MINIPRESS


Opening Button Minipress Series

# GET CREATIVE DESIGN YOUR PUSH BUTTON

CONTENTS

Minipress push buttons have been developed for use in road and rail transport vehicles. The Minipress is TSL-ESCHA's smallest push button and due to its compact design it can be used in even the tightest spaces.

The push button is based on a hermetically sealed one-piece housing and switches on a wear-free basis. The mechanical design guarantees high levels of durability regardless of the temperature, dust, or humidity . The Minipress is weather-resistant, car wash-proof and resistant to conventional chemical cleaning agents. Vehicles that are fitted 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 different colors of the inside ring that can be chosen and the lighting colors of the LEDs, it is possible to adapt the push button to the customer's individual requirements. It is also possible to adapt the different mounting variants to some extent to the specified design, which allows mounting under different conditions.

Despite the small form factor of this push button, its functional safety is a major feature. This means that the Minipress Series provides a shockproof switching principle that avoids impulsing due to weather issues and blocking of the switching element.

# THE PUSH BUTTON FOR THE MOST EXTREME REQUIREMENTS


WC
SOS

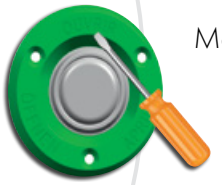
## ROBUST

Frost-resistant

Dustproof

Protection level IP67

Wear proof



Maintenance-free

## INTERCHANGEABLE

Selectable
light signals

# HIGHLIGHTS AT A GLANCE

# CONFIGURATION

## CONSTRUCTION TYPES

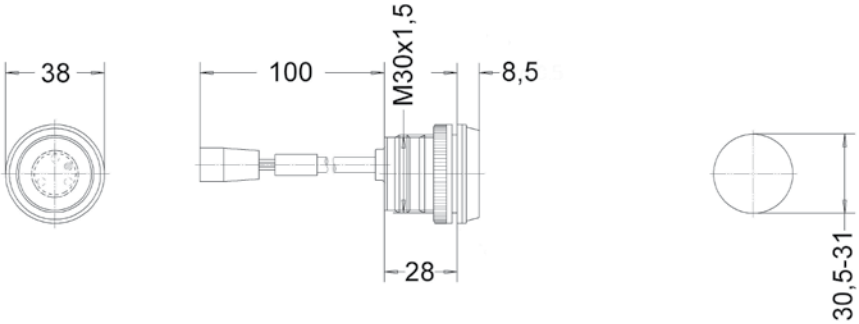
The four different installation designs of the Minipress allow you to use this push button family in various areas of application:

### CONSTRUCTION TYPE 1

Function: 1-sided

Description: Installation at the back with a knurled nut

Applications: Operator panels, or cab panel

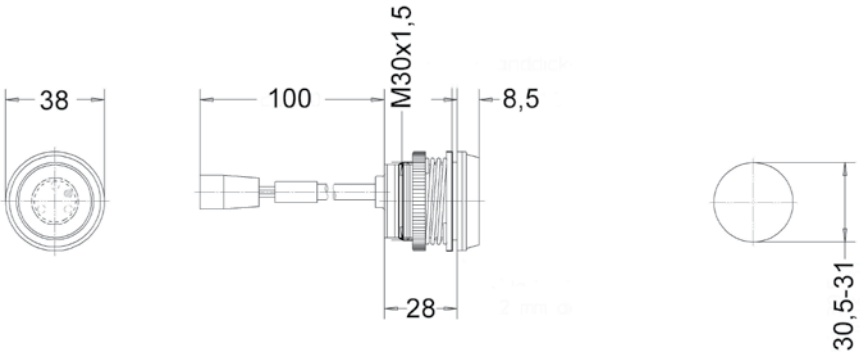



### CONSTRUCTION TYPE 2

Function: 1-sided

Description: Installation at the back with knurled nut and pressure spring to limit screw power

