



TSL - Trust Your Senses to a Proven Partner



MINIPRESS



Push Buttons Minipress Series

GET CREATIVE
DESIGN YOUR OWN BUTTON



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Minipress push buttons are developed for road and rail transport vehicles. The Minipress buttons are the smallest of TSL-ESCHA. Their compact design is a distinctive mark that allows for installation in the tightest spaces.

The push button features a hermetically sealed one-piece housing design and wear-free switching. The mechanical design guarantees a high level of durability regardless of temperature, dust, or humidity. The Minipress is weatherproof, car-wash proof, and resistant to conventional cleaning chemicals. Vehicles with this push button series have been running all over the world in a wide variety of different operating conditions for more than 20 years.

Due to the inside ring color variety and LED colors, it is possible to adapt the push button to the unique customer requirements. To some extent, it is also possible to adapt different mounting variants to specific designs.



In spite of being a compact push button, its functionality is a major feature. The Minipress Series provides a shockproof switching principle that avoids self-triggering or blocking of the switching even under extreme weather conditions.

PUSH BUTTONS FOR STRICT REQUIREMENTS



ROBUST



Frost-resistant



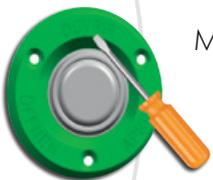
Dustproof



Protection level IP67



Wear proof



Maintenance-free

INTERCHANGEABLE



Selectable
light signals

HIGHLIGHTS AT A GLANCE

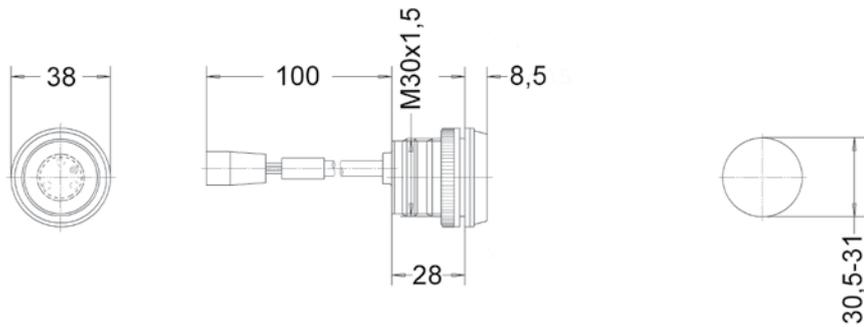
CONFIGURATION

CONSTRUCTION TYPES

Four different construction types of the Minipress allow this product family to be installed in various areas of application:

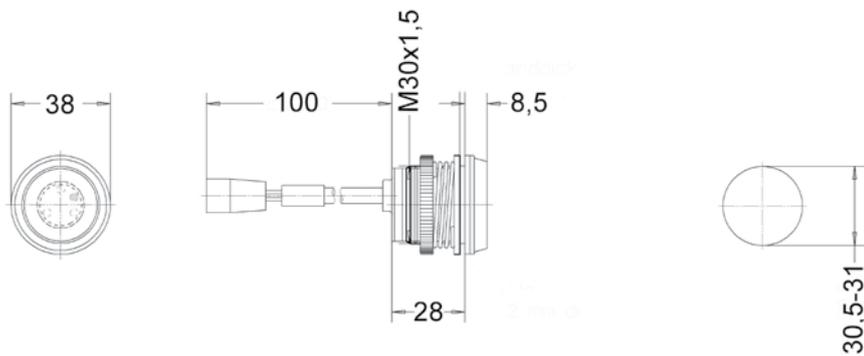
CONSTRUCTION TYPE 1

Function: 1-sided
Description: Rear assembly with knurled nut
Applications: Operator control panel or driver's cabin



CONSTRUCTION TYPE 2

Function: 1-sided
Description: Rear assembly with knurled nut and pressure spring to limit screw power
Applications: Operator control panel or driver's cabin



