FPC 200 Presentation

NEO 3000

NEO 3000 Series of protection relays

Base
Industrial or Power distribution applications

FPC 200 series

Current protections for MV and LV Substation, Transformers and Motors

OR

Voltage and **frequency** protections for Busbar

Demanding industrial and power distribution applications

FPC 400 series

Current, **Voltage** and **Frequency** protections for MV and LV Substations, Transformers, Capacitors, Busbars and Motors

Custom power distribution applications

FPC 680 series

Current, Voltage and **Frequency** protections for MV Substations, Transformers, Capacitors, Busbars and Motors

**LV – low voltage, MV – medium voltage*

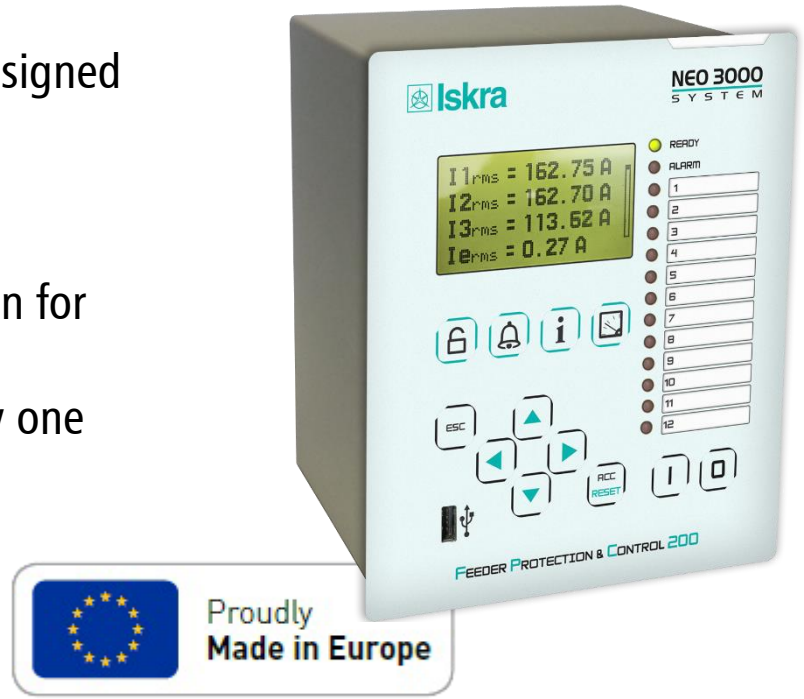
FPC 200 | Brief description

FPC 200 is a protection relay designed and made by Iskra d.d., EU.

FPC 200 is a modular microprocessor type protection relay designed for LV / MV industrial environment or power distribution with current **or** voltage protection.

Robust design and easy mounting made FPC 200 best solution for integration into any demanding environment.
Commissioning and setting is made simple and fast with only one USB.

Number of I/O is flexible.

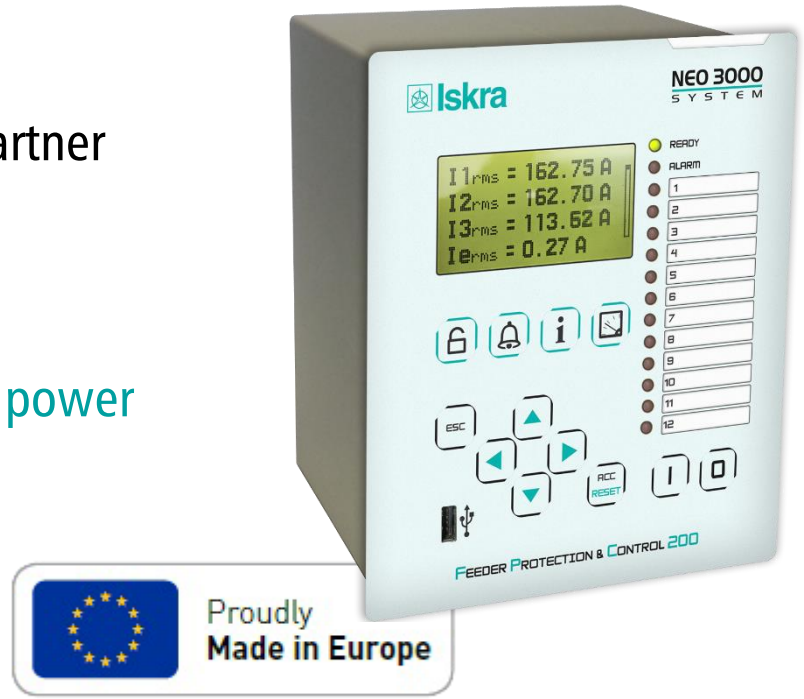


FPC 200

Protect and control devices with Iskra

- Reliable and effective protection relay
- Modularity provides cost effective solution
- Remote control and monitoring
- Easy and fast commissioning
- High quality EU production
- Tradition of protection relays makes Iskra reliable partner
- Support by Iskra d.d.

