

Technical Information Common to Buffalo Industrial Range

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Buffalo combinations, switches and sockets are tough and robust and perform well in the dust and the wet and provide resistance to chemical attack, weather effects and are impervious to the ingress of dust and the damaging effects of water. The range offers products with a dependable protection rating of IP66 to cover many arduous applications.

Protection Rating Reference Chart (IP Code AS 60529)

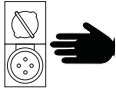
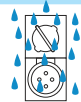
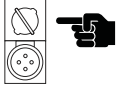

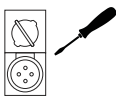

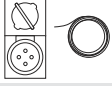

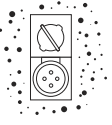

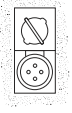

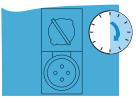














Solids		Water	
1	 Protected against a solid object greater than 50mm such as a hand	1	 Protected against vertically falling drops of water. Limited ingress permitted
2	 Protected against a solid object greater than 12.5mm such as a finger	2	 Protected against vertically falling drops of water with enclosure tilted up to 15 degrees from the vertical. Limited ingress permitted
3	 Protected against a solid object greater than 2.5mm such as a screwdriver	3	 Protected against sprays of water up to 60 degrees from the vertical. Limited ingress permitted for three minutes
4	 Protected against a solid object greater than 1mm such as a wire	4	 Protected against water splashed from all directions. Limited ingress permitted
5	 Dust Protected. Limited ingress of dust permitted. Will not interfere with operation of the equipment. Two to eight hours	5	 Protected against jets of water. Limited ingress permitted
6	 Dust tight. No ingress of dust. Two to eight hours	6	 Water from heavy seas or water projects in powerful jets shall not enter the enclosure in harmful quantities
		7	 Protection against the effects of immersion in water between 15cm and 1m for 30 minutes
		8	 Protection against the effects of immersion in water under pressure for long periods

Table 1 (pin configurations referenced in product charts)

						
A 10A 250V-	B 15A 250V-	C 20A 500V-	D 32A 500V-	E 10A 500V-	F 20A 500V-	G 32A 500V-
						
H 40A 500V-	I 50A 500V-	J 10A 500V-	K 20A 500V-	L 32A 500V-	M 40A 500V-	N 50A 500V-



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Buffalo Chemical Resistance Chart

At Trader we have tried to simplify the chemical resistant solution with our Buffalo offer. Instead of offering different levels of protection and solutions as others in the market, we have raised the performance standard product to perform in a wider range of environments. Our offer is made to the same chemical resistant standard of our grey, orange and transparent mouldings. Along with all fixing screws, springs and pins exposed to the elements being produced from 304 grade stainless steel.

Trader has selected materials for these industrial products that should be able to stand up to the majority of environments likely to be encountered. Research and development with leading material suppliers have enabled us to identify materials that perform in harsh environments where they will be subject to chemicals, impact and weather. The Buffalo range out performs other standard industrial products in a broad range of environments when exposed to hydrocarbons such as petrol and oils, alkalis and a range of solvents. Please review the chemical performance chart for more detail and contact us with any queries.

Product Type		Enclosures (E1, ES1, E2 & ES2)	Housings for Switches, Sockets & Plugs, as well as exposed expects such as flaps & switch knobs
Product Colour		Grey	Grey, Orange & Transparent
Acids			
Weak Solutions	Hydrochloric 10%	Excellent	Excellent
	Nitric 10%	Excellent	Excellent
Concentrate	Sulphuric 100%	Excellent	Poor
Alkalis			
Weak Solutions	Sodium Hydroxide 10% (Caustic Soda)	Excellent	Good
Concentrate	Potassium Hydroxide 100%	Excellent - Good	Poor
Automotive			
	Petroleum	Excellent	Excellent
	Lubrication Oils	Excellent	Excellent
	Hydraulic Oil	Excellent	Excellent
Solvents			
Aliphatic Hydrocarbons (Alkanes)	Methane	Good	Excellent
	Propane	Excellent	Excellent
Alcohols	Ethylene Glycol	Excellent	Excellent
	Glycerol (Glycerin)	Excellent	Good
	Methyl Alcohol (Methanol)	Excellent	Good
	Ethyl Alcohol (Ethanol)	Excellent	Excellent
Amines	Aniline	Poor	Poor
Aromatic Hydrocarbons	Methyl Benzene	Poor	Good
	Xylene	Poor	Good
Ethers	Dimethyl Ethyl	Excellent	Excellent
Ketones	Acetone	Excellent	Poor
	Acetophenone	Poor	Poor
	Ethyl Methyl Ketone	Poor	Poor
Miscellaneous			
	Detergent	Excellent	Excellent
Inorganic Salts	Magensium Sulphate	Excellent	Excellent
Oxidising Agents			
Weak Solution	Sodium Hypochlorite 5%	Excellent	Excellent
Strong Solution	Hydrogen Peroxide 30%	Excellent	Excellent
Water			
	Ambient	Excellent	Excellent
	Heated >60°C	Fair	Good
	Steam	Poor	Poor



