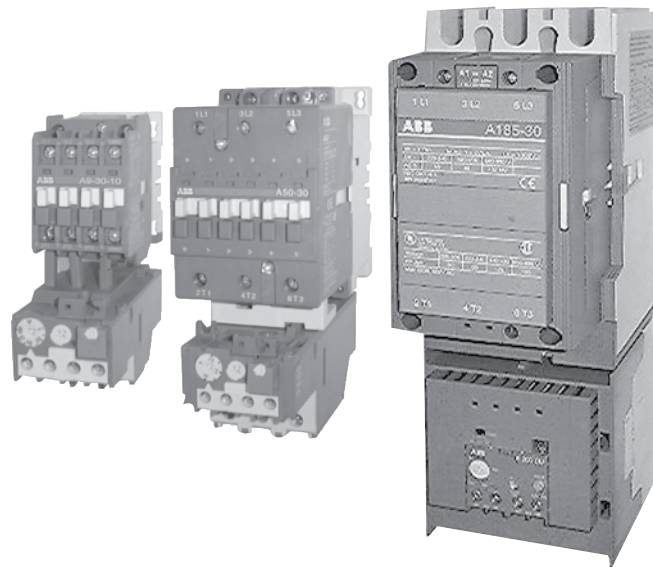
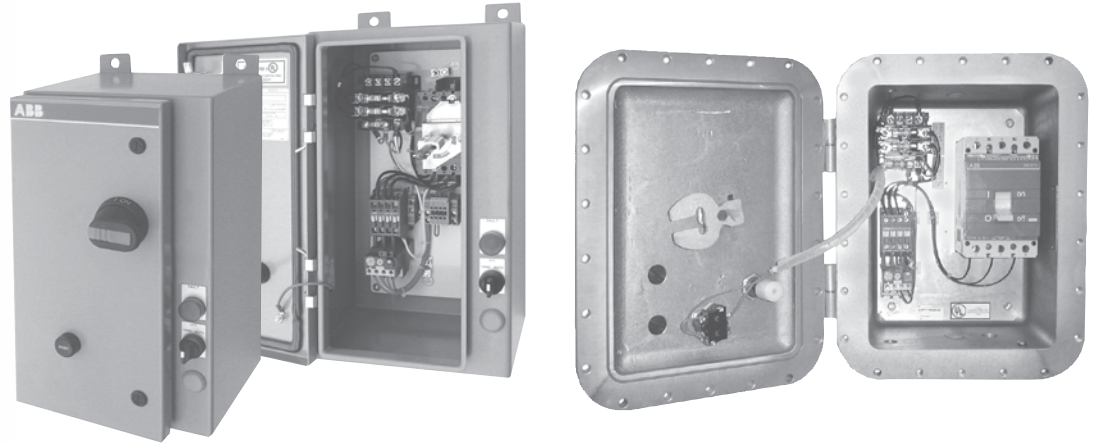




Starters
Across the line
Combination

3



Across the line • Combination Starters

General information

Field modification kits

A Starters

Start-Stop pushbutton kit – dual element

3

Contactactor/starter size	Catalog number	List price
A9 – AF750	MPSSK	\$ 38

For field installation on NEMA 1 enclosures. Kit includes one dual element pushbutton and hardware. ①

Start-Stop pushbutton kit

Contactactor/starter size	Catalog number	List price
A9 – AF750	MP4SSK4	\$ 48

For field installation on all enclosures. Kit includes two momentary pushbuttons and hardware. ①

Fwd-Rev-Stop pushbutton kit

Contactactor/starter size	Catalog number	List price
A9 – AF750	MPFRK-4	\$ 120

For field installation on all enclosures. Kit includes three momentary pushbuttons and hardware. ①

2 Position selector switch kit

Contactactor/starter size	Catalog number	List price
A9 – AF750	MPSL2K-4	\$ 90

For field installation on all enclosures. Labels for ON-OFF are included. Kits include mounting hardware. ①

3 Position selector switch kit

Contactactor/starter size	Catalog number	List price
A9 – AF750	MPSL3K-4	\$ 90

For field installation on all enclosures. Labels for HAND-OFF-AUTO are included. Kits include mounting hardware. ①

Pilot light kits

Contactactor/starter size	Voltage	Catalog number	List price
A9 – AF750	120 240 480V	MPPLK-41 MPPLK-42 MPPLK-44	\$ 90

For field installation on all enclosures. ①

Reset button kits

Contactactor/starter size	Catalog number	List price
A9 – AF750	KPR3-104B	\$ 14

For field installation on all enclosures. ①

① For use with UL Type 3R, 4, 4X, 12 & 13.

