

22MM (N5) PILOT DEVICES



SPRINGER
controls company

Springer Controls offers a complete line of rugged, industrial grade pilot devices. We carry both the 22mm and 30mm (section H) oil-tight devices. See page G26 for complete, assembled push button stations.

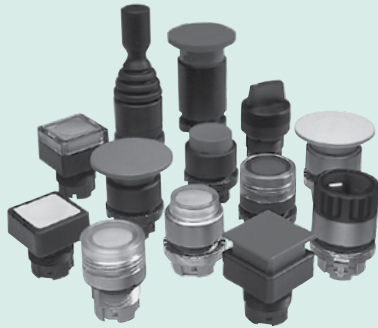
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22MM (N5) PILOT DEVICES:

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FEATURES

Shape, Material and Colors



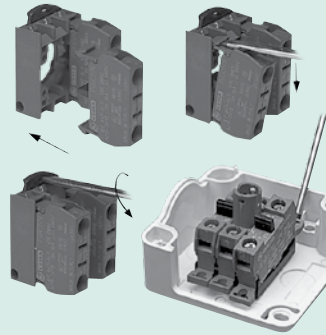
The N5 line offers two bezel types for operators:

- round in chrome
- round in black thermoplastic (4x)

Modern ergonomic N5 actuators are available in a wide variety of styles and colors, and are the result of superior industrial design experience.

Series N5 satisfies any sophisticated industrial applications.

Fast Mounting



All the N5 rear panel devices are snap-on.

Mounting between panel and operator is accomplished by means of a patented snap-on flange which ensures a fast fitting.

For base mounting, the fitting is done directly on the adaptor inside the enclosures base.

Each single block can be mounted or removed individually.

In panel mounting, it is also possible to install or remove the snap-on mounting flange with the contact block group.

Blocks and/or flange can be disassembled by a standard screwdriver, to simplify operations.

Fitting and Positioning



All the N5 operators are fitted with seal to ensure IP66 N12 degree of protection.

A locating tab on the operator allows the correct positioning on panels.

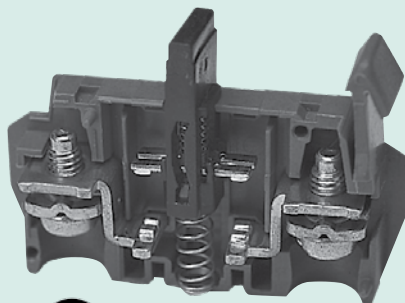
The tab also ensures panel stability and prevents unwanted rotations.

The tab can be removed with a screwdriver for applications in holes without a notch.

Suitable for use in NEMA types 1, 3, 3R, 3S, 4, 4X, 12 and 13 enclosures.

G2

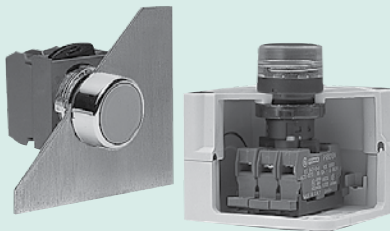
Safety and Reliability



The N5 contact blocks are designed to ensure maximum reliability in every condition and to monitor control circuits at low energy levels (12V-5mA minimum), thanks to advanced solution such as:

- Four contact points
- High efficiency self-cleaning operation
- Silver contacts properly shaped
- High contact pressure
- UL certified
- AC/DC Rating (page G22)

Mounting System



The N5 line offers a wide variety of operators, contact blocks and power supplies for panel mounting.

Furthermore, a range of operators, contact blocks and power supplies are available for base mounting.

The base mounting option is simple with our plastic enclosures fitted with a standard mounting adaptor, which allows a snap-on and secure fastening.

Rear Locking and Back Mounting Procedure



N5 operators are back mounted to the panel by a patented locking ring. The units can be assembled using a standard screwdriver.

As an option, an assembly wrench is available. (N5ACWAF)

N5 CATALOG NUMBERING SYSTEM

Standard & Illuminated Push-Buttons

Operators
Page G6 & Page G14

N5		P				
Bezel Style	Type	Type	Cap Color	Push-Button Type	Lens Type	
C = Chrome X = Round Plastic	P = Push Button	N = Non-illuminated L = Illuminated	O = No Cap N = Black R = Red V = Green G = Yellow L = Blue B = White	G = Flush S = Extended E = Recessed	D = Diffused for illuminated push-button only	

Double Function Push-Buttons

Page G13

N5	D	P	L				
Bezel Style	Type	Type	Cap Color	Push-Button Type	ISO Symbols		
D = Square Plastic	P = Push Button	L = Illuminated	N = Black V = Green	G = Flush S = Top Flush Button Extended	00 = No Symbol 01 = With Symbol		

Pilot Lights

Page G7

N5						
Bezel Style	Type	Color	Lens Type	For Unibloc Type only		
C = Chrome X = Round Plastic	L = Standard U = Unibloc	R = Red V = Green G = Yellow L = Blue B = White I = Clear A = Amber	D = Diffused R = Retraced V = Glass	D0 = Full Voltage		

Mushroom Head Push-Buttons

Page G6

N5		E					
Bezel Style	Type	Mushroom Diameter	Color	Illumination	Position Type		
C = Chrome X = Round Plastic	M = Momentary T = Push/Pull R = Turn to reset C = Key to reset	3 = Ø 28 mm 4 = Ø 40 mm 6 = Ø 60 mm	N = Black R = Red V = Green G = Yellow	N = Non Illuminated L = Illuminated	1 = Push-Pull 2 = 3 pos; maint. Push-Mom-Pull 3 = 3 pos; mom Push-Mom-Pull 95 = Keyed		

N5 CATALOG NUMBERING SYSTEM

Knob & Lever Selector Switches

Pages G9, G10 & G12

N5	□	S	□	□	□	□
Bezel Style	Type	Type	Cam	Spring Return	Color	
C = Chrome X = Round Plastic		M = Knob V = Lever L = Illuminated Knob	D, I or H = 2 positions E, L, U or Z = 3 positions X = 4 positions Y or W = 5 positions	0 = Fixed 1 = From Left 3 = From Left & Right 5 = From Right	N = Black R = Red V = Green G = Yellow L = Blue	

Key Selector Switches

Page G11

N5	□	S	C	□	□	□	9	5
Bezel Style	Type	Cam	Spring Return	Key Removal	Key Selection			
C = Chrome X = Round Plastic		D, I or H = 2 positions E, L, U or Z = 3 positions X = 4 positions	2/4 Positions 0 = Fixed 5 = From right 3 Positions 0 = Fixed 5 = From right 3 = From left & right	See key removal position page G9				

Contact Blocks

Page G5

N5	B	□	□	□	□
Bezel Style	Contacts	Terminal Type		Contact Type	
	01 = 1 NC 10 = 1 NO 11 = 1 NO + 1 NC 20 = 2 NO 02 = 2 NC	V = Standard Screw F = Faston B = Base Mounting Screw		N = Normal A = Early Closing R = Late Opening	

Power Supplies

Page G5


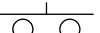
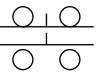

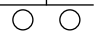
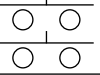

N5	P	□	□	□	□
Type	Style	Terminal Type	Full Voltage		
D = Full Voltage T = Transformer R = Resistor	N = Normal M = Multifunction continuous blinking	V = Standard Screw B = Base Mounting Screw	0 = No Bulb A = 6V B = 12V D = 24V G = 48V L = 120V Transformer / Resistor 110 - 120V = J 220 - 250V = N 480 - 500V = Y		

ASSEMBLY of 22mm PILOT DEVICES
Contacts and Power Supplies

Complete Unit Assembly

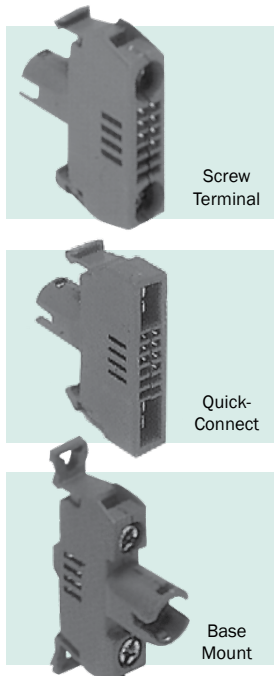
22mm OPERATOR **+** **CONTACT BLOCK** **or** **POWER SUPPLY** **or** **OPTIONAL ACCESSORIES**
 Pages G6 - G17 Page G5 Page G5 Pages G19 - G21
 (Assembled Push Button Stations - pages G26 - G28)

Contact Blocks (For use with all Panel Mounted Operations)

Type	Symbol	Screw Terminal Catalog No.	Quick Connect Terminal Catalog No.	Price
N.C.		N5B01VN	N5B01FN	\$11.50
N.O.		N5B10VN	N5B10FN	\$11.50
N.C. N.O.		N5B11VN	Not Available	\$23.00
N.C. Late Break		N5B01VR	Not Available	\$11.50
N.O. Early Make		N5B10VA	Not Available	\$11.50
N.O. N.O.		N5B20VN	Not Available	\$23.00
N.C. N.C.		N5B02VN	Not Available	\$23.00

G5

Power Supplies; Includes bulb¹ (For use with all Panel Mounted Operations)



	Voltage	Screw Terminal Catalog No.	Quick Connect Terminal Catalog No.	Base Mt. Terminal Catalog No.	Price
Full Voltage	No Lamp	N5PDNVO	N5PDNFO	N5PDNB0	\$27.00
	6V	N5PDNVA	N5PDNFA	N5PDNBA	\$32.50
	12V	N5PDNVB	N5PDNFB	N5PDNBB	\$32.50
	24V	N5PDNVD	N5PDNFD	N5PDNBD	\$32.50
	48V	N5PDNVG	N5PDNFG	N5PDNBG	\$32.50
	120V	N5PDNVL	N5PDNFL	N5PDNBL	\$32.50
Transformer	120 - 6V	N5PTNVJ	N5PDNFJ	N5PDNBJ	\$66.00
	240 - 6V	N5PTNVN	N5PDNFN	N5PDNBN	\$66.00
	480 - 6V	N5PTNVY	N5PDNFY	N5PDNBY	\$66.00
Resistor AC/DC	110 - 120V	N5PRNVJ	N5PDNFJ	N5PDNBJ	\$54.00
	220 - 240V	N5PRNVN	N5PDNFN	N5PDNBN	\$54.00
Flashing Full Voltage	110v AC/DC BA9S 130V-2W	N5PDMVJ	N5PDNFJ	N5PDNBJ	\$79.00
Flashing Transformer	120 - 6V BA9S 6V - 6W 220/250V	N5PTMVJ	N5PDNFJ	N5PDNBJ	\$103.00

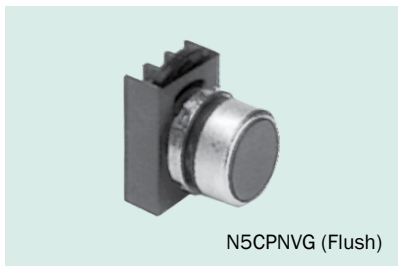
Notes:

1. To order LED bulbs, see page G7. LED bulbs are sold separately

Discount Schedule SC-36

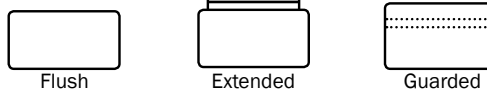
PUSH BUTTONS *(Operators only - add contacts on page G5)*

Standard - Momentary

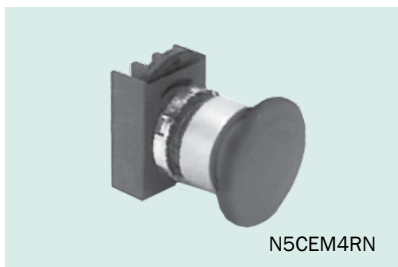


Operator (only) ¹	Chrome Bezel Catalog No.	Type 4X Bezel Catalog No.	Price
With Flush Cap	N5CPN • G	N5XPN • G	\$13.00
With Extended Cap	N5CPN • S	N5XPN • S	\$13.00
Guarded Cap	N5CPN • E	---	\$13.00

(• See Color Table Below)



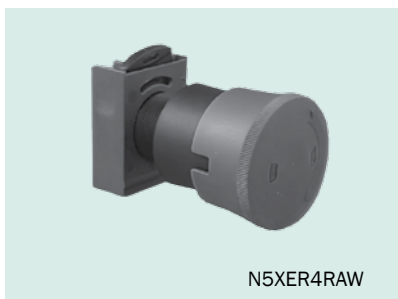
Mushroom Head - Momentary



Operator (only) ¹	Chrome Bezel Catalog No.	Type 4X Bezel Catalog No.	Price
Mushroom Head 28mm	N5CEM3 • N	N5XEM3 • N	\$25.50
Mushroom Head 40mm	N5CEM4 • N	N5XEM4 • N	\$25.50
Mushroom Head 60mm	N5CEM6 • N	N5XEM6 • N	\$29.00

(• See Color Table Below)

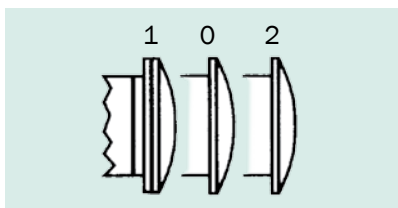
Mushroom Head - with Latch



Operator (only) ¹	Chrome Bezel Catalog No.	Type 4X Bezel Catalog No.	Price	
Push-Pull 40mm (2 pos. Maint.)	N5CET4 • N1	N5XET4 • N1	\$33.50	
Twist Release	Red 28mm	N5CER3RN	N5XER3RN	\$60.00
	Red 40mm	N5CER4RN	N5XER4RN	\$60.00
	EN418 ²	---	N5XER4RAN	\$65.00
	EN418-IND ³	---	N5XER4RAW	\$70.00
Key Release	Red 40mm	N5CEC4RN95	N5XEC4RN95	\$83.00
	EN418 ²	---	N5XER4RA95N	\$88.00

See page G26 for complete Emergency Stop Stations

Mushroom Head - 3 Position Push Pull



Operator (only) ¹	Chrome Bezel Catalog No.	Type 4X Bezel Catalog No.	Price
Maintained Push (0 to 1) Momentary Pull (0 to 2)	N5CET4 • N2	N5XET4 • N2	\$48.00
Momentary Push (0 to 1) Momentary Pull (0 to 2)	N5CET4 • N3	N5XET4 • N3	\$48.00

(• See Color Table Below)

• COLOR TABLE

- use complete catalog number when ordering. Replace the (•) with the suffix from the table below.

Color	Black	Red	Green	Yellow	Brown	Blue	White	Grey	W/O cap	w/Red,Blk/Green/Yellow
Caps	N	R	V	G	M	L	B	H	0	Z ⁴
Mushroom Heads	N	R	V	G	-	-	-	-	-	-

- Notes:**
- 1 Contact Blocks not included; see page G5
 - 2 Emergency Stop Operator; Complies with EN418 Machinery Safety Standard.
 - 3 Emergency Stop Operator with status indication. EN418 approved
 - 4 When ordering operator with 4 color caps (Red, Black, Green & Yellow) add \$3.00

Discount Schedule SC-36

PILOT LIGHTS (Complete Unit = Operator + Power Supply)

Pilot Lights - Standard

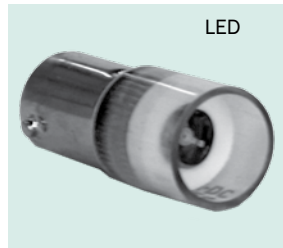
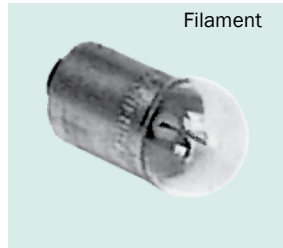


Lens & Lamp Holder		Chrome Bezel Catalog No.	Type 4X Bezel Catalog No.	Price
Standard¹	Diffused Lens	N5CL • D	N5XL • D	\$9.50
	Glass Lens	N5CL • V	---	\$29.00
Unibloc Full Voltage (complete Pilot Light, Bulb not included)		---	N5XU • DD0	\$18.50

(* See Color Table Below)

Unibloc combines an indicator light and full voltage power in one unit. 250V maximum

Bulbs



Description	Volts Nominal	Watts Nominal	Catalog No.	Price
N59S Filament Type	6	0,6	N59S06	\$4.50
	6	1,5	N59S15	\$4.50
	12	2	N59S12	\$4.50
	24	2	N59S24	\$4.50
	30	2,1	N59S30	\$4.50
	48	2	N59S48	\$4.50
	60	1,2	N59S60	\$4.50
	130	2	N59S130	\$4.50

Description	Volts Nominal	Catalog No.	Price
Multi-LED	6	BA9S06L *	\$28.00
	12	BA9S12L *	\$28.00
	24	BA9S24L *	\$28.00
	48	BA9S48L *	\$28.00
	110	BA9S110L *	\$28.00
	230	BA9S230L *	\$28.00

* LED Color Table	Red	Green	Yellow
	R	V	G

• COLOR TABLE

- use complete catalog number when ordering. Replace the (*) with the suffix from the table below.

Color	Red	Green	Yellow	Blue	White	Amber	Clear
Color Code	R	V	G	L	B	A	I

Notes: 1 Lens & Lamp holder only; select Power Supply from page G5

PRESS-TO-TEST PILOT LIGHTS (Complete Unit = Part number with competed suffixes)

Press-To-Test Pilot Lights; includes power supply, contacts, and incandescent bulb

N5CPLVSDFL

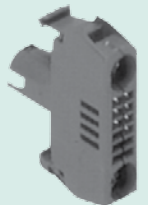


N5CPLVSD



N5B01VN

N5B10VN

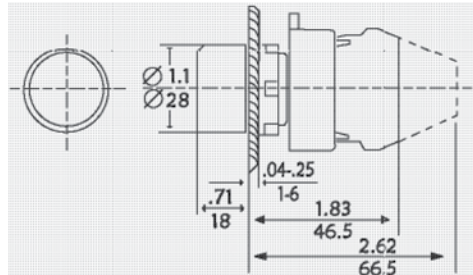


N5PDNVL

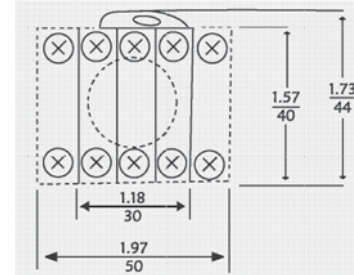
Operator	Chrome Bezel Catalog No.	4X Bezel Catalog No.	Price
Full Voltage	N5CPL • SDF *	N5XPL • SDF *	\$75
Transformer	N5CPL • SDT *	N5XPL • SDR *	\$109
Resistor	N5CPL • SDR *	N5XPL • SDR *	\$93

(• See Color Table Below)

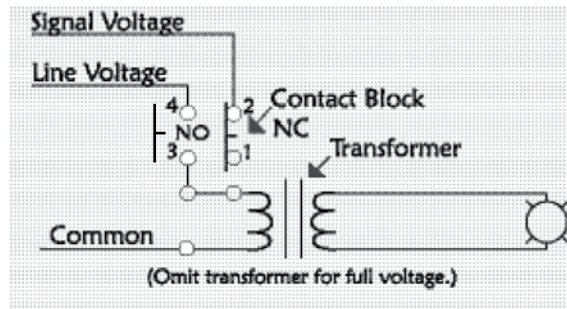
(* Add Power Supply suffix from table below)



Round Recessed Push Button



Typical Back Side View



Wire Diagram

*Power Supply (For Press-To-Test Pilot Lights)

Power Supply Type	Lamp	Incandescent Bulb Power Supply Suffix *
Full Voltage	6V	A
	12V	B
	24V	D
	48V	G
	60V	H
	120V	L
Transformer (AC Only)	110 - 120V	J
	220 - 250V	N
	480 - 500V	Y
Standard Resister (AC/DC)	110 - 120V	J
	220 - 240V	N

• COLOR TABLE

- use complete catalog number when ordering. Replace the (•) with the suffix from the table below.