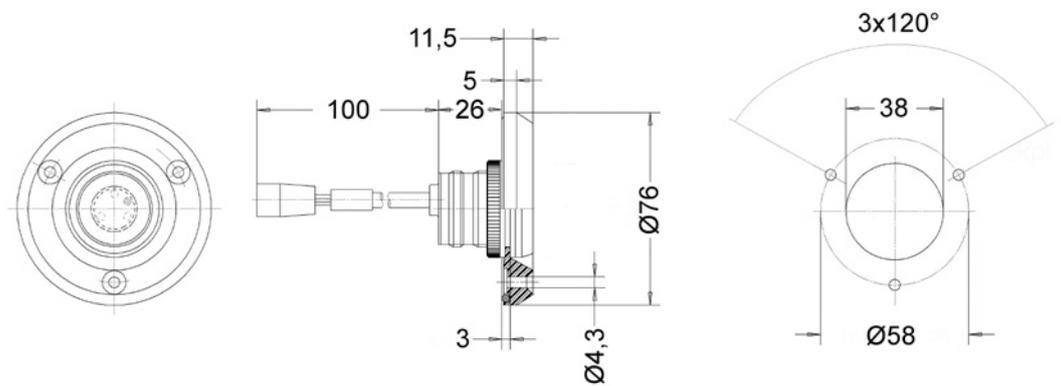
Configuration Status "Construction and Mounting Types"





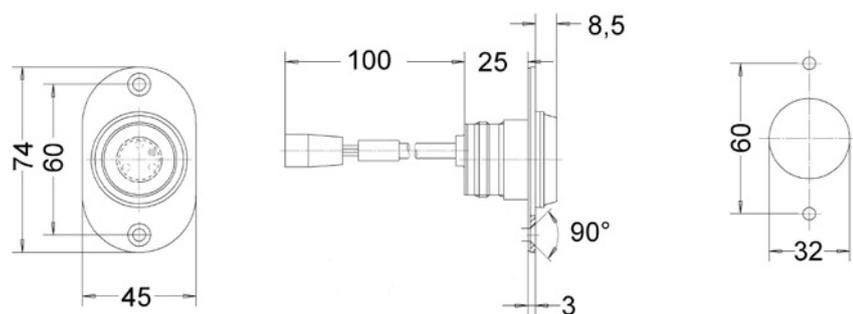
CONSTRUCTION TYPE 3

Function: 1-sided
 Description: Rear installation with mounting ring
 Applications: Door hinge or vehicle wall



CONSTRUCTION TYPE 4

Function: 1-sided
 Description: Front installation with adapter plate
 Applications: Door frames



IT'S ALL ABOUT
 THE DETAILS

CONFIGURATION

COLOR SELECTION FOR MOUNTING RINGS

Frequently used colors to customize mounting rings.



TRAFFIC YELLOW
Similar to RAL1023



TRAFFIC GRAY
Similar to RAL7042



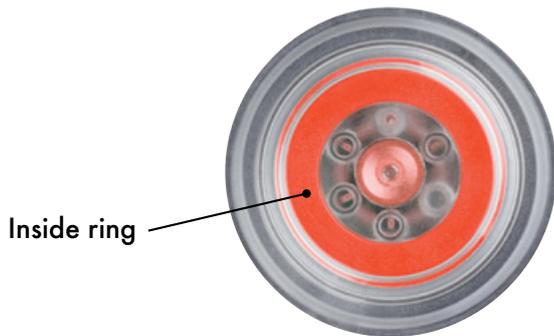
TRAFFIC RED
Similar to RAL3020



TRAFFIC WHITE
Similar to RAL9016

INSIDE RINGS

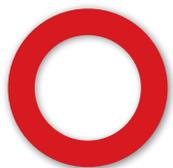
Frequently used inside-ring colors to customize your push button.



