

**P R O D U C T
P O R T F O L I O
S T A N D A R D
S E R I E S**





Esbee Industrial Combines manufactures wide range of products catering to industrial segments as well as white good Industry.

The Industrial range of products include 22.5 mm Push Button, Signaling Units, Tower lights, Push Button stations, Synchronous Motors & Industrial Fuses. The white good industry range of products include Appliance switches, Lamp sockets, Miniature switches & Wire harnesses. Over a period of time, we have established the state-of-art facilities from design to manufacture products all under one roof.

Certification & International Approvals:

We are ISO 9001:2008 certified company. A strong believer in Indian product quality, our products have International Approvals like **CE, CSA, VDE, UL, "S"** mark (for 22.5mm push buttons & signaling units) and **CSA, TUV** (for appliance Switches & Lamp Sockets).

Our core strengths:

- >> Manufacturers of User-friendly products.
- >> International safety approvals.
- >> Accepted by developed countries like Germany, USA, Canada, UK, Dubai .
- >> Continuous in-house endurance testing to ensure reliability.



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Ø 22.5 mm

3



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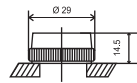
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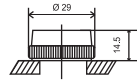
TEEKAY SERIES



Flush head Push Button with 1 NC Block

Cat. No. : TD11AB2

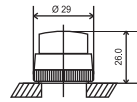
Colour (4th Digit) : 1



Flush head Push Button with 1 NO Block

Cat. No. : TD1□AA2

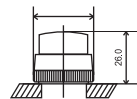
Colour (4th Digit) : 1 2 3 4 5 6 7



Projecting head Push Button with 1 NC Block

Cat. No. : TD4□AB2

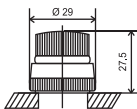
Colour (4th Digit) : 1 2 3 4 5 6 7



Projecting head Push Button with 1 NO Block

Cat. No. : TD4□AA2

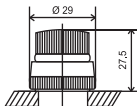
Colour (4th Digit) : 1 2 3 4 5 6 7



Symmetric head 2 position selector switch (NSR) Black with 1 NC Block

Cat. No. : TK63AB2

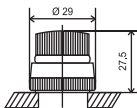
Colour (4th Digit) : 3



Symmetric head 2 position selector switch (NSR) Black with 1 NO Block

Cat. No. : TK63AA2

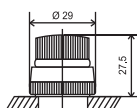
Colour (4th Digit) : 3



Symmetric head 2 position selector switch (SR) Black with 1 NC Block

Cat. No. : TI63AB2

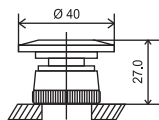
Colour (4th Digit) : 3



Symmetric head 2 position selector switch (SR) Black with 1 NO Block

Cat. No. : TI63AA2

Colour (4th Digit) : 3



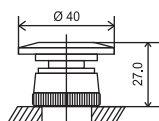
Mushroom Head Push Turn Actuator with 1 NO or NC Block

Cat. No. : TH5□AB2

: TH5□AA2

Colour (4th Digit) : 1 2 3 4

Auxiliary Contacts : B2 for NC & A2 for NO



Mushroom Head Push Function Actuator with 1 NO or NC Block

Cat. No. : TD5□AB2

: TD5□AA2

Colour (4th Digit) : 1 2 3 4

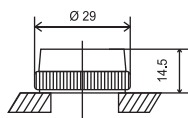
Auxiliary Contacts : B2 for NC & A2 for NO

Note: Colours available -

- 1 - Red, 2 - Green, 3 - Black, 4 - Yellow,
- 5 - White/Opal, 6 - Blue, 7 - Orange,
- 8 - Colourless