Color	Red	Green	Yellow	Blue	White	Amber	Clear	w/o Lens
Color Code	R	V	G	L	B	A	I	O

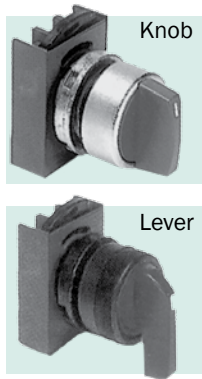
Discount Schedule SC-36

2 POSITION SELECTOR SWITCHES

(Complete Unit = Operator + Contact Block)

2 Position Selector Switches - Standard

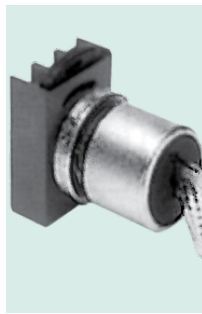
(Contact Block & Legend Plates sold separately; page G5, G21)



Operating Mode	Cam	Knob Type ¹		With Black Lever		Price
		Chrome Bezel Catalog No.	Type 4X Bezel Catalog No.	Chrome Bezel Catalog No.	Type 4X Bezel Catalog No.	
Maintained	D	N5CSMD0 •	N5XSMD0 •	N5CSVD0N	N5XSVD0N	\$22.50
	I	N5CSMI0 •	N5XSMI0 •	N5CSVION	N5XSVISION	\$22.50
	H	N5CSMH0 •	N5XSMH0 •	N5CSVHON	N5XSVDHON	\$22.50
Spring Return						
Right To Left	D	N5CSMD5 •	N5XSMD5 •	N5CSVD5N	N5XSVD5N	\$22.50
Right To Center	I	N5CSMI5 •	N5XSMI5 •	N5CSVI5N	N5XSVI5N	\$22.50
Left To Center	H	N5CSMH1 •	N5XSMH1 •	N5CSVH1N	N5XSVDH1N	\$22.50

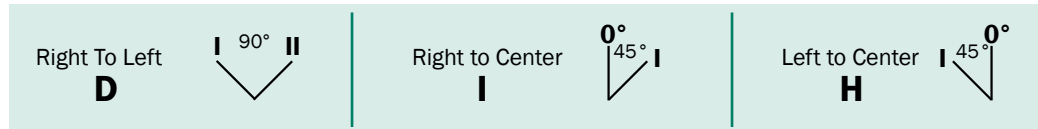
(• See Color Table Below)

2 Position Selector Switches - Key Operated²



Operating Mode	Cam	Key Removal	Chrome Bezel Catalog No.	Type 4X Bezel Catalog No.	Price
Maintained	D	Left	N5CSCD0A95	N5XSCD0A95	\$67.50
		Right	N5CSCD0E95	N5XSCD0E95	\$67.50
		Left & Right	N5CSCD0K95	N5XSCD0K95	\$67.50
	I	Center	N5CSCI0C95	N5XSCI0C95	\$67.50
		Right	N5CSCI0E95	N5XSCI0E95	\$67.50
		Center & Right	N5CSCION95	NRXSCION95	\$67.50
	H	Left	N5CSCH0A95	N5XSCH0A95	\$67.50
		Center	N5CSCH0C95	N5XSCH0C95	\$67.50
		Center & Left	N5CSCH0H95	N5XSCH0H95	\$67.50
Spring Return					
Right To Left	D	Left	N5CSD5A95	N5XSCD5A95	\$88.00
Right To Center	I	Center	N5CSCI5C95	N5XSCI5C95	\$88.00
Left To Center	H	Center	N5CSCH1C95	N5XSCH1C95	\$88.00

Cam Mode



Contact Switching Sequence

Cam Mode	↶	↑	↷	Screw Terminal Contact Block	
				Left Position	Right Position
D	0	--	X	--	N5B10VN
	X	--	0	N5B01VN	--
	0	--	X	N5B11VN	--
	X	--	0	N5B01VN	N5B10VN
I	--	0	X	--	N5B10VN
	--	X	0	N5B01VN	--
	--	0	X	N5B11VN	--
	--	X	0	N5B01VN	N5B10VN
H	0	X	--	--	N5B10VN
	X	0	--	N5B01VN	--
	0	X	--	N5B11VN	--
	X	0	--	N5B01VN	N5B10VN

• COLOR TABLE - use complete catalog number when ordering. Replace the (•) with the suffix from the table below.

Color	Black	Red	Green	Yellow	Blue
Color Code	N	R	V	G	L

Notes: 1 Add Suffix from Color Table.

2 Supplied with standard #95 key (spare keys found on page G20)

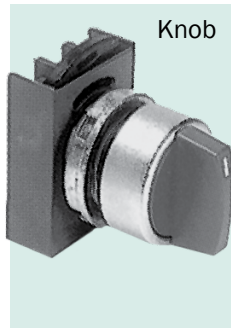
Discount Schedule SC-36

3 POSITION SELECTOR SWITCHES

(Complete Unit = Operator + Contact Block)

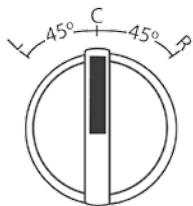
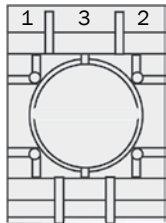
(Contact Block & Legend Plates sold separately; page G5, G21)

3 Position Selector Switches - Standard



Operating Mode	Cam	Knob Type		With Black Lever		Price
		Catalog No. Chrome Bezel	Catalog No. Type 4X Bezel	Catalog No. Chrome Bezel	Catalog No. Type 4X Bezel	
Maintained	E	N5CSME0 •	N5XSME0 •	N5CSVEON	N5XSVEON	\$22.50
	L	N5CSML0 •	N5XSML0 •	N5CSVLON	N5XSVLON	\$22.50
	U	N5CSMU0 •	N5XSMU0 •	N5CSVUON	N5XSVUON	\$22.50
	Z	N5CSMZ0 •	N5XSMZ0 •	N5CSVZON	N5XSVZON	\$22.50
Spring Return Left To Center, Maintained Right	E	N5CSME1 •	N5XSME1 •	N5CSVE1N	N5XSVE1N	\$25.50
	L	N5CSML1 •	N5XSML1 •	N5CSVL1N	N5XSVL1N	\$25.50
	U	N5CSMU1 •	N5XSMU1 •	N5CSVU1N	N5XSVU1N	\$25.50
	Z	N5CSMZ1 •	N5XSMZ1 •	N5CSVZ1N	N5XSVZ1N	\$22.50
Spring Return Right To Center Maintained Left	E	N5CSME5 •	N5XSME5 •	N5CSVE5N	N5XSVE5N	\$25.50
	L	N5CSML5 •	N5XSML5 •	N5CSVL5N	N5XSVL5N	\$25.50
	U	N5CSMU5 •	N5XSMU5 •	N5CSVU5N	N5XSVU5N	\$25.50
	Z	N5CSMZ5 •	N5XSMZ5 •	N5CSVZ5N	N5XSVZ5N	\$25.50
Spring Return Left & Right To Center	E	N5CSME3 •	N5XSME3 •	N5CSVE3N	N5XSVE3N	\$25.50
	L	N5CSML3 •	N5XSML3 •	N5CSVL3N	N5XSVL3N	\$25.50
	U	N5CSMU3 •	N5XSMU3 •	N5CSVU3N	N5XSVU3N	\$25.50
	Z	N5CSMZ3 •	N5XSMZ3 •	N5CSVZ3N	N5XSVZ3N	\$25.50

Contact Switching Sequence



Cam Mode	↶	↑	↷	Screw Terminal Contact Block		
				Left Position	Right Position	
Z	0	0	X	N5B10VN	---	0° 45° 45°
	X	0	0	---	N5B10VN	
	X	X	0	N5B01VN	---	
	0	X	X	---	N5B01VN	
	0	0	X	N5B11VN	---	
	X	X	0			
	X	0	0	---	N5B11VN	
	0	X	X	---	N5B11VN	
E	0	0	X	---	N5B01VN	0° 45° 45°
	0	X	0	N5B10VN	---	
	0	0	X	N5B11VN	---	
	0	X	0			
L	X	0	0	---	N5B10VN	0° 45° 45°
	0	X	0	N5B01VN	---	
	X	0	0	N5B11VN	---	
	0	X	0			
U	0	0	X	N5B11VN	---	0° 45° 45°
	0	X	0			
	0	0	X	---	N5B11VN	
	X	0	0			

• **COLOR TABLE** - use complete catalog number when ordering. Replace the (•) with the suffix from the table below.

Color	Black	Red	Green	Yellow	Blue
Color Code	N	R	V	G	L

3 POSITION KEYED SELECTOR SWITCHES

(Contact Block & Legend Plates sold separately; page G5, G21)

3 Position Selector Switches - Key Operated - Maintained¹



Cam ²	Key Removal	Chrome Bezel Catalog No.	Type 4X Bezel Catalog No.	Price
Z	Left	N5CSCZ0A95	N5XSCZ0A95	\$67.50
	Center	N5CSCZ0C95	N5XSCZ0C95	\$67.50
	Right	N5CSCZ0E95	N5XSCZ0E95	\$67.50
	Left - Center	N5CSCZ0H95	N5XSCZ0H95	\$67.50
	Left - Right	N5CSCZ0K95	N5XSCZ0K95	\$67.50
	Center - Right	N5CSCZ0N95	N5XSCZ0N95	\$67.50
	Left - Center - Right	N5CSCZ0T95	N5XSCZ0T95	\$67.50
E	Left	N5CSCE0A95	N5XSCE0A95	\$67.50
	Center	N5CSCE0C95	N5XSCE0C95	\$67.50
	Right	N5CSCE0E95	N5XSCE0E95	\$67.50
	Left - Center	N5CSCE0H95	N5XSCE0H95	\$67.50
	Left - Right	N5CSCE0K95	N5XSCE0K95	\$67.50
	Center - Right	N5CSCE0N95	N5XSCE0N95	\$67.50
	Left - Center - Right	N5CSCE0T95	N5XSCE0T95	\$67.50
L	Left	N5CSCL0A95	N5XSCL0A95	\$67.50
	Center	N5CSCL0C95	N5XSCL0C95	\$67.50
	Right	N5CSCL0E95	N5XSCL0E95	\$67.50
	Left - Center	N5CSCL0H95	N5XSCL0H95	\$67.50
	Left - Right	N5CSCL0K95	N5XSCL0K95	\$67.50
	Center - Right	N5CSCL0N95	N5XSCL0N95	\$67.50
	Left - Center - Right	N5CSCL0T95	N5XSCL0T95	\$67.50
U	Left	N5CSCU0A95	N5XSCU0A95	\$67.50
	Center	N5CSCU0C95	N5XSCU0C95	\$67.50
	Right	N5CSCU0E95	N5XSCU0E95	\$67.50
	Left - Center	N5CSCU0H95	N5XSCU0H95	\$67.50
	Left - Right	N5CSCU0K95	N5XSCU0K95	\$67.50
	Center - Right	N5CSCU0N95	N5XSCU0N95	\$67.50
	Left - Center - Right	N5CSCU0T95	N5XSCU0T95	\$67.50

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3 Position Selector Switches - Key Operated - Spring Return¹

Cam ²	Key Removal	L → C		C ← R		L → C ← R		Price
		Chrome Bezel Catalog No.	Type 4X Bezel Catalog No.	Chrome Bezel Catalog No.	Type 4X Bezel Catalog No.	Chrome Bezel Catalog No.	Type 4X Bezel Catalog No.	
Z	Left	--	--	N5CSCZ5A95	N5XSCZ5A95	--	--	\$67.50
	Center	N5CSCZ1C95	N5XSCZ1C95	N5CSCZ5C95	N5XSCZ5C95	N5CSCZ3C95	N5XSCZ3C95	\$67.50
	Right	N5CSCZ1E95	N5XSCZ1E95	--	--	--	--	\$67.50
	Left - Center	--	--	N5CSCZ5H95	N5XSCZ5H95	--	--	\$67.50
	Center - Right	N5CSCZ1N95	N5XSCZ1N95	--	--	--	--	\$67.50
E	Left	--	--	N5CSCE5A95	N5XSCE5A95	--	--	\$88.00
	Center	N5CSCE1S95	N5XSCE1C95	N5CSCE5C95	N5XSCE5C95	N5CSCE3C95	N5XSCE3C95	\$88.00
	Right	N5CSCE1E95	N5XSCE1E95	--	--	--	--	\$88.00
	Left - Center	--	--	N5CSCE5H95	N5XSCE5H95	--	--	\$88.00
	Center - Right	N5CSCE1N95	N5XSCE1N95	--	--	--	--	\$88.00
L	Left	--	--	N5CSCL5A95	N5XSCL5A95	--	--	\$88.00
	Center	N5CSCL1C95	N5XSCL1C95	N5CSCL5C95	N5XSCL5C95	N5CSCL3C95	N5XSCL3C95	\$88.00
	Right	N5CSCL1E95	N5XSCL1E95	--	--	--	--	\$88.00
	Left - Center	--	--	N5CSCL5H95	N5XSCL5H95	--	--	\$88.00
	Center - Right	N5CSCL1N95	N5XSCL1N95	--	--	--	--	\$88.00
U	Left	--	--	N5CSCU5A95	N5XSCU5A95	--	--	\$88.00
	Center	N5CSCU1C95	N5XSCU1C95	N5CSCU5C95	N5XSCU5C95	N5CSCU3C95	N5XSCU3C95	\$88.00
	Right	N5CSCU1E95	N5XSCU1E95	--	--	--	--	\$88.00
	Left - Center	--	--	N5CSCU5H95	N5XSCU5H95	--	--	\$88.00
	Center - Right	N5CSCU1N95	N5XSCU1N95	--	--	--	--	\$88.00

Notes: 1 Supplied with 2- #95 Keys

2 See contact switching , page G10

Discount Schedule SC-36

4 & 5 POSITION SELECTOR SWITCHES

(Complete Unit = Operator + Contact Block)

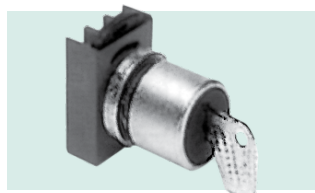
(Contact Block & Legend Plates sold separately; page G5, G21)

4 Position Selector Switches; Standard

Operating Mode	Cam	with Knob		with Black Lever		Price
		Chrome Bezel Catalog No. ¹	Type 4X Bezel Catalog No. ¹	Chrome Bezel Catalog No.	Type 4X Bezel Catalog No.	
Maintained	X	N5CSMXO •	N5XSMXO •	N5CSVXON	NTXSVXON	\$22.50
Spring Return (4 to 3 only, maintained (1-2-3))	X	N5CSMX5 •	N5XSMX5 •	N5CSVX5N	N5XSVX5N	\$29.00

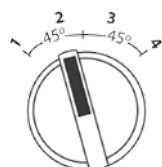
(See Color Table Below)

4 Position Selector Switches; Key Operated (Operators only)

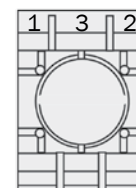


Operating Mode	Cam	Key Removal	Chrome Bezel Catalog No.	Type 4X Bezel Catalog No.	Price
Maintained	X	All	N5CSCXOZ95	N5XSCXOZ95	\$82.50
Spring Return (4 to 3 only, maintained (1-2-3))	x	1-2-3	N5CSCX5R95	N5XSCX5R95	\$102.50

Contact Switching Sequence



Cam Code	← ↶ ↷ →				Screw Terminal Contact Block	
	←	↶	↷	→	Left Position	Right Position
X	0	X	0	0	N5B11VN	---
	0	0	0	X		
	0	0	X	0	---	N5B11VN
	X	0	0	0		

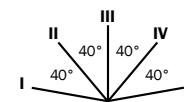
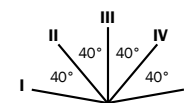


5 Position Selector Switches; Standard

Operating Mode	Cam	with Knob		with Black Lever		Price
		Chrome Bezel Catalog No. ¹	Type 4X Bezel Catalog No. ¹	Chrome Bezel Catalog No.	Type 4X Bezel Catalog No.	
Maintained	Y	N5CSMYO •	N5XSMYO •	N5CSVYON	N5XSVYON	\$40.50
	W	N5CSMWO •	N5XSMWO •	N5CSVWON	N5XSVWON	\$40.50

Contact Switching Sequence

Cam Code	← ↶ ↷ →					Screw Terminal Contact Block	
	←	↶	↷	→	Left Position	Right Position	
W	0	X	0	0	N5B11VN	---	
	0	0	0	X			
	0	0	X	0	---	N5B11VN	
	0	0	0	X			
Y	0	X	0	0	N5B11VN	---	
	0	0	0	X			
	0	0	0	X	---	N5B11VN	
	X	0	0	0			



• **COLOR TABLE** - use complete catalog number when ordering. Replace the (•) with the suffix from the table below.

Color	Black	Red	Green	Yellow	Blue
Color Code	N	R	V	G	L

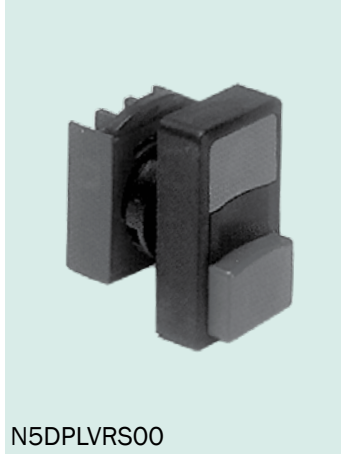
Note: 1 Add Color Suffix from Color Table above

Discount Schedule SC-36

DOUBLE PUSH BUTTONS (Start-Stop)

(Complete Unit = Operator + Power Supply (optional) + Contact Blocks)

Double Push Button without Symbols

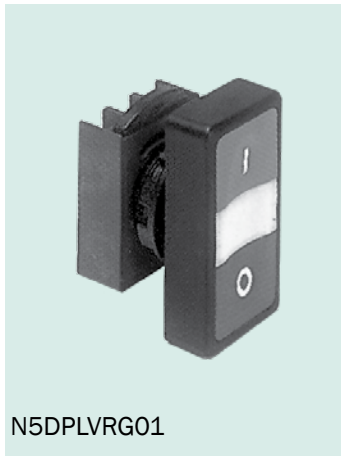


Button Level	Button Color	Catalog No. Button without Symbols ¹	Price
Flush Top Indicator Light*	Black - Red	N5DPLNRG00	\$33.50
Flush Bottom	Green - Red	N5DPLVRG00	\$33.50
Flush Top Indicator Light*	Black - Red	N5DPLNRS00	\$33.50
Extended Bottom	Green - Red	N5DPLVRS00	\$33.50

*Double Push Buttons come with both a white transparent lens for use with indicator light and a black insert for non-illuminated feature.

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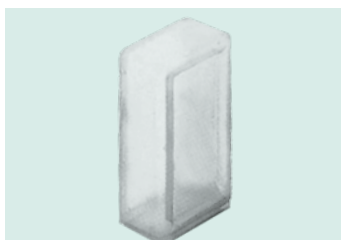
Double Push Button with Symbols



Button Level	Button Color	Catalog No. Button with Symbols ¹	Price
Flush Top Indicator Light*	Black - Red	N5DPLNRG01	\$33.50
Flush Bottom	Green - Red	N5DPLVRG01	\$33.50
Flush Top Indicator Light*	Black - Red	N5DPLNRS01	\$33.50
Extended Bottom	Green - Red	N5DPLVRS01	\$33.50

*Double Push Buttons come with both a white transparent lens for use with indicator light and a black insert for non-illuminated feature.

