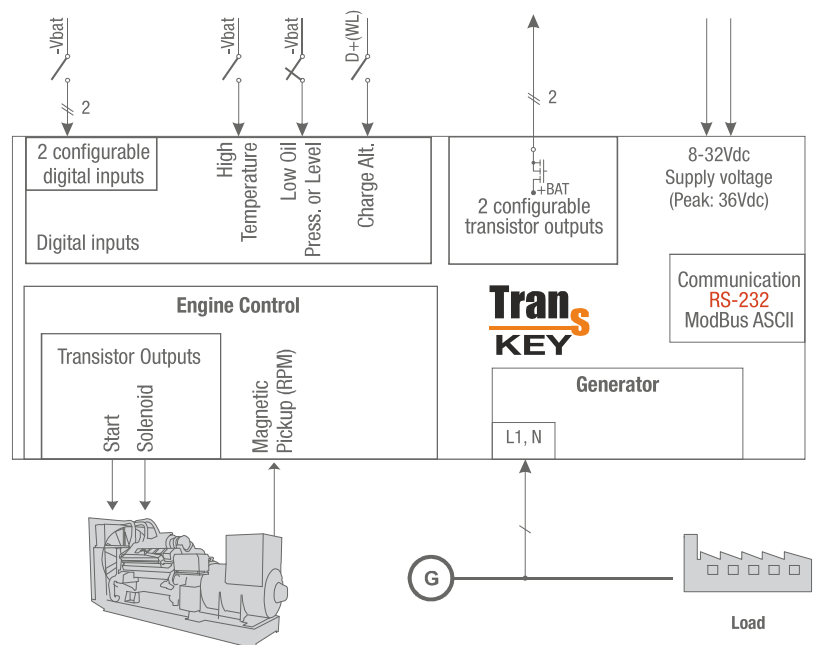
Order Information

Order Information	
Trans-KEY	Manual and Remote Start Unit wiht KEY Switch, 72x72DIN Size, Transistor outputs without display
Trans-KEY.DISP	Manual and Remote Start Unit wiht KEY Switch, 72x72DIN Size, Transistor outputs with display

EMKO energy

Tran**s** DUAL

**Trans Series
Failure and time interval
dual working**

Dual working

Easy plugging to Trans-AMF and Trans-Auto controllers
Dual GenSet working by time interval
Priority selection
When the failure situation, automatically start to another Genset
Equal aging by working hours
Definable time interval period
Load transfer without power interruption

Working hour and failure feedback

Start / Stop → Tran**s** DUAL

RS-485 communication

Start / Stop → Tran**s** DUAL

Working hour and failure feedback

Products		
	Tran**s** AMF	Tran**s** AUTO
Trans-Dual	+	+

Order Information	
Trans-Dual	Failure and time interval dual working Module

Tran**s** I / O

**Trans Series
Expansion
I/O Module**

Expansion Board

Easy plugging to all Trans series controllers
Configurable 8 İnputs and 8 outputs
Each Input and Output configurable by user or select from list
Selectable hardware type of inputs by +Ve or -Ve
Selectable NO or NC input polarity
Selectable NO or NC output polarity
Adjustable input active delay
Can be used together wiht remote monitoring modules

+Ve or -Ve (×8)

| 8 configurable digital inputs | Expansion Modules Communication |
| Digital inputs | |