PUSH BUTTON ACTUATORS

Ø 22.5 mm

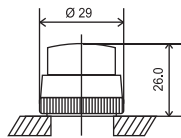


Flush Head Non Illuminated

Cat. No. : HD15C□
Colour (6th Digit) : 1 2 3 4 5 6 7

Flush Head Illuminated

Cat. No. : HD16C□
Colour (6th Digit) : 1 2 4 5 6 7 8

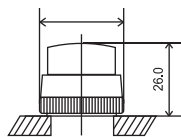


Projecting Head 'Push Function' Non Illuminated

Cat. No. : HD45C□
Colour (6th Digit) : 1 2 3 4 5 6 7

Projecting Head 'Push Function' Illuminated

Cat. No. : HD46C□
Colour (6th Digit) : 1 2 4 5 6 7 8

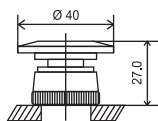


Projecting Head 'Push - Push Function' Non Illuminated

Cat. No. : HF45C□
Colour (6th Digit) : 1 2 3 4 5 6 7

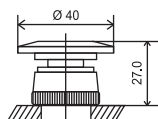
Projecting Head 'Push - Push Function' Illuminated

Cat. No. : HF46C□
Colour (6th Digit) : 1 2 4 5 6 7 8



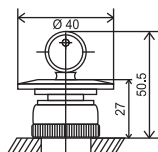
Mushroom Head Ø 40 mm 'Push Function' Non Illuminated

Cat. No. : HD55C□
Colour (6th Digit) : 1 2 3 4



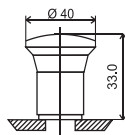
Mushroom Head Ø 40 mm 'Push Turn' Non Illuminated

Cat. No. : HH55C□
Colour (6th Digit) : 1 2 3 4



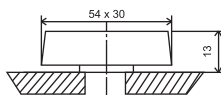
Mushroom Head with Lock & Key Non Illuminated

Cat. No. : HQ55C□
Colour (6th Digit) : 1 2 3 4



Mushroom Head 'Push Pull' Non Illuminated

Cat. No. : HG55B□
Colour (6th Digit) : 1 2 3 4



Twin Touch Non Illuminated

Cat. No. : HD15G3
Colour (6th Digit) : 3

Twin Touch Non Illuminated

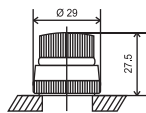
Cat. No. : HD16G□
Colour (6th Digit) : 4 7 8

(Colour of Center Indication Strip)

Note:

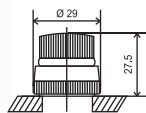
- All Actuators are offered with Standard black ABS collar. Eg. : HD15□1
- All Actuators (except Mushroom Head & Twin touch) are also available with chrome plated ABS & Brass collar.
 - For Chrome plated ABS Collar replace 5th digit C by A Eg. : HD15□A1
 - For Brass Collar replace C by B Eg. : HD15□B1
- For all Non-Illuminated Actuators at least 1 NO or NC Block required to make a complete Assembly. Eg. HD15C1 + HC61A2 makes complete assembly of flush head actuator with 1 NO Block.
- For all Illuminated Actuators at least 1 LED Holder / Bulb Holder required to make a complete Assembly. NO or NC Blocks can be added as per requirement. * For Spare LED Holder refer page no. 7
- Colours available -
 - 1 - Red, 2 - Green, 3 - Black, 4 - Yellow,
 - 5 - White/Opal, 6 - Blue, 7 - Orange, 8 - Colourless

SELECTOR ACTUATORS



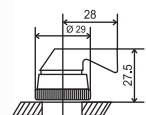
Symmetric Head Non Illuminated

Cat. No. : **2 Position**
 Non Spring Return HK65C□
 Spring Return HI65C□
3 Position
 Non Spring Return HL65C□
 Spring Return HJ65C□
 Spring Return L.H. HM65C□
 Spring Return R.H. HN65C□
 Colour (6th Digit) : **1 2 3 5**



