

30MM (N7) PILOT DEVICES



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)

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30MM (N7) PILOT DEVICES:

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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
							D ... 24V* J ... 110-120v W ... 415V *FV only
							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

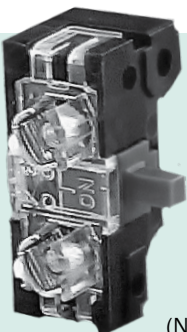
Contact Table

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

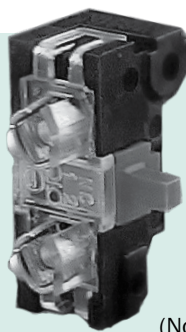
H5

Contact Ratings

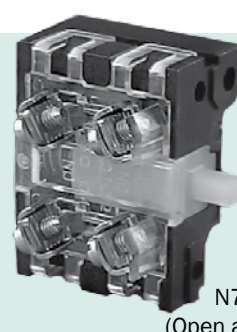
NEMA Rating	Amp. Rating Max. Volts	VA Make	Break	Continuous	Make	Break
Maximum AC Contact Rating Per Pole, 50 or 60 Hz						
A600	120	60	6	10	7200	720
	240	30	3			
	480	15	1.5			
	600	12	1.2			
Maximum DC Contact Rating Per pole						
P600	125	1.1	5	138		
	250	0.55		138		
	301-600	0.2		120		



N7B10N
(Normally Open)



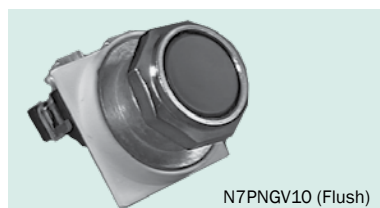
N7B01N
(Normally Closed)



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

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.

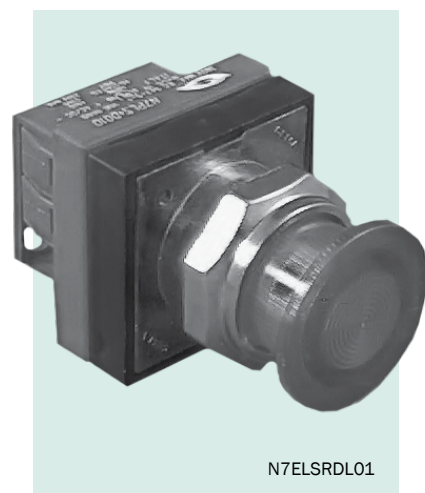
Colors	Black	Red	Green	Yellow	Brown ¹	Blue ¹	White ¹	Amber ¹
Caps	N	R	V	G	M	L	B	A

Note:

¹ Colors not available in mushroom heads

Discount Schedule SC-36

PILOT LIGHTS AND ILLUMINATED MUSHROOM HEAD



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

• 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 Bulbs included in price	130V
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	BA9S110LR	\$28.00
Green	BA9S110LV	\$28.00
Blue	BA9S110LL	\$28.00
Yellow	BA9S110LG	\$28.00
White	BA9S110LB	\$28.00

Replacement Filament Bulbs can be ordered from page G8

Note:

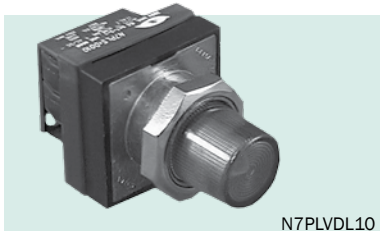
¹ Refer to page G8 for Push-to-Test Diagram

* 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.

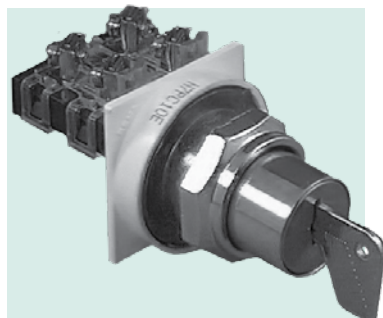
Lens Color	Red	Green	Yellow	Blue	White	Amber	Clear
Color Code	R	V	G	L	B	A	I

*

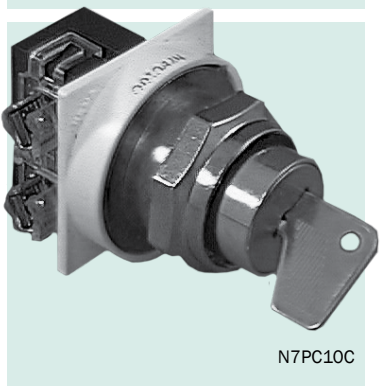
Full Voltage Suffix	No Bulb O	6V A	12V B	24V D	130V L
Transformer Suffix	120V J	240-250V N	380V U	415V W	480V Y
Resistor Suffix	110-120V J	220-250V N	* Standard Filament Bulbs included in price.		