8 Configurable Outputs
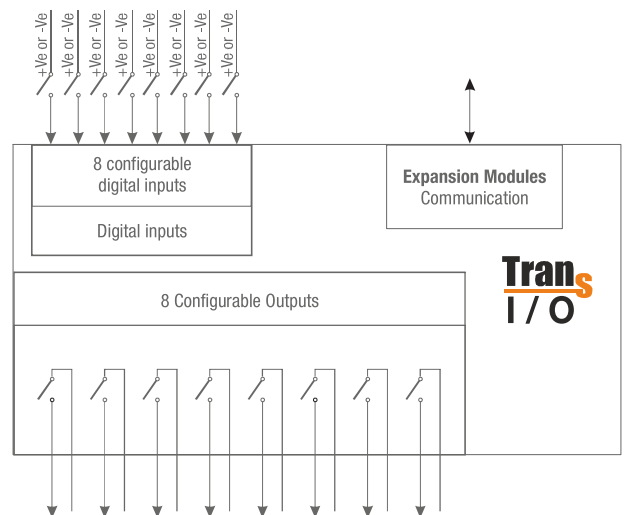
Tran**s** I / O

Products					
	Tran**s** AMF	Tran**s** AUTO	Tran**s** ATS	Tran**s** SYNCRO	Tran**s** MAINS	Tran**s** AMF SYNCRO
Trans - I/O	+	+	+	+	+	+

Order Information	
Trans-I/O	Expansion Input / Output Module for Trans Series Controller

Local Remote Control System

Local Remote Control & Visualisation

Remote Control & Visualisation

Remote HMI Control Panel for Gen-Set

GenSets Local remote control and display function

"Remote / Local'' selection

ModBus RS-485 communication

Same output configuration between Local device with Remote device

arameter configuration via Remote device (Control function)

Read measurement values with remote device (Display function)

Start, Stop function via Remote device

Ethernet
Communication

Ethernet LAN

Ethernet Communication

Load

BUSBAR

Generator-1   Generator-2   Generator-3   Generator-4

Trans midi S AMF
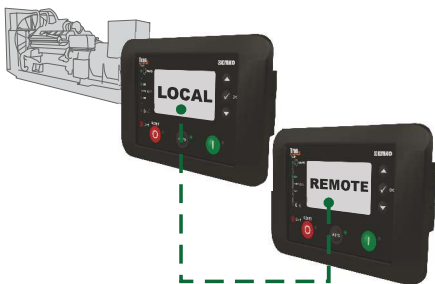
Local Remote Control

Via ModBus RS-485

Products		
	Trans midi S AMF	Trans midi S AUTO
Local Remote Control	+	+

Custom designed 10.1" wide Touch TFT Screen

Gen-Set visualisation and control by EMKO HMI panel

User-designed touch TFT screens

Easy viewing and control with advanced visual screens

Email notification when the alarm situation

Multiple GenSets visualisation and control

Measured values and statistic analysis

Ethernet or RS-485 communication with HMI panel

Max. Distance	Access Interface	Connection Type	Communication Modul	Control Panel	Management			Analysis		Alarm Notice		User		Cellular Location	Android & Iphone Applications
					Remote Visualisation	Control	Programming	Data Logging	Graphic View	Sms	E@mail	Single Access	Multi Access		
2,5 mt.	PC Software	USB	N/A		●	●	●	–	–	–	–	●	–	–	–
1000 mt.	PC Software	RS-485	Trans-485		●	●	●	–	–	–	–	●	–	–	–
GSM	PC Software	SMS	Trans-Messenger		–	●	●	–	–	●	–	●	–	–	–
GPRS	PC Software	GPRS	Trans-GPRS	Trans-AMF	●	●	●	–	–	O 1	–	●	–	●	–
	Embedded WEB browser	Ethernet	Trans-Web_Ethernet	Trans-AUTO	●	●	●	●	●	–	●	●	●	–	–
	Embedded WEB browser	GPRS/Ethernet	Trans-Web_GPRS	Trans-SYNCRO	●	●	●	●	●	●	●	●	●	–	–
	Emko Web Management	Ethernet	Trans-Web_Ethernet		●	●	–	●	●	–	●	●	●	–	●
	Emko Web Management	GPRS/Ethernet	Trans-Web_GPRS		●	●	–	●	●	●	●	●	●	–	●
	Emko Web Management	GPRS	Trans-GPRS		●	●	–	●	●	–	●	●	●	●	●