Applications: Operator panels, or cab panel



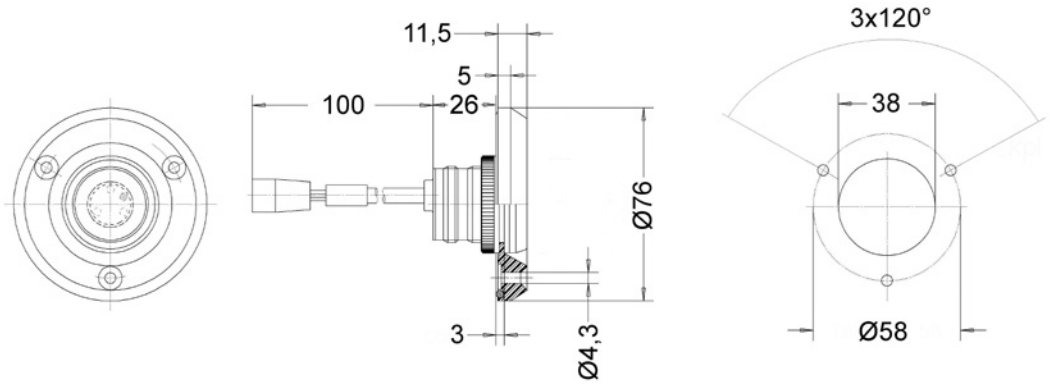

Configuration Status "Construction and Mounting Types"

## CONSTRUCTION TYPE 3

Function: 1-sided

Description: Installation at the back with a mounting ring

Applications: Door leaf or side of vehicle

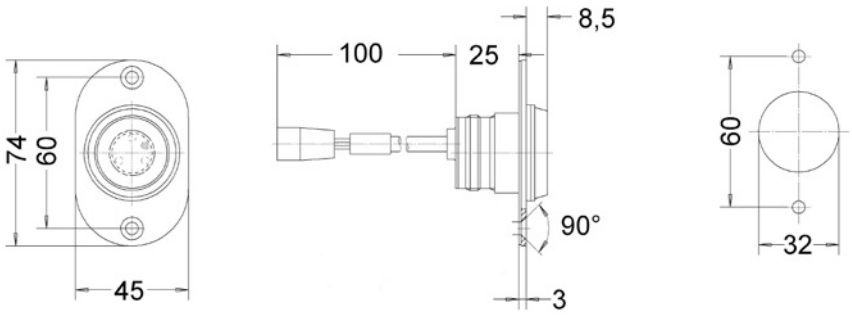



## CONSTRUCTION TYPE 4

Function: 1-sided

Description: Installation at the front with adapter plate

Applications: Door frames




IT'S THE DETAILS THAT MATTER

# CONFIGURATION

## COLOR SELECTION FOR MOUNTING RINGS

Frequently used colors to customize mounting rings individually.

TRAFFIC YELLOW
Similar to RAL1023

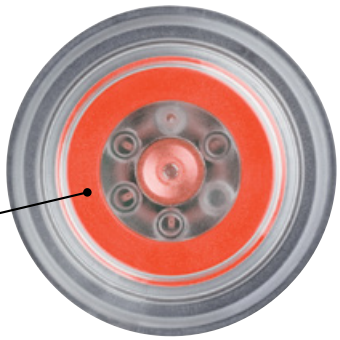
TRAFFIC GRAY
Similar to RAL7042

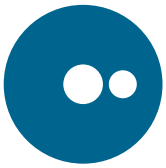
TRAFFIC RED
Similar to RAL3020

TRAFFIC WHITE
Similar to RAL9016

## INSIDE RINGS

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



MP30T
Traffic blue similar to RAL5017

TRAFFIC GREEN
Similar to RAL6024

TRAFFIC YELLOW
Similar to RAL1023

TRAFFIC GRAY A
Similar to RAL7042

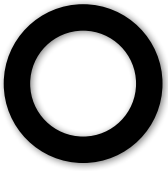
PASTEL ORANGE
Similar to RAL2003

TRAFFIC GRAY B
Similar to RAL7043

TRAFFIC RED
Similar to RAL3020

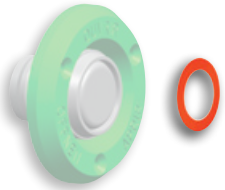
TRAFFIC WHITE
Similar to RAL9016

TRAFFIC BLUE
Similar to RAL5017



TRAFFIC BLACK
Similar to RAL9017

Configuration Status "Mounting and Inside Rings"



