



QUICK PROTECTION RELAY SELECTION GUIDE



MOTOR PROTECTION RELAYS	ANSI	LA	NE	NH	NI	NJ	NK	100M	330	320-327	KB	KA	KC	KD	KE	MA	MB	NewCode	
Dimensions in mm L x W x H		150 X 95 X 130	150 X 96 X 125					102 X 52 X 125	171 X 120 X 175	171 X 120 X 175	101 X 90 X 117			105 X 60 X 150		150 X 85 X 154	150 X 85 X 154	100 X 45 X 113	
Overloading		X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Thermal Memory	51	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Locked Rotor on Start	51	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Unbalance Load	60	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Phase Loss	46	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Latched LED Trip Indication		X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Overload Auto Reset		X	X	X	X	X	X	X			X	X	X	X	X	X	X	X	X
Earth Leakage	64			X	X	X	X							X	X	X	X	X	X
Short Circuit	50							X		X				X	X	X	X	X	X
Locked Rotor while Running (Jam)	51					X	X			X			X	X	X	X	X	X	X
Load Loss (Dry Run)	37										X	X	X	X	X	X	X	X	X
4 to 20 mA Output Loop for Motor Load						X	X			X									X
Phase Rotation	47											X	X	X	X	X	X	X	X
MCCB / Contactor Co-ordinated Tripping	94				X		X			X				X	X	X	X	X	X
Overvoltage	59											X	X	X	X	X	X	X	X
Undervoltage	27											X	X	X	X	X	X	X	X
Voltage Phase Symmetry	46											X	X	X	X	X	X	X	X
Re-start Timer for Load Loss													X	X	X	X	X	X	X
Starts Per Hour	66									X				X	X		X	X	X
Power Factor Measurement	55													X	X		X	X	X
Real Power Used															X		X	X	X
Apparent Power Used														X	X		X	X	X
Earth Fault	50									X				X	X	X	X	X	X
Earth Insulation Lockout														X	X		X	X	X
Fault & Event Records														X	X	X	X	X	X
Integrated Starter Logic																	X	X	X
Field Inputs																X	X	X	X
Programmable Output Contact														X	X	X	X	X	X
Uploadable Event and Fault Records														X	X	X	X	X	X
Multi Protocol Field Bus Communications																X	X	X	X
Profibus DP (DPV0)																X			
Profibus DP (DPV1)																	X	X	X
Modbus																X	X	X	X
Canbus																X	X	X	X
Rapid reconfiguration memory module																			X
RTD PTC																X	X	X	X
RTD PT 100																	X	X	X
RTD PT 1000																	X	X	X
Expandable I/O Module																			X
Door Mounted MMI														X	X	X			X



MOTOR PROTECTION RELAYS	ANSI	OLR	UCR	EC	GA
Dimensions in mm L x W x H		102 X 52 X 125	102 X 52 X 125	78 X 40 X 110	150 X 85 X 60
Earth Insulation Lockout				X	
Jam Protection	51	X			
Load Loss Protection	37		X		
Earth Leakage Protection	64				X



320 - 327 Series Relay



A mature analog relay design utilized widely in industry over the last 25 years, low failure rates and simplicity of settings with selectable features covering short circuit, earth fault, locked rotor, running stall, starts per hour, unbalance and single phasing. Clear descriptive control panel mounted LED indicators are used for monitoring

actual levels and doubling as a latched fault LED indicator making this relay an excellent diagnostic tool for the driven motor load. A 4 to 20 mA output allows interface to DCS or SCADA for remote monitoring and indication of motor load current.

330 Series Relay



This motor protection range calculates true RMS load patterns of the cranes and winders. It has unbalance and phase loss protection with user-selectable detection thresholds 2 to 40 %. It was established to meet the protection demands of wound rotor motors used on winches, overhead cranes and winders,

taking into consideration their unique duty class, starting class, cyclic duration factors and motor loading.

NewCode Relay



A sophisticated IED with comprehensive fully customizable protection and control features. User configurable logic function blocks with pre-programmed starter controllers covering the majority of standard starter configurations requiring only user start and stop inputs. The NewCode can be used on standalone or

automated projects using Modbus RTU or Profibus DPV 1 communications protocol. The relay has 7 inputs and 4 fully programmable output contacts and allows for expansion modules to add additional I/O, selectable RTD sensor temperature measurement, as well as 4-20 mA I/O controller and door mounted MMI. Free issue, easy to use, intuitive configuration software with extensive monitoring, logging and simulation capabilities to assist with integration, pre-testing, commissioning of drive and training.