- Parametering via USB, connection without auxiliary power supply
- Connect to relay directly from notebook

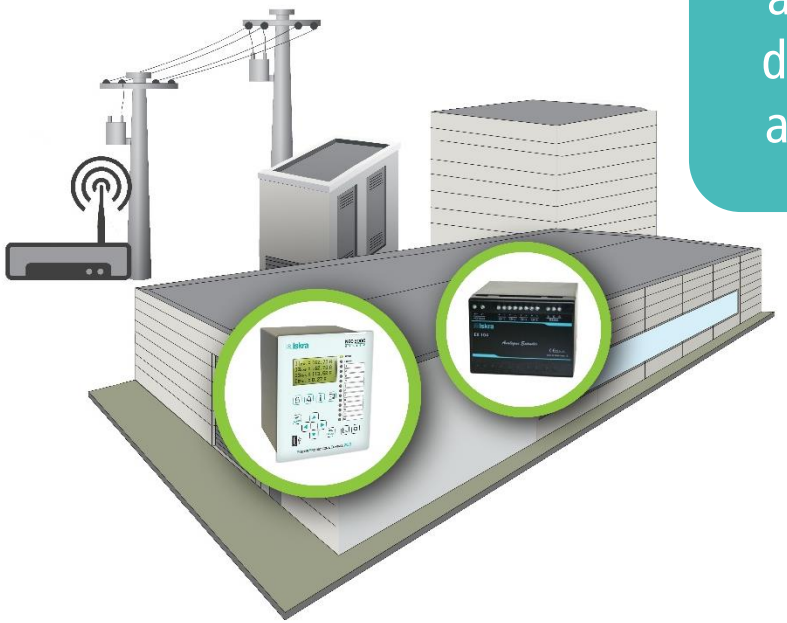


FPC 200

Family of protection relays

Solutions tailored for industrial needs

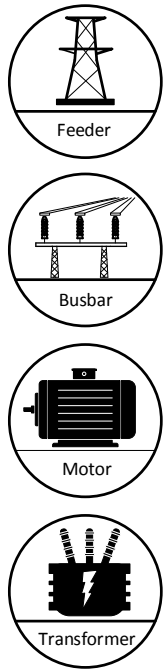
and power distribution application



FPC 200

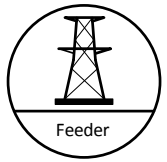
Family of protection relays

- Feeder
- Busbar
- Motor
- Transformer



FPC 200 | Family of protection relays

Feeder



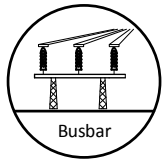
F3 =

- **50** **51** Overcurrent IDMT with inrush restraint and Cold Load Pick-up
- **50N** **51N** Earth fault overcurrent IDMT with inrush restraint and Cold Pick-up
- **50G** **51G** Earth fault overcurrent IDMT with inrush restraint and Cold Pick-up
- **46** Negative sequence/ unbalance overcurrent
- **49F** 3 phase thermal overload (feeders & cables)
- **94** **69** Circuit breaker control and monitoring
- **50BF** Circuit breaker failure
- **74** Trip circuit supervision (TCS)
- **79** Auto-reclosure
- **86** **94** Lockout relay

Current based protection functionality

FPC 200 | Family of protection relays

Busbar



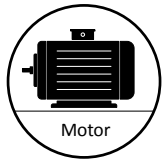
B2 =

- **27** Phase-to-phase undervoltage
- **27R** Remanent undervoltage
- **27D** Positive sequence undervoltage
- **59** Phase-to-phase overvoltage
- **59N** Neutral voltage displacement/ Residual overvoltage
- **81H** Overfrequency
- **81L** Underfrequency
- **81R** Rate of change of frequency (df/dt)
- **94** **69** Circuit breaker control and monitoring
- **50BF** Circuit breaker failure
- **74** Trip circuit supervision (TCS)
- **86** **94** Lockout relay

Current based protection functionality

FPC 200 | Family of protection relays

Motor



M3 =

- **50** **51** Overcurrent IDMT with inrush restraint and Cold Load Pick-up
- **50N** **51N** Earth fault overcurrent IDMT with inrush restraint and Cold Pick-up
- **50G** **51G** Earth fault overcurrent IDMT with inrush restraint and Cold Pick-up
- **46** Negative sequence/ unbalance overcurrent
- **37** Phase undercurrent
- **49M** **49T** 3 phase thermal overload (motors, generator)
- **38** **49T** Temperature monitoring (up to 8 sensors)
- **48** **51LR** **14** Locked rotor, excessive starting time
- **66** Starts per hour
- **94** **69** Circuit breaker control and monitoring
- **50BF** Circuit breaker failure
- **74** Trip circuit supervision (TCS)
- **86** **94** Lockout relay

Current based protection functionality

FPC 200 | Family of protection relays

Transformer

T3 =

- **50** **51** Overcurrent IDMT with inrush restraint and Cold Load Pick-up
- **50N** **51N** Earth fault overcurrent IDMT with inrush restraint and Cold Pick-up
- **50G** **51G** Earth fault overcurrent IDMT with inrush restraint and Cold Pick-up
- **64REF** Restricted earth-fault
- **46** Negative sequence/ unbalance overcurrent
- **49F** 3 phase thermal overload (feeders & cables)
- **38** **49T** Temperature monitoring (up to 8 sensors)
- **26** **63** Thermostat / Buchholz switch
- **94** **69** Circuit breaker control and monitoring
- **50BF** Circuit breaker failure
- **74** Trip circuit supervision (TCS)
- **86** **94** Lockout relay