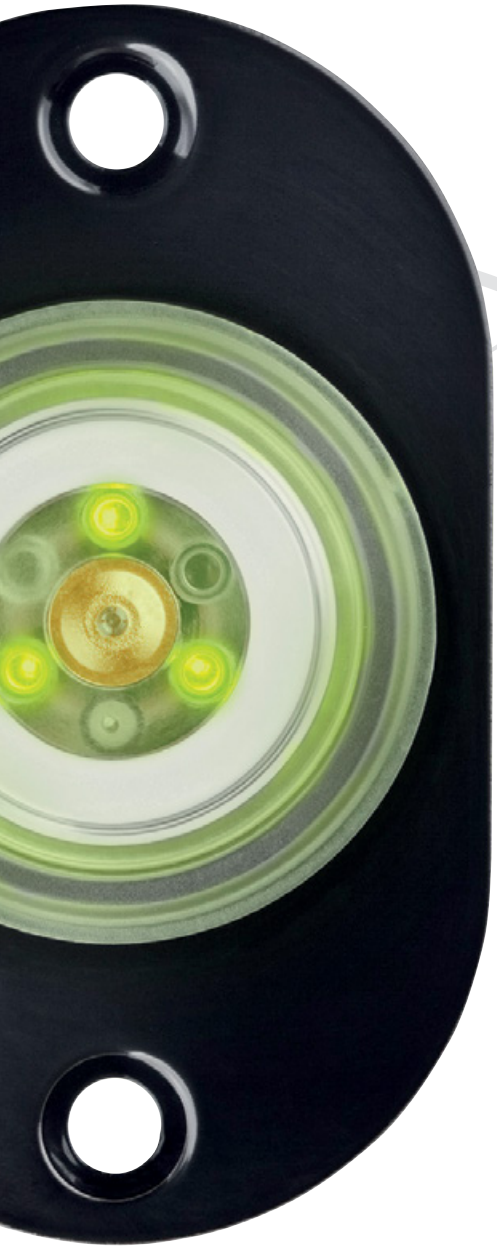
The stated RAL colors are only achieved approximately. Slight discrepancies are unavoidable in the manufacturing process.

LOOK SHARP

# CONFIGURATION

On the next few pages, we will show several examples of light signals.
The push button triggers the different light signals in different operating conditions.

There is the option of triggering functions directly in the push button itself or by means of an external controller. This means that it is possible, for example, to control release of the push button or to display a door disturbance.



In this connection, the options are just as diverse as the requirements of the various applications. It is possible to specify on an individual basis linking of light and input signals as well as the output (Out).

The tables below give you an impression of available Minipress options. In this connection, each table stands for one individual programmed push button and describes the light signals of each individual operating status condition.

**Special configuration for timer push buttons**
The push button version with a timer function is a special Minipress variant. You can use this push button version as a wash basin push button or as a push button for a toilet flush: it makes it possible to switch the output for a specified time. Amongst other things, this makes it possible to test water inlets.

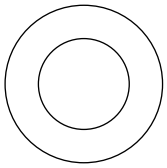
In principle, this function can be implemented in any Minipress regardless of the design or light signals.

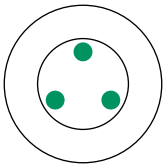
**The Panel-System**
The integration of several MP´s in a mechanical case creates a logical unit, which benefits several advantages. Besides the optical one, exist a simplication of the fitting and the wiring.

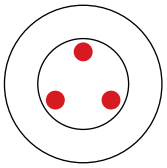
## INDIVIDUAL PUSH BUTTON FUNCTIONS

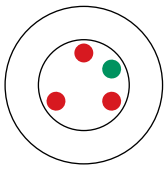
The Minipress has a wide range of different individual light signals. The tables list a selection of the standard variants. Further variants can be implemented on request.

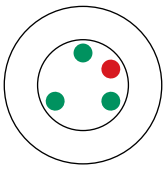
LIGHTSIGNALS

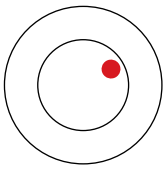

L0

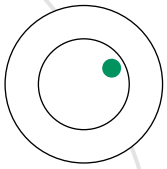

L1


L2

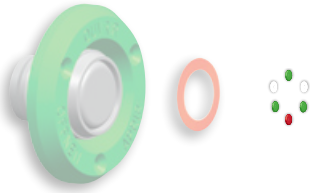

L3


L4


L5


L6

Configuration Status "Light signals"