Discount Schedule SC-36

KEY SELECTOR PUSH BUTTONS & PUSH BUTTON ACCESSORIES



N7PC10E



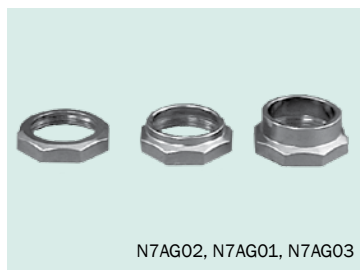
N7PC10C

Key Selector Push Buttons

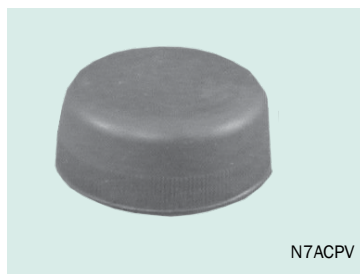
Contact Arrangement	Lockable Position	Catalog No.	Price
Without Contacts	Released	N7PC00E	\$83.00
1 N.O.	Released	N7PC10E	\$97.00
2 N.O.	Released	N7PC20E	\$111.00
1 N.C.	Released	N7PC01E	\$97.00
2 N.C.	Released	N7PC02E	\$111.00
1 N.O. - 1 N.C.	Released	N7PC11E	\$111.00

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

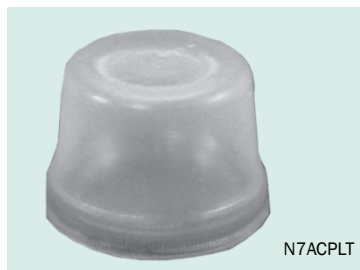
Contact Arrangement	Lockable Position	Catalog No.	Price
Without Contacts	Both	N7PC00C	\$83.00
1 N.O.	Both	N7PC10C	\$97.00
2 N.O.	Both	N7PC20C	\$111.00
1 N.C.	Both	N7PC01C	\$97.00
2 N.C.	Both	N7PC02C	\$111.00
1 N.O. - 1 N.C.	Both	N7PC11C	\$111.00



N7AG02, N7AG01, N7AG03



N7ACPV



N7ACPLT

Push Button Accessories

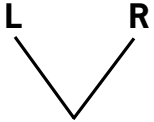
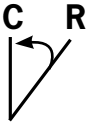
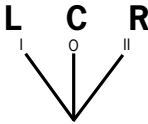
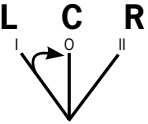
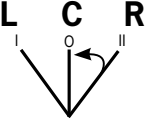
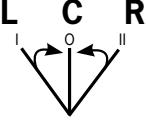
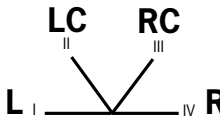
Description	Catalog No.	Price
Guard Rings for Push Buttons		
Unguarded (Extended)	N7AG02	\$4.50
Guarded (Flush)	N7AG01	\$4.50
Extended Guard (Recessed)	N7AG03	\$9.00

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

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

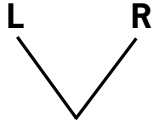
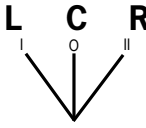
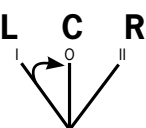
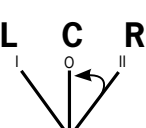
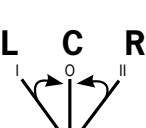
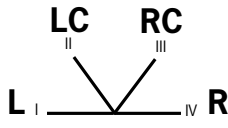
Ordering Information

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

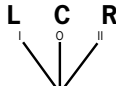
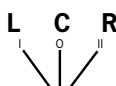
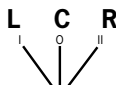
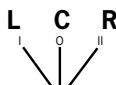
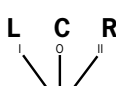
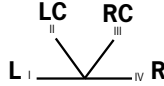
Color Table • Use complete catalog number when ordering. Replace (•) with the suffix from the table below

