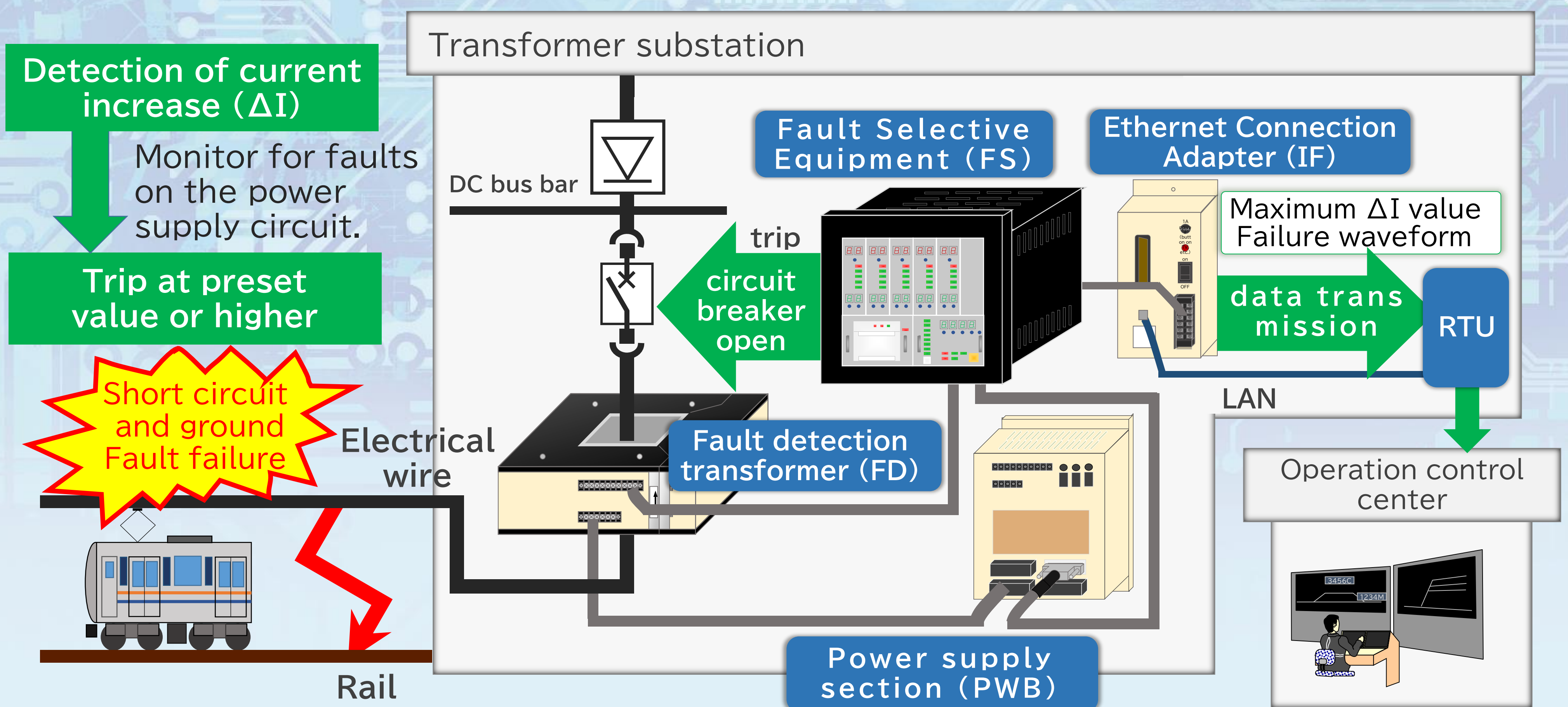


Fault selective device for DC feeder circuits (With fault waveform and maximum ΔI transmission function)

This device detects the current increase (ΔI) when a short circuit or ground fault occurs on a feeder circuit for a DC electric railway, and transmits a signal for the circuit breaker to open. A function to transmit the fault waveform and the maximum ΔI value can be added upon request.



Purpose and role of the device

This system focuses on the difference in the current increase (ΔI) between the train load current and the fault current, and by constantly monitoring ΔI , it selects and detects only the fault current and outputs an open signal to the DC high-speed circuit breaker to immediately stop the electricity supply. In addition, the system has a function to transmit the presence or absence of abnormalities in data transmission, fault current waveform, and maximum ΔI value directly to a sub-station of a distant monitoring device (far system) without going through the distribution panel, which enables analysis of faults in power commands, etc., and contributes to reducing downtime.

Transmission of maximum ΔI value and fault waveform

When the maximum ΔI value is updated, the ΔI value is transmitted to the power command.