General information

Factory modifications

Starters

Control cover accessories — NEMA 1, 3R, 12, 4, 4X

Description	Suffix code	List price adder
Start-Stop pushbutton	A	\$ 72
Fwd-rev-stop pushbutton	B	360
2 position selector switch (Std. On-Off)	C	72
3 position selector switch (Std. Hand-Off-Auto)	D	72
LED Pilot light, Red, RUN (Std)	E	135
LED Pilot light, Green, Off (Std)	R	135
Start-Stop pushbutton & pilot light	F	207
Fwd-rev-stop pushbutton & pilot light	G	496
2 position selector switch & pilot light	H	207
3 position selector switch (HOA) & pilot light	J	207
Fast-slow-stop pushbutton	K	360
Fast-slow-stop pushbutton & pilot light	L	495
Fast-slow-off-auto selector switch	M	150
Emergency stop	P	100
F suffix + 1NO & 1NC auxiliary contact	T	237
J suffix + 1NO & 1NC auxiliary contact	U	237
Pushbutton (standard START)	Y	36

Special modifications

Description	Suffix code	List price adder
Contact		
Coil surge suppressor	S	\$ 75
Relays		
Type N control relay (4 pole) N.O.	1	225
Phase failure phase reversal with over and undervoltage relay	2	300
Electronic timer (On Delay)	5	300
Electronic timer (Off Delay)	6	300
Ground fault protection	GF	2,250
For multi-speed controllers		
Compelling relay	CPR	300
Accelerating relay	ACR	300
Decelerating	DCR	300
Meter & metering		
Current monitor (single CT)	CT	375
Ammeter (single CT w/meter) ②	AM	705
Voltmeter ②	VM	1,200
Voltmeter & Voltmeter switch ②	VMS	1,800
Elapsed time meter ②	ETM	375
Operation counter ②	OC	560
Wattmeter ②	WM	3,650

Control circuit transformer — A9 - AF750

Standard size with fused secondary

Primary	Sec-ondary	H _z	Coil suffix	Starter Size	Std. CCT VA	List price adder	Extra VA CCT	Suffix code	List price adder
208	120	50/60	A	A9 - A40	50	\$ 360	50VA	V	\$ 150
240	120	50/60	B	A9 - A40 ①	50	630	75VA	W	200
480	120	50/60	C	A50 - A75	75	435	100VA	X	250
600	120	50/60	D	A110	100	560	200VA	Z	400
208	24	50/60	E	A145 - A185	150	720			
240	24	50/60	F	A260	250	795			
480	24	50/60	G						
600	24	50/60	H						

Additional auxiliary contact blocks — A9 - AF750

Contact configuration	Suffix code	A9 - AF750 List price adder
1 N.O & 1 N.C.	8	\$ 30
2 N.O & 2 N.C.	9	60

Fuses — set of three

Fuse switch size	List price adder
30A	\$ 80
60A	100
100A	250
200A	375
400A	900

2 Speed combination starters

Starter size	Non-fusible switch price adder	Fusible switch price adder	MCCB or MCP price adder
A9 (A9N00)	\$ 990	\$ 1,008	\$ 1,287
A12	990	1008	1287
A16 (A16N0)	990	1008	1287
A26 (A26N1)	990	1008	1287
A30	990	1224	1350
A40	990	1224	1350
A50 (A50N2)	1152	1224	1350
A63	1230	1350	1785
A75 (A75N3)	1494	1602	1809
A110	2310	2565	2982
A145 (A145N4)	3042	3366	4158
A185	3300	3735	4533
A210	3450	3825	6000
A260 (A260N5)	3744	4068	6849
A300	4200	6000	8750
AF400	6600	9450	9030
AF460	8200	11,100	9475
AF580	8400	11,800	10,200
AF750	9000	12,450	12,900

Utilize non-combination starter pricing with these price adders. Price class will change when adding disconnect / breaker to Discount Schedule ACE.