Voltage based protection functionality

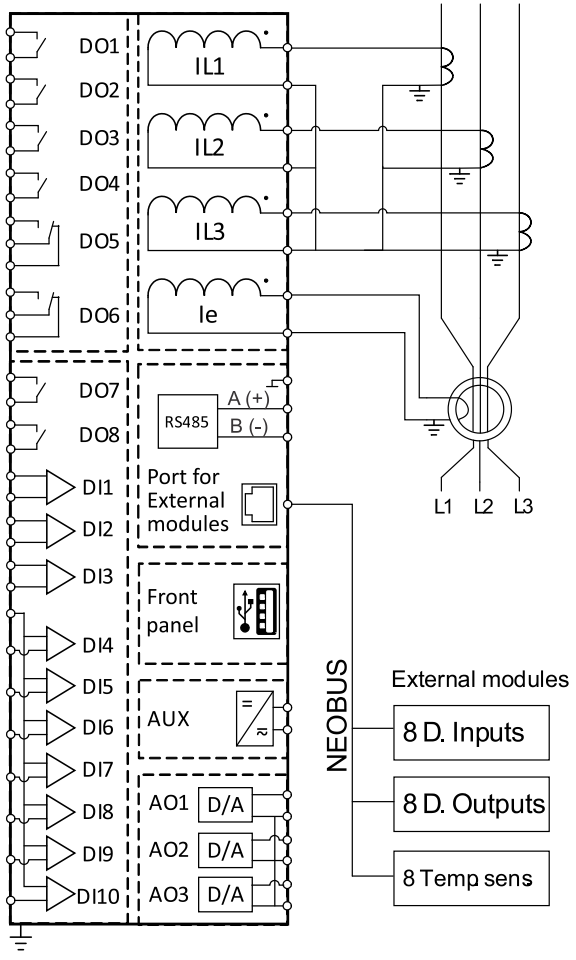
FPC 200 | Automation and diagnostic

- Temperature monitoring
- Circuit breaker control and monitoring
- Lockout Relay
- Cumulative breaking current
- Circuit breaker failure
- Auto-reclosure

