

Technical Specification

Item	Description
(1) Digital Input (DC100V)	
Interface	Parallel Wire
Source	70 Vdc - 110 Vdc
Isolation	Photo-coupler
(2) Digital Input (DC24V)	
Interface	Parallel Wire
Source	16 Vdc - 29 Vdc
Isolation	Photo-coupler
(3) Digital Output(DC 100V PHOTO MOS-output)	
Interface	Parallel Wire
Driver Type	Relay
Current Rate	1.3A/200V
Coil Drive Voltage	5V
(4) Analogue Input	
Voltage Input	0-10 Vdc, Input Impedance over 10kΩ
PWM Input	26Vdc Pulse Width Modulation signal
Pulse Counter(S.G)	Input Impedance over 10kΩ
Isolation	Isolated Power and Photo-coupler
(5) Serial Communication (RS485/RS422)	
Interface	Twisted Pair Screened Cable (2Wire, 4Wire)
Transfer Mode	Multi-drop, Half / Full Duplex Communication
Transfer Rate	9,600 / 19,200 / 38,400 / 115,200 bps
(6) Serial Communication (20mA Current Loop)	
Interface	Twin Twisted & Screened Cable
Transfer Mode	Single Ended, Half / Full Duplex Communication
Transfer Rate	4,800bps / 9,600bps
(7) Train Bus(TCN)	
Interface	Twisted Pair Screened Cable
Transfer Mode	Multi-drop, Half Duplex Communication
Transfer Rate	1Mbps, 1.5Mbps, 2Mbps



"Woojin Industrial Systems Co., Ltd.
produces the best customized product."

TGMS

Operation support

- Automated operation (Driverless operation)
- Status display for supporting operator and crew (Driver operation available)
- Failure and Troubleshooting display