Hazardous location enclosure accessories — NEMA 7 & 9

Item	Suffix code	List price adder
3R Breather / drain	A	\$ 80
Start PB green	B	180
Stop PB red	C	180
St/St dual PB	D	360
Em. Stop mush momentary	E	220
Em. Stop mush maintained	F	460
Black PB N.O. auxiliary	G	180
Black PB N.C. auxiliary	H	180
Pilot light	J	180
Illuminated PB	K	460
Push-to-test pilot light	L	450
Potentiometer	M	460
2-pos Selector Maintained	N	260
2-pos Selector spring L to R	P	280
2-pos Selector spring R to L	Q	280
3-pos Selector sw. main	R	260
3-pos Selector spring L to R	S	280
3-pos Selector spring R to L	T	280
3-pos Selector spring to C	U	280
2-pos Selector key operated	V	450
3-pos Selector key operated	W	450

① NEMA 7 and 9.

② For NEMA 7/9, add \$800 to the list price adder of the meter to include a view window on the enclosure door.

General information

Catalog number explanation

3

1 1 S F 1- 2 C 1 J**UL rated starter size**

1 – A9 B – A145 J – A9N00 (NEMA size 00)
 2 – A12 C – A185 K – A16N0 (NEMA size 0)
 3 – A16 D – A210 L – A26N1 (NEMA size 1)
 4 – A26 E – A260 M – A50N2 (NEMA size 2)
 5 – A30 F – A300 N – A75N3 (NEMA size 3)
 6 – A40 G – AF400 P – A145N4 (NEMA size 4)
 7 – A50 H – AF460 Q – A260N5 (NEMA size 5)
 8 – A63 T – AF580 R – AF460N6 (NEMA size 6)
 9 – A75 U – AF750 S – AF750N7 (NEMA size 7)
 A – A110

Starter type

1 – Non-reversing
 2 – Reversing
 3 – 2 speed, 2 winding or 1 winding

Single phase

S – Single phase (Insert only for single phase)

Combination type

N – Non-fusible disconnect
 F – Fusible disconnect
 B – Thermal magnetic or electronic trip type circuit breaker (MCCB)
 M – Motor Circuit Protection (MCP)
 J – Fusible disconnect (with fuses, size base on the HP or FLA x 1.75)
 R – Non-fusible disconnect with trailing Class R fuse block with fuses
 G – Non-fusible disconnect with trailing Class R fuse block

Enclosure

1 – NEMA / UL Type 1
 2 – NEMA / UL Type 12
 3 – NEMA / UL Type 3R
 4 – NEMA / UL Type 4
 X – NEMA / UL Type 4XSS
 P – NEMA / UL Type 4X PL
 7 – UL Type 7

Coil voltage / CCT**Coil voltage selection – A9 - A300**

Hz	Contactor type	Volts									
		24	110	120	208	220	240	440	480	500	600
60	A	1			3		4	5	6		7
50	A	1	2			4				7	

Coil voltage selection – AF400 - AF750 ①

Hz	Contactor type	Volts	
		100 - 250	250 - 500
50/60	AF	70	71

Control transformer voltage selection chart

Hz	Type	Volts			
		200-208/120	240/120	460 - 480/120	575 - 600/120
50/60	A/AF	A	B	C	D
	Type	200-208/24	240/24	460 - 480/24	575 - 600/24
	A/AF	E	F	G	H

Overload range

See Overload relay selection chart, see page 3.6 - 3.7

Accessories

(See Factory Modifications, page 3.3)

Fuse clip

1 – 30A, 600V Class J
 2 – 60A, 600V Class J
 3 – 100A, 600V Class J
 4 – 200A, 600V Class J
 5 – 400A, 600V Class J
 6 – 600A, 600V Class J
 7 – 800A, 600V Class J
 8 – 1200A, 600V Class J
 9 – 2000A, 600V Class J

Circuit breaker amp rating (200V - 600V)

1 – 15A B – 90A M – 400A
 2 – 20A C – 100A N – 450A
 3 – 25A D – 125A O – 500A
 4 – 30A E – 150A P – 600A
 5 – 35A F – 175A Q – 700A
 6 – 40A G – 200A R – 800A
 7 – 50A H – 225A S – 900A
 8 – 60A J – 250A T – 1000A
 9 – 70A K – 300A U – 1200A
 A – 80A L – 350A V – 2500A

MCP amp rating (200V - 600V)

1 – 3A 7 – 150A D – 700A
 2 – 5A 8 – 250A E – 800A
 3 – 10A 9 – 400A F – 900A
 4 – 25A A – 450A G – 1000A
 5 – 50A B – 500A H – 1200A
 6 – 100A C – 600A J – 2500A

NOTE: For AF50 - AF300 starters, consult factory.