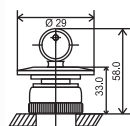
Symmetric Head Illuminated

Cat. No. : **2 Position**
 Non Spring Return HK66C□
 Spring Return HI66C□
3 Position
 Non Spring Return HL66C□
 Spring Return HJ66C□
 Spring Return L.H. HM66C□
 Spring Return R.H. HN66C□
 Colour (6th Digit) : **1 2 5 8**



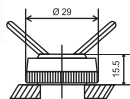
Lever Head Non Illuminated

Cat. No. : **2 Position**
 Non Spring Return HK75C□
 Spring Return HI75C□
3 Position
 Non Spring Return HL75C□
 Spring Return HJ75C□
 Spring Return L.H. HM75C□
 Spring Return R.H. HN75C□
 Colour (6th Digit) : **1 3 5**



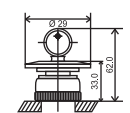
Lock & Key Rotary Type Non Illuminated**

Cat. No. : **2 Position**
 Non Spring Return HK85C3
 Spring Return HI85C3
3 Position
 Non Spring Return HL85C3
 Spring Return HJ85C3
 Spring Return L.H. HM85C3
 Spring Return R.H. HN85C3
 Colour (6th Digit) : **3**





Tip Head Non Illuminated

Cat. No. : HP95C□
 Colour (6th Digit) : **1 2 3 5**



Lock & Key Push Turn

Cat. No. : HH85C3
 Colour (6th Digit) : **3**

Note*: In 2 position selector actuator, for operating style  replace 2nd digit from K to R and for operating style  replace 2nd digit from K to T.

** For Lock & Key Actuators, various combinations for Key removal Positions are available i.e. Left, Right or Both.

Note: Colours available (Except Lock & Key)-
 1 - Red, 2 - Green, 3 - Black, 4 - Yellow,
 5 - White/Opal, 6 - Blue, 7 - Orange, 8 - Colourless

2 POSITION

3 POSITION



ACCESSORIES FOR ACTUATORS



MODULAR CONTACT BLOCKS



NO Block

Cat. No. : HC61A2



NC Block

Cat. No. : HC61B2



LED Holder

Cat. No. : EHL□□□□□

Colour (4th Digit) : **R** **G** **Y** **A** **B** **W**

Voltage (5th, 6th, 7th & 8th Digit):

012 C - 12 V AC/DC
024 C - 24 V AC/DC
048 C - 48 V AC/DC
064 C - 64 V AC/DC
110 A - 110 V AC
240 A - 240 V AC

CLIPS FOR MODULAR BLOCKS



First Row Clip

Cat. No. : HC922002



Single Leg Clip

Cat. No. : HE102000



Second Row Clip (For Vertical Cascading)

Cat. No. : HC122030

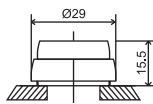


Side Row Clip (For Horizontal Cascading)

Cat. No. : HC929002

Note : First Row Clip is Included in all Actuators and Selector Actuators Assemblies except TEEKAY series.

INDICATORS & SPARES



Ribbed Lens Without Trim Collar (Standard)

Cat. No. : HB07F□
Colour (6th Digit) : 1 2 4 5 6 7 8

Ribbed Lens With Trim Collar

Cat. No. : HB07E□
Colour (6th Digit) : 1 2 4 5 6 7 8



Spare Lens for Modular / Integral Indicators (Ribbed Lens)

WITHOUT TRIM COLLAR

Colour	Cat. No.	Cat. No.
Red	HE103108	HE903108
Green	HE104109	HE904109
Yellow	HE104109	HE905110
Opal	HE101111	HE901111
Blue	HE107112	HE907112
Orange	HE108113	HE908113
Colourless	HE100101	HE900101

WITH TRIM COLLAR

Modular Bulb Holders Bulb Holders with Series Resistor



Bulb Rating	Supply Voltage	Cat. No.
6V, 2W	6V AC/DC	HC61S1
12V, 2W	12V AC/DC	HC61T1
24V, 2W	24V AC/DC	HC61U1
48V, 2W	48V AC/DC	HC61V1
130V, 20mA	110V AC/DC	HC61W1