TRAFFIC YELLOW
Similar to RAL1023



PASTEL ORANGE
Similar to RAL2003



TRAFFIC RED
Similar to RAL3020



TRAFFIC BLUE
Similar to RAL5017



MP30T
Traffic blue similar to RAL5017



TRAFFIC GREEN
Similar to RAL6024



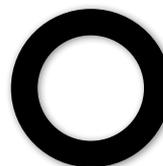
TRAFFIC GRAY A
Similar to RAL7042



TRAFFIC GRAY B
Similar to RAL7043



TRAFFIC WHITE
Similar to RAL9016



TRAFFIC BLACK
Similar to RAL9017

Configuration Status "Mounting and Inside Rings"



RAL colors are only for reference. Slight color deviations are inevitable in the manufacturing process.

LOOK SHARP

CONFIGURATION

On the next few pages, several examples of light signals are shown. The push button triggers different light signals according to operating conditions.

It is possible to program different triggering functions directly in the push button or by means of an external controller. For example, to display a sudden door out-of-order.

The options are just as diverse as the application requirements of our clients. Sound and light signals as well as the output are customizable.

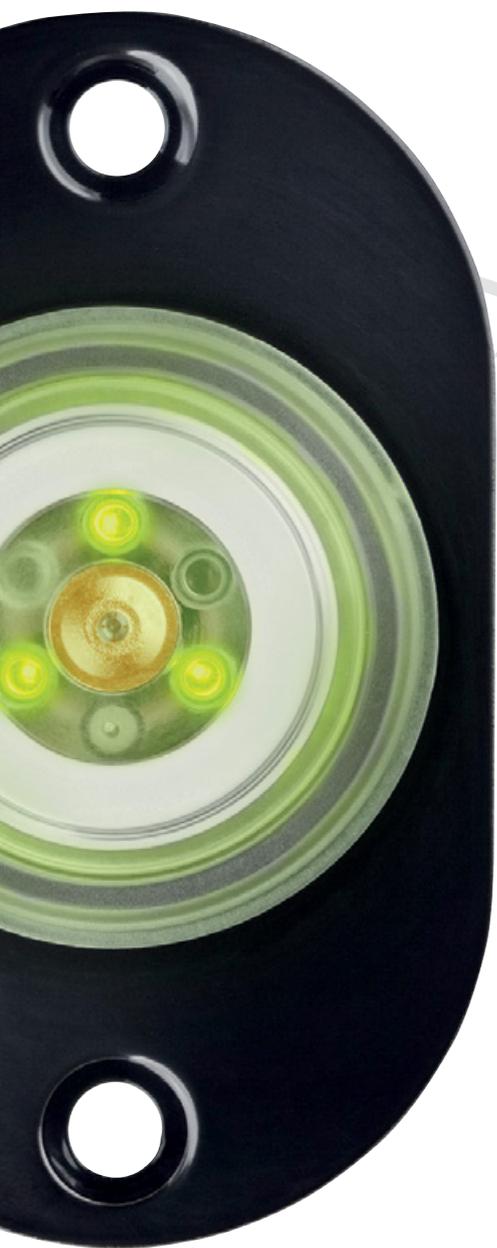
The following tables give a general impression of available Minipress options. Each table stands for one individual programmed push button and describes the light signals of each individual operating status.

Special configuration for timer push buttons

A timer function is a special Minipress variant. This push button version can be used for lavatories or as flush toilet button, making possible to switch the output for a specific time. Among other things, this makes it possible to test water flow. Timer function can be implemented virtually in any Minipress button regardless of the design or light signals.

Button Panels

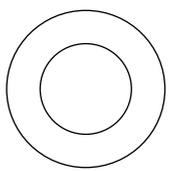
Several Minipress buttons can be installed in a one button panel, creating several advantages. It is not only optically appealing, but button mounting and wiring is significantly simplified.



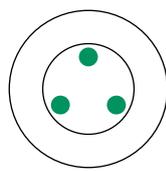
INDIVIDUAL PUSH BUTTON FUNCTIONS

The Minipress has a wide range of customizable light signals. Following, a selection standard variants is shown. Further variants available upon request.