① For AF400 - AF750 only.

General information

Motor data

Starters

Ampere ratings of 3 phase, AC induction motors

Horse power	110 – 120V			200 – 208V			220 – 240V			380 – 415V		440 – 480V			550 – 600V		
	Single phase	Two phase	Three phase	Single phase	Two phase	Three phase	Single phase	Two phase	Three phase	Single phase	Three phase	Single phase	Two phase	Three phase	Single phase	Two phase	Three phase
1/10	3.0	—	—	1.65	—	—	1.5	—	—	1.0	—	—	—	—	—	—	—
1/8	3.8	—	—	2.1	—	—	1.9	—	—	1.2	—	—	—	—	—	—	—
1/6	4.4	—	—	2.4	—	—	2.2	—	—	1.4	—	—	—	—	—	—	—
1/4	5.8	—	—	3.2	—	—	2.9	—	—	1.8	—	—	—	—	—	—	—
1/3	7.2	—	—	4.0	—	—	3.6	—	—	2.3	—	—	—	—	—	—	—
1/2	9.8	4.0	4.4	5.4	2.2	2.4	4.9	2.0	2.2	3.2	1.3	2.5	1.0	1.1	2.0	0.8	0.9
3/4	13.8	4.8	6.4	7.6	2.6	3.5	6.9	2.4	3.2	4.5	1.8	3.5	1.2	1.6	2.8	1.0	1.3
1	16.0	6.4	8.4	8.8	3.6	4.6	8.0	3.2	4.2	5.1	2.3	4.0	1.6	2.1	3.2	1.3	1.7
1 1/2	20.0	9.0	12.0	11.0	5.0	6.6	10.0	4.5	6.0	6.4	3.3	5.0	2.3	3.0	4.0	1.8	2.4
2	24.0	11.8	13.6	13.2	6.5	7.5	12.0	5.9	6.8	7.7	4.3	6.0	3.0	3.4	4.8	2.4	2.7
3	34.0	16.6	19.2	18.7	9.2	10.6	17.0	8.3	9.6	10.9	6.1	8.5	4.2	4.8	6.8	3.3	3.9
5	56.0	26.4	30.4	30.8	14.5	16.8	28.0	13.2	15.2	17.9	9.7	14.0	6.6	7.6	11.2	5.3	6.1
7 1/2	80.0	38.0	44.0	44.0	21.0	24.2	40.0	19.0	22.0	27.0	14.0	21.0	9.0	11.0	16.0	8.0	9.0
10	100.0	48.0	56.0	55.0	26.4	30.8	50.0	24.0	28.0	33.0	18.0	26.0	12.0	14.0	20.0	10.0	11.0
15	135.0	72.0	84.0	75.0	39.6	46.2	68.0	36.0	42.0	44.0	27.0	34.0	18.0	21.0	27.0	14.0	17.0
20	—	94.0	108.0	96.8	52.0	60.0	88.0	47.0	54.0	56.0	34.0	44.0	23.0	27.0	35.0	19.0	22.0
25	—	118.0	136.0	121.0	65.0	75.0	110.0	59.0	68.0	70.0	44.0	55.0	29.0	34.0	44.0	24.0	27.0
30	—	138.0	160.0	150.0	76.0	88.0	136.0	69.0	80.0	87.0	51.0	68.0	35.0	40.0	54.0	28.0	32.0
40	—	180.0	208.0	194.0	100.0	115.0	176.0	90.0	104.0	112.0	66.0	88.0	45.0	52.0	70.0	36.0	41.0
50	—	226.0	260.0	238.0	125.0	143.0	216.0	113.0	130.0	139.0	83.0	108.0	56.0	65.0	86.0	45.0	52.0
60	—	—	—	—	147.0	160.0	—	133.0	154.0	—	103.0	—	67.0	77.0	—	53.0	62.0
75	—	—	—	—	183.0	212.0	—	166.0	192.0	—	128.0	—	83.0	96.0	—	66.0	77.0
100	—	—	—	—	240.0	273.0	—	218.0	248.0	—	165.0	—	109.0	124.0	—	87.0	99.0
125	—	—	—	—	—	344.0	—	—	312.0	—	208.0	—	135.0	156.0	—	108.0	125.0
150	—	—	—	—	—	396.0	—	—	360.0	—	240.0	—	156.0	180.0	—	125.0	144.0
200	—	—	—	—	—	528.0	—	—	480.0	—	320.0	—	208.0	240.0	—	167.0	192.0
250	—	—	—	—	—	663.0	—	—	602.0	—	403.0	—	—	302.0	—	—	242.0
300	—	—	—	—	—	—	—	—	—	—	482.0	—	—	361.0	—	—	289.0
350	—	—	—	—	—	—	—	—	—	—	560.0	—	—	414.0	—	—	336.0
400	—	—	—	—	—	—	—	—	—	—	636.0	—	—	477.0	—	—	382.0
500	—	—	—	—	—	—	—	—	—	—	786.0	—	—	590.0	—	—	472.0