FPC 200

Rear side configuration

Current based protection functionality

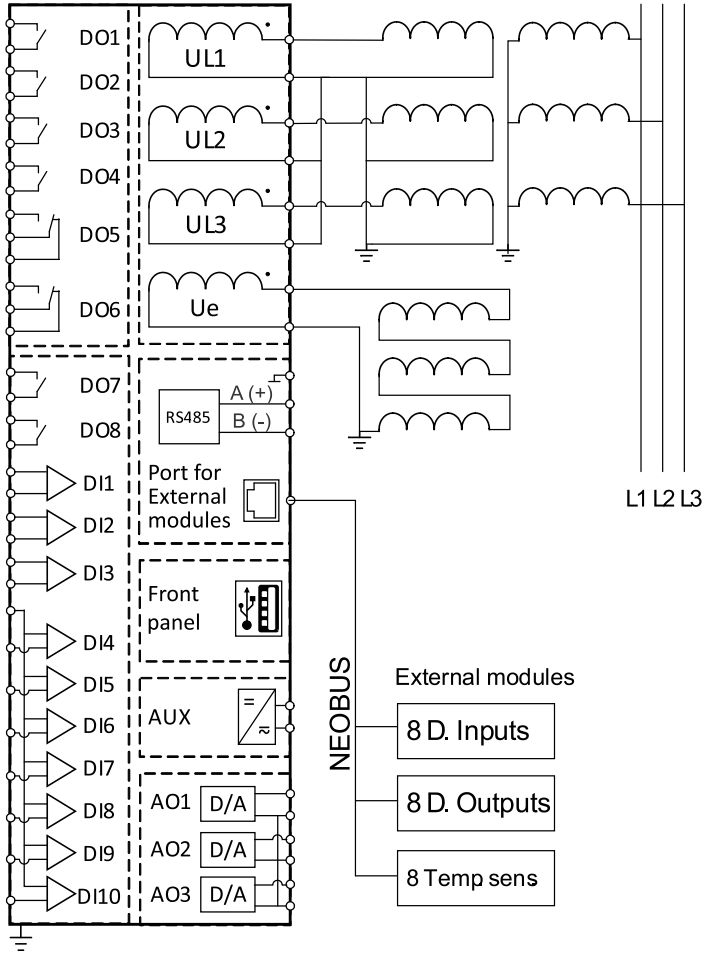


F3

T3

M3

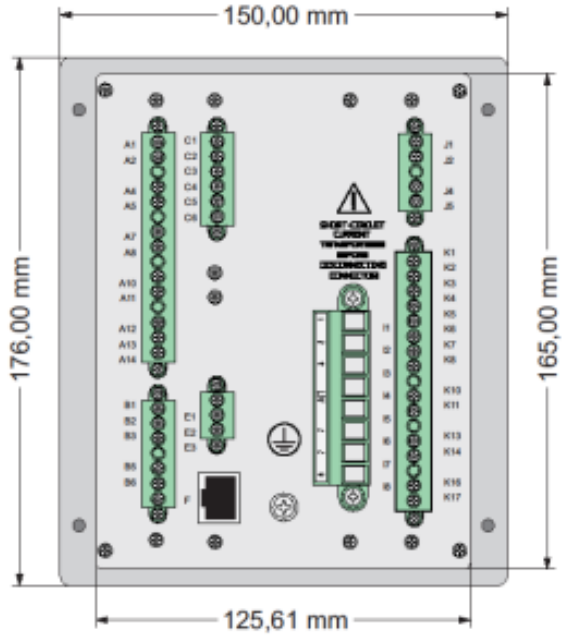
Voltage based protection functionality

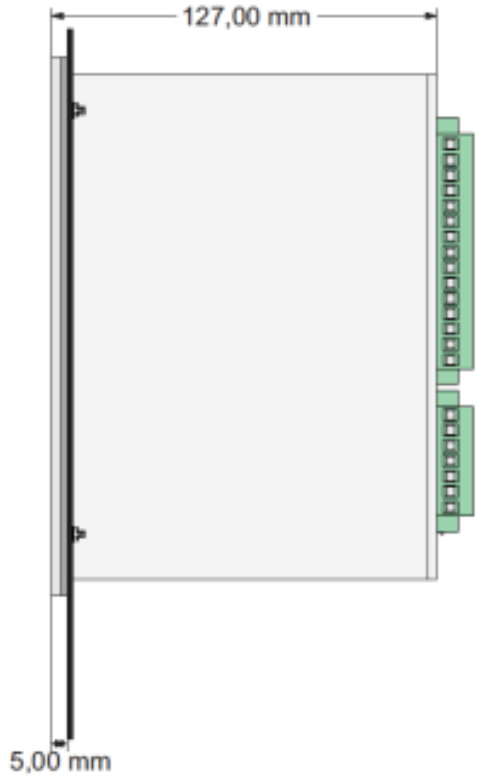


B2

B3

FPC 200 | Dimensions of base unit





