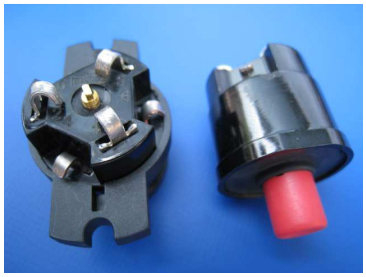
ELECTRICA



THREE PHASE Motor Protector

¾ inch size , “3T” type

- **The motor protector consists of a moulded phenolic base containing three heaters and a snap-acting bimetal disc with three contacts. The motor protector must be connected to the three phase electric motor so that the bimetal disc is the neutral point of the motor. Each contact and each heater is in series with one of the phase windings of the motor. When the bimetal disc opens because of overheating, the neutral point is open, thereby shutting down the motor.**

- **The 3T motor protectors are designed to protect three phase induction motors with rated power up to 2.2 kW (3.0 HP) against overload and locked rotor conditions up to 37A for each phase.**

- **AUTOMATIC RESET: Main application is protection of three phase induction motors where reset is required after the natural cooling down of the motor without man supervision. Models with cover can be used on devices in contact with flammable gases.**

- **MANUAL RESET: Main application is protection of electric motor where automatic reset would be dangerous or otherwise undesirable (Food Mixers, Chain saws, etc.). Trip-free to assure contact break independent of manual action.**

GENERAL CHARACTERISTICS

• CONTACT CONFIGURATION:	Three poles - Single throw - N.C.
• CONTACT RATING:	Low Capacity: max 24A at 230Vac, max 18A at 460Vac High Capacity: max 37A at 230Vac, max 28A at 460Vac Above ratings are locked-rotor inductive currents (LRA)
• MAX OPERATING TEMPERATURE:	150°C
• NOM OPENING TEMPERATURE:	from 95°C up to 150°C (±5°C)
• NOM CLOSING TEMPERATURE:	from 43°C up to 102°C (±9°C)
• DIFFERENTIAL Nom opening minus Nom closing temp	Minimum 25°C
• FIRST CYCLE TRIP CURRENT (at 25°C in 6-16 seconds)	from 3A to 37A
• ULTIMATE TRIP CURRENT At protector ambient temperature	from 0.6A to 15A from 40°C to 100°C
• BIMETAL DISC	Different physical sizes, broad range of material resistivity
• AUXILIARY HEATERS	selection of flat or coiled heaters
• MIN NUMBER OF CYCLES	3000 cycles for models with Automatic Reset 500 cycles for models with Manual Reset
• TERMINAL CONFIGURATION:	Quick-Connect tab Solder terminal Cable leads (AWG 14 or AWG 16)
• APPROVALS :	UL , file E51822 , volume 1 , section 7 ENEC planned

Code structure

STANDARD CODE 3TA2LM70701

Basic model – 3/4" size
Three phase motorprotector

Reset and base shape		
	Round	Eared
Automatic	B	A
Manual	N	M

Disc shape and size Diameter and thickness
1=ø19.00x0.26
2=ø16.00x0.18
3=ø19.00x0.26 perforated

Disc resistivity (ohms x C.M./FT)			
High capacity contacts			Low capacity contacts
A=15	G=50	N=150	U=400
B=20	H=60	P=200	V=475
C=25	J=70	R=250	W=560
D=30	K=90	S=300	X=650
E=35	L=100	T=350	Y=850
F=40	M=125		

Temperature					
	Open (±5°C)	Close (±9°C)		Open (±5°C)	Close (±9°C)
G	90	Manual	D	135	Manual
J	90	57	W	135	61
F	105	Manual	U	135	69
K	105	61	M	135	78
L	105	69	R	135	92
V	105	78	S	135	102
B	120	Manual	E	150	Manual
Z	120	61	H	150	78
N	120	69	T	150	92
X	120	78	O	150	102
Y	120	92	P	150	115

Terminals configuration
From 00 to ZZ many different terminal options are available

Flat Type					
Code	Diam.	Mat.	Code	Diam.	Mat.
110	1.10	NiCr	120	1.20	NiCr
130	1.30	NiCr	140	1.40	NiCr
150	1.50	NiCr	160	1.60	NiCr
170	1.70	NiCr	180	1.80	NiCr