NOTE: The above values of full-load currents are typical for motors running at speeds normal for belted motors and motors with normal torque characteristics. Whenever possible, use the actual motor nameplate full-load current when selecting motor control products.

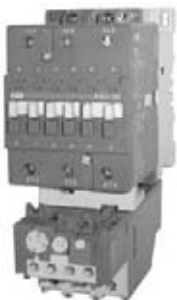
General information

Standard thermal overload relays

3



A9 & TA25



A50 & TA75

Standard – Thermal, Type TA, Class 10 & Electronic, Type E, Class 10, 20 & 30

For contactor	Setting range A	Replace Δ with suffix code on starter catalog number	Catalog number
A/AL/AE9 – A/AL/AE40	0.1 – 0.16	A	TA25DU0.16
	0.16 – 0.25	B	TA25DU0.25
	0.25 – 0.4	C	TA25DU0.4
	0.4 – 0.63	D	TA25DU0.63
	0.63 – 1.0	E	TA25DU1.0
	1.0 – 1.4	F	TA25DU1.4
	1.3 – 1.8	G	TA25DU1.8
	1.7 – 2.4	H	TA25DU2.4
	2.2 – 3.1	J	TA25DU3.1
	2.8 – 4.0	K	TA25DU4.0
	3.5 – 5.0	L	TA25DU5.0
	4.5 – 6.5	M	TA25DU6.5
	6.0 – 8.5	N	TA25DU8.5
	7.5 – 11	P	TA25DU11
	10 – 14	Q	TA25DU14
	13 – 19	R	TA25DU19
	18 – 25	S	TA25DU25
	24 – 32	T	TA25DU32
A/AL/AE30 – A/AL/AE40	18 – 25	A	TA42DU25
	22 – 32	B	TA42DU32
	29 – 42	C	TA42DU42
A/AE/AF50 – A/AE/AF75	18 – 25	A	TA75DU25
	22 – 32	B	TA75DU32
	29 – 42	C	TA75DU42
	36 – 52	D	TA75DU52
	45 – 63	E	TA75DU63
	60 – 80	F	TA75DU80
A/AE/AF110	29 – 42	C	TA80DU42
	36 – 52	D	TA80DU52
	45 – 63	E	TA80DU63
	60 – 80	F	TA80DU80
	65 – 90	A	TA110DU90
	80 – 110	B	TA110DU110
A/AF145 – A/AF185	65 – 90	A	TA200DU90
	80 – 110	B	TA200DU110
	100 – 135	C	TA200DU135
	110 – 150	D	TA200DU150
	130 – 175	E	TA200DU175
	150 – 200	F	TA200DU200
A/AF210 – A/AF300	130 – 185	A	TA450DU185 ①
	165 – 235	B	TA450DU235 ①
	220 – 310	C	TA450DU310 ①
A/AF400 – A/AF460	170 – 500	E5	E500DU500 ②
A/AF580 – A/AF750	270 – 800	E8	E800DU800 ②

NOTE: Overloads on this page are used as standard and do not require a price adder.