MA Relay



Comprehensive protection features with integrated current measurement up to 250 A with integral earth leakage core. Extendable current range with use of interposing CTs and CBCT. The MA offers an economical solution for both standalone and fully automated plants utilizing optional add-on Profibus DP or Modbus

RTU modules. The relay has 5 field inputs and 4 relay outputs of which two are fully programmable. Three PTC temperature sensor inputs for monitoring in bearings and motor windings. The flexible configuration and wide voltage measurement range of the fields input circuit make this an ideal relay for automating older plants. 'Why wait to automate?'

GA Earth Leakage Protection Relays



Selectable models covering the 30 mA to 1000 mA range, in a neat, accurate, dependable and proven platform with user terminal block selectable instantaneous or IDMT curves. Ideal for use where the presence of harmonics can result in nuisance tripping such as on VSD or DOL starts with high inrush currents. Diverse relay output

configurations are available when ordering to eliminate the alteration of protection relay settings by maintenance staff.

100 M Series Relays



Often used in gating boxes in underground applications, the relay provides accurate overload and unbalance protection with user-selectable Class 3 to 10 curves. In order to improve the safety of underground conditions the relay has a user-selectable 7 to 12 times motor full load short circuit detection threshold

MB Relay



The relay design incorporates an integrated CT module block and earth leakage core that translates into a neat installation solution. Residing at the centre of the relay is a modern and comprehensive range of customizable protection and control features suitable for a wide variety of applications. Above all else it includes a

host of user-friendly features not found in similar products and caters for Profibus, Canbus and Modbus communications protocols. It is also an ideal upgrade unit for the NewElec MA range.

KA, KB and KC Relays



Small footprint integrated CT direct measurement up to 50 A with extendable current range using interposing CTs. Affordable for small motors. Comprehensive selectable protection features incorporating overload, unbalance, thermal memory and earth leakage detection with selectable

instantaneous or IDMT curves. Some ranges also include overvoltage, undervoltage and phase rotation. Selectable dry run protection utilizing under current or under power detection as trip threshold with automatic reset and optional re-start relay output when used in sump pump applications.

UCR 80 Single-Pole Undercurrent Relay



Used to monitor load loss conditions so that it can be used to detect broken couplings, dry run conditions in pumps, lightly loaded conveyors or, if used in conjunction with the OLR 8, used to limit motor operations between preset loading conditions. It is an ideal partner fitted to pump starters lacking dry run protection.

OLR 8 Single-Pole Overcurrent Relay



This relay is designed to assist in rapidly tripping a motor whose load has exceeded a user-selectable preset threshold. It is often used when mechanical parts attached to a drive train are exposed to over torquing and consequent fracture. It is an easy-to-use product with user-friendly LED

indicators and has both a main trip latching relay and incident warning changeover contact.

LA Relay



Designed for simplicity, the relay has an integrated CT for use from 1 to 250 A current ranges allowing the use of up to a 95 mm² cable core to pass through the 22 mm aperture. The LA provides superior overload, unbalance and single phasing protection for many applications where standard class 15 cold class 5 hot thermal

curves are adequate. User-friendly control panel mounted LEDs provide clear accurate fault indication for maintenance staff. A door mounted fault indicator replicating the control panel mounted LEDs with a remote reset and test pushbutton assist plant personnel with fault indication without having to open the MCC cubicle door.

KD and KE Series Relays



Small footprint integrated CT direct measurement up to 50 A with extendable current range using interposing CTs. Target market includes all pumping and compressor applications. Comprehensive selectable protection features incorporating overvoltage, undervoltage, phase rotation and earth

leakage detection with selectable instantaneous or IDMT curves. Selectable dry run protection utilizing undercurrent or under power detection as trip threshold with automatic reset and optional re-start relay output when used in sump pump applications. Drive power measurement to assist in pump efficiency and plant energy management programs. Time and date stamped event (2000) and fault (60) records to assist maintenance personnel with fault finding. Free issue, easy to use, intuitive configuration software with extensive monitoring, logging and simulation capabilities to assist with integration, pre-testing, commissioning of drive and training.

EC Series Relays



Designed to protect stand-by motors that are used on seasonal applications, where moisture may infiltrate motor windings due to condensation. Also useful where motors are periodically sprayed with water such as in abattoirs. When the relay detects an insulation deterioration it will inhibit the motor from being started.

NEW ELEC

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N Series Relays



These relays were designed to accommodate a wide range of mounting options. Current range detection is 5 to 550 A but protection features vary between models. Some include a 4 to 20 mA output. Variable user-selected thermal curves 2.5 to 32 seconds can be accommodated together with parallel trip annunciating

contacts and external reset that include PLC reset. User-friendly LEDs assist maintenance personnel with fault finding.

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