- BUC310**
- BUC315**
- BUC320**
- BUC332**
- BUC410**
- BUC420**
- BUC432**
- BUC440**
- BUC450**
- BUC510**
- BUC520**
- BUC532**
- BUC540**
- BUC550**

Modular Combinations

Buffalo offers an extensive range of modular combinations that adapt readily to almost any situation, three pin up to 32A, four and five pin up to 50A.

Phase links are factory fitted in all cases (Installers should check that no terminals have loosened off in transport). The terminal sizes are generous to allow easy connection of the conductors. See the table for product detail.



General Information						Switch Data						Socket Data		Plug Data
Pin & Volt	Cat No.	Current Rating	Pin Config	Pin Config Code (Table 1)	Enclosure	AC21 Rating (A)	AC22 Rating (A)	AC23 Rating (A)	M Rating	Minimum Conductor Size (mm ²)	Maximum Conductor Size (mm ²)	Minimum Conductor Size (mm ²)	Maximum Conductor Size (mm ²)	Matching Plug
3 Pin 250V~	BUC310	10	3 Flat	A	ES2	10	10	8	M80	1.5	6	1.5	6	BUP310
	BUC315	15	3 Flat	B	ES2	15	15	8	M80	1.5	6	1.5	6	BUP315
3 Pin 500V~	BUC320	20	3 Round	C	E2	20	20	20	M150	6	16	2.5	6	BUP320
	BUC332	32	3 Round	D	E2	32	32	28	M180	6	16	6	16	BUP332
4 Pin 500V~	BUC410	10	4 Round	E	E2	10	10	10	M100	6	16	1.5	6	BUP410
	BUC420	20	4 Round	F	E2	20	20	20	M150	6	16	1.5	6	BUP420
	BUC432	32	4 Round	G	E2	32	32	28	M180	6	16	2.5	6	BUP432
	BUC440	40	4 Round	H	E2	40	40	35	M200	10	25	6	16	
	BUC450	50	4 Round	I	E2	50	50	25	M250	10	25	10	16	
5 Pin 500V~	BUC510	10	5 Round	J	E2	10	10	10	M100	6	16	1.5	6	BUP510
	BUC520	20	5 Round	K	E2	20	20	20	M150	6	16	1.5	6	BUP520
	BUC532	32	5 Round	L	E2	32	32	28	M180	6	16	2.5	6	BUP532
	BUC540	40	5 Round	M	E2	40	40	35	M200	10	25	6	16	
	BUC550	50	5 Round	N	E2	50	50	25	M250	10	25	10	16	



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Data Specification Sheet
November 2017

BUSW110
BUSW120
BUSW132
BUSW220
BUSW310
BUSW320
BUSW332
BUSW350
BUSW363

Heavy Duty Switches

The same heavy duty switches used in our Combinations are available as individual switches for isolation and control applications.

They have generous terminal sizes, have a large, easy to use knob, suitable for use with heavy industrial gloves, and a positive, rotary action. They feature an eight millimetre lock off facility.

The range includes Single, Double, and Three Pole, in amperages from 10A up to 63A. See the table for product detail.