① TA450 overloads require mounting kits for installation.

② Not suitable for single-phase motors or direct current (DC) motors.

General information

Electronic overload relays

Starters



A145 & E200

Optional – Electronic, Type E, Class 10, 20 & 30 Selectable

For contactor	Setting range	Suffix code	Catalog number ①	List price adder
A/AL/AE9 – A/AL/AE16	0.1 – 0.32	A1	E16DU0.32	\$ 33
	0.3 – 1.0	B1	E16DU1.0	
	0.9 – 2.7	C1	E16DU2.7	
	2.0 – 6.3	D1	E16DU6.3	
	5.7 – 18.9	E1	E16DU18.9	
A/AL/AE26 – A/AL/AE40	9 – 30	E1	E45DU30	42
	15 – 45	E2	E45DU45	49
A/AE/AF50 – A/AE/AF75 A/AE/AF110	27 – 80	E1	E80DU80	86
	50 – 140	E1	E140DU140	96
A/AF145 – A/AF185	65 – 200	E2	E200DU200	100
A/AF210 – A/AF300	105 – 320	E3	E320DU320	287
AF400 – AF460	170 – 500	E5	E500DU500	Std ②
AF580 – AF750	270 – 800	E8	E800DU800	Std ②

① Not suitable for single-phase motors and direct current (DC) motors.
② Included in standard list price of starter.

General information

Enclosures

3

Type enclosure	For use with	Dimensions H x W x D (inches)	Catalog number	List price
IP65	A9 – A16 Contactors & starters, blank cover A9 – A16 Contactors & starters, start & stop/reset A9 – A16 Contactors & starters, reset only	7 x 3.5 x 5.2	EKA16S-0 EKA16S-A EKA16S-R	\$ 113 135 135
NEMA 1 Lift off cover	A9 – A26 Contactors, non-reversing & reversing starters A30 – A75 Contactors, non-reversing & reversing starters	11.5 x 7 x 6 13 x 9 x 7	EK-N1A9A26 EK-N1A30A75	263 282
NEMA 1 Indoor metal hinged cover	A9 – A40 Non-reversing starters + CCT A9 – A40 Reversing contactors A9 – A40 Reversing starters A50 – A75 Contactors A50 – A75 Non-reversing starters + CCT A50 – A75 Reversing starters	10 x 8 x 6 14 x 12 x 8	EK-11H EK-12	240 308
	A95 – A110 Contactors A95 – A110 Non-reversing starters + CCT	24 x 12 x 8	EK-13	608
NEMA 1, 3R 4, 4X & 12 Plastic	A9 – A40 Contactors A9 – A40 Non-reversing starters + CCT A9 – A40 Reversing starters	10 x 8 x 7	EK-W	240
	A50 – A75 Contactors A50 – A75 Non-reversing starters + CCT A50 – A75 Reversing starters	12 x 10 x 7	EK-W2	330
NEMA 12 Indoor metal dusttight	A9 – A40 Contactors A9 – A40 Non-reversing starters A9 – A40 Reversing contactors A9 – A40 Reversing starters A50 – A75 Contactors + CCT A50 – A75 Non-reversing starters + CCT A50 – A75 Reversing starters	10 x 8 x 6 14 x 12 x 8	EK-24 EK-22	270 405
NEMA 3R Outdoor metal	A9 – A40 Contactors + CCT A9 – A40 Non-reversing starters + CCT A9 – A40 Reversing contactors A9 – A40 Reversing starters A50 – A75 Contactors + CCT A50 – A75 Non-reversing starters + CCT A50 – A75 Reversing contactors A50 – A75 Reversing starters A95 – A110 Contactors + CCT A110 Non-reversing starters + CCT A110 Non-reversing starters + CCT	10 x 8 x 6 14 x 12 x 8	EK-31 EK-32	338 653

NOTE : (1) All enclosures come standard with reset button and predrilled back panel.

General information

Enclosure rating definitions

Introduction

An enclosure is a surrounding case constructed to provide a degree of protection to personnel against accidental contact with the enclosed equipment and to provide a degree of protection to the enclosed equipment against specified environmental conditions.