Bulb Holder with Built in Resistor & Diode

Bulb Rating	Supply Voltage	Cat. No.
130V, 20mA	240V AC	HC61X1

Bulb Holder without Resistor & Diode

Supply Voltage	Cat. No.
6V / 12V /	HC61R1
24V / 48V	
110V AC/DC*	

Filament Lamps (BA 9S Type)



Supply Voltage	Cat. No.
6V AC/DC	HC550001
12V AC/DC	HC550002
24V AC/DC	HC550003
48V AC/DC	HC550004
130V AC/DC	HC550005

Note*: Please specify the supply voltage while ordering HC61R1

SPARES



Fixing Device



Cat. No. : HH192000



Lamp Extractor

Cat. No. : HH157000

Spare Lens Cap for Flush Head Actuators

		NON ILLUMINATED	ILLUMINATED
	Colour	Cat. No.	Cat. No.
	Red	HB103002	HB103103
	Green	HB104000	HB104101
	Black	HB102006	NA
	Yellow	HB105008	HB105109
	White/Opal	HB101004	HB101105
	Blue	HB107010	HB107111
	Orange	HB108012	HB108113
	Colourless	NA	HB100107

Shroud for Actuator



Colour	Cat. No.
Red	HH152002
Green	HH153003
Black	HH154004
Yellow	HH155005
Colourless	HH150100

COLLAR (for Flush/Projecting Head)



Colour	Cat. No.
Black Chrome Plated	HB192000
'ABS'	HB196000
'BRASS'	HB326000



Adaptor Ring (For 30 to 22mm in Panel Cutout conversion)

Colour	Cat. No.
Gray	HH180000
Black Chrome Plated	HH182004
'ABS'	HH196006



Blanking Plugs

Colour	Cat. No.
Gray	HH180002
Black	HH182009
Chrome Plated 'ABS'	HH196010



Center Indication Strip (for Twin Touch Actuator)

Colour	Cat. No.
Black	HB102058
Yellow	HB105163
Orange	HB108169
Colourless	HB100161

PUSH BUTTON STATIONS (in gray ABS)



Flush Head Actuator - Red
with Legend - STOP, Contact - 1 'NC'
Cat. No. : JAA10000



Flush Head Actuator - Green
with Legend - START, Contact - 1 'NO'
Cat. No. : JAB20000



Illuminated Actuator - Red with Legend - OFF
Contact - 1 'NC' Bulb Holder with Bulb 240V AC
Cat. No. : JAC50000



Illuminated Actuator - Green with Legend - ON
Contact - 1 'NO' Bulb Holder with Bulb 240V AC
Cat. No. : JAD60000



Two Position Symmetric Head Selector Switch -
Black with Legend - OFF / ON, Contact - 1 'NO'

Cat. No. : JAH20000



Two Position Lock & Key Rotary Switch
with Legend - OFF / ON, Contact - 1 'NO'

Cat. No. : JAI20000



Mushroom Head Actuator 'Push Function'
with Legend - STOP, Contact - 1 'NC' for Stop

Cat. No. : JAE10000



Mushroom Head Actuator 'Push Turn Type'
with Legend - STOP, Contact - 1 'NC' for Stop

Cat. No. : JAF10000



Mushroom Head Actuator with Lock & Key
and Legend - STOP, Contact - 1 'NC' for Stop

Cat. No. : JAG10000

Mushroom Head 'Push Pull' and Legend -
STOP, Contact - 1 'NC' for Stop

Cat. No. : TJ51AB2

PUSH BUTTON STATIONS (in gray ABS)



Flush Head Actuator - Green
with Legend - START
Contact - 1 'NO' (*Station One*)

Flush Head Actuator - Red
with Legend - STOP
Contact - 1 'NC' (*Station Two*)