Pole & Volt	Cat No.	Current Rating (Nominal) (A)	AC21 Rating (A)	AC22 Rating (A)	AC23 Rating (A)	M Rating	Minimum Conductor Size (mm ²)	Maximum Conductor Size (mm ²)
Single Pole 250V~	BUSW110	10	10	10	8	M80	1.5	6
	BUSW120	20	20	15	8	M150	2.5	16
	BUSW132	32	32	20	28	M180	6	16
2 Pole 500V~	BUSW220	20	20	32	28	M150	2.5	16
3 Pole 500V~	BUSW310	10	10	10	10	M100	2.5	16
	BUSW320	20	20	20	20	M150	2.5	16
	BUSW332	32	32	28	28	M180	6	16
	BUSW350	50	50	25	35	M250	10	25
	BUSW363	63	63	25	25	M300	10	25



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Data Specification Sheet
November 2017

BUPP310
BUPP315
BUPP320
BUPP332
BUPP410
BUPP420
BUPP432
BUPP510
BUPP520
BUPP532

Heavy Duty Sockets

The Socket components used in our Combinations are also available as individual Socket Outlets for use in relevant applications.

They are robust and easy to use, and have a one piece transparent flap to seal out dust and moisture when not in use.

This self latching one piece design removes a possible failure point and opportunities for dust and grime to collect.

The range includes three, four, and five pin products in amperages from 10A up to 50A. See the table for product detail.



Pin & Volt	Cat No.	Current Rating (A)	Pin Config	Pin Config Code (Table 1)	Enclosure	Minimum Conductor Size (mm ²)	Maximum Conductor Size (mm ²)	Matching Plug
3 Pin 250V~	BUPP310	10	3 Flat	A	ES1	1.5	6	BUP310OR
	BUPP315	15	3 Flat	B	ES1	1.5	6	BUP315OR
3 Pin 500V~	BUPP320	20	3 Round	C	E1	2.5	6	BUP320OR/BUPA320OR
	BUPP332	32	3 Round	D	E1	6	16	BUP332OR/BUPA332OR
4 Pin 500V~	BUPP410	10	4 Round	E	E1	1.5	6	BUP410OR/BUPA410OR
	BUPP420	20	4 Round	F	E1	1.5	6	BUP420OR/BUPA420OR
	BUPP432	32	4 Round	G	E1	2.5	6	BUP432OR/BUPA432OR
5 Pin 500V~	BUPP510	10	5 Round	J	E1	1.5	6	BUP510OR/BUPA510OR
	BUPP520	20	5 Round	K	E1	1.5	6	BUP520OR/BUPA520OR
	BUPP532	32	5 Round	L	E1	2.5	6	BUP532OR/BUPA532OR



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BUEXPP410OR
BUEXPP420OR
BUEXPP432OR
BUEXPP510OR
BUEXPP520OR
BUEXPP532OR

Extension Sockets

Buffalo offers a range of Industrial Extension Sockets in four and five pins from 10A to 32A.

They are made from the same Chemical Resistant material used throughout the Buffalo Range, including the transparent sections that allow confirmation of correct wiring and assist with fault finding.



All socket variants have generous terminal sizes and provision for cable entry by gland or terminator. See the table for product detail.

Pin & Volt	Cat No. Extension Sockets	Current Rating (A)	Pin Config	Pin Config Code (Table 1)	Terminal Size (mm dia)	Maximum Conductor Size (mm ²)	Minimum Cable (mm ²)	Maximum Cable Diameter (mm)	Gland Nut Thread (mm)	Matching Plug
4 Pin 500V~	BUEXPP410OR	10	4 Round	E	4.1	10	7	16	M25 x 1.5	BUP410/ BUPA410
	BUEXPP420OR	20	4 Round	F	4.1	10	7	16	M25 x 1.5	BUP420/ BUPA420
	BUEXPP432OR	32	4 Round	G	4.1	10	9	28	M32 x 1.5	BUP432/ BUPA432
5 Pin 500V~	BUEXPP510OR	10	5 Round	J	4.1	10	7	16	M25 x 1.5	BUP510/ BUPA510
	BUEXPP520OR	20	5 Round	K	4.1	10	7	16	M25 x 1.5	BUP520/ BUPA520
	BUEXPP532OR	32	5 Round	L	4.1	10	9	28	M32 x 1.5	BUP532/ BUPA532

All products accept a locking ring which prevents accidental removal and assists with maintaining the highest IP Rating and a spring loaded flap that seals out dust and moisture when not in use.

Compatible with common pendant outlet kits.