A brief description of the more common types of enclosures used by the electrical industry relating to their environmental capabilities follows.

Refer to NEMA Standards Publication for more information regarding applications, features and design tests.

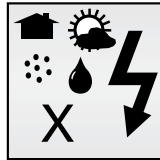
Individual NEMA product Standards Publications or third party certification standards may contain additional requirements for product testing and performance.

Definitions pertaining to nonhazardous locations



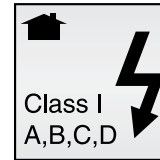
Type 1

Enclosures are intended for indoor use primarily to provide a degree of protection against limited amounts of falling dirt. (NEMA Standard 7-15-1991.)



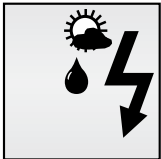
Type 4X

Enclosures are intended for indoor or outdoor use primarily to provide a degree of protection against corrosion, windblown dust and rain, splashing water, hose-directed water and damage from external ice formation. (NEMA Standard 1-10-1979)



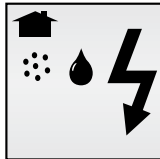
Type 7

Enclosures are intended for indoor use in locations classified as Class I, Groups, A, B, C, or D, as defined in the National Electrical Code. (NEMA Standard 7-15-1991.)



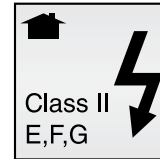
Type 3R

Enclosures are intended for outdoor use primarily to provide a degree of protection against rain, sleet and damage from external ice formation. (NEMA Standard 7-15-1991.)



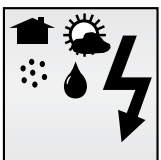
Type 12

Enclosures are intended for indoor use primarily to provide a degree of protection against circulating dust, falling dirt, and dripping noncorrosive liquids. (NEMA Standard 7-15-1991.)



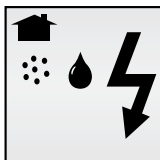
Type 9

Enclosures are intended for indoor use in locations classified as Class II, Groups E, F, or G, as defined in the National Electrical Code. (NEMA Standard 7-15-1991.)



Type 4

Enclosures are intended for indoor or outdoor use primarily to provide a degree of protection against windblown dust and rain, splashing water, hose-directed water and damage from external ice formation. (NEMA Standard 1-10-1979.)



Type 13

Enclosures are intended for indoor use primarily to provide a degree of protection against dust, spraying of water, oil and noncorrosive coolant. (NEMA Standard 1-10-1979.)

Legend

- Indoors
- Outdoors
- Water
- Dirt/dust
- Corrosion

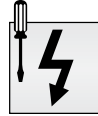
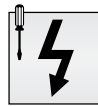
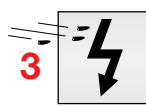
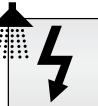
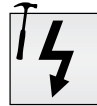
General information

IP Environmental ratings

IP ratings

3

indicate the degree of protection against dust, liquids and impacts. The IP degrees of protection are defined by the French standard NFC 20-010. To rate a device's degrees of protection, the letters IP are followed by up to three numbers. These numbers are defined as follows:

first number protection against solid objects	second number protection against liquids	third number protection against mechanical impacts
IP 0  no protection 1  protected against solid objects over 50mm (e.g. accidental touch by hands.) 2  protected against solid objects over 12mm (e.g. fingers) 3  protected against solid objects over 2.5mm (tools & wires) 4  protected against solid objects over 1mm (small tools & small wires) 5  protected against dust (no harmful deposit) 6  totally protected against dust	IP 0  no protection 1  protected against vertically falling rain or condensation 2  protected against direct sprays of water up to 15° from vertical 3  protected against sprays to 60° from vertical 4  protected against water sprayed from all directions 5  protected against low pressure jets of water from all directions 6  protected from strong jets of water (e.g. for use on ship decks) 7  protected against the effects of immersion between 15cm and 1m	IP 0  no protection 1  impact 0.225 joule 150g falling from 15cm 2  impact 0.375 joule 250g falling from 15cm 3  impact 0.50 joule 250g falling from 20cm 5  impact 2.00 joule 500g falling from 40cm 7  impact 6.00 joule 1.5kg falling from 40cm 9  impact 20.00 joule 5 kg falling from 40cm