O 1 : GPRS modem connected to the PC and SIM card with SMS packed is required.
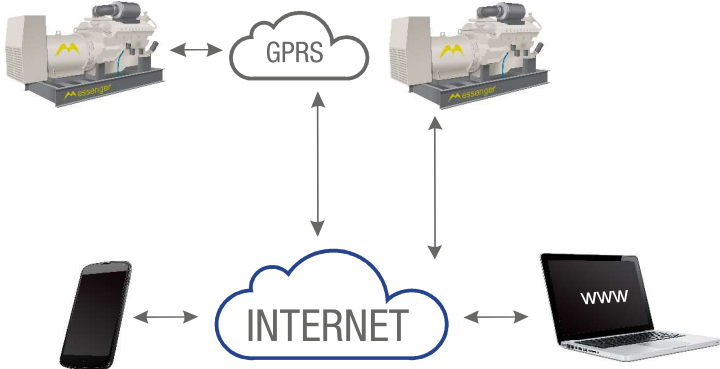
Tran**s** WEB

Trans Series
Embedded Web Server
Communication Module

Web Server

Easy plugging to all Trans Series controllers
Ethernet or GPRS communication
Built-in http web pages
Compatible to Trans-Cloud remote Gen-Set Management System
Remote Genset control by Smart phones and PC
E-mail sending when the alarm situation
4Gb SD memory
User definable data logging period
Alarm abservation and archive
DHCP supported

Tran**s** GPRS

Trans Series
GPRS
Communication Module

Easy plugging to all Trans Series controllers
GPRS communication
Call-Back selection by GPRS
GPS information by GPS model
Maintenance management of multiple Gen-Sets from a central computer
Alarm observation and archive
DHCP supported
ModBus over TCP/IP communication protocol
Suitable for telemetry projects

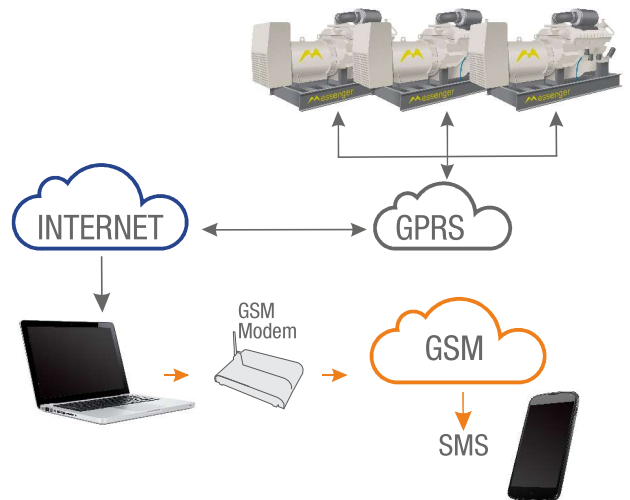| Products					
Tran**s** AMF	Tran**s** AUTO	Tran**s** ATS	Tran**s** SYNCRO	Tran**s** MAINS	Tran**s** AMF SYNCRO
Trans-WEB +	+	+	+	+	+

Order Information	
Trans-WEB_Ethernet	Remote Control & Visualisation Module communicate by Ethernet with **Trans-Cloud** and **Trans-GenAgent** SCADA software
Trans-WEB_GPRS	Remote Control & Visualisation Module communicate by GPRS & Ethernet with **Trans-Cloud** and **Trans-GenAgent** SCADA software

Products					
Tran**s** AMF	Tran**s** AUTO	Tran**s** ATS	Tran**s** SYNCRO	Tran**s** MAINS	Tran**s** AMF SYNCRO
Trans-GPRS +	+	+	+	+	+

Order Information	
Trans-GPRS	Remote Control & Visualisation Module, communication by GPRS

Tran**s**
485

RS-485
Serial

GENCHARGER

Easy plugging to all Trans Series controllers
RS-485 serial ModBus communication
Call-Back selection by Serial network
Maintenance management of multiple Gen-Sets from a central computer
Alarm observation and archive
Easy adjustable ID adress
Max. 247 device can be add on serial network
500V galvanic insulation

3A or 5A output for 12Vdc and 24 Vdc battery
90...290Vac wide range supply voltage
Float charging
67 Khz switching
Constant output voltage
Corrent limiting
Fail (Relay) output
High Current and short circuit protection
Reserve connection protection
High voltage protection (only on S+ series)
High temperature protection
Wide range operation voltage
Suitable for Lead Acid battery
%95 efficiency
Boost input for quick charging
Easy replacable fuse
Flame resistance plastic box

