

Across the line • Combination • Reduced voltage

Starters



Starters
Across the line
Combination
Reduced voltage

3





General information

Field modification kits

A Starters

Start-Stop pushbutton kit – dual element

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Starter size	Catalog number
A9 – A750	MPSSK

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

Start-Stop pushbutton kit

Starter size	Catalog number
A9 – A750	MP4SSK4

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

Fwd-Rev-Stop pushbutton kit

Starter size	Catalog number
A9 – A750	MPFRK-4

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

2 Position selector switch kit

Starter size	Catalog number
A9 – A750	MPSL2K-4

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

3 Position selector switch kit

Starter size	Catalog number
A9 – A750	MPSL3K-4

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

Pilot light kits

Starter size	Voltage	Catalog number
A9 – A750	120	MPPLK-41
	240	MPPLK-42
	480V	MPPLK-44

For field installation on all enclosures. ①

Reset button kits

Starter size	Catalog number
A9 – A750	KPR3-104B

For field installation on all enclosures. ①

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

General information

Factory modifications



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Control cover accessories – A9-A750

Description	Control suffix ①
Start-stop pushbutton	A
Fwd-rev-stop pushbutton	B
2 position selector switch (Std. ON-OFF)	C
3 position selector switch (Std. HAND-OFF-AUTO)	D
Pilot light, Red, RUN (Std.)	E
Pilot light, Green, RUN	R
Pilot light suffix + V= Neon bulb	V
Pilot light suffix + X= LED bulb	X
Start-stop pushbutton & pilot light	F
Fwd-rev-stop pushbutton & pilot light	G
2 position selector switch & pilot light	H
3 position selector switch & pilot light	J
Fast-slow-stop pushbuttons	K
Fast-slow-stop pushbuttons & pilot light	L
Fast-slow-off-auto selector switch	M
Emergency stop	P
F suffix + 1NO & 1NC auxiliary contact	T
J suffix + 1NO & 1NC auxiliary contact	U
Pushbutton (standard START)	Y

Additional auxiliary contact blocks — A9 – A750

Contact configuration	Suffix code ①
1 N.O.	10
1 N.C.	01
2 N.O.	20
1 N.O. & 1 N.C.	11
2 N.C.	02
4 N.O.	40
3 N.O. & 1 N.C.	31
2 N.O. & 2 N.C.	22
1 N.O. & 3 N.C.	13
4 N.C.	04
3 N.O. & 3 N.C.	33

Special modifications

Contact configuration	Suffix code ①
Contactor	
Coil surge suppressor	S
Auxiliary relays	
Type N control relay (4 pole)	CR
Electronic timer	
1.5 – 30, On Delay	TN30
5 – 100, On Delay	TN100
1.5 – 30, Off Delay	TF30
5 – 100, Off Delay	TF100
Phase failure phase reversal with over and undervoltage relays	PFPR
Ground fault protection	GFP
For multi-speed controllers	
Compelling relay	CPR
Accelerating relay	ACR
Decelerating relay	DCR
Meters & metering	
Current transformer	CT
Ammeter (including C.T.)	AM
Ammeter & ammeter switch	AMS
Voltmeter	VM
Voltmeter & voltmeter switch	VMS
Elapsed time meter	ETM
Operation counter	OC
Wattmeter	WM
Miscellaneous	
Lightning arrestor	LA
Space heater, 100W with thermostat	SH

Hazardous location enclosure accessories, NEMA 7 & 9

Item	Catalog Suffix No. ①
3R Breather/drain	A
Start PB green	B
Stop PB red	C
St/St dual PB	D
Em. Stop mush momentary	E
Em. Stop mush maintained	F
Black PB N.O. auxiliary	G
Black PB N.C. auxiliary	H
Pilot light	J
Illuminated PB	K
Push-to-test pilot light	L
Potentiometer	M
2-Pos Selector Maintained	N
2-Pos Selector spring L to R	P
2-Pos Selector spring R to L	Q
3-Pos Selector sw. main.	R
3-Pos Selector spring L to R	S
3-Pos Selector spring R to L	T
3-Pos Selector spring to C	U
2-Pos Selector key operated	V
3-Pos Selector key operated	W

Control circuit transformer (standard VA) – A9 - A750 ②

Standard size with fused secondary			Coil suffix	Starter size	CCT VA
Primary	Secondary	Hz			
				A9 – A40	45 ③
				A9 – A40	50
				A50 – A75	75
				A95 – A110	100
				A145 – A185	150
				A210 – A300	250
				A400 – A460	150
				A580 – A750	250

Control circuit transformers do include two primary fuses and one secondary fuse.