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Straight Plug

- BUP310OR**
- BUP315OR**
- BUP320OR**
- BUP332OR**
- BUP410OR**
- BUP420OR**
- BUP432OR**
- BUP510OR**
- BUP520OR**
- BUP532OR**

Angle Plug

- BUPA310OR**
- BUPA315OR**
- BUPA320OR**
- BUPA332OR**
- BUPA410OR**
- BUPA420OR**
- BUPA432OR**
- BUPA510OR**
- BUPA520OR**
- BUPA532OR**

Straight & Angled Plugs

Buffalo offers an extensive range of Industrial Plugs, three pin up to 32A, and four and five pins up to 50A. Angled Plugs are also available in ratings other than 3 pin 10A and 15A. See the table for product detail.



Pin & Volt	Cat No. Straight Plug	Cat No. Angle Plug	Current Rating (A)	Pin Config	Pin Config Code (Table 1)	Terminal Size (mm dia)	Maximum Conductor Size (mm ²)	Minimum Cable Diameter (mm ²)	Maximum Cable Diameter (mm ²)	Gland Nut Thread (mm)	Matching Socket/Combination
3 Pin 250V~	BUP310OR	BUPA310OR	10	3 Flat	A	clamp type	2.5	7	12.5	M20 x 1.5	BUPP310/BUC310
	BUP315OR	BUPA315OR	15	3 Flat	B	clamp type	2.5	7	12.5	M20 x 1.5	BUPP315/BUC315
3 Pin 500V~	BUP320OR	BUPA320OR	20	3 Round	C	4.1	10	7	16	M25 x 1.5	BUPP320/BUC320
	BUP332OR	BUPA332OR	32	3 Round	D	4.1	10	7	16	M25 x 1.5	BUPP332/BUC332
4 Pin 500V~	BUP410OR	BUPA410OR	10	4 Round	E	4.1	10	7	16	M25 x 1.5	BUPP410/BUC410
	BUP420OR	BUPA420OR	20	4 Round	F	4.1	10	7	16	M25 x 1.5	BUPP420/BUC420
	BUP432OR	BUPA432OR	32	4 Round	G	4.1	10	9	28	M32 x 1.5	BUPP432/BUC332
5 Pin 500V~	BUP510OR	BUPA510OR	10	5 Round	J	4.1	10	7	16	M25 x 1.5	BUPP510/BUC510
	BUP520OR	BUPA520OR	20	5 Round	K	4.1	10	7	16	M25 x 1.5	BUPP520/BUC520
	BUP532OR	BUPA532OR	32	5 Round	L	4.1	10	9	28	M32 x 1.5	BUPP532/ BUC532



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Data Specification Sheet
November 2017

BU4DIN

Din Enclosure IP66

DIN Rail Accessory Mounting Enclosure provides a facility to mount up to 4 poles of equipment such as MCB's and RCDs - external to a switchboard in an environment needing a high level of protection.

As with all Buffalo products, it is manufactured from robust, chemical resistant material to provide a long reliable life in the dust and wet.



Cat No.	Description	Poles	Enclosure Included	Conduit Entries
BU4DIN	Enclosure Din 4 Pole	4	BUBB2G	3 x 25mm



BUBB1G
BUBBS1G
BUBB2G
BUBBS2G
BUBB3G
BUBB4G

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Enclosures

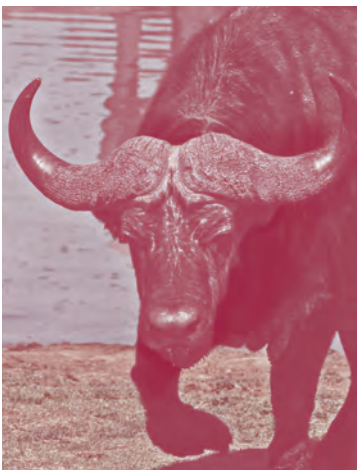
The enclosures included with the Buffalo products (Modular Combinations, Heavy Duty Switches, Heavy Duty Sockets and Din Enclosures) have threaded entries top and bottom. In standard enclosures there are 3 x M25 entries. In shallow enclosures, used for single phase 10A and 15A products, there is a single M25 one end and 2 x M20 at the alternate end. They come complete with plugs for all entries, a parts pack with cover screw caps, along with caps for mounting screws, and 2 x 25/20 threaded reducers. Multi-gang enclosures come standard with bridges to support and seal against the gaskets and modules.