Double Push Button Accessory



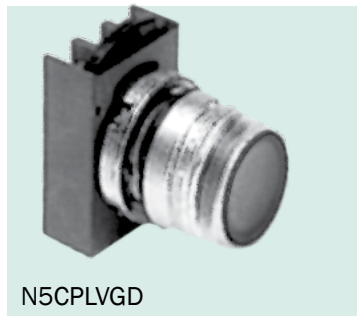
Description	Catalog No.	Price
Silicone rubber boot for use with flush operators	O80CPDT	\$7.00

Notes: 1 Bulb and Power Supply not included. To order necessary Power Supply and Bulb see page G5

ILLUMINATED PUSH BUTTONS

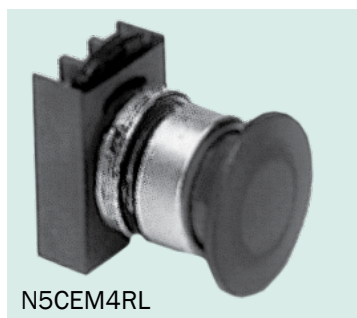
(Complete Unit = Operator + Power Supply + Contact Blocks)

Standard - Momentary



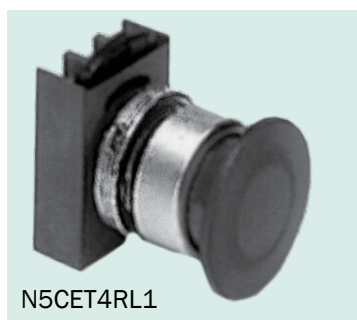
Operator (Only) ¹ (with diffused lens)	Chrome Bezel Catalog No.	Type 4X Bezel Catalog No.	Price
With Flush Cap	N5CPL • GD	N5XPL • GD	\$18.00
With Extended Cap	N5CPL • SD	N5XPL • SD	\$18.00
Guarded	N5CPL • ED	N5XPL • ED	\$18.00

Mushroom Head - Momentary



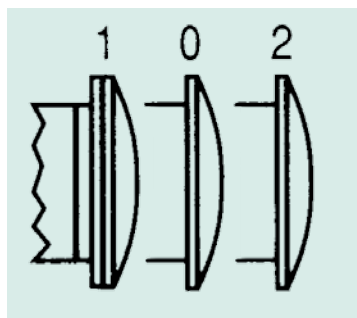
Operator (Only) ¹	Chrome Bezel Catalog No.	Type 4X Bezel Catalog No.	Price
Mushroom Head 40mm	N5CEM4 • L	N5XEM4 • L	\$25.50

Mushroom Head - With Latch (Maintained)



Operator (Only) ¹	Chrome Bezel Catalog No.	Type 4X Bezel Catalog No.	Price
40mm Push To Latch - Pull To Release	N5CET4 • L1	N5XET4 • L1	\$36.50

Mushroom Head - 3-Position Push Pull (Center Rest)



Operator (Only) ¹	Chrome Bezel Catalog No.	Type 4X Bezel Catalog No.	Price
40mm 3-Position -Maintained Push (0 to 1) -Momentary Pull (0 to 2)	N5CET4 • L2	N5XET4 • L2	\$48.00
40mm 3-Position -Momentary Push (0 to 1) -Momentary Pull (0 to 2)	N5CET4 • L3	N5XET4 • L3	\$48.00

• **COLOR TABLE** - use complete catalog number when ordering. Replace the (*) with the suffix from the table below.

Color	Black	Red	Green	Yellow	Blue
Color Code	N	R	V	G	L

Note: 1 Order Contact Blocks & Powre Supply from page G5

Discount Schedule SC-36

2 & 3 POSITION ILLUMINATED SELECTOR SWITCHES

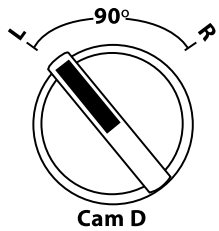
(Complete Unit = Operator + Power Supply + Contact Blocks)

2-Position Illuminated Selector Switches



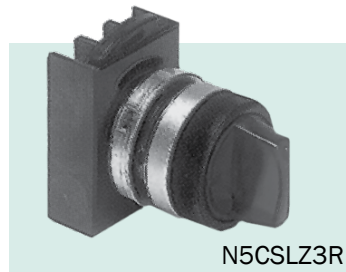
Operating Mode	Cam	Chrome Bezel Catalog No. ¹	Type 4X Bezel Catalog No. ¹	Price
Maintained	D	N5CSLD0 •	N5XSLD0 •	\$29.00

Contact Switching Sequence



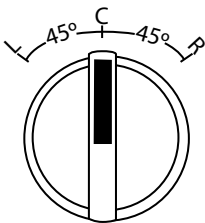
Cam Code	←	↑	Screw Terminal Contact Block	
			Left Position	Right Position
D	0	X	---	N5B10VN
	X	0	N5B01VN	---
	0	X	N5B11VN	---
	X	0		

3-Position Illuminated Selector Switches



Operating Mode	Cam	Chrome Bezel Catalog No. ¹	Type 4X Bezel Catalog No. ¹	Price
Maintained	Z	N5CSLZ0 •	N5XSLZ0 •	\$29.00
Spring Return Left To Center Maintained Right	Z	N5CSLZ1 •	N5XSLZ1 •	\$40.50
Spring Return Right To Center Maintained Left	Z	N5CSLZ5 •	N5XSLZ5 •	\$40.50
Spring Return Left & Right To Center	Z	N5CSLZ3 •	N5XSLZ3 •	\$40.50

Contact Switching Sequence



Cam Code	←	↑	↗	Screw Terminal Contact Block	
				Left Position	Right Position
Z	0	0	X	N5B10VN	---
	X	0	0	---	N5B10VN
	X	X	0	N5B01VN	---
	0	X	X	---	N5B01VN
	0	0	X	N5B11VN	---
	X	X	0		
	X	0	0	---	N5B11VN
	0	X	X		

• **COLOR TABLE** - use complete catalog number when ordering. Replace the (•) with the suffix from the table below.

Color	Red	Green	Yellow	Blue	White	Amber	Clear
Color Code	R	V	G	L	B	A	I

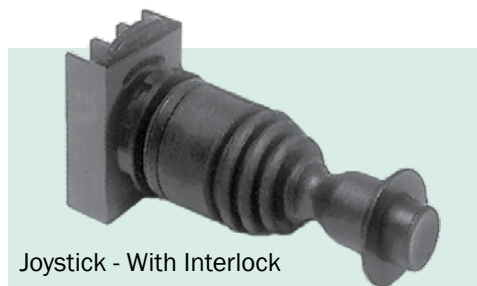
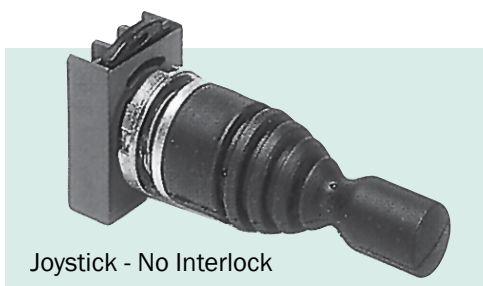
Note: 1 Order Contact Blocks, Power Supplies and Bulbs from page G5

Discount Schedule SC-36

SPECIAL OPERATORS (Complete Unit = Operator + Contact Blocks)

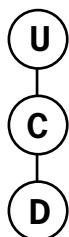
Joystick - Operators - Type 4X

Positions (see below)	Mechanical Interlock	Maintained All Positions Catalog No.	Momentary All Positions Catalog No.	Price
3	No	N5XMN2F	N5XMN2T	\$132.00
3	Yes	N5XMB2F	N5XMB2T	\$132.00
5	No	N5XMN4F	N5XMN4T	\$179.00
5	Yes	N5XMB4F	N5XMB4T	\$179.00



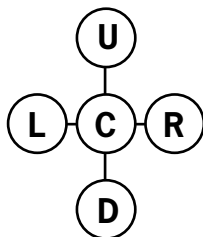
G16

3-Position Joystick Contact Arrangement



Position			Screw Terminal Contact Block Catalog No. and Mounting Position	
Up	Center	Down	Position 1	Position 2
0	0	X	N5B11VN	---
X	0	0	---	N5B11VN
X	0	0	---	N5B11VN
0	0	X	---	N5B11VN

5-Position Joystick Contact Arrangement

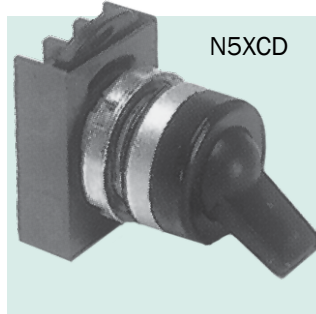


Position					Screw Terminal Contact Block Catalog No. and Mounting Position	
Up	Right	Center	Down	Left	Position 1	Position 2
0	0	0	X	0	N5B11VN	---
X	0	0	0	0	---	N5B11VN
0	X	0	0	0	---	N5B11VN
0	0	0	0	X	---	N5B11VN

Discount Schedule SC-36

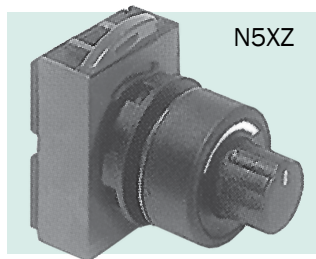
SPECIAL OPERATORS

Toggle Switches & Cams - Operator Only (Note selection and position of contact block(s) operation)



Position			Contact Block Mounting Position		Positions & Catalog No.	Price
Up	Center	Down	1	2		
X	---	0	---	N5B10VN	2 Position Maintained N5XCD	\$24.00
0	---	X	N5B01VN	---		
X	---	0	N5B11VN	---		
0	---	X	---	---		
X	0	0	---	N5B10VN	3 Position Maintained N5XCB	\$24.00
0	0	X	N5B01VN	---		
X	0	0	N5B11VN	---		
0	0	X	---	---		

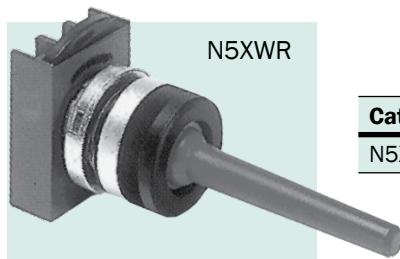
Potentiometer Operators*



Style	Catalog No.	Price
Chrome Bezel (Operator)*	N5CZ	\$60.00
4X Bezel (Operator)*	N5XZ	\$60.00
10 K-OHM (Operator)*	2W10K	\$75.00

* Potentiometer Operator use .25" x 2" stem.

Wobble Sticks - Type 4X



Catalog No.	Price
N5XWR	\$48.00

Reset Push Buttons (Flush blue push buttons with white "R" provided with screw adjustable from 60mm to 80mm depth)



Style	Catalog No.	Price
Chrome Bezel	N5CRG	\$19.50
4X Bezel	N5XRG	\$19.50
Reset Rod (extended screw 170mm)	N5ACVLR	\$11.50

Discount Schedule SC-36

22mm PRE-ASSEMBLED OPERATORS

The 22mm Pilot Device units listed below are the most commonly ordered units. The units are complete and include operator, contact mounting base and contact blocks. Legend plates are not included. They may be ordered separately from page G21. Units are packed, unassembled in a single carton.

Push Buttons - Momentary

Operator / Description	Type 1, 3, 3R, 4, 12, 13 IP66 Chrome Bezel	Catalog No.	Price
Flush Pushbutton - 1N.O. Contact Block - Black Cap		N5CPNNG10	\$24.50
Flush Pushbutton - 1 N.O. & 1 N.C. Contact Block - Black Cap		N5CPNNG11	\$36.00
Flush Pushbutton - 1 N.O. Contact Block - Green Cap		N5CPNVG10	\$24.50
Flush Pushbutton - 1 N.O. & 1 N.C. Contact Block - Green Cap		N5CPNVG11	\$36.00
Flush Pushbutton - 1 N.C. Contact Block - Red Cap		N5CPNRG01	\$24.50
Extended Pushbutton - 1 N.C. Contact Block - Red Cap		N5CPNRS01	\$24.50
Extended Pushbutton - 1 N.O. & 1 N.C. Contact Block - Red Cap		N5CPNRS11	\$36.00
Guarded Pushbutton - 1 N.O. Contact Block - Black Cap		N5CPNNE10	\$24.50
Guarded Pushbutton - 1 N.O. & 1 N.C. Contact Block - Black Cap		N5CPNNE11	\$36.00
Mushroom 40mm Pushbutton - 1 N.C. Contact Block - Red Cap (Momentary)		N5CEM4RN01	\$37.00
Mushroom 40mm Twist-Release - 1 N.C. Contact Block - Red Cap		N5CER4RN01	\$71.50
Double Pushbutton Flush - 1 N.O. & 1 N.C. Contact Block - Black-Red Cap (No power supply)		N5DPLNRG0011	\$56.50
Double Pushbutton Flush - 1 N.O. & 1 N.C. Contact Block - Green-Red Cap (No power supply)		N5DPLVRG0011	\$56.50

Selector Switches - Maintained

Operator / Description	Type 1, 3, 3R, 4, 12, 13 IP66 Chrome Bezel	Catalog No.	Price
3 Position Sel. Sw. - 2 N.O. Contact Blocks - Cam Z - Black Knob		N5CSMZON20	\$45.50
2 Position Sel. Sw. - 1 N.O. Contact Block - Cam D - Black Knob		N5CSMDON10	\$34.00
3 Position Sel. Sw. Key Operated - 2 N.O. Contact Block - Cam Z - Center Removal		N5CSCZOC9520	\$90.50
2 Position Sel. Sw. Key Operated - 1 N.O. & 1 N.C. Contact Block - Cam Z Left-Right Removal		N5CSCDOK9511	\$90.50

Selector Switches - Maintained

Operator / Description	Type 1, 3, 3R, 4, 12, 13 IP66 Chrome Bezel	Catalog No.	Price
Std. Full Voltage Pilot Light 120V - Red Cap (Bulb included)		N5CLRDL	\$42.00
Std. Full Voltage Pilot Light 120V - Green Cap (Bulb included)		N5CLVDL	\$42.00
Std. Full Voltage Pilot Light 120V - Amber Cap (Bulb included)		N5CLADL	\$42.00
Uniblock 300V max. Pilot Light - Red Cap (Bulb included)		N5XURDDO	\$18.50
Uniblock 300V max. Pilot Light - Green Cap (Bulb included)		N5XUVDDO	\$18.50
Uniblock 300V max. Pilot Light - Amber Cap (Bulb included)		N5XUADDO	\$18.50
Uniblock 300V max. Pilot Light - Blue Cap (Bulb included)		N5XULDDO	\$18.50

N5CPNVG11 (Pre-assembled)



+



+



Discount Schedule SC-36

ACCESSORIES / REPLACEMENT PARTS

Pushbutton Caps



Description	Catalog No.	Price
Flush & Guarded Operator	N5ARBG •	\$1.50
Extended Operator	N5ARBS •	

Momentary Operators (Mushroom)



Description	Catalog No.	Price
28mm	N5ARB3 •	\$11.00
40mm	N5ARB4 •	
60mm	N5ARB6 •	

Push-Pull Operators (Mushroom)



Description	Catalog No.	Price
40mm	N5ACB4 •	\$12.50

Knobs & Levers



Description	Catalog No.	Price
Knob for Selector Switches	N5ACMN •	\$4.50
Lever for Selector Switches	N5ARMV •	

Lenses (Pilot Lights)



Description	Catalog No.	Price
Diffused Version	N5ARGLD •	\$1.00
Refracted Version	N5ARGLR •	\$1.50
Glass Version	N5ARGLV •	\$21.00

Illuminated Push Button Lens



Description	Catalog No.	Price
Illuminated Push Button Lens	N5ARGPD •	\$1.00

Illuminated Mushroom Head Push Buttons



Description	Catalog No.	Price
Momentary 40mm	N5ARGP4 •	\$11.00
Push-Pull 40mm	N5ACGP4 •	\$12.50
Illuminated Lever Selector Switch	N5ACGSL •	\$4.50

Rubber Protective Caps (Standard Flush Push Buttons)



Description	Catalog No.	Price
Colored	080CP •	\$8.00
Clear	080CPT	

Rubber Protective Cab (Raised Push Buttons)



Description	Catalog No.	Price
Clear	N5ARCST	\$8.00

COLOR TABLE

• Use complete catalog number when ordering. Replace the (•) with the suffix from the table below.

Colors	Black	Red	Green	Yellow	Brown	Blue	White	Grey	Amber	Clear	w/o Cap	Red, Black, Green, Yellow
Pushbutton Caps	N	R	V	G	M	L	B	H	---	---	O	Z ¹
Mushroom Heads	N	R	V	G	---	---	---	---	---	---	---	---
Knobs	N	R	V	G	---	L	---	---	---	---	---	---
Lenses	---	R	V	G	---	L	B	---	A	I	---	---
Protective Caps	N	R	V	G	---	---	---	---	---	---	---	---

Note 1: When ordering operator with 4-color caps (Red/Black/Green/Yellow) add \$3.00

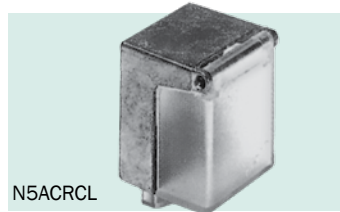
Discount Schedule SC-36

ACCESSORIES / REPLACEMENT PARTS



Plugs (fill a 22mm hole)

Description	Catalog No.	Price
Round Plug	N5ARHPR	\$8.00

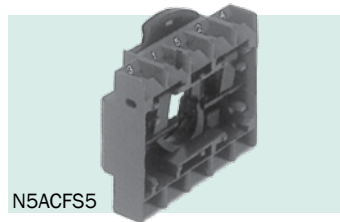


Printed Circuit Board Adaptor

Description	Catalog No.	Price
Adaptor	N5ACA6	\$6.00

Protections

Description	Catalog No.	Price
Extended Guard for 40mm mushroom head	N5ARRE4	\$15.50
Protection Cover: padlockable for standard push buttons, illuminated push buttons, selector switches, illuminated selector switches with knob.	N5ACRCL	\$23.00



Flanges *(For mounting contact blocks)*

Description	Catalog No.	Price
Three position - 30 x 50mm	N5ACFS3	\$4.50
Five position - 50 x 50mm	N5ACFS5	\$8.00



Keys

Description	Catalog No.	Price
Extra Key; Selector Switch	077C3095	\$5.50



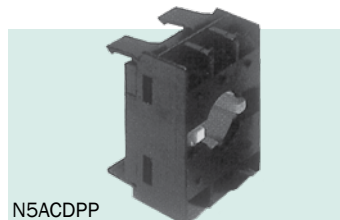
Adapter

Description	Catalog No.	Price
Gives round control and signalling units a square appearance. -- Made in black thermoplastic. -- Excluded for mushroom flush buttons with positive break and Push-Pull units.	N5ARSN1	\$2.50



Reset Adjustment Screw

Description	Catalog No.	Price
Extended Screw (170mm)	N5ACVLR	\$11.50



Push-On / Push-Off

Description	Catalog No.	Price
Device for standard push buttons and illuminated push buttons. -- To be added only to single-pole contact blocks. -- The N.O.-contacts must be early closing types.	N5ACDPP	\$40.50



Ring Adaptor *(Allows N5 series to be mounted in 30mm hole)*

Description	Catalog No.	Price
Chrome	N5ARAM32	\$11.50
4X Bezel	N5ARAX32	\$11.50



Tools

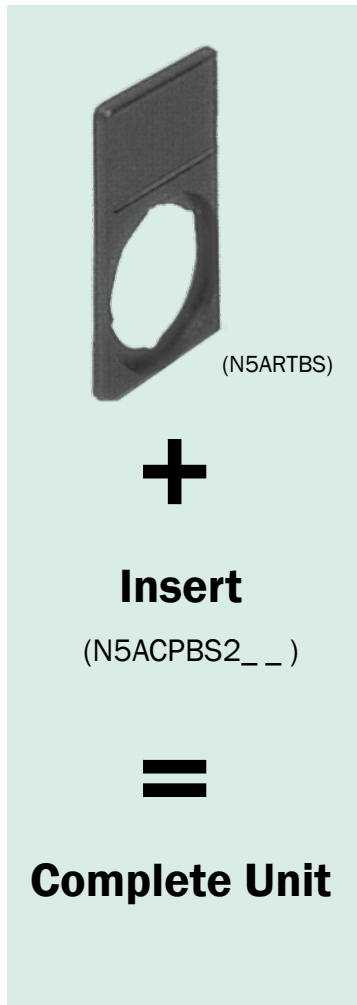
Description	Catalog No.	Price
Locking ring wrench	N5ACWAF	\$11.50
Bulb extractor	080E35L	\$6.00

Discount Schedule SC-36

LEGEND PLATES

(Complete Unit = Legend Insert + Insert Holder)

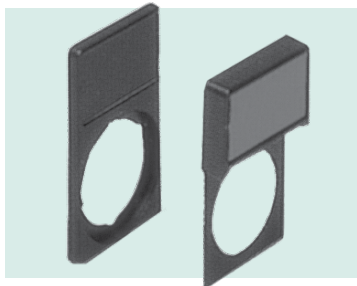
Legend Inserts (used with N5ARTBS Insert Holder – Black background except when noted)



Marking	Catalog No.	Price
Start	N5ACPBS202	\$1.00
Stop (Red)	N5ACPBS201	\$1.00
Forward	N5ACPBS214	\$1.00
Reverse	N5ACPBS215	\$1.00
Close	N5ACPBS205	\$1.00
Open	N5ACPBS206	\$1.00
Up	N5ACPBS204	\$1.00
Down	N5ACPBS203	\$1.00
Left	N5ACPBS222	\$1.00
Right	N5ACPBS224	\$1.00
Fast	N5ACPBS208	\$1.00
Slow	N5ACPBS207	\$1.00
Open-Close	N5ACPBS234	\$1.00
Stop-Start	N5ACPBS232	\$1.00
Forward-Reverse	N5ACPBS231	\$1.00
Off-On	N5ACPBS233	\$1.00
Forward-O-Reverse	N5ACPBS239	\$1.00
Emergency Stop (Red)	N5ACPBS229	\$1.00
Inch	N5ACPBS209	\$1.00
Jog	N5ACPBS210	\$1.00
Lower	N5ACPBS217	\$1.00
Off (Red)	N5ACPBS213	\$1.00
On	N5ACPBS212	\$1.00
Power On	N5ACPBS240	\$1.00
Push To Stop / Pull To Start	N5ACPBS241	\$1.00
Reset	N5ACPBS291	\$1.00
Run	N5ACPBS211	\$1.00
Start - Stop	N5ACPBS255	\$1.00
Up - Down	N5ACPBS256	\$1.00
Hand - Off - Auto	N5ACPBS261	\$1.00
Blank Insert	N5ACPBS	\$1.00
Transparent Insert	N5ACPTS	\$1.00
Custom Engrave	NSACPBSX	\$8.00

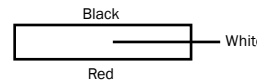
G21

Insert Holders Insert Holders come with blank insert which can be used to make your own legend. One side Red - One side Black.