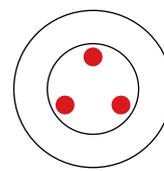
LIGHTSIGNALS



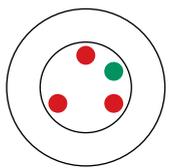
L0



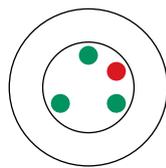
L1



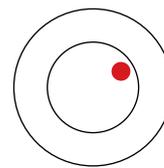
L2



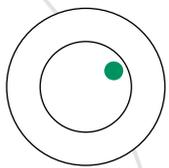
L3



L4

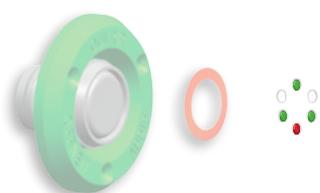


L5



L6

Configuration Status "Light signals"



SEEING PUSH BUTTONS

CONFIGURATION

CONFIGURATION EXAMPLES

3-wire variant

INPUTS		ENABLE		ACTIVATED		PUSH BUTTON VERSION
IN 1	UB	LED	OUT	LED	OUT	
0	0	L0	-	L0	-	· 1 green LED and 3 red LEDs
0	1	L2	-	L3	ON	· 3-wire cable · Button activation via UB

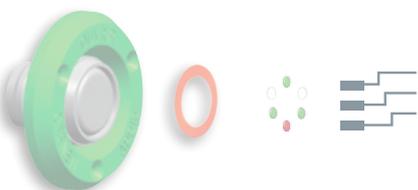
4-wire variant

INPUTS		ENABLE		ACTIVATED		PUSH BUTTON VERSION
IN 1	UB	LED	OUT	LED	OUT	
0	0	L0	-	L0	-	· 3 green LEDs and 1 red LEDs
1	1	L1	-	L4	ON	· 4-wire cable · Button activation via UB
0	1	L0	-	L5	ON	· LEDs are internally switched
1	0	L0	-	L0	-	

3-wire variant with timer function

INPUTS		ENABLE		ACTIVATED		PUSH BUTTON VERSION
IN 1	UB	LED	OUT	LED	OUT	
0	0	L0	-	L0	-	· 1 green
0	1	L6	-	L0	ON	· 3-wire cable · Button activation via UB · 10 or 20 second timer function

Configuration Status "Push Button Function"



PIN ASSIGNMENT FOR PLUG NO. 65

PIN	1	2	3	4	5	6	APPEARANCE
Color	Brown	White	Blue	Black	Gray	n. c.	
Signal	+UB	In 1	Gnd (0V)	Out	In 2	-	
Number of poles	6						
Connector type	MATE-N-LOK® rectangular connector						
Cable	Radox TENUIS, TW / S5F® 5x0.5 mm						
Manufacturer	TYCO Electronics / AMP, 794895-1						
Protection level	IP67						
Cable length	0.1 m						

PIN ASSIGNMENT FOR PLUG NO. 64

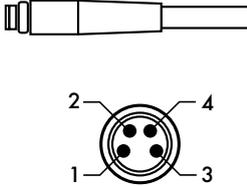
PIN	1	2	3	4	APPEARANCE
Color	Brown	White	Blue	Black	
Signal	+UB	In 1	Gnd (0V)	Out	
Number of poles	4				
Connector type	MATE-N-LOK® rectangular connector				
Cable	Radox TENUIS, TW / S4F® 4x0.5 mm				
Manufacturer	TYCO Electronics / AMP, 794805-1 corresponds to BN65074				
Protection level	IP67				
Cable length	0.1 m				

PIN ASSIGNMENT FOR PLUG NO. 61

PIN	1	2	3	4	5	6	APPEARANCE
Color	Brown	White	Blue	Black	Gray	Red	
Signal	+UB	In 1	Gnd (0V)	Out	In 2	In 3	
Number of poles	5 - 6						
Connector type	Round male connector, M12x1 screwable						
Cable	Radox TENUIS, TW / S...F® 4-6x0.5 mm						
Manufacturer	ESCHA M12x1, 4-, 5-, 6-pole WAS4...WAS6						
Protection level	IP67						
Cable length	0.5 m						