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	N7SCI0C1195	\$120.00
				R	N7SCI0E1195	\$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
			1 N.C. - 1 N.O.	C	N7SCB0C1195	\$120.00
			1 N.C. - 1 N.O.	R	N7SCB0E1195	\$120.00
			1 N.C. - 1 N.O.	L-C	N7SCB0H1195	\$120.00
			1 N.C. - 1 N.O.	L-R	N7SCB0K1195	\$120.00
			1 N.C. - 1 N.O.	C-R	N7SCBOT1195	\$120.00
			1 N.C. - 1 N.O.	L-C-R	N7SCBOT1195	\$120.00
3 Position Maintained		E	1 N.C. - 1 N.O.	L	N7SCE0A1195	\$120.00
			1 N.C. - 1 N.O.	C	N7SCE0C1195	\$120.00
			1 N.C. - 1 N.O.	R	N7SCE0E1195	\$120.00
			1 N.C. - 1 N.O.	L-C	N7SCE0H1195	\$120.00
			1 N.C. - 1 N.O.	L-R	N7SCE0K1195	\$120.00
			1 N.C. - 1 N.O.	C-R	N7SCE0N1195	\$120.00
			1 N.C. - 1 N.O.	L-C-R	N7SCE0T1195	\$120.00
3 Position Maintained		L	1 N.C. - 1 N.O.	L	N7SCL0A1195	\$120.00
			1 N.C. - 1 N.O.	C	N7SCL0C1195	\$120.00
			1 N.C. - 1 N.O.	R	N7SCL0E1195	\$120.00
			1 N.C. - 1 N.O.	L-C	N7SCL0H1195	\$120.00
			1 N.C. - 1 N.O.	L-R	N7SCL0K1195	\$120.00
			1 N.C. - 1 N.O.	C-R	N7SCL0N1195	\$120.00
			1 N.C. - 1 N.O.	L-C-R	N7SCL0T1195	\$120.00
3 Position Maintained		U	2 N.O. - 2 N.C.	L	N7SCU0A2295	\$148.00
			2 N.O. - 2 N.C.	C	N7SCU0C2295	\$148.00
			2 N.O. - 2 N.C.	R	N7SCU0E2295	\$148.00
			2 N.O. - 2 N.C.	L-C	N7SCU0H2295	\$148.00
			2 N.O. - 2 N.C.	L-R	N7SCU0K2295	\$148.00
			2 N.O. - 2 N.C.	C-R	N7SCU0N2295	\$148.00
			2 N.O. - 2 N.C.	L-C-R	N7SCU0T2295	\$148.00
3 Position Maintained		Z	2 N.O. - 2 N.C.	L	N7SCZ0A2295	\$148.00
			2 N.O. - 2 N.C.	C	N7SCZ0C2295	\$148.00
			2 N.O. - 2 N.C.	R	N7SCZ0E2295	\$148.00
			2 N.O. - 2 N.C.	L-C	N7SCZ0H2295	\$148.00
			2 N.O. - 2 N.C.	L-R	N7SCZ0K2295	\$148.00
			2 N.O. - 2 N.C.	C-R	N7SCZ0N2295	\$148.00
			2 N.O. - 2 N.C.	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

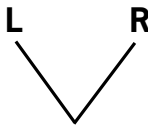
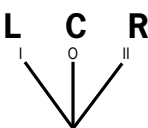
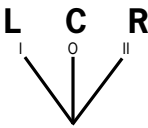
- Accessories - page H20
- Legend Plates - page H19
- Ratings & Dimensions - page H22-H23

Discount Schedule SC-36

ILLUMINATED SELECTOR SWITCHES

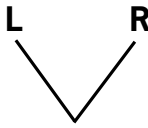
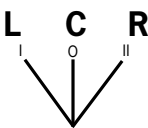
(see page H14 for Contact Switching Sequence)

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

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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

