

1TGE120021R0810

MNS Digital Gateway for Modbus and Ethernet TCP/IP

CONTROLLED ENGINEERING COPY

Verify 1TGE120021R0810, the four RS-485 segment assignments, every M10x address, host protocol selection, Ethernet parameters and 24 VDC supply before replacement; restore communications one segment at a time and confirm all 128 possible device positions.

INSTALLATION IDENTITY	REQUIRED VALUE
Complete model	1TGE120021R0810
Manufacturer part	1TGE120021R0810
Hardware type	1TGE120021R0810
System family	ABB MNS Digital low-voltage switchgear
HS code	8537101190



APTER POWER SALES TEAM

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01 PRE-INSTALLATION PLAN

- 1

Verify the complete 1TGE120021R0810 marking and its assigned ABB MNS Digital low-voltage switchgear position before work.
- 2

Place the connected motor-control-center data concentration process in the approved maintenance state.
- 3

Isolate applicable power and four modbus rtu segments with serial or ethernet supervisory communication field energy before disconnecting conductors.
- 4

Record connector, conductor, address, firmware and software identities before removal.
- 5

Use ESD controls and protect keyed interfaces, exposed contacts and electronic assemblies.

MATCHED HARDWARE

- ABB MNS Digital switchgear
- M10x motor controllers
- RS-485 Modbus segments
- DCS or supervisory Ethernet/serial host

INSTALLATION CONTROL RECORD

CONTROL ITEM	REQUIRED RECORD
Identity	1TGE120021R0810 / 1TGE120021R0810 recorded
Physical interface	ABB MNS Digital switchgear
Companion check	M10x motor controllers
Functional proof	Connects as many as 128 M10x devices
Application test	Motor-control-center data concentration

02 WIRING & INTERFACE CHECKS

CHECK ITEM	REQUIRED VALUE
ABB identity	1TGE120021R0810
Field protocol	Modbus RTU over RS-485
Host interfaces	RS-422 and Ethernet TCP/IP IEEE 802.3
Modbus RTU ports	4
Maximum connected devices	128; 32 per port
Supply	24 V DC, 19 to 31 V DC
Typical current	800 mA
Maximum current	1000 mA
Operating temperature	0 to 55 degC
Storage temperature	-20 to +70 degC
Ingress protection	IP51
MTBF	46 years at 40 degC

FIELD NOTE

Verify 1TGE120021R0810, the four RS-485 segment assignments, every M10x address, host protocol selection, Ethernet parameters and 24 VDC supply before replacement; restore communications one segment at a time and confirm all 128 possible device positions.

03 COMMISSIONING WORKFLOW



COMMISSIONING ACCEPTANCE EVIDENCE

EVIDENCE ITEM	ACCEPTANCE CONDITION
Identity	1TGE120021R0810 / 1TGE120021R0810 recorded
Physical interface	ABB MNS Digital switchgear
Companion check	M10x motor controllers
Functional proof	Connects as many as 128 M10x devices
Application test	Motor-control-center data concentration

04 RETURN-TO-SERVICE RECORD

- ☐
- Confirm the installed ABB MNS Digital switchgear and M10x motor controllers against the approved project.

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VERIFICATION RECORD

PRODUCT IDENTITY	1TGE120021R0810
INSTALLED POSITION	Documented ABB MNS Digital low-voltage switchgear position
VERIFICATION METHOD	Controlled inspection and functional test
RELEASE RECORD	Final diagnostic state retained before service

RELATED PRODUCTS ON APTER POWER

MODEL	SYSTEM ROLE	APTER POWER PAGE
Bently Nevada 330101-00-16-10-02-00	Related industrial automation product	View Bently Nevada 330101-00-16-10-02-00 page
Bently Nevada 330101-00-12-10-02-00	Related industrial automation product	View Bently Nevada 330101-00-12-10-02-00 page
Bently Nevada 330101-00-08-10-02-05	Related industrial automation product	View Bently Nevada 330101-00-08-10-02-05 page
Bently Nevada 330101-00-08-10-02-00	Related industrial automation product	View Bently Nevada 330101-00-08-10-02-00 page
ABB 3BHE022293R0101-PCD232 A	Related industrial automation product	View ABB 3BHE022293R0101-PCD232A page
Bently Nevada 330101-00-08-05-02-00	Related industrial automation product	View Bently Nevada 330101-00-08-05-02-00 page
Siemens 6SE7090-0XX87-4AH0	Related industrial automation product	View Siemens 6SE7090-0XX87-4AH0 page
Siemens C98043-A7109-L100	Related industrial automation product	View Siemens C98043-A7109-L100 page

SOURCE IDENTIFIERS

ABB MNS Digital with M10x Interface Manual Modbus
1TGC908004M0201, release 1.1

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