- ① Add this suffix to the last digit of the catalog number.
- ② Consult factory if additional VA is required.
- ③ Does not include primary fusing.
- ④ A400 - A750 utilizes the AF wide range coil with a lower coil consumption than A210 - A300.



General information

Catalog number explanation

A110 SR F 1 - 84 C 6 D 4 L A

3 Starter size

Starter type

- S - Non-reversing
- SR - Reversing
- SS - Single phase, non-reversing
- ST - Multi-speed, 2 speed 1 winding, 2 speed 2 winding
- SA - Autotransformer
- SG - Wye-delta open transition
- SY - Wye-delta closed transition
- SH - Part winding
- N - NEMA

Combination type

- N - Non-fusible disconnect
- F - Fusible disconnect
- B - Thermal magnetic or electronic trip type circuit breaker
- M - Motor Circuit Protection (MCP)

Enclosure

- 1 - UL Type 1
- 2 - UL Type 12
- 3 - UL Type 3R
- 4 - UL Type 4
- X - UL Type 4X stainless steel
- P - Plastic
- 7 - UL Type 7 & 9
- Class I, Group C, D, Div 1 & 2
- Class II, Groups E, F & G, Div 1 & 2
- Class III
- 74 - Hazardous Type 4

Coil voltage/CCT

Coil voltage selection – A9 - A300 ①

Hz	Cntr type	Volts															
		12	24	48	110	120	125	208	220	240	277	380	415	440	480	500	600
60	A		81	83	84	84		34	36	80	42		86	86	51	53	55
50	A		81	83	84					80			85	86			55

For other voltages, see page 1.26.

Coil voltage selection – A400 - A750

Hz	Cntr type	Volts			
		24 - 60	48 - 130	100 - 250	250 - 500
60	AF	68	69	70	71 ②
50	AF	68	69	70	71 ②
DC	AF	68	69	70	71 ②

Control transformer voltage selection chart

Hz	Type	Volts			
		208/120	230 - 240/120	460 - 480/120	575 - 600/120
50/60	A/AF	0	7	8	9

For other voltages, consult factory.

Overload range

See Overload Relay Selection chart, see page 3.6.

Accessories

See Factory modifications, page 3.3.

Horsepower

- A - 10
- B - 15
- C - 20
- D - 25
- E - 30
- F - 40
- G - 50
- H - 60
- J - 75
- K - 100
- L - 125
- M - 150
- N - 200
- P - 250
- R - 300
- S - 350
- T - 400
- U - 500
- V - 600
- W - 700
- X - 800
- Y - 900
- Z - 1000

Line voltage

- 1 - 200 - 208V
- 2 - 230 - 240V
- 3 - 380 - 415V
- 4 - 460 - 480V
- 6 - 575 - 600V

Fuse clip

- 6A - 30A, 600V, Class J
- 6B - 60A, 600V, Class J
- 6C - 100A, 600V, Class J
- 6D - 200A, 600V, Class J
- 6E - 400A, 600V, Class J
- 6F - 600A, 600V, Class J
- 6G - 800A, 600V, Class L
- 6H - 1200A, 600V, Class L

Circuit breaker amp rating (600V)

- 6D-15
- 6E-20
- 6F-25
- 6G-30
- 6H-35
- 6J-40
- 6K-50
- 6L-60
- 6M-70
- 6N-80
- 6P-90
- 6R-100
- 6S-125
- 6T-150
- 6U-175
- 6V-200
- 6W-225
- 6X-250
- 6Y-300
- 6Z-350
- 6A-400
- 6B-450
- 6C-500
- 6D-600
- 6E-700
- 6F-800
- 6G-900
- 6H-1000
- 6J-1200

Circuit breaker amp rating (200V - 480V)

- 4D-15
- 4E-20
- 4F-25
- 4G-30
- 4H-35
- 4J-40
- 4K-50
- 4L-60
- 4M-70
- 4N-80
- 4P-90
- 4R-100
- 4S-125
- 4T-150
- 4U-175
- 4V-200
- 4W-225
- 4X-250
- 4Y-300
- 4Z-350
- 4A-400
- 4B-450
- 4C-500
- 4D-600
- 4E-700
- 4F-800
- 4G-900
- 4H-1000
- 4J-1200