SELECTOR SWITCHES - CAM CODE AND SWITCHING SEQUENCE



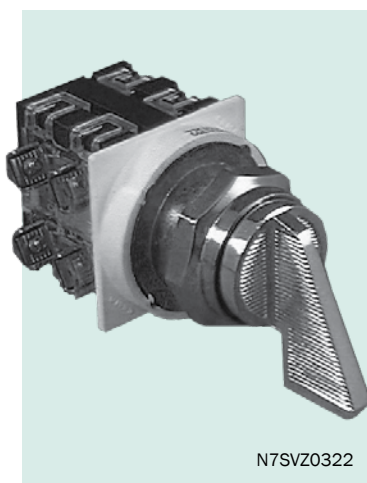
2 Position Selector Switch

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

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	O	O	X	O	O	X	X	O	O	O	O	O	X	O	O	X
	N.C.	N7B01		Red	X	O	O	O	X	O	O	X	O	X	X	O	X	O	O	O
Right	N.O.	N7B10		Green	O	O	X	O	O	X	X	O	O	X	O	O	O	O	O	X
	N.C.	N7B01		Red	X	O	O	O	X	O	O	X	O	X	X	O	X	X	O	O

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	O	O	X	O
	N.C.	N7B01		Red	X	O	O	O
Right	N.O.	N7B10		Green	O	X	O	O
	N.C.	N7B01		Red	O	O	O	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

JOYSTICKS

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	\$142.00	N7MB2F22N	\$230.00
3 Positions Spring Return to Center	N7MN2T22N	\$142.00	N7MB2T22N	\$230.00
5 Positions Maintained	N7MN4F22N	\$166.00	N7MB4F22N	\$267.00
5 Positions Spring Return to Center	N7MN4T22N	\$166.00	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
U — C — D 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

Five Position Joystick *(Contact Sequence)*

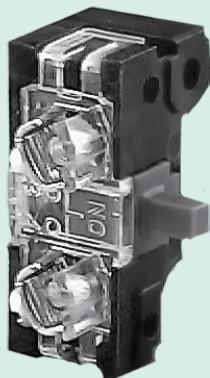
Type	Contacts		Rod Color	Joy Stick Position (Front View)				
	Location (Front View)	Type and Symbol		Left	Up	Center	Down	Right
U — L—C—R — D Five Positions, Maintained and Spring Return to Center With or Without Release Button	Left		Green	0	0	0	X	0
			Red	0	X	0	0	0
	Right		Green	0	0	0	0	X
			Red	X	0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

Ordering Information

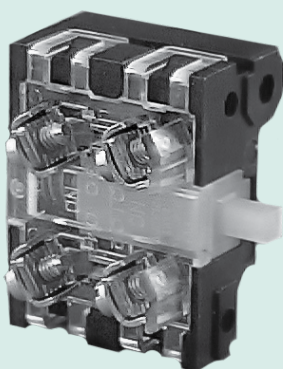
Items: • Accessories - page H20 • Legend Plates - page H19 • Ratings & Dimensions - page H22-H23

Discount Schedule SC-36

CONTACT RATINGS - CONTACT BLOCKS



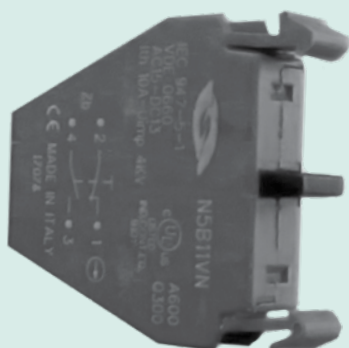
N7B10N



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

Standard Contact Block			
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	N7B10A	\$14.00
1 N.C. (late open)	White	N7B01R	\$14.00

Gold Flashed Contact Blocks (Special Order)

Standard Contact Block			
Contact Configuration	Operating Plunger Color Code	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.

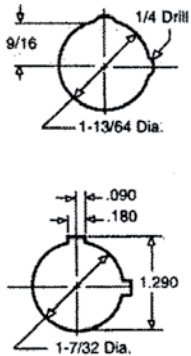
Contacts for Illuminated Push buttons & Illuminated Selector Switches