- Legend Plates are used for Pilot Device identification of application function.
- Legend Plate requires Legend Holder and Legend Insert
- Legend Plates can be custom engraved at \$8.00 each

Description	Catalog No.	Price
Supplied with neutral insert engravable on both sides		
Standard 30 x 50mm	N5ARTBS	\$1.50
Extended 45 x 50mm	N5ARTBM	\$2.50



Emergency Stop Yellow Ring



Description	Catalog No.	Price
58mm Dia	080XTGR02	\$3.00
78MM Dia	080XTG802	\$3.00

Discount Schedule SC-36

TECHNICAL DATA

General Specifications

Conformity to Standards	UL508 (USA) NEMA ICS-2 (USA) VDE 0600 (Germany) BSI (Great Britain) CEI EN60947.5.1 (Italy) CENELEC EN 5000 7 (Europe)	CSA C22.2 No. 14-M91 (Canada) IEC 947.5.1 (International) UTE (France) NFC 63140 (France) JIS (Japan)	
Approvals	UL listed - File Number E170195 Manufacturing Facility is registered to ISO 9000		
Finger Protection at Terminals	IP2X according to IEC 529 Terminal identification is registered to ISO 9000		
Enclosure Ratings	Suitable for use in NEMA Types 1, 3, 3R, 3S, 4, 4X, 12 and 13 enclosures. (Multi-function push buttons are suitable for NEMA Type 1 enclosures only unless used with protective rubber cap accessory.) IP66 per IEC529, when mounted in enclosures with equal or superior seal.		
Ambient Temperature	Operating -13° to +158°F -25° to +70°C	Storage -40° to +158°F -40° to +70°C	
Climate Suitability / Humidity	Climate Type Temperature Wet Hot Wet Variable Wet	Temperature 74°F (23°C) 74°F (23°C) 104°F (40°C) 74° to 104°F (23° to 40°C)	Relative Humidity 50% 83% 92% 83% to 92%
Resistance to Vibration	Per IEC 68-2-6, 16g with a frequency from 40-500 Hz and maximum peak-to-peak amplitude of 0.75mm		
Resistance to Shock	According to MIL 202B, method 202A. Test was performed for 1/2 sinusoid for 11md, 38g max for all operators with transformers and 100g for all other operators.		
Operating Force	Standard push button operator: 2.5lbs (11N). Each contact block: 1.3lbs (6N). Selector switch operator: 2.4in/lb (0.27Nm)		

Wire Terminals

Wire Capacity and Terminal Torque Requirements	Suitable for #22 - #12 AWG stranded or solid copper wires, single or parallel conductors of same size. Terminal torque: 7-12 in/lb. Parallel conductor size combinations (stranded or solid wire):	
	Parallel Conductor Size Combinations (Stranded or Solid Wire)	Terminal Torque
	#12 with #14	12 in/lb
	#14 with #16	12 in/lb
	#16 with #18	12 in/lb
	#16 with #20	12 in/lb
	#16 with #22	12 in/lb
	#18 with #22	10 - 12 in/lb
	#18 with #20	10 - 12 in/lb
	#20 with #22	7 - 12 in/lb
Quick Connect Terminals	Suitable for one female tab connector measuring 0.25 x 0.03 inches (6.35 x 0.8 mm) or two female tab connectors measuring 0.11 x 0.03 inches (2.8 x 0.8 mm).	

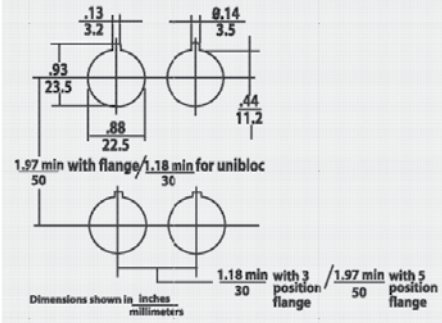
Contact Data

Electrical Reliability Data	Electrical life and reliability in low level current: 80 million operations at 12V, 5mA, resistive load. (32 contacts tested successfully for 2.5 million operations).								
Dust Resistance	In extremely dusty environments, electrical life at low level current is 250,000 operations at 12V, 5mA, resistive load. In a clean environment, electrical life at low level current is 10 million operations at 12V, 5mA, resistive load.								
Thermal Current	Ith = 10A per IEC 947-5-1								
Insulation Voltage	Ui = 660 Volts ac/dc (opposite polarity) except 2NO and 2NC blocks 300 Vac/dc								
Protection from Electrical Shock	Class I per IEC 536 for metal operators Class II (double insulation) per IEC 536 for plastic operators								
Insulation Category	Group "C" per VDE 0110								
Dielectric Strength	2500 volts								
Short Circuit Protection	10A type G fuse, per IEC 269.1 & 269.3								
	A600 (maximum make volt-amperes = 7200; maximum break volt-amperes = 720; PF- .25)								
	Volts (AC - V)	12	24	48	60	120	240	480	600
	Continuous (A)	10	10	10	10	10	10	10	10
	Making (A)	100	100	100	60	60	30	15	12
	Breaking (A)	10	10	10	6	6	3	1.5	1.2
Pilot Duty Ratings	Q300 (maximum make or break vold-amperes = 69)								
	Volts (DC - V)	12	24	48	60	125	250	300	
	Continuous (A)	2.5	2.5	2.5	2.5	2.5	2.5	2.5	
	Making (A)	2.5	2.5	1.4	1.1	0.55	0.27	0.23	
	Breaking (A)	2.5	2.5	1.4	1.1	0.55	0.27	0.23	

Contact Data

IEC Utilization Categories	AC 5 Control of AC Electromagnetic Loads Rated Operational Voltage and Current									
	Ue (V)	12	24	48	60	110	220	380	500	600
	Ie	10	10	10	10	6	3	2	1.5	1.2
Contact Characteristics	DC1 3 Control of DC Electromagnets Rated Operational Voltage and Current									
	UE (M)	12	24	48	60	110	220	300		
	LE (A)	2.5	2.5	1.4	10	0.55	0.27	0.2		
Contact Resistance Contact Fidelity	NC: slow make, double break (positive opening) NO: slow make, double break Self-cleaning (wiping action) contact Double-bridge contacts with four points of contact									
Logic Reed Contact Data (Special Order)	<25mOhm per IEC 255.7 category 3 @ 24V, 1 amp Minimum current: 5mA Minimum voltage: 12 Vac/dc. maximum resistance - 2 ohms									

Mounting

Acceptable Panel Thickness	.040 - .236 inches (1-6 mm)	
Operator Locking Ring Torque	26 in/lb (3 N-m)	
Force Required to Forcibly Remove Contact Blocks and Flange	Contact block or power supply from flange: 27 lbs (118N) 3- or 5-block flange from metal operator: 88 lbs (392 N) 3- or 5-block flange from plastic operator: 66 lbs (294 N)	
Mounting Dimensions		
Mechanical Life Ratings for Operators	Operators	Number of Operations
	Standard Push Buttons	3,000,000
	Illuminated Push Buttons ¹	1,000,000 - 3,000,000
	Momentary Mushroom-head Push Buttons	3,000,000
	Maintained Mushroom-head Push Buttons	500,000
	Push-to-Latch, Turn-to-Release Mushroom-Head Push Buttons	300,000
	3-Position Mushroom-head Push Buttons	300,000
	Non-Illuminated Selector Switches	1,000,000
	Illuminated Selector Switches	500,000
	Joysticks	500,000
	Toggle Switches	1,000,000
	Wobble Sticks	500,000
	Key-Operated Push Buttons	1,000,000
	Selector Push Buttons	

¹ Number of operations dependent on the operating duration of the lamp. If the lamp is left on for long periods of time, its heat can reduce mechanical life. All illuminated push buttons meet at least 1,000,000 operations.

POLYCARBONATE ENCLOSURES, NAMEPLATES, CONTACT BLOCKS POWER SUPPLIES FOR BASE-MOUNTED PILOT DEVICES

(See pg. G26-28 for assembled push-button stations. Consult factory for custom stations)

NEMA 1, 3, 3R, 4, 4X, 12, 13, & IP66

(For use with operators from pages G6 - G15. Requires base-mount contact blocks & power supplies) (maximum of 3 per operator)

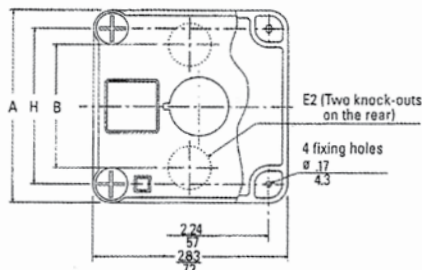
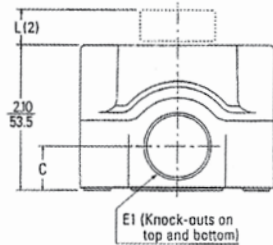
Plastic Enclosures

NEMA 1, 3 3R,3S, 4, 4X, 12, 13 and IP66

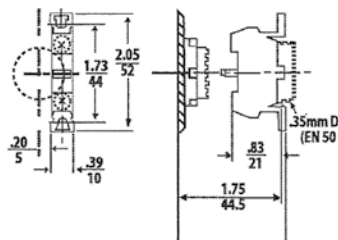
Enclosure Holes	Center Distance (in/mm)	Dimension A (in/mm)	Dimension B (in/mm)	Dimension C (in/mm)
1		2.83 (72)	1.81 (46)	.65 (16.5)
2	1.18 (30)	4.33 (110)	3.07 (78)	.65 (16.5)
3	1.18 (30)	5.51 (140)	4.25 (108)	.65 (16.5)
4	1.18 (30)	6.89 (175)	5.63 (143)	.65 (16.5)
6	1.18 (30)	9.25 (235)	7.87 (200)	.77 (19.5)

Enclosure Holes	Center Distance (in/mm)	Dimension E1 (in/mm)	Dimension E2 ¹ (in/mm)	Dimension H (in/mm)
1		.91 (23)	.61 (15.5)	2.24 (57)
2	1.18 (30)	.91 (23)	.85 (21.5)	3.74 (95)
3	1.18 (30)	.91 (23)	.85 (21.5)	4.92 (125)
4	1.18 (30)	.91 (23)	.85 (21.5)	6.30 (160)
6	1.18 (30)	1.14 (29)	.91 (23)	8.66 (220)

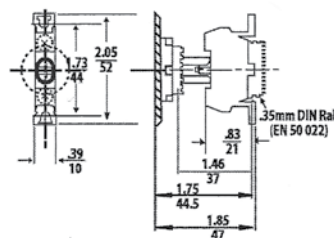
¹ 1-, 2-, 3-, and 4-hole enclosures suitable for cable gland, with locknut, PG16 or ½" NPT.
6-hole enclosures suitable for cable gland, with locknut GP12 or ¾" NPT.



Base Mount Contact Blocks with Screw Terminal



Base Mount Power Supply



Polycarbonate Enclosures

Holes	Color	Encl. Length	Catalog No.	Price
1	Gray	2.83"	N5EPE01	\$23.00
2	Gray	4.33"	N5EPE02	\$27.00
3	Gray	5.51"	N5EPE03	\$35.00
4	Gray	6.89"	N5EPE04	\$50.00
6	Gray	9.25"	N5EPE06	\$76.00

Base-Mount Contact Block

(Screw Terminals only for use with Polycarbonate Enclosures)

Type	Contacts	Catalog No.	Price
Base-Mount	1 NO	N5B10BN	\$11.50
Base-Mount	1 NC	N5B01BN	\$11.50

Base-Mount Power Supply

(Screw Terminals only)

Type	Voltage AC/DC	Catalog No. with Incandescent Bulb	Price
Full Voltage	No Lamp	N5PDNBO	\$27.00
	6	N5PDNBA	\$32.50
	12	N5PDNBB	\$32.50
	24	N5PDNBD	\$32.50
	48	N5PDNBG	\$32.50
Standard Resistor	110 - 120	N5PRNBJ	\$54.50
	220 - 240	N5PRNBN	\$54.50

Legend plates for Plastic Enclosures

(Self adhesive, black background)

Marking	Catalog No.	Price
Stop	N5AELN201	\$2.50
Start	N5AELN202	\$2.50
Down	N5AELN203	\$2.50
Up	N5AELN204	\$2.50
Close	N5AELN205	\$2.50
Open	N5AELN206	\$2.50
On	N5AELN212	\$2.50
Off	N5AELN213	\$2.50
Forward	N5AELN214	\$2.50
Reverse	N5AEL215	\$2.50
Left	N5AELN222	\$2.50
Right	N5AELN224	\$2.50

Discount Schedule SC-36

METAL ENCLOSURES FOR TYPE N5 OILTIGHT PILOT DEVICES

NEMA 12 surface mounting enclosure is available with one through sixteen elements openings. All enclosures will accommodate non-illuminated operators with up to two contact blocks (1 per side). Consult factory for stations with 7 through 20 elements and all custom built assembled push-button stations.

N5 Separate Enclosures



Enclosures only (No operators or contacts)

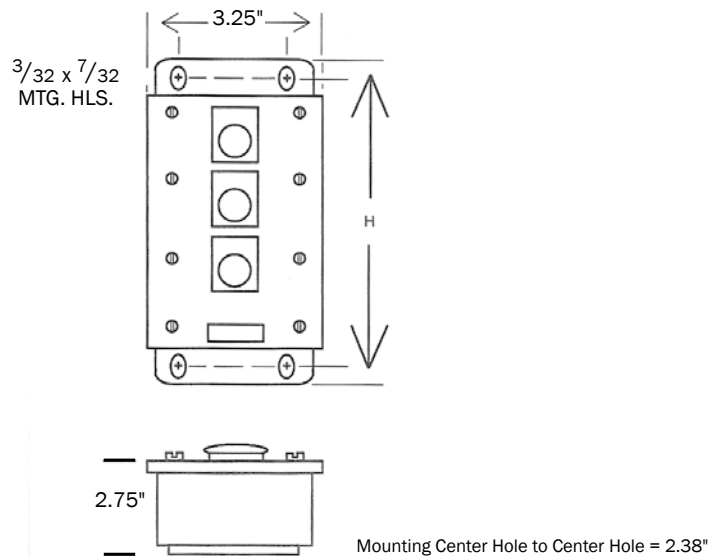
Type 12, Metal, Surface Mounted Enclosure

Number of Element(s)	Catalog No.	Price
1	N5SPPSL - 1	\$124.50
2	N5SPPSL - 2	\$140.00
3	N5SPPSL - 3	\$155.50
4	N5SPPSL - 4	\$194.00
5	N5SPPSL - 5	\$194.00
6	N5SPPSL - 6	\$233.00
7 - 20	Consult factory	

Dimensions

Type12, Metal			
Number of Element(s)	W	Surface Mounted Enclosure	D
		H	
1	3.25"	3.50"	2.75"
2		5.75"	
3		8.00"	
4		10.25"	
5		12.50"	
6		14.75"	

NEMA 12 Painted Metal



Note: Consult factory for extra deep or wide enclosure and stainless steel NEMA 4X

Ordering Information: Select Enclosure Desired by Catalog Number

Discount Schedule SC-36

22mm ASSEMBLED PUSH-BUTTON STATIONS

22mm push-button stations are available assembled in NEMA 1,3,3R,4, 4X, 12, 13, & IP66 rated polycarbonate enclosures. Assembled stations include operators, contact blocks, pilot lights, bulbs and legend plates as indicated. For other assembled stations not listed below please consult factory.

Single Element 22mm Push-Button Stations



Description (CHROME BEZEL)	Catalog No.	Price
Start PB Station Green Flush Push-Button Momentary	N5PEC101	\$57.50
Stop PB Station Red Extended Push-Button Momentary	N5PEC102	\$57.50
Stop PB Station Red 40mm Mushroom Push-Button Momentary	N5PEC103	\$70.00
Stop PB Station Red 40mm Push-Pull	N5PEC104	\$78.00

Consult factory for additional custom push-button stations

Description (4X BEZEL)	Catalog No.	Price
Start PB Station Green Flush Push-Button Momentary	N5PEX101	\$57.50
Stop PB Station Red Extended Push-Button Momentary	N5PEX102	\$57.50
Emergency PB Station Red 40mm Mushroom Push Button, twist release EN418 approved	N5PEX103	\$88.00
Stop PB Station Red 40mm Push-Pull	N5PEX104	\$78.00

Consult factory for additional custom push-button stations

Discount Schedule SC-36

22mm ASSEMBLED PUSH-BUTTON STATIONS

Two Element 22mm Push-Button Stations



Description (CHROME BEZEL)	Catalog No.	Price
Start-Stop PB Station Green Flush, Red Extended Push-Buttons Momentary	N5PEC201	\$93.00
Start-Stop PB Station Green Flush, Red 28mm Mushroom PB Momentary	N5PEC202	\$105.50
Open-Close PB Station Two Black Flush Push-Buttons Momentary	N5PEC203	\$93.00
Up-Down PB Station Two Black Flush Push-Buttons Momentary	N5PEC204	\$93.00
Forward-Reverse PB Station Two Black Flush Push-Buttons Momentary	N5PEC205	\$93.00

Consult factory for additional custom push-button stations.



Description (4X BEZEL)	Catalog No.	Price
Start-Stop PB Station (Green Flush, Red Extended Push-Buttons)	N5PEX201	\$93.00
Start-Stop PB Station (Green Flush, Red 28mm mushroom PB)	N5PEX202	\$105.50
Open-Close PB Station (Two Black Flush Push-Buttons)	N5PEX203	\$93.00
Up-Down PB Station (Two Black Flush Push-Buttons)	N5PEX204	\$93.00
Forward-Reverse PB Station (Two Black Flush Push-Buttons)	N5PEX205	\$93.00

Consult factory for additional custom push-button stations.

Discount Schedule SC-36

22mm ASSEMBLED PUSH-BUTTON STATIONS

Three Element 22mm Push-Button Stations



Description (CHROME BEZEL)	Catalog No.	Price
Forward - Reverse - Stop PB Station Two Black Flush, One Red Extended PB Momentary	N5PEC301	\$132.00
Open - Close - Stop PB Station Two Black Flush, One Red Extended PB Momentary	N5PEC302	\$132.00
Up - Down - Stop PB Station Two Black Flush, One Red Extended PB Momentary	N5PEC303	\$132.00
Start - Stop - On Light PB Station One Green Flush, One Red Extended Momentary, Pilot Light Green 120V	N5PEC304	\$149.00
Start - Stop - Selector Switch One Green, One Red Momentary, 2 pos Sel. Sw. Maintained	N5PEC305	\$152.00

Consult factory for additional custom push-button stations.