Mounting Enclosures (also known as Back Boxes) are also available as individual items manufactured from UV Stabilised PVC to ensure effective solvent bonding with industry standard conduit fittings. These also come with the parts packs and bridges.

All cover mounting screw bosses have brass inserts for long life & reliability.



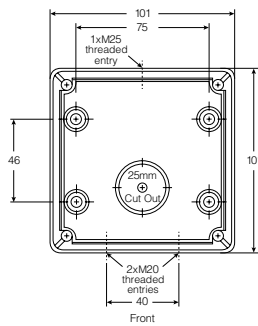
Description	Cat No.	Height (mm)	Width (mm)	Length (mm)	Conduit Entries	Chemical Resistant
Enclosure Back Box 1 Gang	BUBB1G	63	101	101	3x25	Yes
Enclosure Back Box Shallow 1 Gang	BUBBS1G	38	101	101	1x25, 2x20	Yes
Enclosure Back Box 2 Gang	BUBB2G	63	101	198	3x25	Yes
Enclosure Back Box Shallow 2 Gang	BUBBS2G	38	101	198	1x15, 2x20	Yes
Enclosure Back Box 3 Gang	BUBB3G	63	101	298	3x25	Yes
Enclosure Back Box 4 Gang	BUBB4G	63	198	198	4x25	Yes



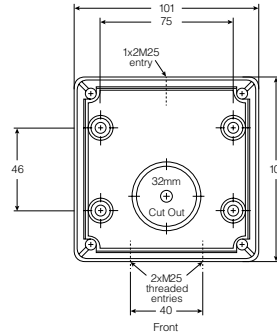
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BUBBS1G
BUBB2G
BUBBS2G
BUBB3G
BUBB4G

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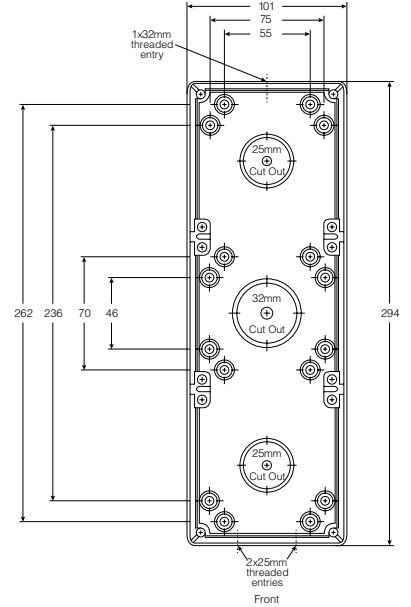
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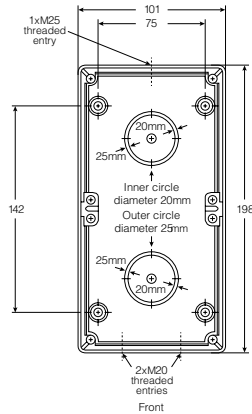
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Depth 38mm



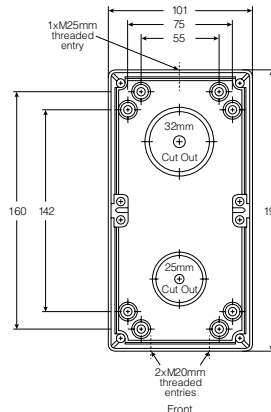
Enclosure Back Box 1 Gang
Depth 63mm



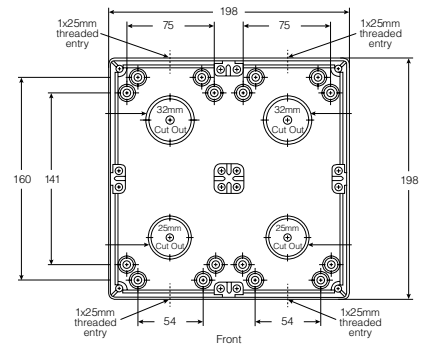
Enclosure Back Box 3 Gang
Depth 63mm



Enclosure Back Box Shallow 2 Gang
Depth 38mm



Enclosure Back Box 2 Gang
Depth 63mm



Enclosure Back Box 4 Gang
Depth 63mm