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

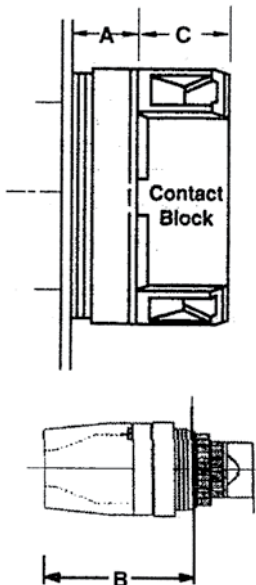
Discount Schedule SC-36

DIMENSIONS & RATINGS

Panel Drilling



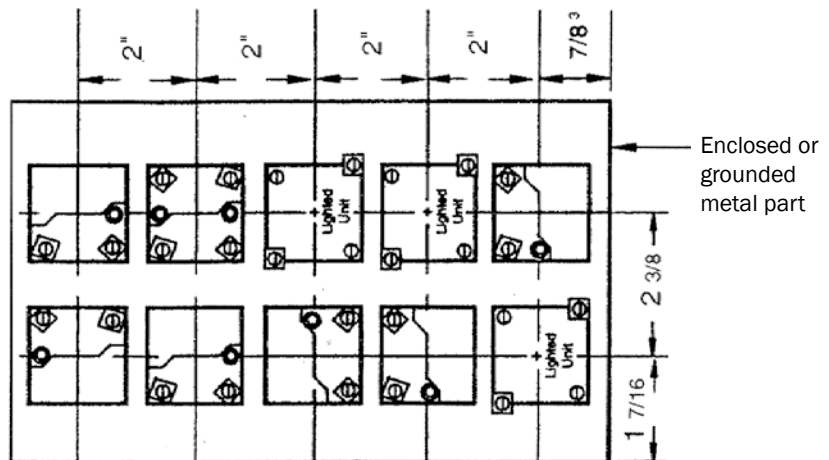
Rear of Mounting Panel



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	
	250	0.55			138	
	301-600	0.5			120	

Minimum Center-line Clearance



Dimensions

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.

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.

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

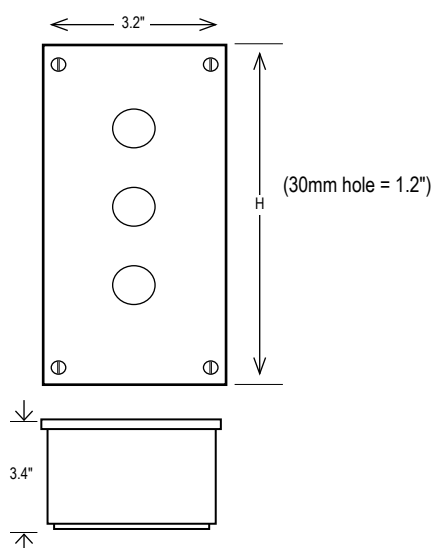
Enclosures Only (No Operators or Contacts)

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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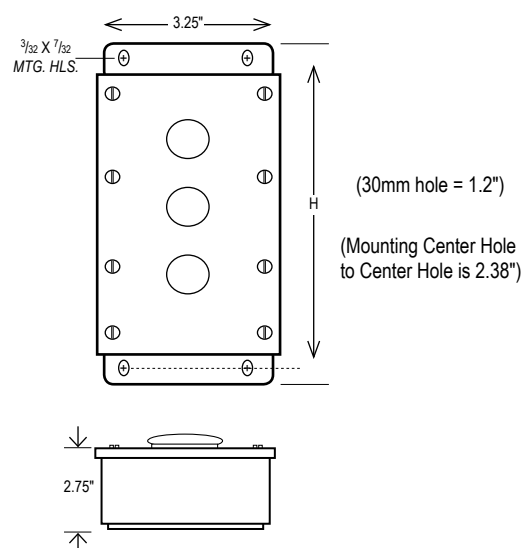
Enclosure Dimensions

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:

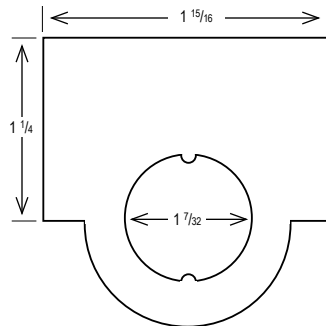
-Select Enclosure Desired by Catalog Number

-Extra Deep Enclosures Available

Discount Schedule SC-36

LEGEND PLATES

Standard Plates *(Listed below; Aluminium with Black Surface)*



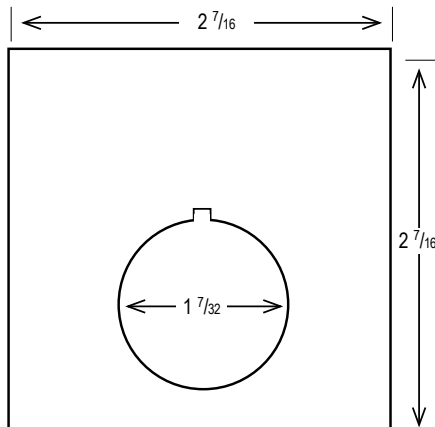
Standard Size Character height is 1/8 inch on standard plate