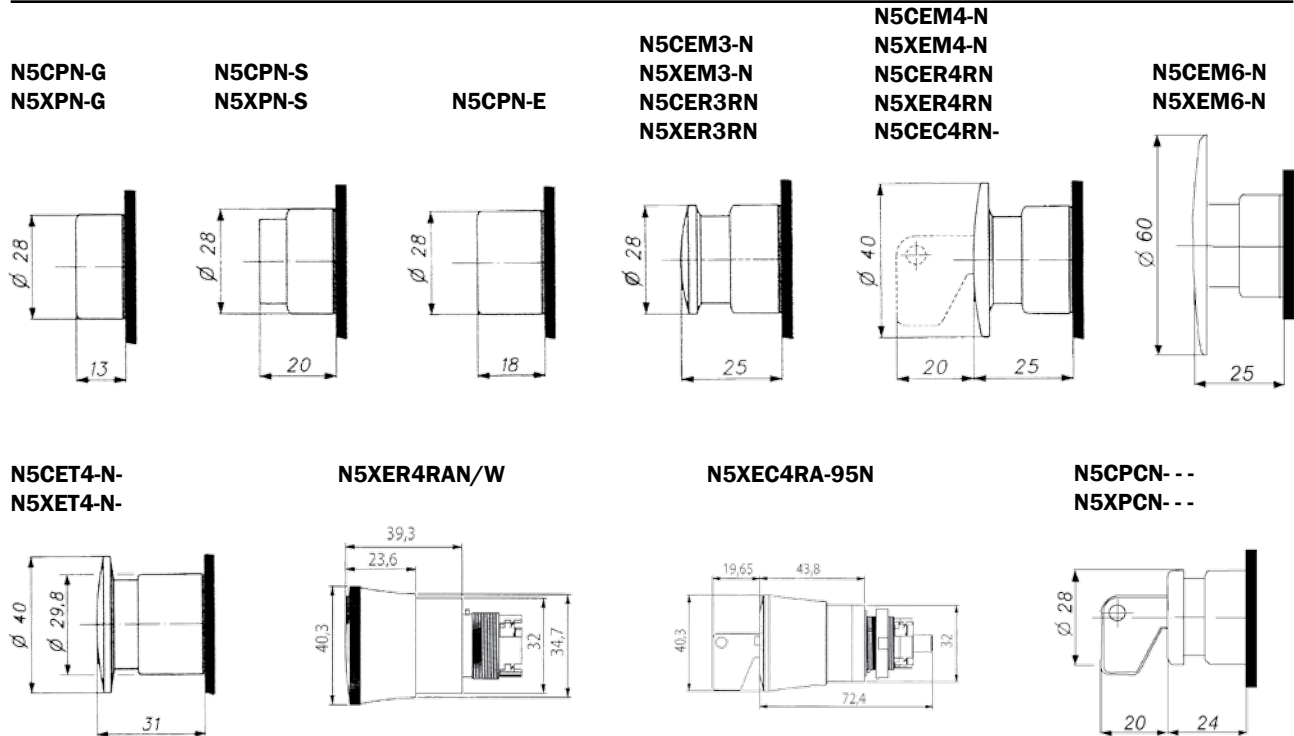


Description (4X BEZEL)	Catalog No.	Price
Forward - Reverse - Stop PB Station Two Black Flush, One Red Extended PB Momentary	N5PEX301	\$132.00
Open - Close - Stop PB Station Two Black Flush, One Red Extended PB Momentary	N5PEX302	\$132.00
Up - Down - Stop PB Station Two Black Flush, One Red Extended PB Momentary	N5PEX303	\$132.00
Start - Stop - On Light PB Station One Green Flush, One Red Extended Momentary, Pilot Light Green 120V	N5PEX304	\$149.00
Start - Stop - Selector Switch One Green, One Red Momentary, 2 pos. Sel. Sw. maintained	N5PEX305	\$152.00

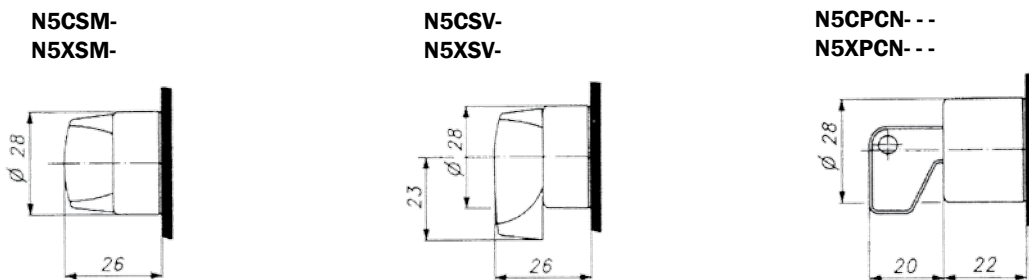
Consult factory for additional custom push-button stations.

Discount Schedule SC-36

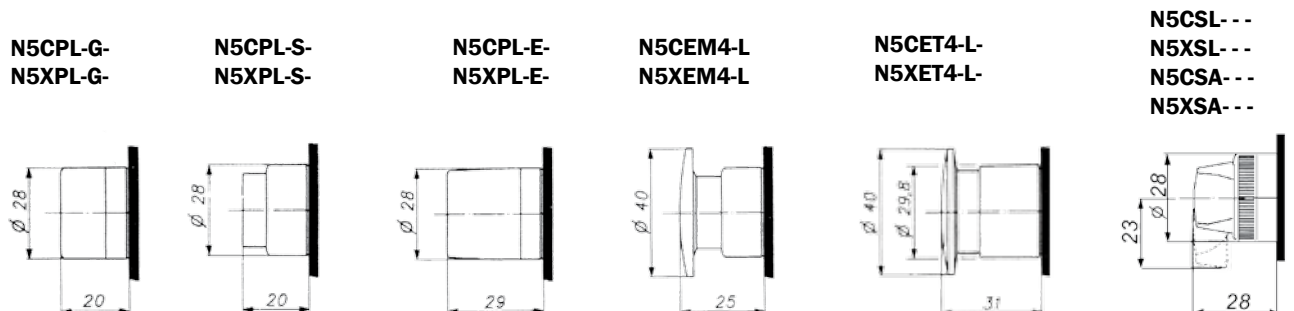
Round Operators - Push-Buttons



Round Operators - Selector Switches



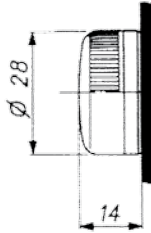
Round Operators - Illuminated Push-Buttons and Selector Switches



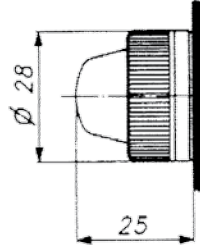
DIMENSIONS

Round Operators - Pilot Lights

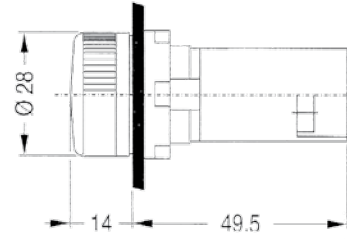
N5CL--
N5XL--



N5CL-V

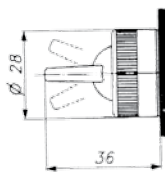


N5XU--

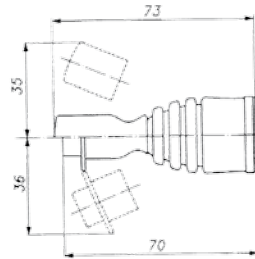


Round Operators - Other Devices

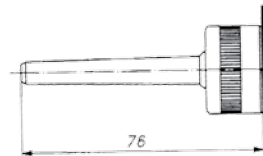
N5XC-



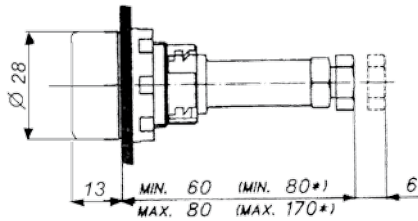
N5CMN--
N5XMN--



N5XMB--

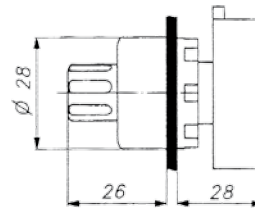


N5CRG
N5XRG



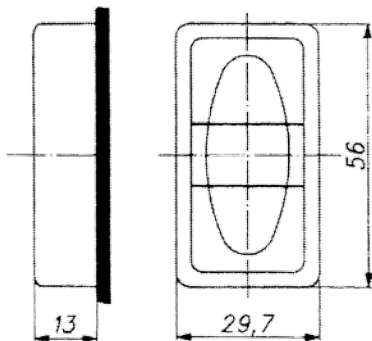
*with accessory N5ACVLR

N5CZ
N5XZ

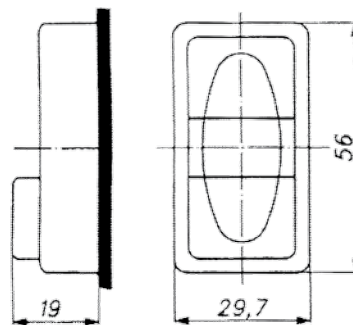


Square Operators - Double Function Push-Buttons

N5DPL-- G --

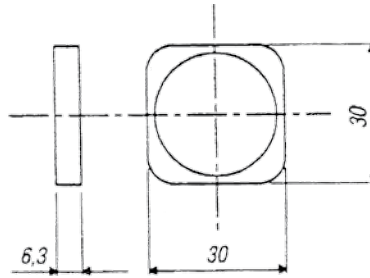


N5DPL-- S --



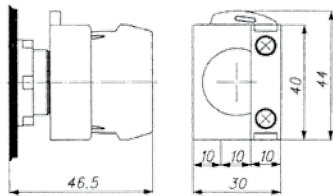
Square Operators - Other Devices

**Adaptor
N5ARSN1**

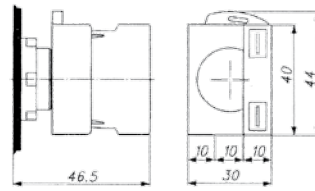


Contact Blocks

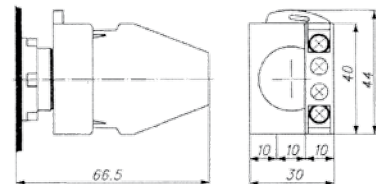
N5B01V- /



N5B01FN /



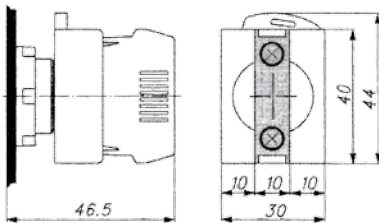
**N5B011VN
N5B02VN
N5B20VN**



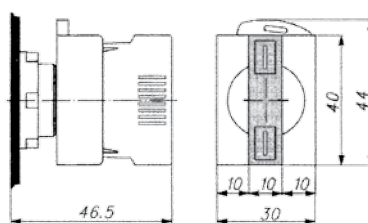
G31

Power Supplies

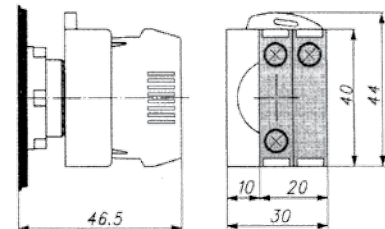
**N5PDNV0
N5PRLV -
N5PRDV-**



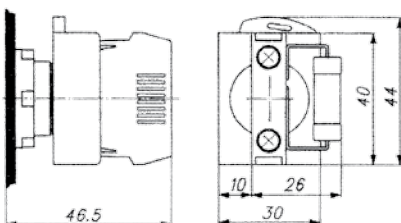
N5PDNF0



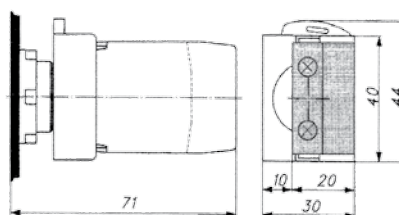
**N5PRNV-
N5PDTV0
N5PRTV-**



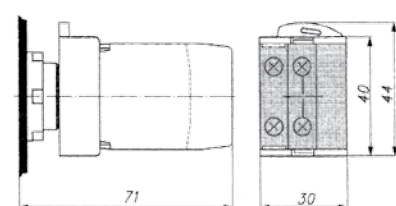
N5PREV-



N5PTNV-



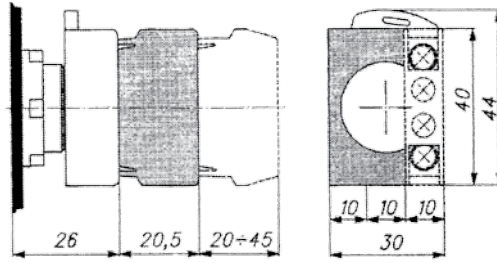
N5PDMV- /



DIMENSIONS

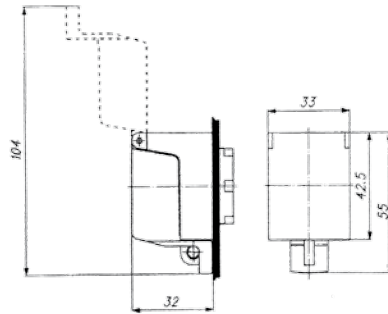
Push-On / Push-Off Devices

N5ACDPP



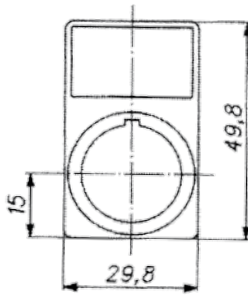
Protection Cover

N5ACRCL

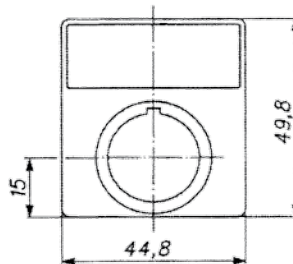


Insert Holders and Plates

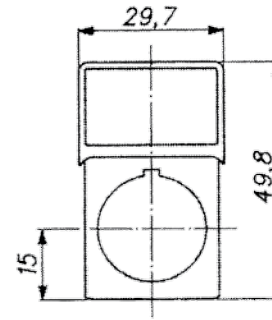
N5ARTBS



N5ARTBM

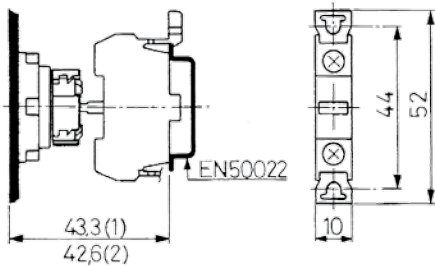


N5ASTBS



Contact Blocks

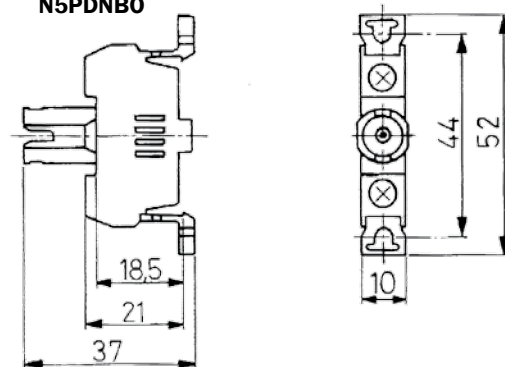
**N5B01BN
N5B10BN**



(1) With insert holder
(2) Without insert holder

Power Supplies

N5PDNB0



30MM (N7) PILOT DEVICES



SPRINGER
controls company



Springer Controls offers a complete line of rugged, industrial grade pilot devices. We carry both the 30mm and 22mm (section G) oil-tight devices. We custom assemble push button stations from 1 - 16 buttons in polycarbonate or metal enclosures. (page H18)

Index
H

30MM (N7) PILOT DEVICES:

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Pilot Lights and Illuminated Mushroom head	H7
Illuminated Standard Push-Buttons	H8
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Selector Switches - Colored Knob: 2-3-4 Position	H11
Keyed Selector Switches: 2-3-4 Position	H12
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Selector Switches	H14
Joysticks	H15
Contact Ratings / Contact Blocks	H16
N7 Mounting Dimensions and Ratings	H17
N7 Metal and Polycarbonate Enclosures	H18
Legend Plates	H19
Accessories	H20
N7 Technical Data	H21
N7 Dimensions	H22, H23

CATALOG NUMBERING SYSTEM

Push-Buttons & Push-Pull Operators

N7 **PNG** **V** **10**

Contact Arrangement

See Contact Block on page H16

Color Cap

N* Black	A Amber
R* Red	L Blue
V* Green	M Brown
G* Yellow	B White

(*Colors Available for Mushroom Heads)

Operator Type

PNS Extended - Push-Button	EM6 Jumbo Mushroom Head PB
PNG Flush - Push- Button	ER3 Twist Release Motor Head
PNE Recessed Guard	ET3 Push-Pull Std. Mushroom Head
EM3 Std. Mushroom Head PB	ET6 Push-Pull Jumbo Mushroom Head

30mm Series

Selector Switch Operators

N7 **SM** **B** **N** **0** **11**

Contact Arrangement

See Contact Block on page H16

Operator Function

0 ... Maintained
5 ... Spring Return from Right
1 ... Spring Return from Left
3 ... Spring Return from Both Left and Right

Knob Color

N Black	G Yellow
R Red	L Blue
V Green	

Cam Number

See Tables on page H14

Operator Type

SM Selector Switch Knob (standard)
SV Selector Switch Metal Lever

30mm Series

CATALOG NUMBERING SYSTEM

Pilot Lights & Press-To-Test Lights

N7 **L** **N** **V** **D** **J**

Voltage

A ... 6V	D ... 24V	L ... 130V	W ... 415V
B ... 12V	J ... 120V	N ... 240V	Y ... 480V

Power Supply

- T ... Transformer Type
- R ... Resistor Type
- D ... Full Voltage Type

Lens Color

R ... Red	G ... Yellow	L ... Blue	I ... Clear
V ... Green	A ... Amber	B ... White	O ... No Lens

Function

- N Normal
- M Multifunction

Operator Type

- L Standard Pilot Light
- T Press-To-Test Pilot Light

30mm Series

H3

Illuminated Push Button & Push-Pull Operators

N7 **PL** **S** **V** **D** **J** **11**

Contact Arrangement

See Contact Block on page H16

Voltage

A... 6V*	G ...48V	N ...220-25V	Y ... 480-500V
B ... 12V*	L ...130V*	U ... 380V	*FV only
D ... 24V*	J ... 110-120v	W ... 415V	

Power Supply

- T ... Transformer Type
- R ... Resistor Type
- D ... Full Voltage Type

Lens Color

R ... Red	G ... Yellow	L ... Blue	B ... White
V ... Green	A ... Amber	M ... Brown	I ... Clear

Guard

- S Extended without guard
- M Flush with guard

Operator Type

- PL Lighted Push-Button
- EL Lighted Mushroom Head

30mm Series

CATALOG NUMBERING SYSTEM

Illuminated Selector Switch

N7 **SL** **D** **R** **T** **O** **11**

Contact Arrangement

See Contact Block on page H16

Voltage

A...6V*	G ...48V	N ...220-25V	Y ...480-500V
B ... 12V*	L ...130V*	U ...380V	*FV only
D ... 24V*	J ... 110-120V*	W ... 415V	

Power Supply

T ... Transformer Type

R ... Resistor Type

D ... Full Voltage Type

Lens Color

R ... Red	G ... Yellow	L ... Blue	B ... White
V ... Green	A ... Amber	M ... Brown	I ... Clear

Position Cam

D ... 2 Position	L ... 3 Position
B ... 3 Position	Z ... 3 Position

Operator Designation

SL Selector Illuminated (Knob Type Only)

30mm Series

ORDERING INFORMATION AND CONTACTS

Ordering Information

- Use complete catalog number when ordering. Contacts can be included in part number. Replace the (*) with the suffix from the color table.
- Additional items available:
 - Accessories..... H20
 - Legend Plates..... H19
 - Ratings & Dimensions H22 - H24

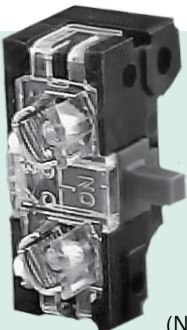
Contact Table

For this Contact Arrangement	Catalog No.	Price
1 N.O.	N7B10N	\$14.00
1 N.C.	N7B01N	\$14.00
2 N.O.	N7B20N	\$28.00
2 N.C.	N7B02N	\$28.00
1 N.O., 1 N.C.	N7B11N	\$28.00