MCP amp rating (600V)

- 6A - 3
- 6B - 5
- 6C - 10
- 6D - 25
- 6E - 50
- 6F - 100
- 6G - 150
- 6H - 250
- 6J - 400
- 6K - 600
- 6L - 800
- 6M - 1000
- 6N-1200

MCP amp rating (200V - 480V)

- 4A - 3
- 4B - 5
- 4C - 10
- 4D - 25
- 4E - 50
- 4F - 100
- 4G - 150
- 4H - 250
- 4J - 400
- 4K - 600
- 4L - 800
- 4M - 1000
- 4N - 1200

① For AF50 - AF300 starters, consult factory.

② For AF400 - AF750 only.

General information

Motor data ①



3

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

① 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

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



A9



A50

For contactor	Setting range A	Suffix code for all other starters	Catalog number
A/AE9 – A/AE40 BC9 – BC30	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/AE30 – A/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/AF95 – 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
	220 – 310	C	TA450DU310
A/AF400 – A/AF460	170 – 500	E5	E500DU500 ②
A/AF580 – A/AF750	270 – 800	E8	E800DU800 ②

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



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A145

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

For contactor	Setting range	Suffix code	Catalog number ①
E16DU – Tripping Class 10 A/AE9 – A/AE16	0.1 – 0.32	A1	E16DU0.32-10
	0.3 – 1.0	B1	E16DU1.0-10
	0.9 – 2.7	C1	E16DU2.7-10
	2.0 – 6.3	D1	E16DU6.3-10
	5.7 – 18.9	E1	E16DU18.9-10
E16DU – Tripping Class 20 A/AE9 – A/AE16	0.1 – 0.32	A2	E16DU0.32-20
	0.3 – 1.0	B2	E16DU1.0-20
	0.9 – 2.7	C2	E16DU2.7-20
	2.0 – 6.3	D2	E16DU6.3-20
	5.7 – 18.9	E2	E16DU18.9-20
E16DU – Tripping Class 30 A/AE9 – A/AE16	0.1 – 0.32	A3	E16DU0.32-30
	0.3 – 1.0	B3	E16DU1.0-30
	0.9 – 2.7	C3	E16DU2.7-30
	2.0 – 6.3	D3	E16DU6.3-30
	5.7 – 18.9	E3	E16DU18.9-30
E200DU – Tripping Class 10, 20 & 30 A/AF145 – A/AF185 A/AF210 – A/AF300 AF400 – AF460 AF580 – AF750	65 – 200	E2	E200DU200
	105 – 320	E3	E320DU320
	170 – 500	E5	E500DU500
	270 – 800	E8	E800DU800

① Not suitable for single-phase motors and direct current (DC) motors.



General information Enclosures

Type enclosure	For use with	Dimensions H x W x D (inches)	Catalog number
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
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
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
	A95 – A110 Contactors A95 – A110 Non-reversing starters + CCT	24 x 12 x 8	EK-13
NEMA 1, 3R 4, 4X & 12 Plastic	A9 – A40 Contactors A9 – A40 Non-reversing starters + CCT A9 – A40 Reversing starters A50 – A75 Contactors A50 – A75 Non-reversing starters + CCT A50 – A75 Reversing starters	10 x 8 x 7 12 x 10 x 7	EK-W EK-W2
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
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 A95 – A110 Contactors + CCT A110 Non-reversing starters + CCT	10 x 8 x 6 14 x 12 x 8	EK-31 EK-32

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

General information

Enclosure rating definitions



Introduction

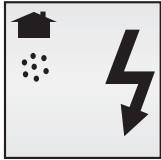
An enclosure is a surrounding case constructed to provide a degree of protection to personnel against accidental contact with the enclosed equipment and to provide a degree of protection to the enclosed equipment against specified environmental conditions.

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



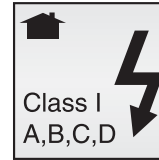
Type 1

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



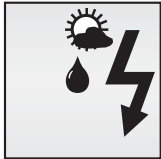
Type 4X

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.)



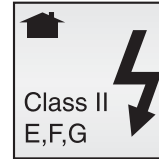
Type 3R

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.)



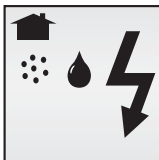
Type 9

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

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