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



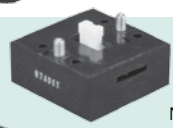
Extra large Plates Character height is 1/4 on extra large plate

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
 N7ACST	Translucent Water Resistant Boots for Knob Operated Standard and Illuminated Selector Switches	N7ACST	\$28.00
 N7ADIM	Mechanical Interlock for Push Buttons (Interlocks two buttons so they cannot be simultaneously depressed)	N7ADIM	\$28.00
 N7ADAMP	Maintained Interlock for Push Buttons (Interlocks two buttons so that when one is depressed, the other is released-maintained operation)	N7ADAMP	\$28.00
 N7ADPP	Push-On/Push-off (Converts standard momentary operator to push-on/push-off)	N7ADPP	\$28.00
 N7CHG	Guard Ring Wrench (for Octagonal Guard Rings)	N7CHG	\$39.00
 N7AOPZ	Potentiometer operator only	N7AOPZ	\$109.00
 N7ALPS	Chrome Lever attachment for Selector-Push Units	N7ALPS	\$18.50
 077C3095	Key (2-3-4 Position/Non-Illuminated Selector Switch)	077C3095	\$5.50
 N7ATPF	Hole Plug, 1 & 13 -Grey	N7ATPF	\$9.00
 N7ADET	Push-Pull module for Mushroom	N7ADET	\$28.00
 N7AXG	Lockout Attachments	N7AXG	\$28.00

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)

(for illuminated push-buttons and illum. selector switches)

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

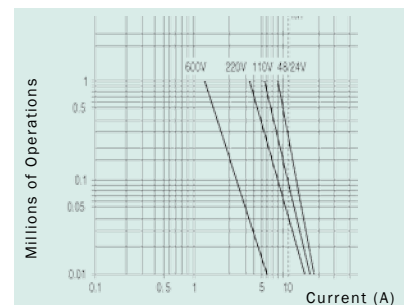
AC Heavy Duty (A600)

DC Standard Duty (P600)

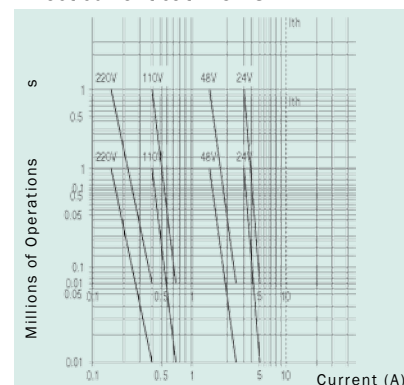
(Q300) for illuminated push-button and illuminated
selector switch.

Electrical Endurance

Alternative current 50/60 Hz cat. Ac15



Direct current cat. DC 13



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.

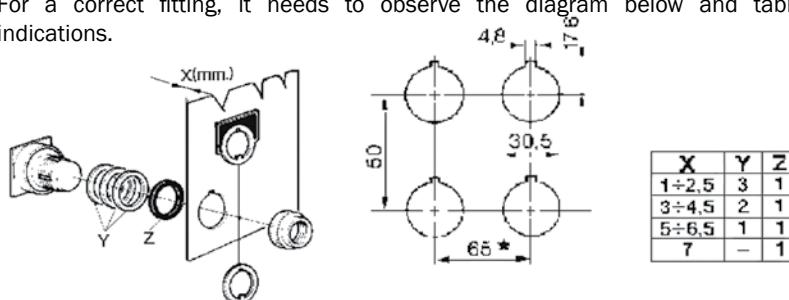
Fitting of Units

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.

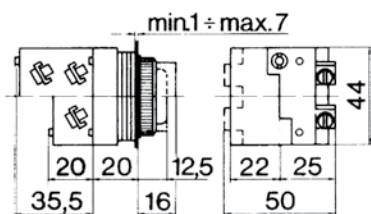
For a correct fitting, it needs to observe the diagram below and tables
indications.