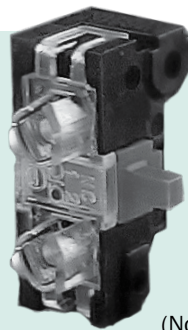
H5

Contact Ratings

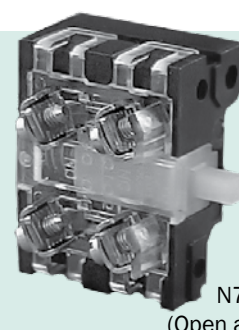
NEMA Rating	Amp. Rating Max. Volts	VA Make	Break	Continuous	Make	Break
Maximum AC Contact Rating Per Pole, 50 or 60 Hz						
A600	120	60	6	10	7200	720
	240	30	3			
	480	15	1.5			
	600	12	1.2			
Maximum DC Contact Rating Per pole						
P600	125	1.1	5	138		
	250	0.55		138		
	301-600	0.2		120		



N7B10N
(Normally Open)



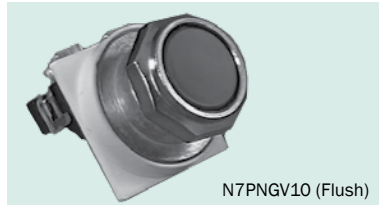
N7B01N
(Normally Closed)



N7B11N
(Open and Closed)

Discount Schedule SC-36

PUSH BUTTONS; STANDARD & MUSHROOM HEAD



Push Buttons - Momentary Operation

Operator	Contact Arrangement	Catalog No.	Price
Extended	Without Contacts	N7PNS • 00	\$27.00
	1 N.O.	N7PNS • 10	\$41.00
	2 N.O.	N7PNS • 20	\$55.00
	1 N.C.	N7PNS • 01	\$41.00
	2 N.C.	N7PNS • 02	\$55.00
	1 N.O. , 1 N.C.	N7PNS • 11	\$55.00
Flush	Without Contacts	N7PNG • 00	\$27.00
	1 N.O.	N7PNG • 10	\$41.00
	2 N.O.	N7PNG • 20	\$55.00
	1 N.C.	N7PNG • 01	\$41.00
	2 N.C.	N7PNG • 02	\$55.00
	1 N.O. , 1 N.C.	N7PNG • 11	\$55.00
Recessed	Without Contacts	N7PNE • 00	\$27.00
	1 N.O.	N7PNE • 10	\$41.00
	2 N.O.	N7PNE • 20	\$55.00
	1 N.C.	N7PNE • 01	\$41.00
	2 N.C.	N7PNE • 02	\$55.00
	1 N.O. , 1 N.C.	N7PNE • 11	\$55.00

H6

Mushroom Operators - Momentary Operation



Operator	Contact Arrangement	Catalog No.	Price
35mm Mushroom	Without Contacts	N7EM3 • 00	\$55.00
	1 N.O.	N7EM3 • 10	\$69.00
	2 N.O.	N7EM3 • 20	\$83.00
	1 N.C.	N7EM3 • 01	\$69.00
	2 N.C.	N7EM3 • 02	\$83.00
	1 N.O. , 1 N.C.	N7EM3 • 11	\$83.00
60mm Mushroom	Without Contacts	N7EM6 • 00	\$55.00
	1 N.O.	N7EM6 • 10	\$69.00
	2 N.O.	N7EM6 • 20	\$83.00
	1 N.C.	N7EM6 • 01	\$69.00
	2 N.C.	N7EM6 • 02	\$83.00
	1 N.O. , 1 N.C.	N7EM6 • 11	\$83.00

Mushroom Operators - Latched Operation (Twist to Release)

Operator	Contact Arrangement	Catalog No.	Price
35mm Mushroom	Without Contacts	N7ER3R00	\$83.00
	1 N.O.	N7ER2R10	\$97.00
	2 N.O.	N7ER3R20	\$111.00
	1 N.C.	N7ER3R01	\$97.00
	2 N.C.	N7ER3R02	\$111.00
	1 N.O. , 1 N.C.	N7ER3R11	\$111.00

Mushroom Operators - Push-Pull

Operator	Contact Arrangement	Catalog No.	Price	Operator	Contact Arrangement	Catalog No.	Price
35mm Mushroom	Without Contacts	N7ET3 • 00	\$83.00	60mm Mushroom	Without Contacts	N7ET6 • 00	\$83.00
	1 N.O.	N7ET3 • 10	\$97.00		1 N.O.	N7ET6 • 10	\$97.00
	2 N.O.	N7ET3 • 20	\$111.00		2 N.O.	N7ET6 • 20	\$111.00
	1 N.C.	N7ET3 • 01	\$97.00		1 N.C.	N7ET6 • 01	\$97.00
	2 N.C.	N7ET3 • 02	\$111.00		2 N.C.	N7ET6 • 02	\$111.00
	1 N.O. , 1 N.C.	N7ET3 • 11	\$111.00		1 N.O. , 1 N.C.	N7ET6 • 11	\$111.00

• COLOR TABLE

Use complete catalog number when ordering. Replace the (•) with the suffix from the table below.

Colors	Black	Red	Green	Yellow	Brown ¹	Blue ¹	White ¹	Amber ¹
Caps	N	R	V	G	M	L	B	A

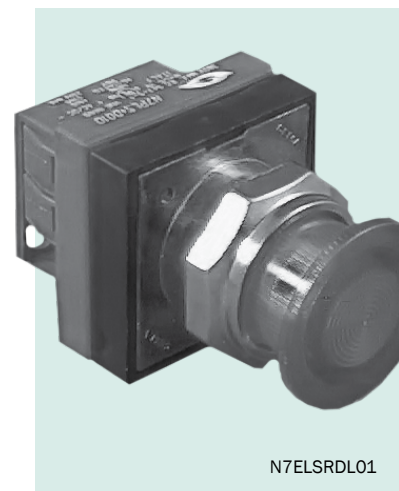
Note:
¹ Colors not available in mushroom heads

Discount Schedule SC-36

PILOT LIGHTS AND ILLUMINATED MUSHROOM HEAD



N7LNRTJ



N7ELSRDL01

Pilot Lights

Type	Function	Catalog No.	Price
Full Voltage	Normal	N7LN • D*	\$83.00
Resistor	Normal	N7LN • R*	\$83.00
Transformer	Normal	N7LN • T*	\$101.00

Push to Test¹

Full Voltage	Normal	N7TN • D*	\$111.00
Resistor	Normal	N7TN • R*	\$111.00
Transformer	Normal	N7TN • T*	\$129.00

Illuminated Mushroom Push Button - Momentary Operation

Type	Function	Catalog No.	Price
Full Voltage	1 N.O.	N7ELS • D*10	\$118.00
	2 N.O.	N7ELS • D*20	\$132.00
	1 N.C.	N7ELS • D*01	\$118.00
	2 N.C.	N7ELS • D*02	\$132.00
	1 N.O. - 1 N.C.	N7ELS • D*11	\$132.00
Resistor	1 N.O.	N7ELS • R*10	\$118.00
	2 N.O.	N7ELS • R*20	\$132.00
	1 N.C.	N7ELS • R*01	\$118.00
	2 N.C.	N7ELS • R*02	\$132.00
	1 N.O. - 1 N.C.	N7ELS • R*11	\$132.00
Transformer	1 N.O.	N7ELS • T*10	\$137.00
	2 N.O.	N7ELS • T*20	\$151.00
	1 N.C.	N7ELS • T*01	\$137.00
	2 N.C.	N7ELS • T*02	\$151.00
	1 N.O. - 1 N.C.	N7ELS • T*11	\$151.00

H7

COLOR TABLE

Use complete catalog number when ordering. Replace the (*) with the suffix from the table below.

Lens Color	Red	Green	Yellow	Blue	White	Amber	Clear
Color Code	R	V	G	L	B	A	I

Full Voltage Suffix	No Bulb O	6V A	12V * Standard	24V Filament	130V Bulbs included in price
Transformer Suffix	120V J	240-250V N	380V U	415V W	480V Y
Resistor Suffix	110-120V J	220-250V N			

LED Lamps - 110V AC (consult factory for other voltages)

Color*	Catalog No	Price
Red	BA9S11OLR	\$28.00
Green	BA9S11OLV	\$28.00
Blue	BA9S11OLL	\$28.00
Yellow	BA9S11OLG	\$28.00
White	BA9S11OLB	\$28.00

Replacement Filament Bulbs can be ordered from page G8

Note:

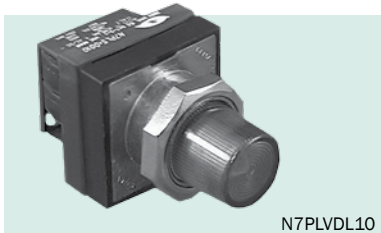
¹ Refer to page G8 for Push-to-Test Diagram

* Use same color lens and LED without diffuser.

** Add Suffix letter "L" for LED bulb to above part number plus add \$18.00 list

Discount Schedule SC-36

ILLUMINATED STANDARD PUSH BUTTONS - Momentary Operation



Full Voltage Type	Contact Arrangement	Catalog No.	Price
Extended	Without Contacts	N7PLS•D*00	\$83.00
	1 N.O.	N7PLS•D*10	\$97.00
	2 N.O.	N7PLS•D*20	\$111.00
	1 N.C.	N7PLS•D*01	\$97.00
	2 N.C.	N7PLS•D*02	\$111.00
	1 N.O. , 1 N.C.	N7PLS•D*11	\$111.00
Flush with Guard	Without Contacts	N7PLM•D*00	\$92.00
	1 N.O.	N7PLM•D*10	\$106.00
	2 N.O.	N7PLM•D*20	\$120.00
	1 N.C.	N7PLM•D*01	\$106.00
	2 N.C.	N7PLM•D*02	\$120.00
	1 N.O. , 1 N.C.	N7PLM•D*11	\$120.00

Resistor Type	Contact Arrangement	Catalog No.	Price
Extended	Without Contacts	N7PLS•R*00	\$83.00
	1 N.O.	N7PLS•R*10	\$97.00
	2 N.O.	N7PLS•R*20	\$111.00
	1 N.C.	N7PLS•R*01	\$97.00
	2 N.C.	N7PLS•R*02	\$111.00
	1 N.O. , 1 N.C.	N7PLS•R*11	\$111.00
Flush with Guard	Without Contacts	N7PLM•R*10	\$92.00
	1 N.O.	N7PLM•R*10	\$106.00
	2 N.O.	N7PLM•R*20	\$120.00
	1 N.C.	N7PLM•R*01	\$106.00
	2 N.C.	N7PLM•R*02	\$120.00
	1 N.O. , 1 N.C.	N7PLM•R*11	\$120.00

Transformer Type	Contact Arrangement	Catalog No.	Price
Extended	Without Contacts	N7PLS•T*00	\$101.00
	1 N.O.	N7PLS•T*10	\$115.00
	2 N.O.	N7PLS•T*20	\$129.00
	1 N.C.	N7PLS•T*01	\$115.00
	2 N.C.	N7PLS•T*02	\$129.00
	1 N.O. , 1 N.C.	N7PLS•T*11	\$129.00
Flush with Guard	Without Contacts	N7PLM•T*00	\$111.00
	1 N.O.	N7PLM•T*10	\$125.00
	2 N.O.	N7PLM•T*20	\$139.00
	1 N.C.	N7PLM•T*01	\$125.00
	2 N.C.	N7PLM•T*02	\$139.00
	1 N.O. , 1 N.C.	N7PLM•T*11	\$139.00

COLOR TABLE

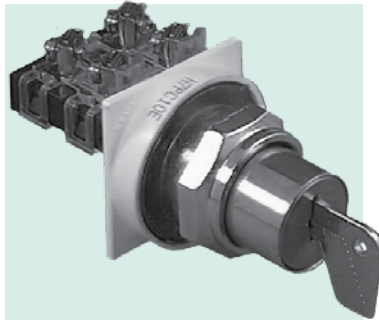
• Use complete catalog number when ordering. Replace the (*) with the suffix from the table below.

Lens Color	Red	Green	Yellow	Blue	White	Amber	Clear
Color Code	R	V	G	L	B	A	I

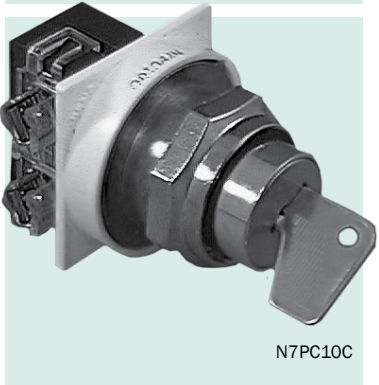
*	Full Voltage Suffix	No Bulb O	6V A	12V B	24V D	130V L
	Transformer Suffix	120V J	240-250V N	380V U	415V W	480V Y
	Resistor Suffix	110-120V J	220-250V N	* Standard Filament Bulbs included in price.		

Discount Schedule SC-36

KEY SELECTOR PUSH BUTTONS & PUSH BUTTON ACCESSORIES



N7PC10E



N7PC10C

Key Selector Push Buttons

Contact Arrangement	Lockable Position	Catalog No.	Price
Without Contacts	Released	N7PC00E	\$83.00
1 N.O.	Released	N7PC10E	\$97.00
2 N.O.	Released	N7PC20E	\$111.00
1 N.C.	Released	N7PC01E	\$97.00
2 N.C.	Released	N7PC02E	\$111.00
1 N.O. - 1 N.C.	Released	N7PC11E	\$111.00

Contact Arrangement	Lockable Position	Catalog No.	Price
Without Contacts	Depressed	N7PC00F	\$83.00
1 N.O.	Depressed	N7PC10F	\$97.00
2 N.O.	Depressed	N7PC20F	\$111.00
1 N.C.	Depressed	N7PC01F	\$97.00
2 N.C.	Depressed	N7PC02F	\$111.00
1 N.O. - 1 N.C.	Depressed	N7PC11F	\$111.00

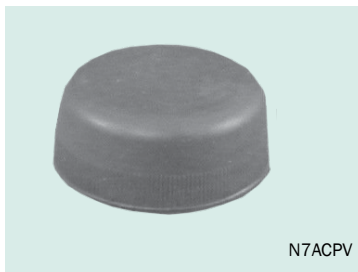
Contact Arrangement	Lockable Position	Catalog No.	Price
Without Contacts	Both	N7PC00C	\$83.00
1 N.O.	Both	N7PC10C	\$97.00
2 N.O.	Both	N7PC20C	\$111.00
1 N.C.	Both	N7PC01C	\$97.00
2 N.C.	Both	N7PC02C	\$111.00
1 N.O. - 1 N.C.	Both	N7PC11C	\$111.00



N7AG02, N7AG01, N7AG03

Push Button Accessories

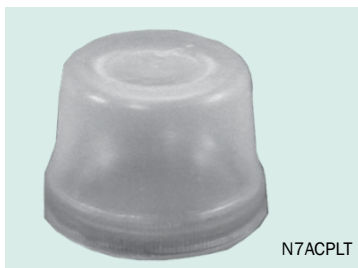
Description	Catalog No.	Price
Guard Rings for Push Buttons		
Unguarded (Extended)	N7AG02	\$4.50
Guarded (Flush)	N7AG01	\$4.50
Extended Guard (Recessed)	N7AG03	\$9.00



N7ACPV

Water Resistant Boots for Push Buttons

Black	N7ACPN	\$18.50
Red	N7ACPR	\$18.50
Green	N7ACPV	\$18.50
Yellow	N7ACPG	\$18.50
Translucent	N7ACPT	\$18.50
Translucent Water Resistant Boots for Illuminated Push Buttons, Pilot Lights and Press-To-Test Pilot Lights	N7ACPLT	\$28.00

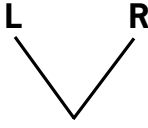

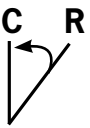
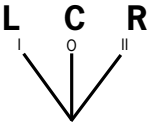
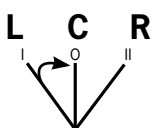
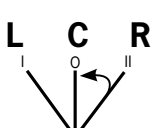
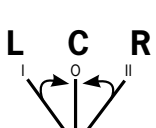
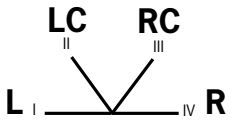


N7ACPLT

Additional accessories see page H20

Discount Schedule SC-36

SELECTOR SWITCHES WITH METAL LEVER

Description	Function	Code	Contact Arrangement	Catalog No.	Price
2 Position Maintained		D	1 N.O. - 1 N.C.	N7SVD0011	\$64.00
		I	1 N.O. - 1 N.C.	N7SVI0011	\$64.00
2 Position Spring Return From Right		I	1 N.O. - 1 N.C.	N7SVI0511	\$83.00
3 Position Maintained		B	1 N.O. - 1 N.C.	N7SVB0011	\$64.00
		E	1 N.O. - 1 N.C.	N7SVE0011	\$64.00
		L	1 N.O. - 1 N.C.	N7SVL0011	\$64.00
		U	2 N.O. - 2 N.C.	N7SVU0022	\$92.00
		Z	2 N.O. - 2 N.C.	N7SVZ0022	\$92.00
3 Position Spring Return From Left		B	1 N.O. - 1 N.C.	N7SVB0111	\$83.00
		E	1 N.O. - 1 N.C.	N7SVE0111	\$83.00
		L	1 N.O. - 1 N.C.	N7SVL0111	\$83.00
		U	2 N.O. - 2 N.C.	N7SVU0122	\$111.00
		Z	2 N.O. - 2 N.C.	N7SVZ0122	\$111.00
3 Position Spring Return From Right		B	1 N.O. - 1 N.C.	N7SVB0511	\$83.00
		E	1 N.O. - 1 N.C.	N7SVE0511	\$83.00
		L	1 N.O. - 1 N.C.	N7SVL0511	\$83.00
		U	2 N.O. - 2 N.C.	N7SVU0522	\$111.00
		Z	2 N.O. - 2 N.C.	N7SVZ0522	\$111.00
3 Position Spring Return To Center		B	1 N.O. - 1 N.C.	N7SVB0311	\$83.00
		E	1 N.O. - 1 N.C.	N7SVE0311	\$83.00
		L	1 N.O. - 1 N.C.	N7SVL0311	\$83.00
		U	2 N.O. - 2 N.C.	N7SVU0322	\$111.00
		Z	2 N.O. - 2 N.C.	N7SVZ0322	\$111.00
4 Position Maintained		X	2 N.O. - 2 N.C.	N7SVX0022	\$92.00

Notes:

- Cam Function Code Operation, page H14
- For operator only, replace last 2 digit with "00". Omit contact price

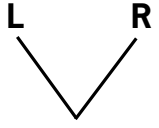
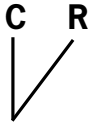
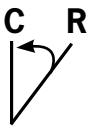
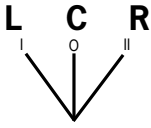
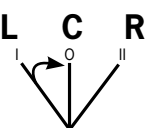
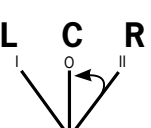
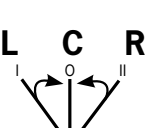
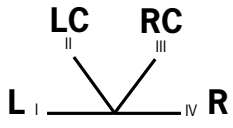
Ordering Information

Items: • Accessories - page H20 • Legend Plates - page H19 • Ratings & Dimensions - page H22-H23

Discount Schedule SC-36

SELECTOR SWITCHES WITH COLORED KNOB

(see page H14 for Contact Switching Sequence)

Description	Function	Code	Contact Arrangement	Catalog No.	Price
2 Position Maintained		D	1 N.O. - 1 N.C.	N7SMD•011	\$64.00
		I	1 N.O. - 1 N.C.	N7SMI•011	\$64.00
2 Position Spring Return From Right		I	1 N.O. - 1 N.C.	N7SMI•511	\$83.00
3 Position Maintained		B	1 N.O. - 1 N.C.	N7SMB•011	\$64.00
		E	1 N.O. - 1 N.C.	N7SME•011	\$64.00
		L	1 N.O. - 1 N.C.	N7SML•011	\$64.00
		U	2 N.O. - 2 N.C.	N7SMU•022	\$92.00
		Z	2 N.O. - 2 N.C.	N7SMZ•022	\$92.00
3 Position Spring Return From Left		B	1 N.O. - 1 N.C.	N7SMB•111	\$83.00
		E	1 N.O. - 1 N.C.	N7SME•111	\$83.00
		L	1 N.O. - 1 N.C.	N7SML•111	\$83.00
		U	2 N.O. - 2 N.C.	N7SMU•122	\$111.00
		Z	2 N.O. - 2 N.C.	N7SMZ•122	\$111.00
3 Position Spring Return From Right		B	1 N.O. - 1 N.C.	N7SMB•511	\$83.00
		E	1 N.O. - 1 N.C.	N7SME•511	\$83.00
		L	1 N.O. - 1 N.C.	N7SML•511	\$83.00
		U	2 N.O. - 2 N.C.	N7SMU•522	\$111.00
		Z	2 N.O. - 2 N.C.	N7SMZ•522	\$111.00
3 Position Spring Return To Center		B	1 N.O. - 1 N.C.	N7SMB•311	\$83.00
		E	1 N.O. - 1 N.C.	N7SNE•311	\$83.00
		L	1 N.O. - 1 N.C.	N7SML•311	\$83.00
		U	2 N.O. - 2 N.C.	N7SMU•322	\$111.00
		Z	2 N.O. - 2 N.C.	N7SMZ•322	\$111.00
4 Position Maintained		X	2 N.O. - 2 N.C.	N7SMX•022	\$92.00