Coiled Type					
Code		Diam.	Turns num.		Mat.
From	To		Min.	Max	NiCr
207	220	0.20	007	020	NiCr
257	268	0.25	007	018	NiCr
307	316	0.30	007	016	NiCr
357	366	0.35	007	016	NiCr
406	414	0.40	006	014	NiCr
456	464	0.45	006	014	NiCr
505	512	0.50	005	012	NiCr
555	562	0.55	005	012	NiCr
605	611	0.60	005	011	NiCr
655	661	0.65	005	011	NiCr
703	710	0.70	003	010	NiCr
753	760	0.75	003	010	NiCr
803	809	0.80	003	009	NiCr
853	859	0.85	003	009	NiCr
903	908	0.90	003	008	NiCr
953	958	0.95	003	008	NiCr
103	107	1.00	003	007	NiCr

Coiled Special Type					
Code		Diam.	Turns num.		Mat.
From	To		Min.	Max	
A03	A07	1.00	003	007	CuNi
B03	B08	0.95	003	008	CuNi
C03	C08	0.90	003	008	CuNi
D03	D09	0.85	003	009	CuNi
E03	E09	0.80	003	009	CuNi
W03	W10	0.70	003	010	CuSn
X03	X10	0.70	003	010	CuZn
Y03	Y07	1.00	003	007	CuZn

CODE EXAMPLE
ø0.70 mm. 700 +
7 turns 007 =
707

SPECIAL CODE 3TA0002/01

Basic model – 3/4" size
Three phase motorprotector

Reset and base shape		
	Round	Eared
Automatic	B	A
Manual	N	M

Terminals configuration
From 00 to ZZ many different terminal options are available

Progressive number

DATE CODE 825

Year of manufacturer – Es: 8=2018

Week of the year

Customer part number is marking on request

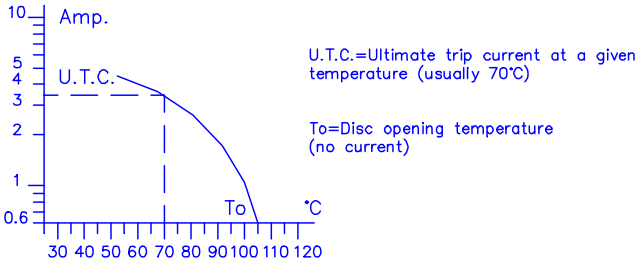
CONTACTS RATING

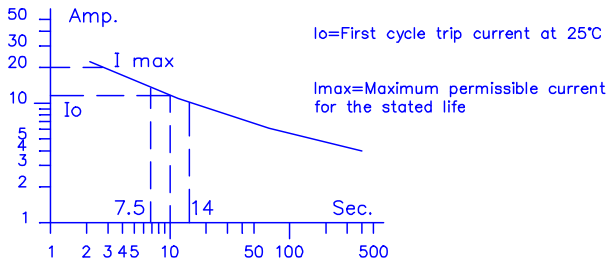
High capacity contacts		Low capacity contacts	
Voltage a.c.	Max amperes	Voltage a.c.	Max amperes
230	37	230	24
460	28	460	18