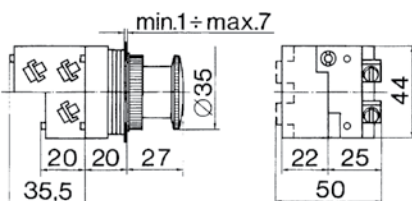
DIMENSIONS

Push-Buttons

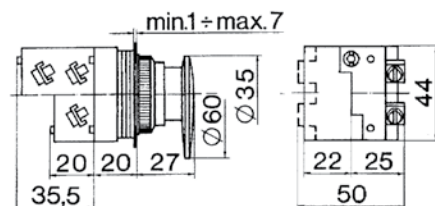
N7PN



N7EM3

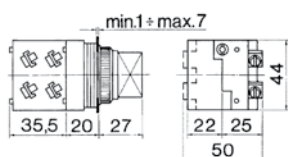


N7EM6

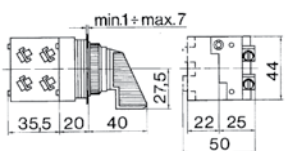


Selector Switches

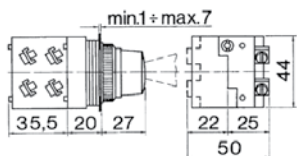
N7SM_ _ _



N7SV_ _ _

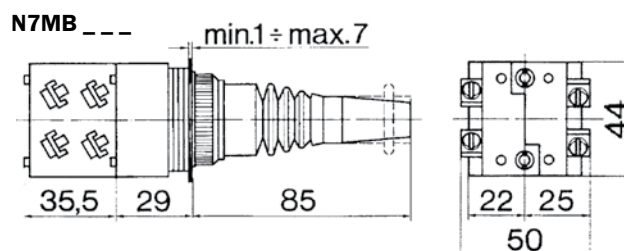


N7SL_ _ _



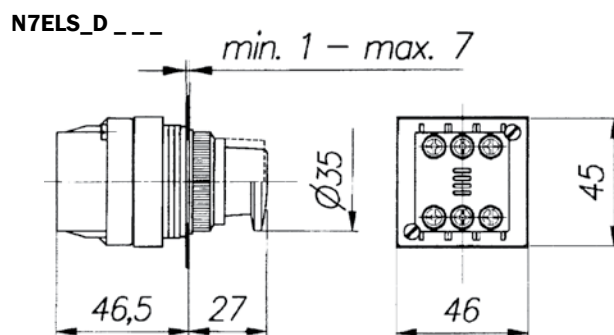
Joysticks

N7MN_ _ _

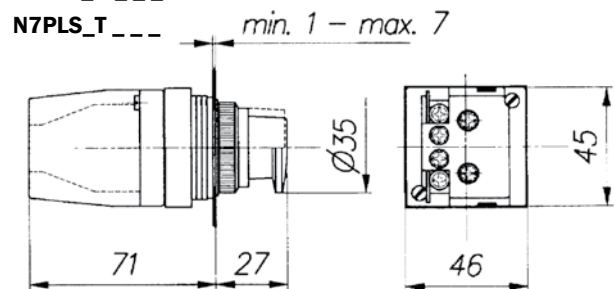


Illuminated Push-Buttons

N7PLS_D_ _ _



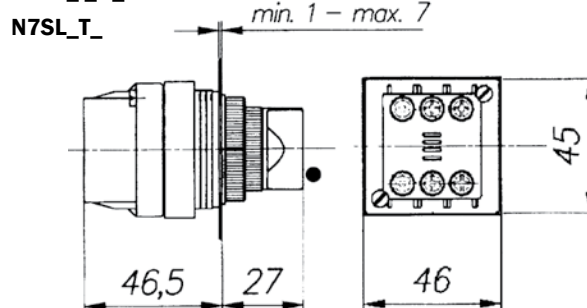
N7PLS_R_ _ _



N7PLS_T_ _ _