Notes:

- Cam Function Code Operation, page H14
- For operator only, replace last 2 digit with "00". Omit contact price




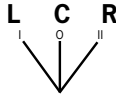
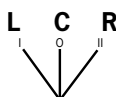
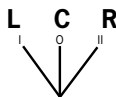
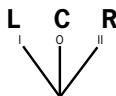
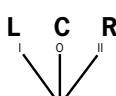
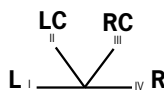
Color Table • Use complete catalog number when ordering. Replace (•) with the suffix from the table below

Colors	Black	Red	Green	Yellow	Blue
Knobs	N	R	V	G	L

Discount Schedule SC-36

KEYED SELECTOR SWITCHES

(see page H14 for Contact Switching Sequence)

Description	Function	Code	Contact Arrangement	Key Removal	Catalog No.	Price
2 Position Maintained		D	1 N.C. - 1 N.O.	L	N7SCD0A1195	\$120.00
				R	N7SCD0E1195	\$120.00
				L-R	N7SCD0K1195	\$120.00
2 Position Maintained		I	1 N.C. - 1 N.O.	C	N7SCIO1195	\$120.00
				R	N7SCIOE1195	\$120.00
				C-R	N7SCION1195	\$120.00
2 Position with Spring Return From Right		I	1 N.C. - 1 N.O..	C	N7SCI5C1195	\$139.00
3 Position Maintained		B	1 N.C. - 1 N.O.	L	N7SCB0A1195	\$120.00
				C	N7SCB0C1195	\$120.00
				R	N7SCB0E1195	\$120.00
				L-C	N7SCB0H1195	\$120.00
				L-R	N7SCB0K1195	\$120.00
				C-R	N7SCBOT1195	\$120.00
				L-C-R	N7SCBOT1195	\$120.00
3 Position Maintained		E	1 N.C. - 1 N.O.	L	N7SCE0A1195	\$120.00
				C	N7SCE0C1195	\$120.00
				R	N7SCE0E1195	\$120.00
				L-C	N7SCE0H1195	\$120.00
				L-R	N7SCE0K1195	\$120.00
				C-R	N7SCE0N1195	\$120.00
				L-C-R	N7SCE0T1195	\$120.00
3 Position Maintained		L	1 N.C. - 1 N.O.	L	N7SCL0A1195	\$120.00
				C	N7SCL0C1195	\$120.00
				R	N7SCL0E1195	\$120.00
				L-C	N7SCL0H1195	\$120.00
				L-R	N7SCL0K1195	\$120.00
				C-R	N7SCL0N1195	\$120.00
				L-C-R	N7SCL0T1195	\$120.00
3 Position Maintained		U	2 N.O. - 2 N.C.	L	N7SCU0A2295	\$148.00
				C	N7SCU0C2295	\$148.00
				R	N7SCU0E2295	\$148.00
				L-C	N7SCU0H2295	\$148.00
				L-R	N7SCU0K2295	\$148.00
				C-R	N7SCU0N2295	\$148.00
				L-C-R	N7SCU0T2295	\$148.00
3 Position Maintained		Z	2 N.O. - 2 N.C.	L	N7SCZ0A2295	\$148.00
				C	N7SCZ0C2295	\$148.00
				R	N7SCZ0E2295	\$148.00
				L-C	N7SCZ0H2295	\$148.00
				L-R	N7SCZ0K2295	\$148.00
				C-R	N7SCZ0N2295	\$148.00
				L-C-R	N7SCZ0T2295	\$148.00
4 Position Maintained		X	2 N.O. - 2 N.C.	All	N7SCX0A2295	\$148.00

Notes:

-For key removal option on 4 position consult factory.
-Cam function code operation, pg H14

Ordering Information

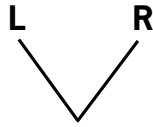
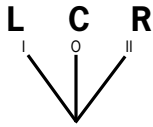
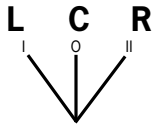
• Accessories - page H20 • Legend Plates - page H19 • Ratings & Dimensions - page H22-H23

Discount Schedule SC-36

ILLUMINATED SELECTOR SWITCHES

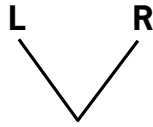
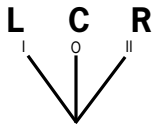
(see page H14 for Contact Switching Sequence)

Full Voltage Type

Description	Function	Code	Contact	Catalog No.	Price
2 Position Maintained		D	Without Contact	N7SLD•D*00	\$92.00
			1 N.C. - 1 N.O.	N7SLD•D*11	\$120.00
3 Position Maintained		B	Without Contact	N7SLB•D*00	\$92.00
		L	Without Contact	N7SLL•D*00	\$92.00
		Z	Without Contact	N7SLZ•D*00	\$92.00
3 Position Maintained		B	1 N.C. - 1 N.O.	N7SLB•D*11	\$120.00
		L	1 N.C. - 1 N.O.	N7SLL•D*11	\$120.00
		Z	1 N.C. - 1 N.O.	N7SLZ•D*11	\$120.00

H13

Transformer Type

Description	Function	Code	Contact	Catalog No.	Price
2 Position Maintained		D	Without Contact	N7SLD•T*00	\$111.00
			1 N.C. - 1 N.O.	N7SLD•T*11	\$139.00
3 Position Maintained		B	1 N.C. - 1 N.O.	N7SLB•T*11	\$139.00
		L	1 N.C. - 1 N.O.	N7SLL•T*11	\$139.00
		Z	1 N.C. - 1 N.O.	N7SLZ•T*11	\$139.00

* Full Voltage Suffix	No Bulb O	6V A	12V B	24V D	130V L
Transformer Suffix	120V J	240-250V N	380V U	415V W	480V Y
Resistor Suffix	110-120V J	220-250V N	*Standard filament bulbs Included in price.		

Notes:

-Cam Function Code Operation, page H14

Color Table • Use complete catalog number when ordering. Replace (•) with the suffix from the table below





Colors	Black	Red	Green	Yellow	Blue
Knobs	N	R	V	G	L

Discount Schedule SC-36





SELECTOR SWITCHES - CAM CODE AND SWITCHING SEQUENCE



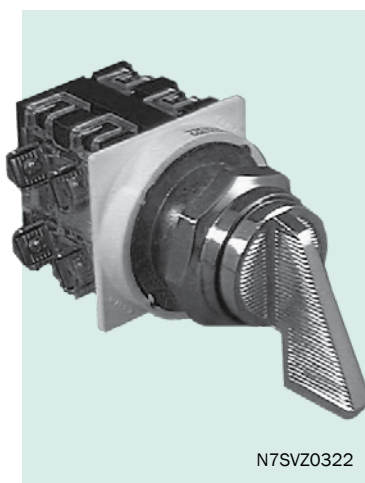
2 Position Selector Switch





Location of Contact Block (Front View)	Contact Block			Cam Code				
	Catalog No.	Symbol	Rod Color	D		I		
				Left	Right	Center	Right	
Left	N.O.	N7B10		Green	0	X	0	X
	N.C.	N7B01		Red	X	0	X	0
Right	N.O.	N7B10		Green	0	X	0	X
	N.C.	N7B01		Red	X	0	X	0

3 Position Selector Switch

Location of Contact Block (Front View)	Contact Block			Cam Code																
	Catalog No.	Symbol	Rod Color	B			E			L			Z			U				
				Left	Center	Right	Left	Center	Right	Left	Center	Right	Left	Center	Right	Left	Center	Right		
Left	N.O.	N7B10		Green	0	0	X	0	0	X	X	0	0	0	0	0	X	0	0	X
	N.C.	N7B01		Red	X	0	0	0	X	0	0	X	0	X	X	0	X	0	0	0
Right	N.O.	N7B10		Green	0	0	X	0	0	X	X	0	0	X	0	0	0	0	0	X
	N.C.	N7B01		Red	X	0	0	0	X	0	0	X	0	0	X	X	0	X	0	0

4 Position Selector Switch



Location of Contact Block (Front View)	Contact Block			Cam Code				
	Catalog No.	Symbol	Rod Color	Left	Left Center	Right Center	Right	
Left	N.O.	N7B10		Green	0	0	X	0
	N.C.	N7B01		Red	X	0	0	0
Right	N.O.	N7B10		Green	0	X	0	0
	N.C.	N7B01		Red	0	0	0	X

Standard Contact Blocks

Contact Configuration	Operating Plunger Color Code	Catalog No.	Price
1 N.O. - 1 N.C.	White	N7B11N	\$28.00
1 N.O.	Green	N7B10N	\$14.00
1 N.C.	Red	N7B01N	\$14.00
1 N.O. (early close)	White	N7B01A	\$14.00
1 N.C. (late open)	White	N7B01R	\$14.00

Ordering Information

Items: • Accessories - page H20 • Legend Plates - page H19 • Ratings & Dimensions - page H22-H23

Discount Schedule SC-36

Joystick Operator

The Joystick Operator is available in three (left-center-right) and five (left-up-right-down-center) position, maintained and spring return (to center) types. They are also available with a release button on the end of the operator which must be depressed in order to operate the joystick







N7MN2T22N

Joystick (Legend plate note included)

Type	Without Release Button		With Release Button	
	Catalog No.	Price	Catalog No.	Price
3 Positions Maintained	N7MN2F22N	\$220.00	N7MB2F22N	\$230.00
3 Positions Spring Return to Center	N7MN2T22N	\$220.00	N7MB2T22N	\$230.00
5 Positions Maintained	N7MN4F22N	\$257.00	N7MB4F22N	\$267.00
5 Positions Spring Return to Center	N7MN4T22N	\$257.00	N7MB4T22N	\$267.00

Three Position Joystick (Contact Sequence)

Type	Contacts		Rod Color	Joy Stick Position (Front View)		
	Location (Front View)	Type and Symbol		Left	Center	Right
3 Positions, Maintained and Spring Return to Center With or Without Release Button	Left		Green	X	0	0
			Red	0	0	X
	Right		Green	0	0	X
			Red	X	0	0







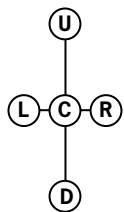
H15



N7MB4T22N

Five Position Joystick (Contact Sequence)

Type	Contacts		Rod Color	Joy Stick Position (Front View)				
	Location (Front View)	Type and Symbol		Left	Up	Center	Down	Right
Five Positions, Maintained and Spring Return to Center With or Without Release Button	Left		Green	0	0	0	X	0
			Red	0	X	0	0	0
	Right		Green	0	0	0	0	X
			Red	X	0	0	0	0

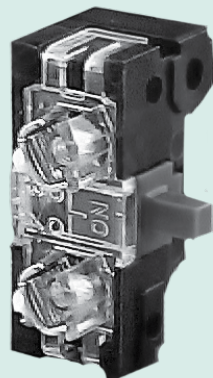


Ordering Information

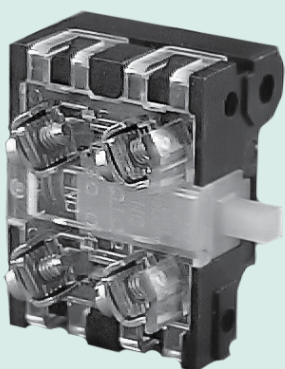
Items: • Accessories - page H20 • Legend Plates - page H19 • Ratings & Dimensions - page H22-H23

Discount Schedule SC-36

CONTACT RATINGS - CONTACT BLOCKS



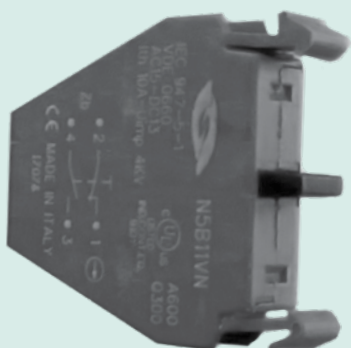
N7B10N



N7B11N



N7APTB10



N5B11VN

Contact Ratings

AC Ratings, NEMA A600 Heavy Pilot Duty			
Maximum AC Voltage	Continuous Current Amperes	AC Voltamperes 60/50 Hz ¹	
		Make	Break
600	10	7200	720

¹ Maximum make and break currents are 60 and 6 amperes respectively for voltages of 120 and below.

DC Ratings, NEMA P600		
Maximum Make or Break Amperes		
125V	250V	600V
1.1	0.55	0.2

¹ Maximum make and break currents are 60 and 6 amperes respectively for voltages of 120 and below.

Standard Contact Blocks

Contact Configuration	Operating Plunger Color Code	Standard Contact Block	
		Catalog No.	Price
1 N.O. - 1 N.C.	White	N7B11N	\$28.00
1 N.O.	Green	N7B10N	\$14.00
1 N.C.	Red	N7B01N	\$14.00
1 N.O. (early close)	White	N7B10A	\$14.00
1 N.C. (late open)	White	N7B01R	\$14.00

Gold Flashed Contact Blocks (Special Order)

Contact Configuration	Operating Plunger Color Code	Standard Contact Block	
		Catalog No.	Price
1 N.O. - 1 N.C.	White	N7B11D	\$56.00
1 N.O.	Green	N7B10D	\$28.00
1 N.C.	Red	N7B01D	\$28.00

Finger-Safe Guards

For Use With	Catalog No.	Price
1 N.O.	N7APTB10	\$4.50
1 N.C.	N7APTB01	\$4.50
1 N.O. - 1 N.C.	N7APTB11	\$6.00

Suitable for use in NEMA Types 1, 3, 3R, 4, 4X, 12 and 13 applications when mounted in enclosures rated for those same applications. For some NEMA Type 4X applications, protective caps will improve corrosion resistance.

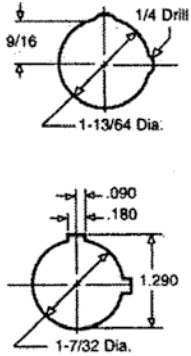
Contacts for Illuminated Push buttons & Illuminated Selector Switches

For Use With	Catalog No.	Price
1 N.O. - 1 N.C.	N5B11VN	\$23.00
1 N.O.	N5B10VN	\$11.50
1 N.C.	N5B01VN	\$11.50
2 N.O.	N5B20BN	\$23.00
2 N.C.	N5B02VN	\$23.00

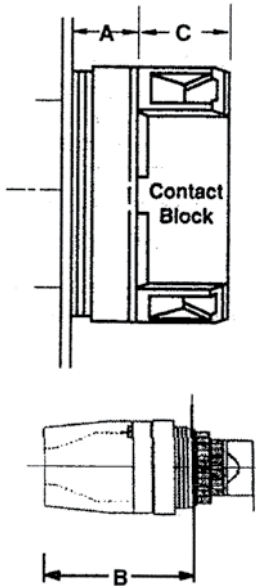
Discount Schedule SC-36

DIMENSIONS & RATINGS

Panel Drilling



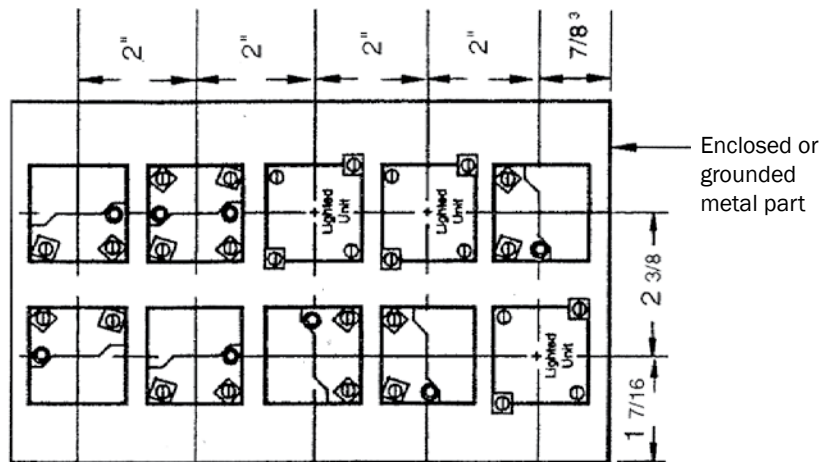
Rear of Mounting Panel



Contact Ratings

NEMA Rating	Max. Volts	Amp. Rating			VA	
		Make	Break	Continuous	Make	Break
Maximum AC Contact Rating Per Pole, 50 or 60 Hz						
A600	120	60	6	10	7200	720
	240	30	3			
	480	15	1.5			
	600	12	1.2			
Maximum DC Contact Rating Per Pole						
P600	125	1.1	5		138	120
	250	0.55				
	301-600	0.5				

Minimum Center-line Clearance



Dimensions

Depth Behind Panel	Push Buttons & Selector Switches	Push-Pull Units Non-Illuminated	Illuminated	
			FV	XFMR
A ³	21/32	1 11/32		
B	---	---	1 7/8"	2 3/8"
C ⁴	3/4	3/4	---	---

Maximum Panel Thickness, Inches	Spacers Required
1/16	3
1/8	2
3/16	1

Panels thicker than 3/16" must be counter bored.

Notes:

1. Use the trim washer if no legend plate is used. Discard the trim washer when using a legend plate.
2. When using Legend Plate, both horizontal and vertical centerlines between operators must be 2 1/2" minimum. When using either 2 1/4" mushroom head or lever selector switch, both horizontal and vertical centerlines between operators must be 2 1/4" minimum.
3. Depth when three neoprene spacers are used. Reduce depth by 1/16" for each spacer omitted.
4. Depth per contact block. Maximum contact stack depth is three (3) inches.

Discount Schedule SC-36

SEPARATE ENCLOSURES FOR TYPE N7 OILTIGHT PILOT DEVICES

N7 (30mm) surface mounting enclosures are available from one through sixteen element openings. All enclosures are UL approved. Enclosures will accommodate non-illuminated operators with up to two contact blocks (1 per side). Consult factory for stations with 7 through 16 elements and all custom assembled push button stations.