Robust design for industrial usage

Protection level IP52

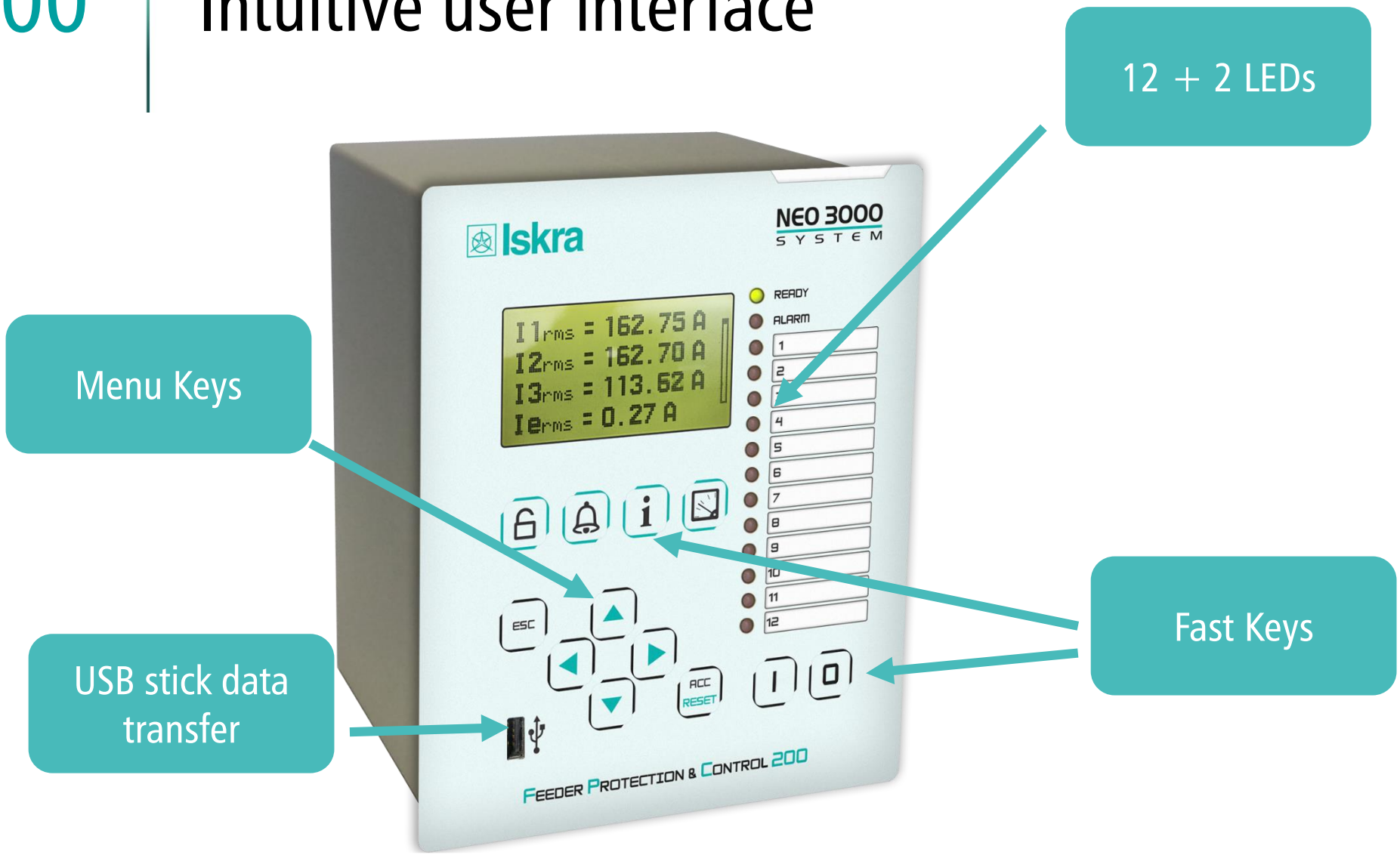
Oil / gas application

FPC 200 | External modules

- 8 Temperature Pt 100 sensors* (on request)
- 8 digital inputs (on request)
- 8 digital outputs (on request)
- 4 analog outputs (on request