Illuminated Selector Switches

N7SL_D_ _

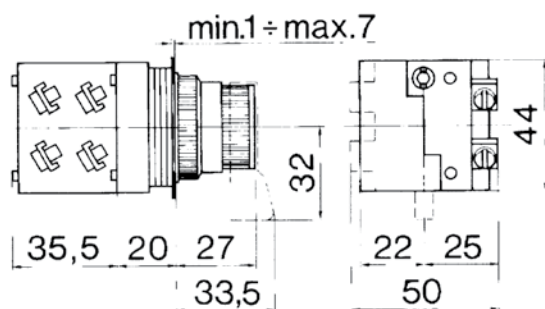


N7SL_T_ _

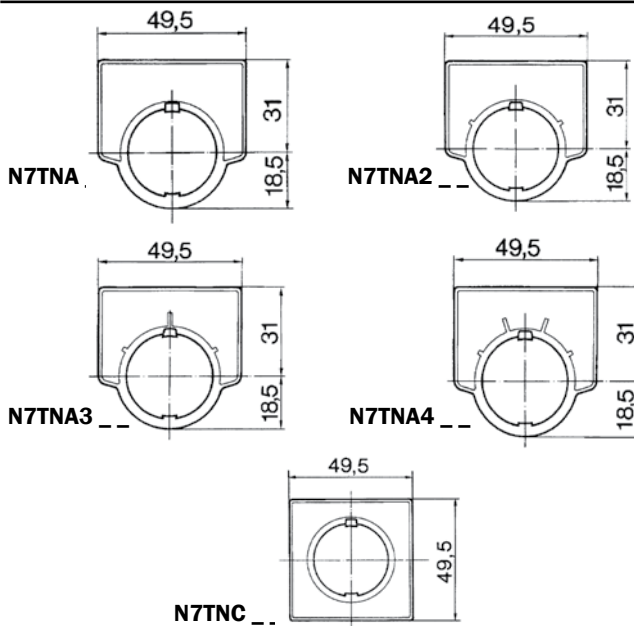
DIMENSIONS

Selector Push-Buttons

N7LN_ _ _



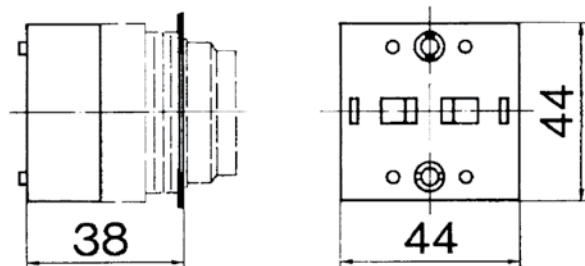
Nameplates



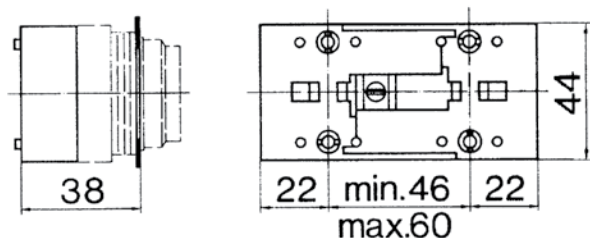
H23

Kits

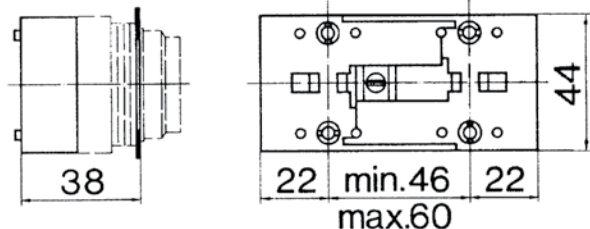
N7ADPP



N7ADAMP

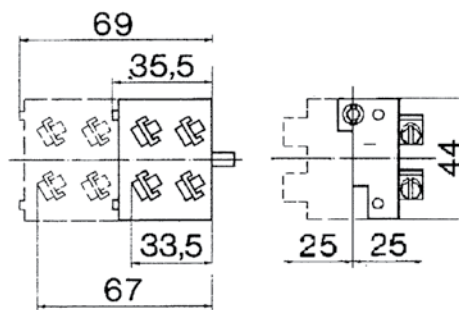


N7ADIM

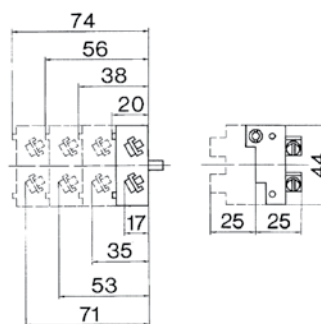


Contact Blocks

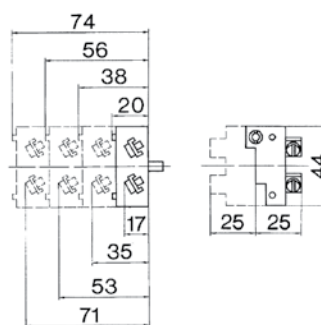
N7B11N



N7B10N



N7B01N



NOTES

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