Control support

- HVAC control
- Fire detection control
- Communication/Display control

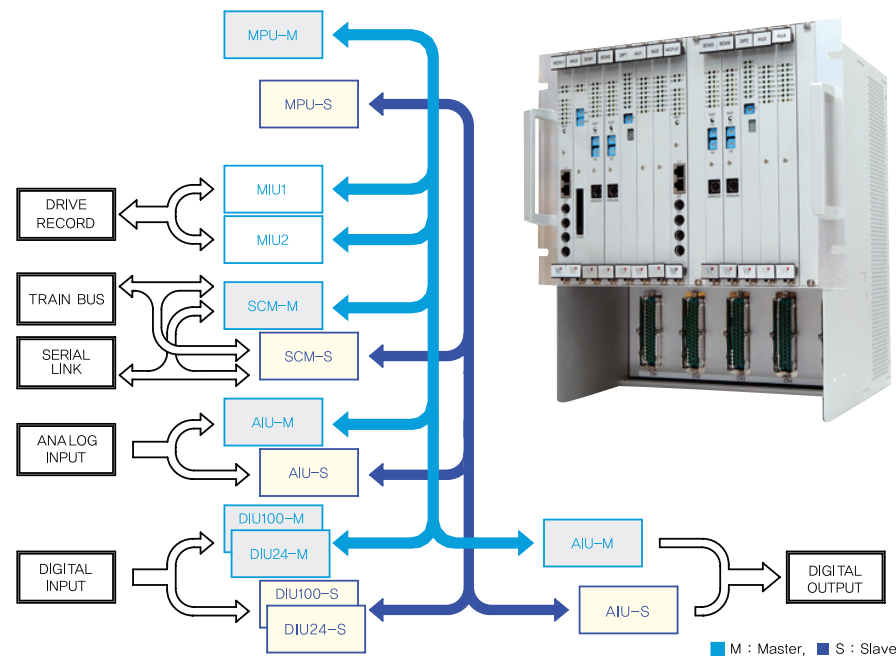
Maintenance support

- Operation data record
- Failure data record

Inspection support

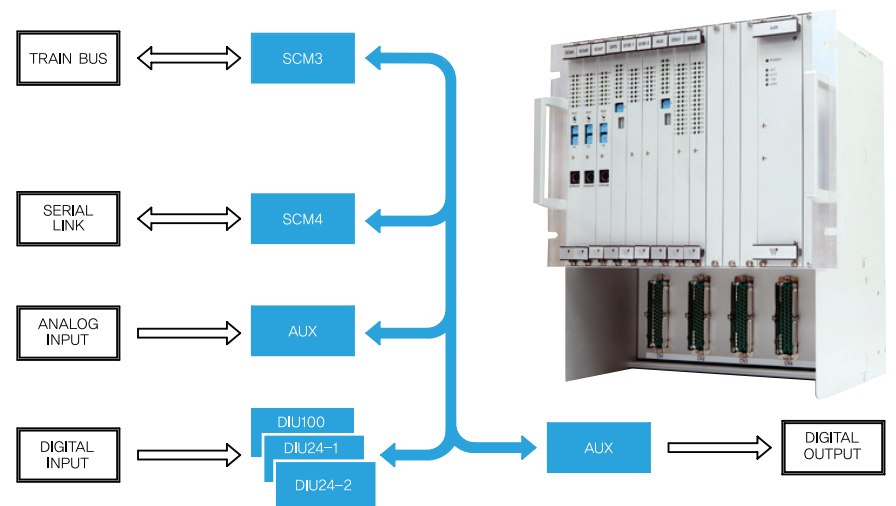
- Daily inspection
- Monthly inspection
- Pre-departure test

Train Computer



- **CPU**
XPC860(Motorola)
- **Train Bus**
2Mbps(SL-NET)
- **Back plane**
VME Bus
- **Serial link**
RS422(1ch), RS485(5ch)
- **Input signal**
100V(24ch), 24V(40ch)
- **Output signal**
100V(26ch)
- **Input voltage**
100Vdc (70V ~110V)
- **Redundancy for hot standby**

Car Computer



- **CPU**
TMS320c32(TI)
- **Train Bus**
2Mbps(SL-NET)
- **Back plane**
VME Bus
- **Serial link**
RS422(2ch), RS485(8ch)
- **Input signal**
100V(32ch), 24V(72ch)
- **Output signal**
100V(32ch), 24V(12ch)
- **Input voltage**
100Vdc (70V ~110V)

Display Unit

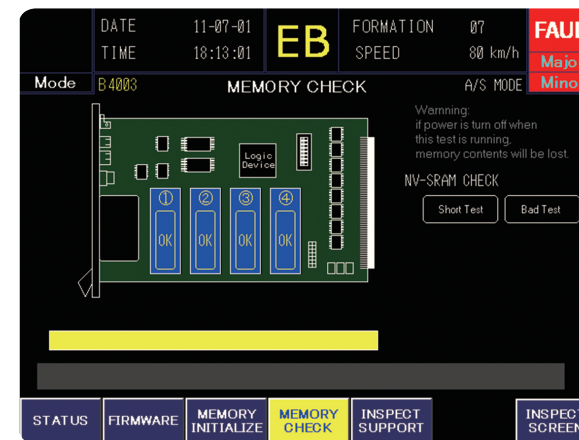
- **Display type**
TFT-Color LCD
- **Touch panel**
Resistive screen
- **Display size**
12.1 inch
- **Display color**
65,536 Color
- **Input voltage**
24Vdc (19.2V ~ 28.8V)



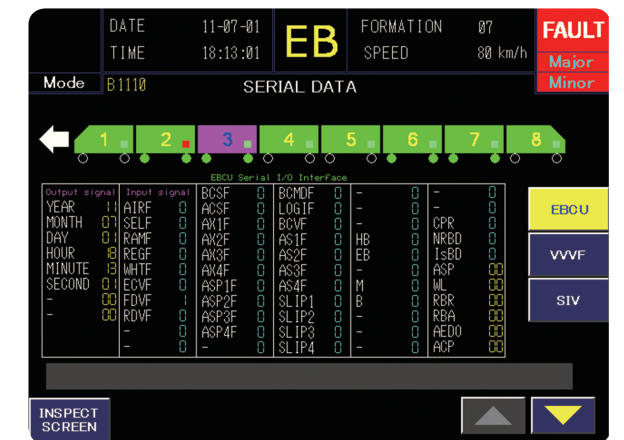
TCMS

HMI (Human Machine Interface)

The HMI of TCMS is designed in order to display train status on all screens commonly and shows operation status of primary device directly.



Train Status Display



Fault Record Display

