

# Product data sheet

Specifications



## MiCOM P143-Feeder relay-60 TE- Rack mounting - 24Inputs/18Outputs

P143---J-N---L

### Main

<b>Range of product</b>	MiCOM P14x
<b>Product or component type</b>	Protection relay
<b>Relay application</b>	Feeder
<b>Product reference</b>	P143
<b>Mounting case size</b>	60TE
<b>Power supply</b>	24...32 V DC 48...110 V DC 110...250 V DC 110...240 V AC
<b>Measuring inputs</b>	: current input CT...X/5 A and X/1 A 5 : voltage input VT 3 : voltage input VT 4
<b>Max. number of Digital Inputs (DI)</b>	24
<b>Discrete input voltage</b>	24...250 V DC universal programmable voltage thresholds
<b>Max. number of Digital Outputs (DO)</b>	18 relay output
<b>Communication ports</b>	RJ45 1 optional RJ45 2 optional RJ45 3 optional LC 2 optional RS485 1 optional RS232 1 front
<b>Communication protocols</b>	IEC 61850 ed. 1 IEC 61850 ed. 2 option Modbus option DNP3 option
<b>Redundancy communication port protocol</b>	RSTP PRP HSR Dual IP
<b>Protection functions</b>	Directional active overpower 32P Directional low power 32L Undercurrent 37 Load loss 37 Sensitive phase & earth undercurrent 37N Thermal overload protection 38/49T Field loss (underimpedance) 40 Negative sequence overcurrent 46OC Negative sequence thermal 46T Broken conductor 46BC Negative phase sequence 47 Thermal overload for machines 49 Phase overcurrent 50/51P Breaker failure 50BF Earth fault overcurrent 50N/51N Voltage-dependent overcurrent 51V

Disclaimer: This documentation is not intended as a substitute for and is not to be used for determining suitability or reliability of these products for specific user applications

Undervoltage protection 27  
 Overvoltage protection 59  
 Residual overvoltage 59N  
 Restricted earth fault 64  
 Directional earth fault 67N  
 Directional phase overcurrent 67P  
 Earth fault wattmetric 67W  
 Logic selectivity 68  
 Overfrequency 81O  
 Underfrequency load shedding 81P  
 Rate of change of frequency 81R  
 Underfrequency 81U  
 Lockout 86  
 CT supervision CTS  
 Trip circuit supervision TCS  
 VT supervision VTS  
 Switch ON to fault (SOTF)

**Measurement functions** Current phase to phase or phase to neutral  
 Voltage phase to phase or phase to neutral  
 Power

**Max. number of setting groups** 4

**Monitoring functions** Trip circuit supervision 74  
 Circuit breaker monitoring  
 Relay self-monitoring

**Connections - terminals** Ring terminal (digital input)  
 Ring terminal (digital output)  
 Ring terminal (current transformer)  
 Ring terminal (voltage transformer)

## Complementary

**Time synchronisation protocol** IRIG-B  
 PTP

**Software name** Easergy Studio

**Display type** and LCD 3 lines

**Number of key** 2 hot key

**Local signalling** 8 x LED red programmable  
 4 x LED function

**Height** 177 mm

**Width** 483 mm

**Depth** 270 mm

**Net weight** 14 kg

## Environment

**Electromagnetic compatibility** Magnetic field at power frequency level 5 conforming to IEC 61000-4-8  
 Immunity to conducted interference caused by radio-electrical fields level 3 conforming to IEC 61000-4-6  
 Radiated radio-frequency electromagnetic field immunity test level 4 conforming to IEC 61000-4-3 2020  
 Immunity to radiated radio-electrical interference class 3 conforming to EN/IEC 60255-22-3  
 Surge immunity test class 3 conforming to IEC 61000-4-3  
 Surge immunity test conforming to EN/IEC 60255-26  
 Immunity to electrostatic discharge conforming to IEC 61000-4-5  
 Immunity to electrostatic discharge conforming to EN/IEC 61000-4-2  
 Immunity to electrostatic discharge conforming to IEC 60255-22-2  
 Radiated emission class A conforming to CISPR 22

**Mechanical robustness** Vibrations (level: class 2) conforming to IEC 60255-21-1  
 Shocks (level: class 2) conforming to IEC 60255-21-2  
 Seismic tests (level: class 2) conforming to IEC 60255-21-3

**Climatic withstand** Temperature variation conforming to EN 60068-2-1  
 Temperature variation conforming to EN/IEC 60068-2-2  
 Humidity resistant conforming to IEC 60068-2-78  
 Humidity resistant conforming to IEC 60068-2-14  
 Humidity resistant conforming to IEC 60068-2-30

**Ambient air temperature for operation** -25...55 °C

**Ambient air temperature for storage** -25...70 °C

**IP degree of protection** IP54 conforming to IEC 60529  
 IP10

<b>Relative humidity</b>	0...93 % at 40 °C, 56 days 0...93 % at -25...55 °C, 5 cycles
<b>Maximum operating altitude</b>	<= 2000 m
<b>Protective treatment</b>	Partial coating conforming to EN 60068-2-52:severity 3 Partial coating conforming to EN 60068-2-60 Partial coating conforming to EN 60068-2-42 Partial coating conforming to EN 60068-2-43

## Packing Units

<b>Unit Type of Package 1</b>	PCE
<b>Number of Units in Package 1</b>	1

**Recommended replacement(s)**