N7 Separate Enclosures; Metal and Polycarbonate

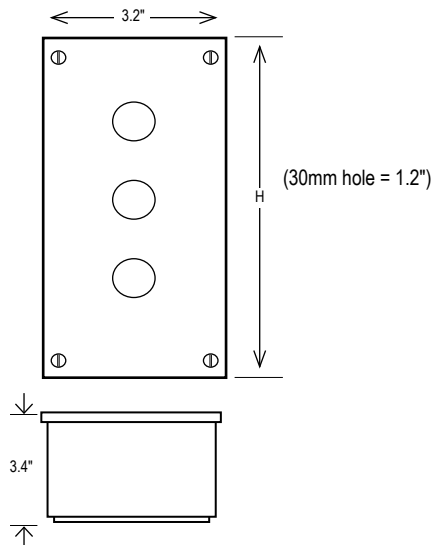
Enclosures Only (No Operators or Contacts)

Element	Type 3R, 4X Polycarbonate Surface Mounted Enclosure		Type 12 Metal Surface Mounted Enclosure	
	Catalog No.	Price	Catalog No.	Price
1	N7EPE01	\$92.00	N7SPPB-1	\$125.00
2	N7EPE02	\$108.00	N7SPPB-2	\$140.00
3	N7EPE03	\$120.00	N7SPPB-3	\$156.00
4	**consult factory	**consult factory	N7SPPB-4	\$194.00
5			N7SPPB-5	\$194.00
6			N7SPPB-6	\$233.00
7-16			**consult factory	**consult factory

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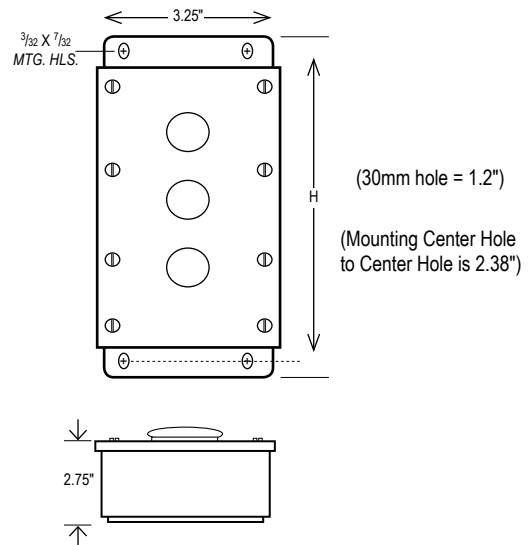
Enclosure Dimensions

NEMA Polycarbonate 3R, 4X



Number of Elements	W	H	D
1	3.2"	4.3"	3.4"
2		6.7"	
3		9.1"	

NEMA 12 Painted Metal



Number of Elements	W	H	D
1	3.25"	3.50"	2.75"
2		5.75"	
3		8.00"	
4		10.25"	
5		12.50"	
6		14.75"	

Ordering Information:

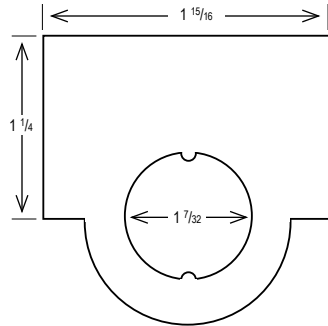
-Select Enclosure Desired by Catalog Number

-Extra Deep Enclosures Available

Discount Schedule SC-36

LEGEND PLATES

Standard Plates (Listed below; Aluminium with Black Surface)



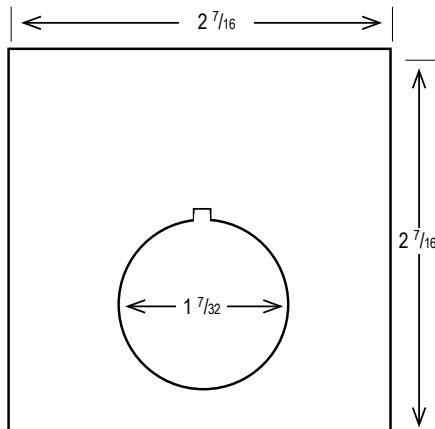
Standard Size Character height is 1/8 inch on standard plate

Catalog No.	Price
N7TNA_● (see below)	\$3.00
N7TNA-X (custom)	\$15.50

Marking	Catalog No.	Marking	Catalog No.	Marking	Catalog No.
Pushbutton		Pushbutton		2 Pos. Selector Switch	
Start	N7TNA41	Raise	N7TNA59	Man-Auto	N7TNA231
Stop	N7TNA40	Lower	N7TNA60	Off-On	N7TNA230
Fast	N7TNA49	Jog	N7TNA51	Jog-Run	N7TNA234
Slow	N7TNA48	Inch	N7TNA50	Up-Down	N7TNA232
Open	N7TNA47	Run	N7TNA52	3 Pos. Selector Switch	
Close	N7TNA46	Forward	N7TNA55	Auto-Off-Hand	N7TNA310
Off	N7TNA54	Reverse	N7TNA56	Open-Off-Close	N7TNA312
On	N7TNA53	Power On	N7TNA42	Up-Off-Down	N7TNA313
Up	N7TNA45	(Blank)	N7TNA	4 Pos. Selector Switch	
Down	N7TNA44			1-2-3-4	N7TNA4
				(Blank)	N7TNC

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Extra Large Plates





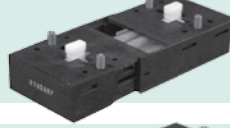





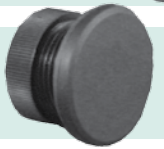
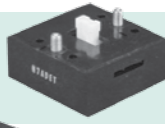

Extra large Plates Character height is 1/4 on extra large plate

Brushed Aluminized Surface			Plastic	
	Catalog No.	Price	Catalog No.	Price
Blank	N7TNBM	\$9.50	N7TMBP	\$7.50
Engraved	N7TNBM-X	\$19.00	N7TMBP-X	\$17.50

Discount Schedule SC-36

ACCESSORIES

Accessories

	Description	Catalog No.	Price
 <p>N7ACST</p>	Translucent Water Resistant Boots for Knob Operated Standard and Illuminated Selector Switches	N7ACST	\$28.00
 <p>N7ADIM</p>	Mechanical Interlock for Push Buttons (Interlocks two buttons so they cannot be simultaneously depressed)	N7ADIM	\$28.00
 <p>N7ADAMP</p>	Maintained Interlock for Push Buttons (Interlocks two buttons so that when one is depressed, the other is released-maintained operation)	N7ADAMP	\$28.00
 <p>N7ADPP</p>	Push-On/Push-off (Converts standard momentary operator to push-on/push-off)	N7ADPP	\$28.00
 <p>N7CHG</p>	Guard Ring Wrench (for Octagonal Guard Rings)	N7CHG	\$39.00
 <p>N7AOPZ</p>	Potentiometer operator only	N7AOPZ	\$109.00
 <p>N7ALPS</p>	Chrome Lever attachment for Selector-Push Units	N7ALPS	\$18.50
 <p>077C3095</p>	Key (2-3-4 Position/Non-Illuminated Selector Switch)	077C3095	\$5.50
 <p>N7ATPF</p>	Hole Plug, 1 & 13 -Grey	N7ATPF	\$9.00
 <p>N7ADET</p>	Push-Pull module for Mushroom	N7ADET	\$28.00
 <p>N7AXG</p>	Lockout Attachments	N7AXG	\$28.00

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Discount Schedule SC-36

TECHNICAL DATA

Compliance With Standards

IEC 947.5.1 - VDE 0660 - NFC 63140
CEI EN 60947.5.1 - UTE - BSI - NEMA
CENELEC EN 50007

Approvals

UL (USA) - CSA (Canada) - RINA -
Lloyd's Register of Shipping



Climactic Protections

The standard versions are suitable for use in the following climates:

Temperate Climate cat. 23/50 (DIN 50014)
Wet Climate cat. 23/83 (DIN 50015)
Hot Wet Climate cat. 40/92 (DIN 50015)
Var. Wet Climate cat. FW24 (DIN 50016)

Temperature Ranges

Operation -25° C tot +70° C
Storage -40° C tot +70° C

Protection Degree of Operators

IP65 according to IEC 529 when they are mounted into enclosures with the same or a higher degree of protection.
IP66 with appropriate protective caps.

Protection Degree of Terminals

IP2x according to IEC 529.
Fully integrated on signaling units, illuminated push-buttons and illuminated selector switches. With accessory on contact blocks for control units.

Rated Insulation Voltage

690V according to EN 60947.1

Impulse Withstand Voltage

4kV according to EN 60947.1

Insulation Class

Group C according to VDE 0110

Electric Shocks Protection

Class 1 according to IEC 536

Short Circuit Protection

With fuses type gI of 10A according to IEC 947.5.1

Connection Terminals

Screw type with retractable clamp.
Clamping capacity of rigid and/or flexible conductors:
- minimum 22 AWG (0.32mm²)
- maximum 12 AWG (3.3 mm²)

Performances of the Contacts

- Slow acting
- Self-Cleaning
- NC forced breaking
- Double break

Electrical Performances

Rated thermal current I_{th} = 10 A

Performances according to IEC 947.5.1

Category AC15 (A600)								
Voltage U _e (V)	24	48	60	110	220	380	500	600
Current I _e (A)	10	10	10	6	3	2	1.5	1.2

Category DC13 (P600)								
Voltage U _e (V)	24	48	60	110	220	380	500	600
Current I _e (A)	5	2.7	2	1.1	0.55	0.3	0.22	0.2

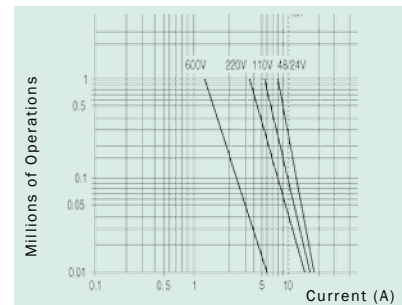
Category DC13 (Q300)								
<i>(for illuminated push-buttons and illum. selector switches)</i>								
Voltage U _e (V)	24	48	60	110	220	300		
Current I _e (A)	2.5	1.4	1	0.55	0.27	0.2		

Performances according to CSA and UL

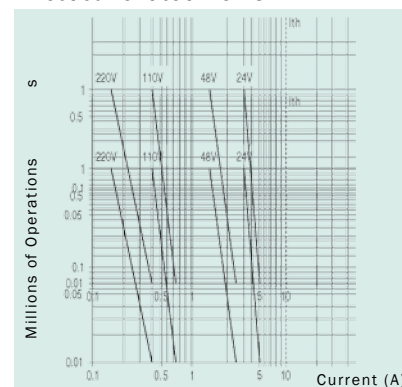
AC Heavy Duty (A600)	
DC Standard Duty (P600)	
<i>(Q300) for illuminated push-button and illuminated selector switch.</i>	

Electrical Endurance

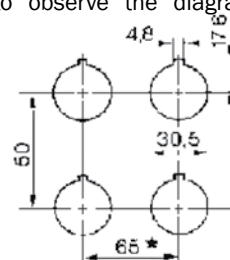
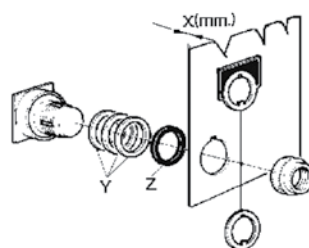
Alternative current 50/60 Hz cat. Ac15



Direct current cat. DC 13



For a correct fitting, it needs to observe the diagram below and tables indications.



X	Y	Z
1÷2.5	3	1
3÷4.5	2	1
5÷6.5	1	1
7	-	1

Mechanical Endurance

Joysticks Key Push-Buttons Locking Emergency	0.5x10 ⁶ op.
Knob Selector Switches Lever Selector Switches Key Selector Switches Illum. Selector Switches Selector Push-Buttons Timed Push-Buttons Illuminated Push-Buttons	1x10 ⁶ op.
Momentary std. Push-Buttons Momentary mush. Push-Buttons	3x10 ⁶ op.

Number of Contact Blocks

Momentary std. Push-Buttons Momentary mush. Push-Buttons	4 double pole (8 single pole)
Key Push-Buttons Locking Emergency	4 double pole (8 single pole)
Selector Switches (4 pos. types excl.)	6 double pole (6 single pole)
4 pos. Selector Switches	2 double pole
Selector Push-Buttons	6 double pole (6 single pole)
Joysticks 2 and 4 positions	4 double pole (4 single pole)
Illuminated Push-Buttons Illuminated Selector Switches	for different contacts configuration, contact our sales office.

Fitting of Units

The units of Series N7 are designed for fitting onto panels with a thickness between 1 and 7 mm, with holes of 30.5 mm diameter, according to the rules established by EN 60947.5.1.

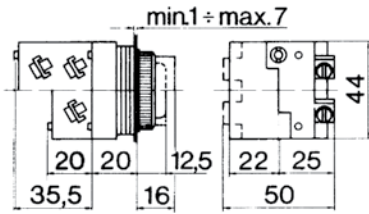
A special metal ring supplied with each unit or one of the nameplates included among the fittings, enables the unit to be exactly positioned.

All equipment is supplied with a set of spacing rings to adjust variations in the thickness of the panel thus ensuring a uniform front protrusion.

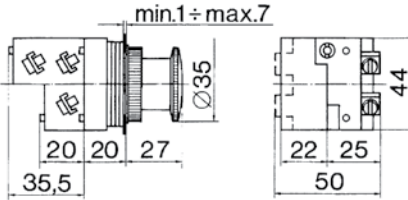
DIMENSIONS

Push-Buttons

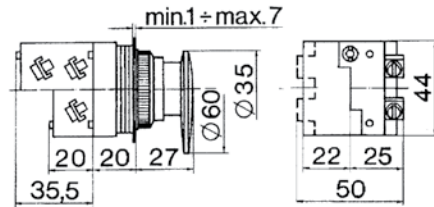
N7PN



N7EM3

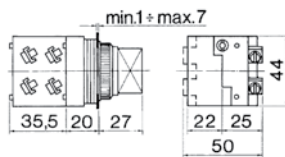


N7EM6

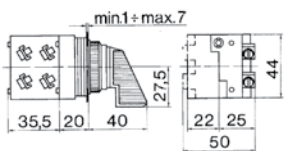


Selector Switches

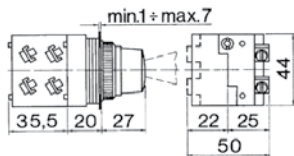
N7SM_ _ _



N7SV_ _ _



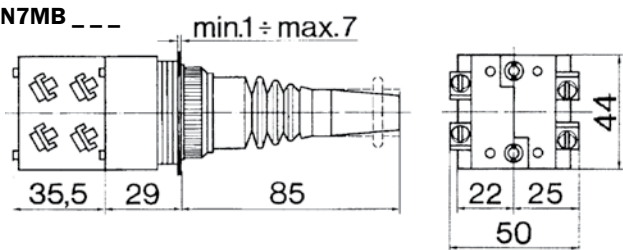
N7SL_ _ _



Joysticks

N7MN_ _ _

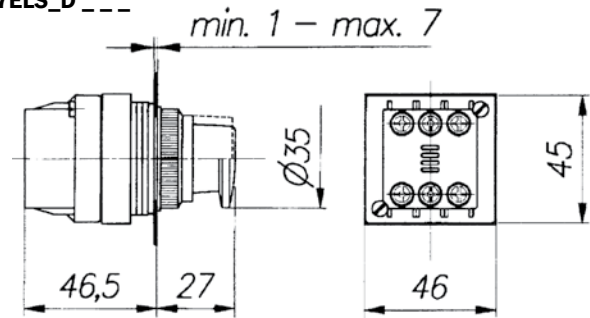
N7MB_ _ _



Illuminated Push-Buttons

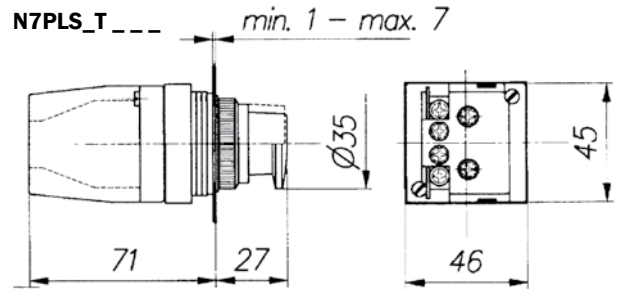
N7PLS_D_ _ _

N7ELS_D_ _ _



N7PLS_R_ _ _

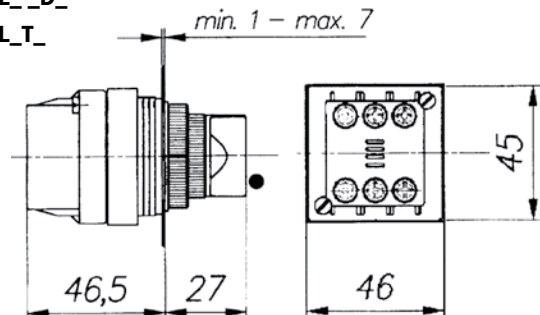
N7PLS_T_ _ _



Illuminated Selector Switches

N7SL_D_ _ _

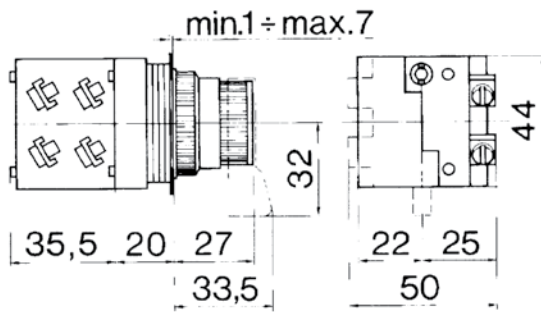
N7SL_T_ _ _



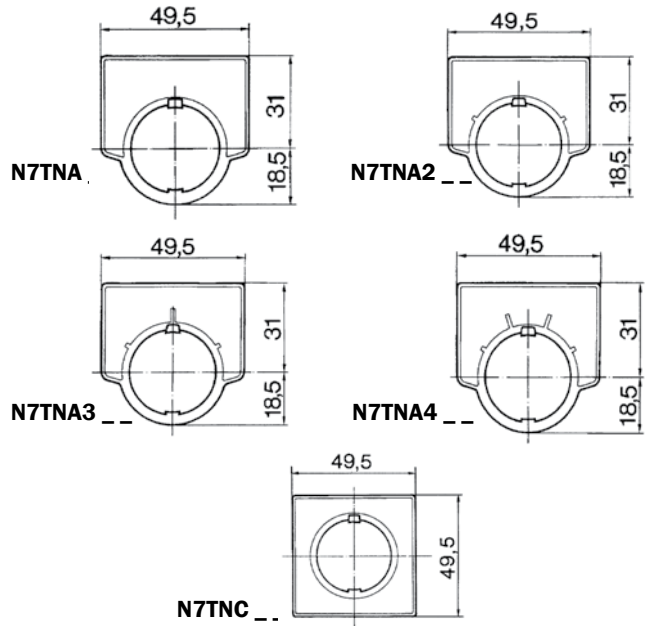
DIMENSIONS

Selector Push-Buttons

N7LN_ _ _

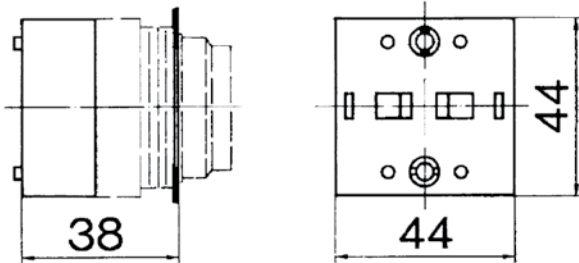


Nameplates

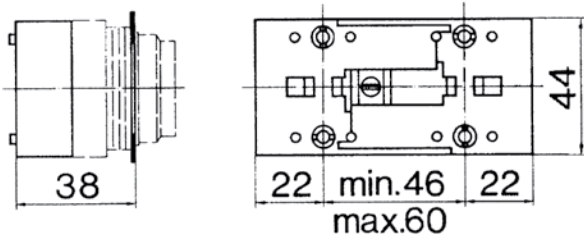


Kits

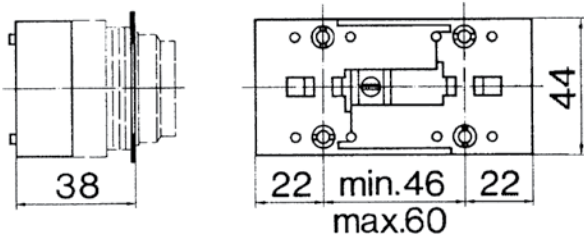
N7ADPP



N7ADAMP

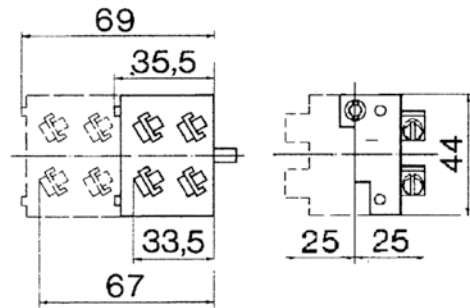


N7ADIM

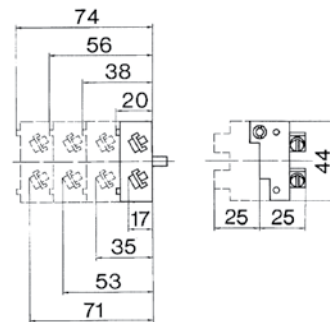


Contact Blocks

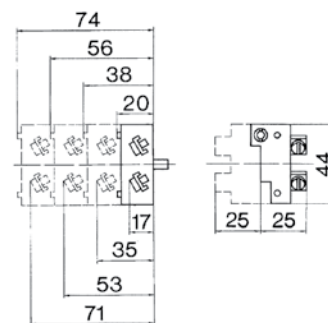
N7B11N



N7B10N



N7B01N



NOTES