RS-485
RS-232

SMS
GSM
GSM
Modem

Products			
	Tran**s** AMF	Tran**s** AUTO	Tran**s** ATS
Trans-485	+	+	+

Order Information	
Trans-485	Remote Control & Visualisation Module,communication by RS-485 wiht Trans-GenAgent SCADA software

Order Information	
GENCHARGER-312S	SMPS Battery Charger, 3A Output for 12Vdc battery, 90-290 Vac supply voltage
GENCHARGER-512S	SMPS Battery Charger, 5A Output for 12Vdc battery, 90-290 Vac supply voltage
GENCHARGER-324S	SMPS Battery Charger, 3A Output for 24Vdc battery, 90-290 Vac supply voltage
GENCHARGER-524S	SMPS Battery Charger, 5A Output for 24Vdc battery, 90-290 Vac supply voltage

Tran**s**
Gen-Agent

**Remote
Visualisation & Control
SCADA Sofware**

Web
Management

**Remote Genset
Management
System**

ETHERNET | GSM | GPRS | USB | RS-485 Serial

Web Management

Automatic device recognition for Trans series controllers
Remote control & visualisation for multiple Gen-Sets
Communicate by Dial Up, Ethernet, Internet, GPRS, GSM, RF and Serial
USB communication for single Gen-Set remote control & visualisation
"Auto Call'' for 3 times / daily
Alarm and event Archive
Configurable and recordable new language by user
Authorised access, secure communication
Windows XP, Vista, 7 compatible

Easy remote access to GenSet all over the word
Unlimited users for remote access to GenSet
Server - client based solution
Multiple GenSets visualisation
Measured values and statistic analysis
Email and SMS notification when the alarm stuation
Html interface by internet
Full protection for accessing
No need to download any software
GenSet visualisation and control by PC/netbook, smartphone, etc.
Multiple GenSets situations shows on the map

▶ **Observation**
  Measurement values
  J 1939 ECU values
  Power and Energy values
  Event Logs
  Analogue View
  Archive database
  Outputs status
  Alarm status
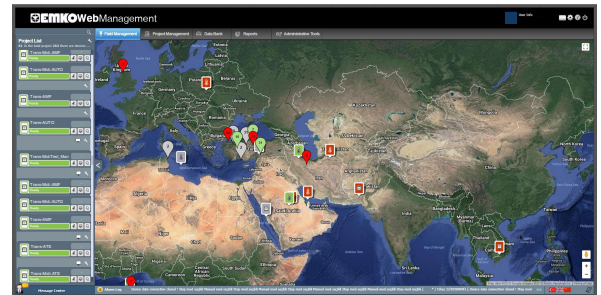 Online device status
  Red or Yellow Alarms
  Maintenance Alarm

▶ **Control**
  Modes changing
  Engine Start / Stop
  Breakers control
  Operator parameters changing
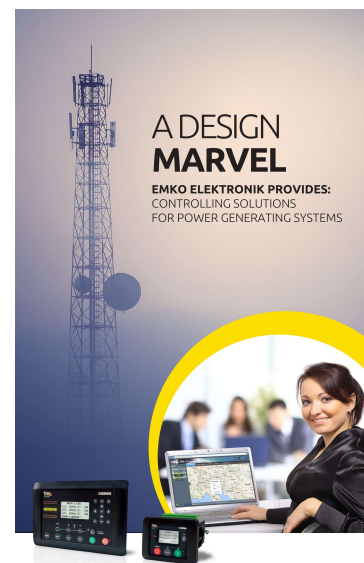 Technician parameters changing
  Device measurement values adjusting

A DESIGN
MARVEL

EMKO ELEKTRONIK PROVIDES:
CONTROLLING SOLUTIONS
FOR POWER GENERATING SYSTEMS

Order Information	
Trans-GenAgent	Remote Control & Visualisation SCADA software

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