Note: 5 and 6 pole versions only allow for operating voltage <60V

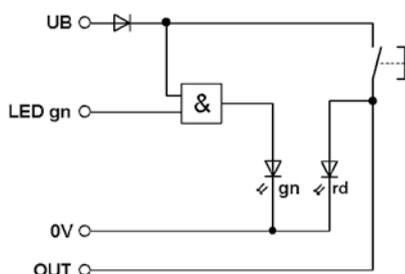
PIN ASSIGNMENT FOR PLUG NO. 60

PIN	1	2	3	4	APPEARANCE
Color	Brown	White	Blue	Black	
Signal	+UB	In 1	Gnd (0V)	Out	
Number of poles	4				
Connector type	Round male connector, combined snap-in lock and M8x1 screwable corresponding to BN 65074				
Cable	Radox TENUIS, TW / S4F® 4x0.5 mm				
Manufacturer	ESCHA diameter 8mm M8x1 (SSFP4), 4-pole, SSP4				
Protection level	IP67				
Cable length	0.1 m				

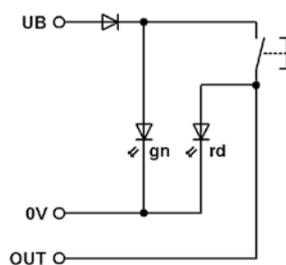
Note: 6 and 8 pole versions only allow for operating voltage <60V

PNP CONNECTION DIAGRAM

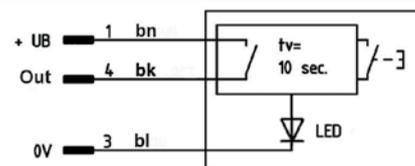
With 4-wire version



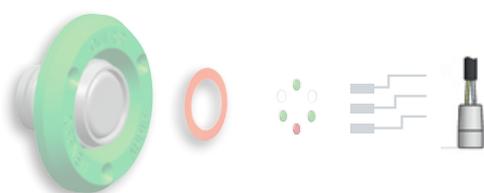
With 3-wire version



With 3-wire version as timer push button



Configuration Status "Connection"



ADDITIONAL CONNECTORS AND TECHNICAL DATA

Plug nr.	DESCRIPTION	POLES	DESCRIPTION	APPEARANCE
0	Circular connectors	4	TYCO Electronics/AMP ArtNr.: 0-0925 0750-0	
1	Flat connectors FASTIN-FASTON	4	TYCO Electronics/AMP ArtNr.: 180901	
2	Flat connectors FASTIN-FASTON	4	TYCO Electronics/AMP 626 057	
66	SUPERSEAL connector	4	TYCO Electronics/AMP 2821061-1	
71	Rectangular plug	4	GERMAN DTM044P-4P	

TECHNICAL DATA

ELECTRICAL DATA		MECHANICAL DATA		ENVIRONMENTAL CONDITIONS	
Nominal voltage	24 V _{DC} , 36V _{DC} , 72 V _{DC} , 110 V _{DC}	Housing material and button surface	UV-stabilized Polycarbonate (UL94 V-0)	Operating life	Approx. 7.000.000 press cycles
Operating voltage	Refer to nominal Voltage +/-30%	Adapter plate	V2A, powder-coated	Operating temperature	-40°C to +80°C
Nominal current	Max. 50 mA or 200 mA	Mounting ring	Polyoxymethylene	Protection level	Waterproof front IP67, rear IP60
Operating current	Approx. 10 mA	Button diameter	Refer to construction type page 6		
Switching output	PNP or NPN	Activation force	Approx. 7.5 - 9N		
		Connection options	Refer to connection section page 13		



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TSL-ESCHA GmbH

Elberfelder Str. 1 | 58553 Halver | Germany
Tel.: +49 2353 66796-0 | Fax: +49 2353 66796-799

info@tsl-escha.com · www.tsl-escha.com