Cat. No. : JBB2A100



Flush Head Actuator - Green
with Legend - START
Contact - 1 'NO' (*Station One*)

Mushroom Head Actuator 'Push Turn Type'
with Legend - STOP
Contact - 1 'NC' (*Station Two*)

Cat. No. : JBB2F100



Pilot Light 240V AC Colourless Lens (*Station One*)

Flush Head Actuator - Green
with Legend - START
Contact - 1 'NO' (*Station Two*)

Flush Head Actuator - Red
with Legend - STOP
Contact - 1 'NC' (*Station Three*)

Cat. No. : JCZ4B2A1



Flush Head Actuator - Green
with Legend - FORWARD,
Contact - 1 'NO' (*Station One*)

Flush Head Actuator - Red
with Legend - STOP,
Contact - 1 'NC' (*Station Two*)

Flush Head Actuator - Green
with Legend - REVERSE
Contact - 1 'NO' (*Station Three*)

Cat. No. : JDB2A1B2



Flush Head Actuator - Green
with Legend - UP
Contact - 1 'NO' (*Station One*)

Flush Head Actuator - Red
with Legend - STOP
Contact - 1 'NC' (*Station Two*)

Flush Head Actuator - Green
with Legend - DOWN
Contact - 1 'NO' (*Station Three*)

Cat. No. : JEB2A1B2

ENCLOSURES & SPARES FOR PUSH BUTTON STATIONS



All Purpose Enclosures

All Gray Without hole
Cat. No. : HF999000

All Gray & 1 hole of Ø22.5
Cat. No. : HF999001

All Gray & 2 holes of Ø22.5
Cat. No. : HF999002



Push Button Station Enclosures

All Gray 1 hole of Ø22.5
Cat. No. : HF999004

All Gray & 2 hole of Ø22.5
Cat. No. : HF999005

All Gray & 3 holes of Ø22.5
Cat. No. : HF999003

Single hole yellow cover & Gray Base
Cat. No. : HF995001



Spare Contact Block (for Push Button Stations)

'NO' Contact Block
Cat. No. : HC42A2

'NC' Contact Block
Cat. No. : HC42B2



1 'NO' + 1 NC Contact Block
Cat. No. : HC42C2

2 'NO' Contact Block
Cat. No. : HC42D2

2 'NC' Contact Block
Cat. No. : HC42E2



Bulb Holder with Bulb 240 V AC
with 1 'NO' Contact Block
Cat. No. : HC22N1

Bulb Holder with Bulb 240 V AC
with 1 'NC' Contact Block
Cat. No. : HC22O1



Protecting Shroud

Cat. No. : HF195004



Yellow legend plate

Cat. No. : HB135000



Small

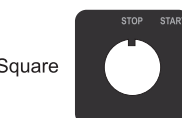
Metal Plates - Spare

Cat. No. : HH2420122



For PBS

Cat. No. : HH2420124



Square

Cat. No. : HH2420123

Note: Printing as per customer requirement

TECHNICAL SPECIFICATIONS

Actuator, Indicators, Modular & Front Connection Blocks

VDE, CE Electrical Ratings (IEC 60947-3, IEC 60947-5-1, VDE 0660 Part 200, IEC 60947-3, IEC 60947-5-1)

Alternating Current	Rated Operational Voltage (50-60 Hz)		V	110	230	440	500
	Rated Operational Current (IEC 60947-3)	AC21	Amp	16	14.0	11.0	10.0
	Rated Operational Current (IEC 60947-5-1)	AC15	Amp	8	6.0	3.0	2.0
Direct Current	Rated Operational Voltage		V	24	48	110	220
	Rated Operational Current (IEC 60947-5-1)	DC13	Amp	1.5	1.0	0.3	0.2

UL, CSA Electrical Ratings (CAN/CSA-C22.2 NO 14-M91, UL 508)