Physical configurations

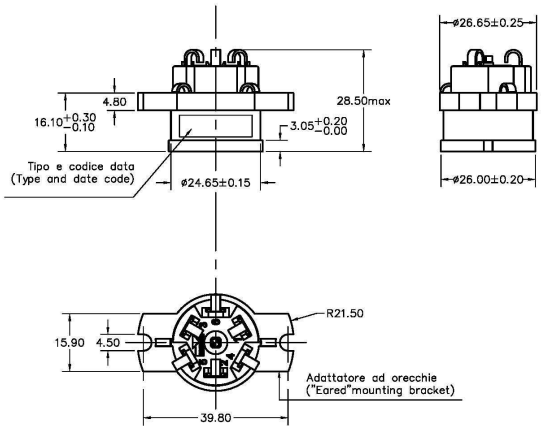


Example of performance curves

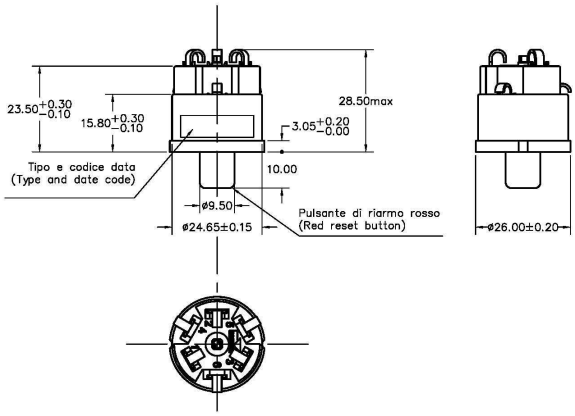




OUTLINE DRAWINGS



Automatic Reset
Eared mounting available on request



Manual Reset
Eared mounting available on request
Red or green button option

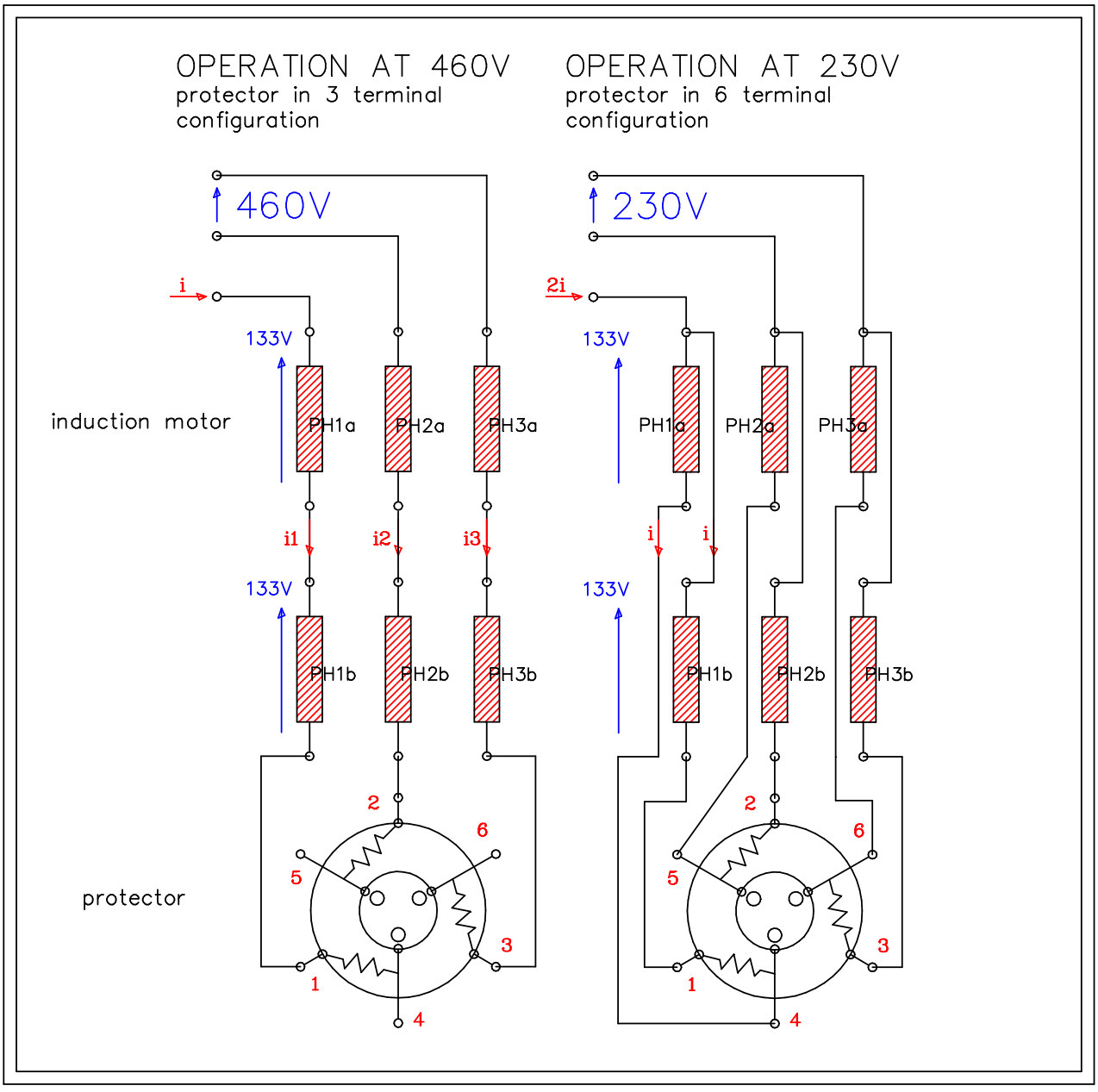
Please consult factory for details of individual approval or particular configuration not shown in this catalogue.

Mounting on the application

The Overload protector should be mounted in the motor shell or in the motor end frame, so that it will receive the maximum amount of heating from the motor windings, in running and in locked rotor conditions. The best location depends on the construction of the motor.

Dual Voltage motors

Dual voltage three phase induction motors can be protected in both configurations with the same Motor Protector.
In high voltage configuration each motor winding must be connected to one heater.
In low voltage configuration each motor phase is split in 2 half windings: half winding must be connected to one heater of the protector, and the other half winding must be connected to the corresponding contact of the protector.



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