*for motor and transformer protection

FPC 200 | Intuitive user interface

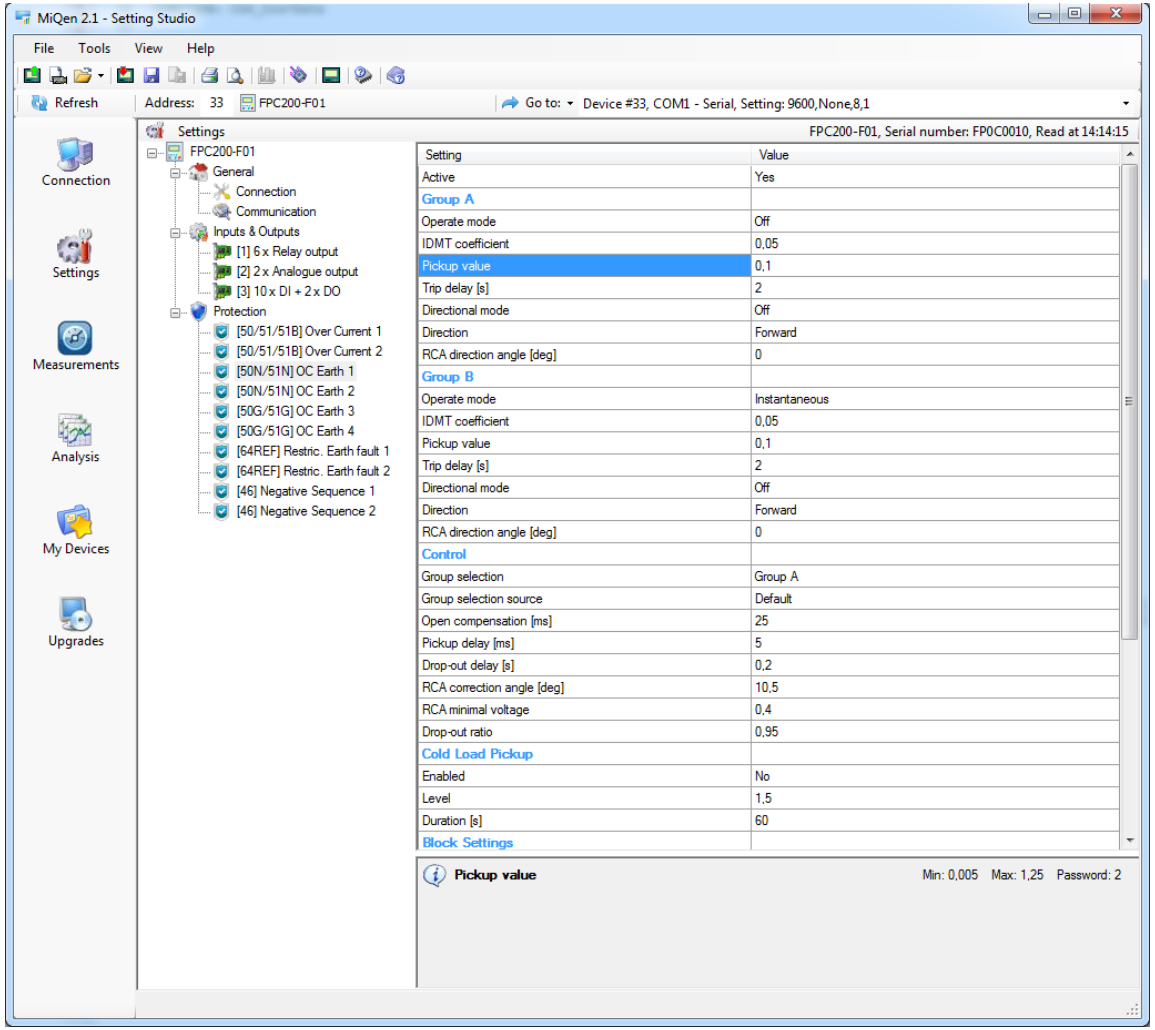


FPC 200

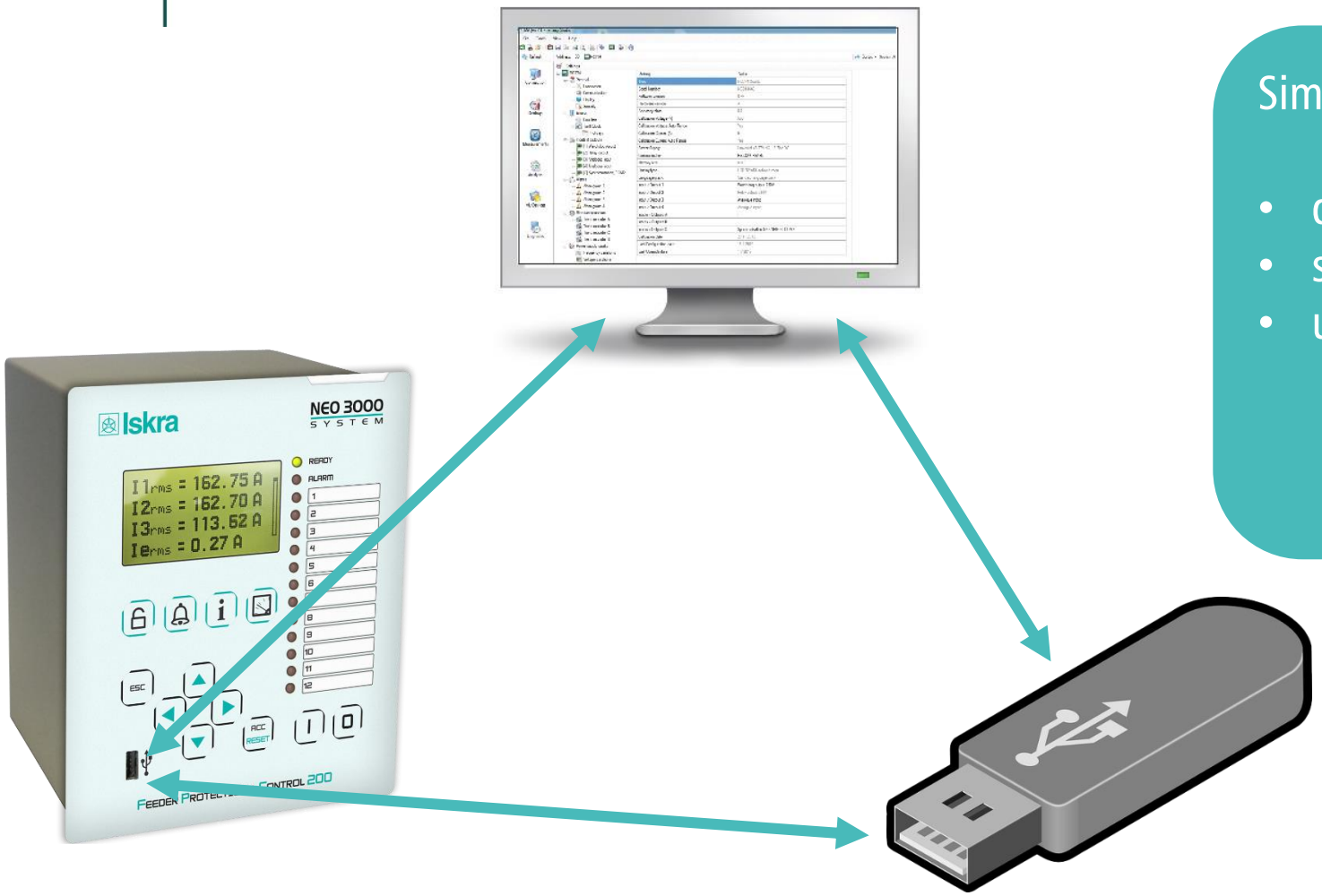
Numerical and graphical MiQen software

Download MiQen for free on Iskra web page:

https://www.iskra.eu/en/Software_2/MiQen2/



FPC 200 | Setting and event recording



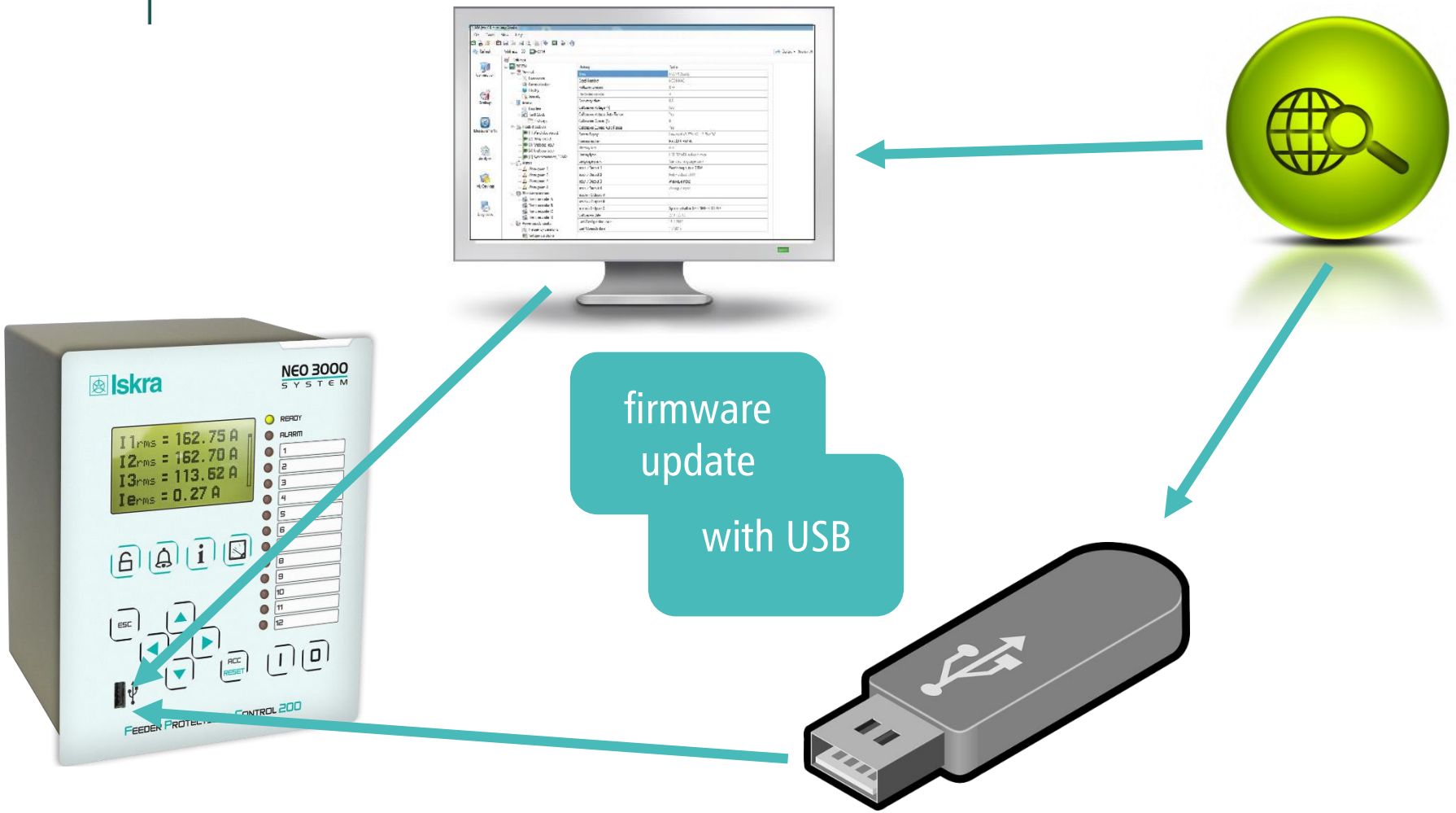
Simplification

- data recording
- settings recording
- uploading settings

with USB

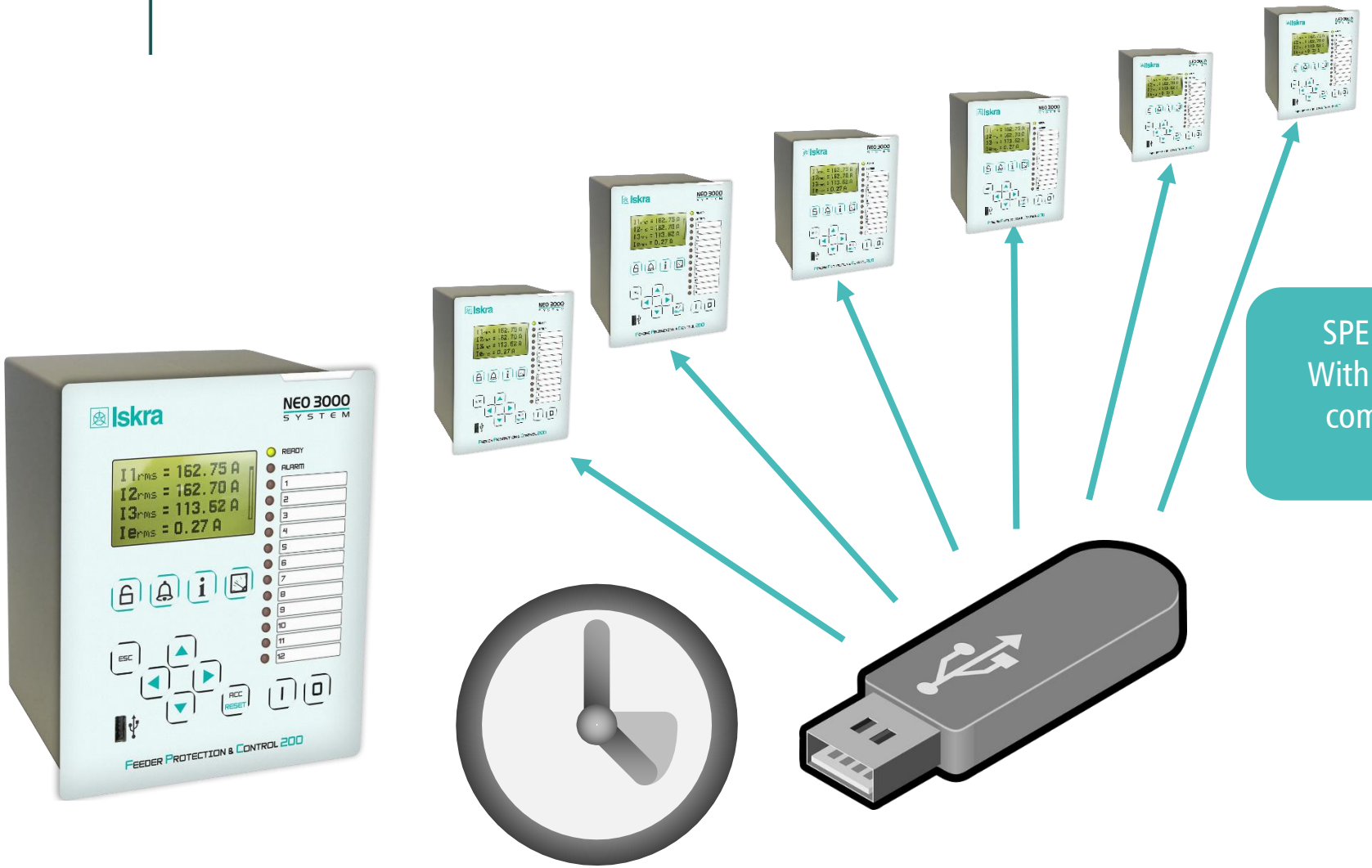
FPC 200

Fast and simple updating



FPC 200

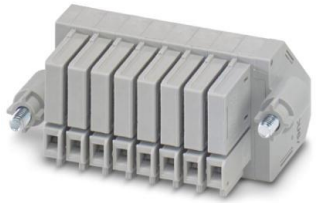
Fast and simple commissioning



SPEED & SIMPLICITY is KEY:
With one USB fast and simple commissioning on multiple devices

FPC 200 | Ordering options

- Configurable FPC 200 device:
  - Current or Voltage inputs, communication, 10 DI, 8 DO, 3 AO



- Accessories
  - Connector types:

- External modules
  - 8 temperature Pt 100 sensors* (on request)
  - 8 digital inputs (on request)
  - 8 digital outputs (on request)
  - 4 analog outputs (on request)

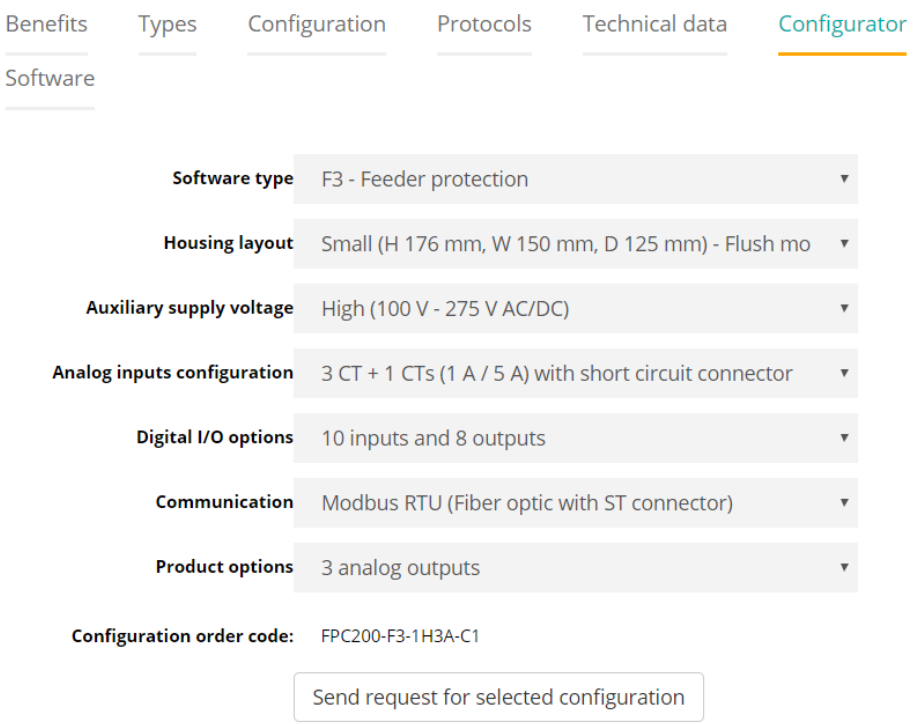
*for motor and transformer protection

FPC 200 | Configurator

How to configure and get proposal for relay and accessories?

Visit page:

https://www.iskra.eu/en/Protection_Relays/FPC_200/



FPC 200

Ordering code

	FPC200	F3	-	1	H	1	A	-	A	0
Software type										
Feeder protection		**F3**								
Busbar protection		**B2**								
Motor protection		**M3**								
Transformer protection		**T3**								