Contact Rating	Thermal Continuous	Maximum Current								Maximum VA	
		120 V		240 V		480 V		600 V		Make	Break
Code Designation, AC	Test Current, Amp	Make	Break	Make	Break	Make	Break	Make	Break		
A 600	10	60	6.0	30	3.0	15	1.50	12	1.20	7200	720

Contact Rating Code Designation, DC	Thermal Continuous Test Current, Amp	Maximum Make & Break Current, Amp				Maximum Make & Break at 300 V or less, VA
		125 V		250 V		
P 300	5.0	1.1		0.55		138

Electrical Life at 230 V, 50-60Hz, AC, utilisation category AC21 to IEC 60947-3

Rated current Amps	Operations (x10 ⁶)
6	0.5
2	1

Rated Thermal Current 16Amp with, 2.5mm² flexible conductor

Mechanical Life 1 x 10⁶ operations

Terminals Suitable for flexible or solid conductors from 2 x 1 mm²

Degree of Protection IP 65
IP67 with rubber / vinyl shroud

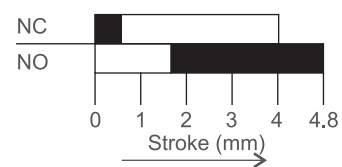
Operational Temperature Limits (without shroud)
Non-illuminated -30 to +60°C
Illuminated -30 to +40°C

Rated Insulation Voltage 600 V AC.

Dielectric / H. V. Test Voltage at 2.5 KVAC FOR 60. Sec.

Disposition of Contacts for Modular Blocks

- Contact Open
- Contact Close



Technical Specifications (Push Button Stations & all Purpose Enclosures)

Degree of Protection :

Ingress Protection IP65 for Push Button Station with Indicators / Non Illuminated Push Function Actuators & all Purpose Enclosure.

Safety :

Fully insulated to house electrical and electronic equipment with respect to protection against electrical shock.

Materials :

- Base : Tough, impact resistant, ABS.
- Cover : Tough, impact resistant, ABS.
- Cover Screws : Slotted head, metal screws for Push Button Stations and tough, low friction PA6 captive cross slot head screws for all purpose enclosures.
- Gasket : Oil and acid resistant nitrile rubber.

Terminal Capacity :

1 to 2.5 mm square flexible wire

Mounting :

Directly through base, in cover screw cavity, outside gasketed area with No.4 size, sheet metal screws.

Machining :

Machining is easy with normal tools. Enclosures can be drilled, sawed, filed, punched etc. They can be welded with ultrasonic equipment.

Dimensions :

	1	2	3	All Purpose
	Station	Station	Station	Enclosure
Base size mm	74 x 70	107 x 70	140 x 70	110 x 80
Cover Depth mm	16.50	16.50	16.50	20.00
Base Depth mm	32.00	30.00	32.00	45.00

Maintenance :

Do not need any particular maintenance. If necessary, soap and water can be used for cleaning. If detergent is used, enclosure should be rinsed well with clean water. **Do not use any solvents to clean the enclosures.**