When a fault is detected and a breaker open signal is sent, the fault current waveform is transmitted to the power command.

Time Synchronization Function

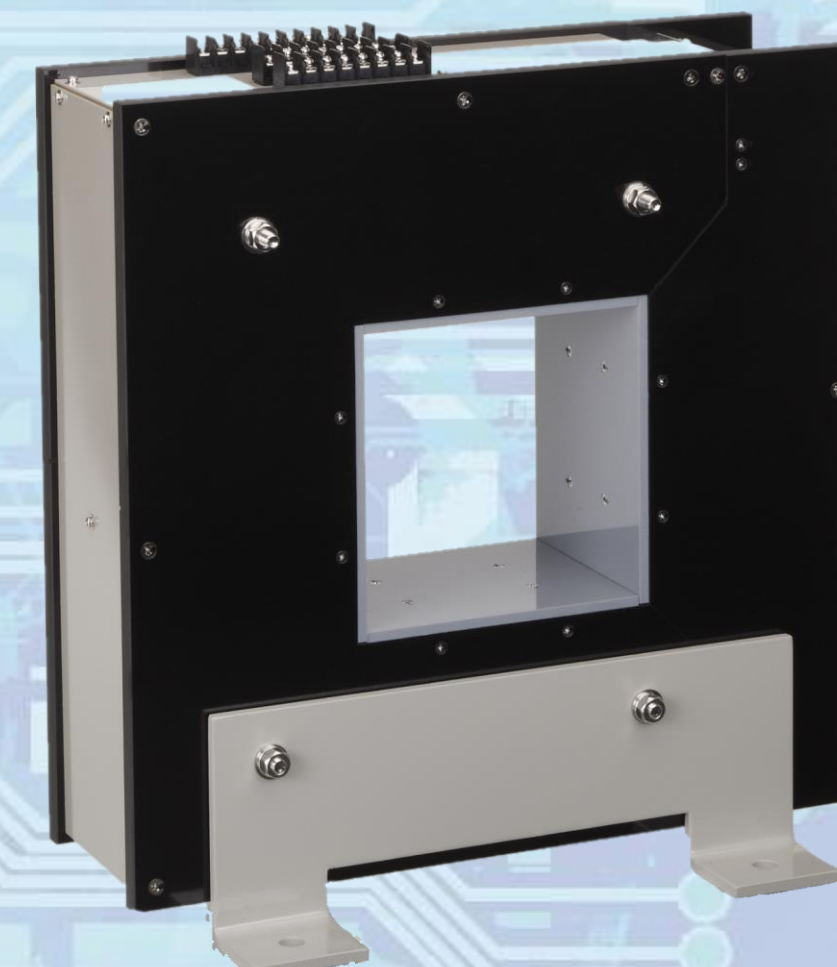
A new function has been added to synchronize the time in the fault selector with the remote terminal unit.



type	MEFK4-U2-1(FS) / DF-8DS(FD) TS-13-1T2(IF) / SF-3ST2(PWB)
Mounting Unit (Max. number of units to be mounted)	ΔI unit 5 units (single system)/control unit 1 unit/printer unit 1 unit (option) ※Fault waveforms are recorded for 10 phenomena and can be printed with the printer unit.
Rated current	Failure detection rating 4000A
regulating current	200A division of regulated current 1000A to 4000A
accuracy	The detection margin of each setpoint is within $\pm 2.5\%$ at $\alpha = 50 \pm 5$
possession function	ΔI separation function Base current characteristics Regenerative lapse characteristics Section compensation function Sensitivity change function at re-closing Shared line switching function
transmitted data	(1) Waveform data: Current waveform data at the time of failure (all lines). Current value between 100ms before and 150ms after fault detection (0.8ms sampling) (2) Maximum ΔI value: The maximum value of ΔI that has occurred in the past. The maximum value of ΔI that the fault selector has detected so far is transmitted (all lines). (3) Time setting data: Time setting from remote terminal unit to Ethernet connection adapter It is possible to set the device time of the fault selection device by sending data. (4) Inspection data: For checking the communication between the remote terminal unit and the Ethernet connection adapter.
communication system	Ethernet 100BaseT, 10BaseT (LAN)
control power supply	DC 100V/110V (variation range 80V to 132V)
Dimensions/ Weight	[FS] H370mm x W330mm x D387.5mm / approx. 17kg [FD] H400mm x W400mm x D125mm / Approx. 16kg (Primary through hole: 150mm x 150mm) [IF] H224mm x W100mm x D275mm / Approx. 16kg [PWB] H260mm x W430mm x D247mm / approx. 11kg



MEFK4-U2-1(FS)



DF-8DS(FD)