Housing layout										
Small housing ((W) 150 mm, (H) 176 mm, (D) 125 mm)				**1**						
Auxiliary supply voltage										
High (AC/DC 100 V - 250 V)					**H**					
Low (DC 24 V - 60 V)					**L**					
AC analog inputs configuration										
3CT + 1CTsens. (1 A/5 A*) with fixed connector						**1**				
3CT + 1CTsens. (1 A/5 A*) with removable connector						**2**				
3CT + 1CTsens. (1 A/5 A*) with short circuit connector						**3**				
4VT (60 V-250 V*) with removable connector						**4**				
Digital IO options										
6 Outputs							**0**			
10 Inputs (DC 24 V-250 V, AC 230 V) and 8 Outputs							**A**			
Communication										
None									**0**	
Modbus RTU (2-wire RS485 with 3-pin screw connector)									**A**	
Modbus RTU (RS232 with DB9 Female connector)									**B**	
Modbus RTU (Fiber Optic with ST connector)									**C**	
IEC60870-5-103 (2-wire RS485 with 3-pin screw connector)									**G**	
IEC60870-5-103 (RS232 with DB9 Female connector)									**H**	
IEC60870-5-103 (Fiber Optic with ST connector)									**I**	
Product options										
None										**0**
3 Analog outputs										**1**

FPC 200 | More information

https://www.iskra.eu/en/Protection_Relays/FPC_200/

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