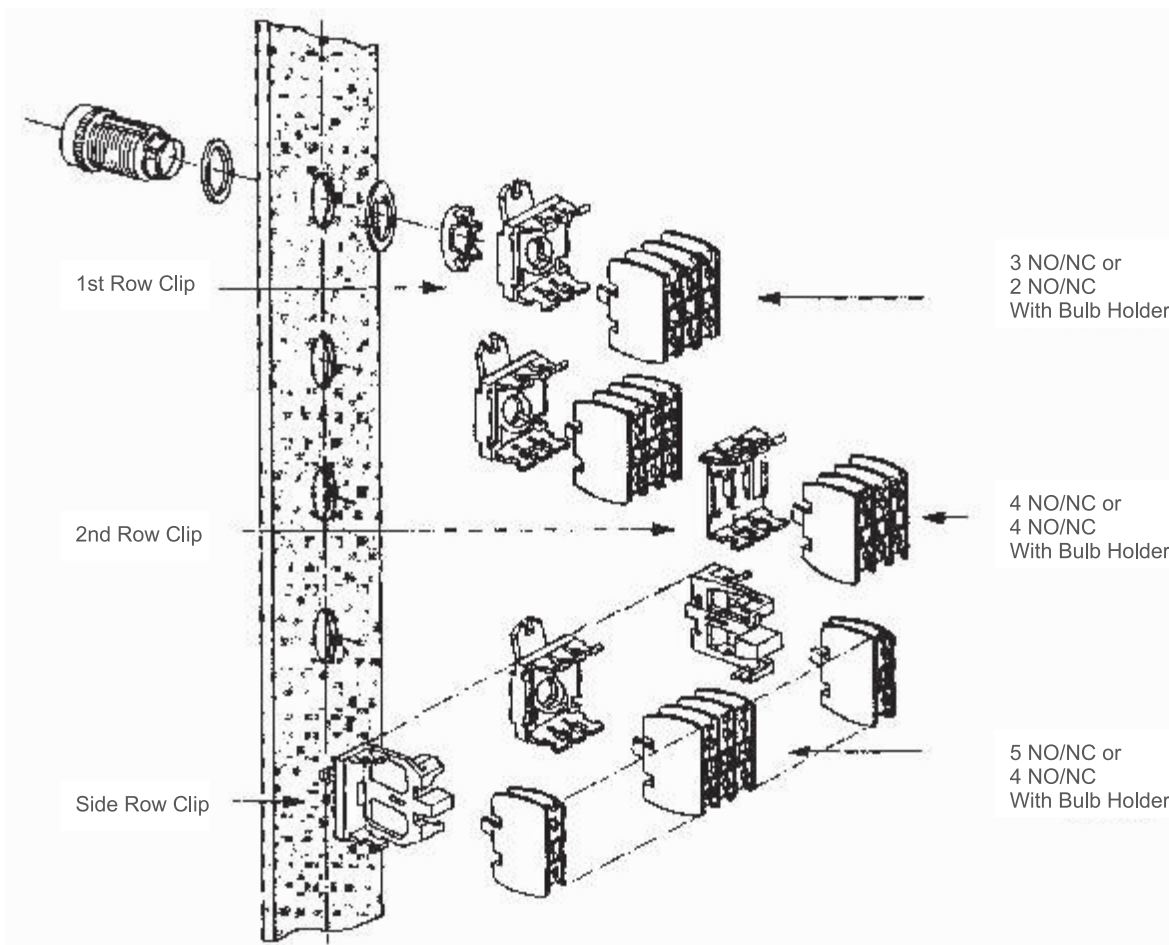
Chemical resistance :

ABS products are almost completely resistant to aqueous acids, alkalis and salts. Concentrated phosphoric and hydrochloric acids have little effect. Low KB solvents, alcohols and animal / vegetable / mineral oils produce insignificant changes. Aromatic or chlorinated hydrocarbons and high KB solvents cause marked swelling. Esters Ketones and Unsaturated alkalis are solvents for ABS and should not be used.

Chemical resistance :

Long term exposure to temperatures above 70°C should be avoided. No significant change in impact strength is noticed up to -20°C.

EXPLODED VIEW OF MODULAR BLOCK ASSEMBLIES





TEEKAY SERIES

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PUSH BUTTON
ACTUATORS
Ø 22.5 mm

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SELECTOR
ACTUATORS

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ACCESSORIES
FOR ACTUATORS

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INDICATORS &
SPARES

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PUSH BUTTON
STATIONS
(in gray ABS)

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ALL PURPOSE
ENCLOSURES &
PUSH BUTTON
STATION ENCLOSURES

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TECHNICAL
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EXPLODED VIEW OF
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ASSEMBLIES

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