# SEEING PUSH BUTTONS

# CONFIGURATION

## CONFIGURATION EXAMPLES

### 3-wire variant

| INPUTS | | NOT ACTIVATED | | ACTIVATED | | PUSH BUTTON VERSION |
|---|---|---|---|---|---|---|
| **IN 1** | **UB** | **LED** | **OUT** | **LED** | **OUT** | |
| 0 | 0 | L0 | - | L0 | - | · 1 green LED and 3 red ones<br>· 3-wire cable<br>· Activation of push button via UB |
| 0 | 1 | L2 | - | L3 | ON | |

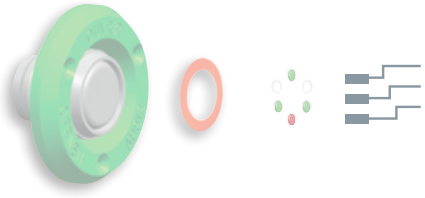
### 4-wire variant

| INPUTS | | NOT ACTIVATED | | ACTIVATED | | PUSH BUTTON VERSION |
|---|---|---|---|---|---|---|
| **IN 1** | **UB** | **LED** | **OUT** | **LED** | **OUT** | |
| 0 | 0 | L0 | - | L0 | - | · 3 green LEDs and 1 red one<br>· 4-wire cable<br>· Activation of push button via UB<br>· LEDs are switched internally |
| 1 | 1 | L1 | - | L4 | ON | |
| 0 | 1 | L0 | - | L5 | ON | |
| 1 | 0 | L0 | - | L0 | - | |

### 3-wire variant with timer function

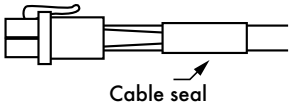
| INPUTS | | NOT ACTIVATED | | ACTIVATED | | PUSH BUTTON VERSION |
|---|---|---|---|---|---|---|
| **IN 1** | **UB** | **LED** | **OUT** | **LED** | **OUT** | |
| 0 | 0 | L0 | - | L0 | - | · 1 green<br>· 3-wire cable<br>· Activation of push button via UB<br>· Timer function with 10 or 20 seconds |
| 0 | 1 | L6 | - | L0 | ON | |

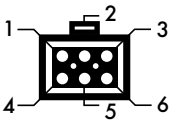
Configuration Status "Push Button Function"

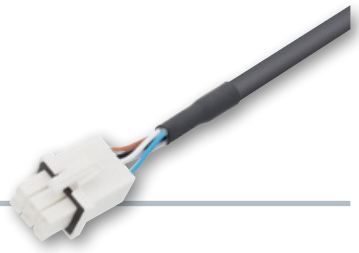


## PIN ASSIGNMENT FOR PLUG NO. 65

| PIN | 1 | 2 | 3 | 4 | 5 | 6 | VIEW |
|---|---|---|---|---|---|---|---|
| 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 | | | | | | |
| Designation | TYCO Electronics / AMP, 794895-1 | | | | | | |
| Protection class | IP67 | | | | | | |
| Cable length | 0.1 m | | | | | | |

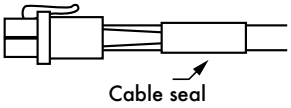


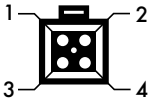



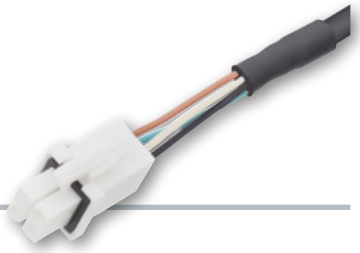



## PIN ASSIGNMENT FOR PLUG NO. 64

| PIN | 1 | 2 | 3 | 4 | VIEW |
|---|---|---|---|---|---|
| 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 | | | | |
| Designation | TYCO Electronics / AMP, 794805-1 corresponds to BN65074 | | | | |
| Protection class | IP67 | | | | |
| Cable length | 0.1 m | | | | |

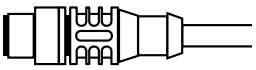


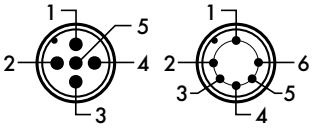



## PIN ASSIGNMENT FOR PLUG NO. 61

| PIN | 1 | 2 | 3 | 4 | 5 | 6 | VIEW |
|---|---|---|---|---|---|---|---|
| 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 | | | | | | |
| Designation | ESCHA M12x1, 4-, 5-, 6-pole WAS4...WAS6 | | | | | | |
| Protection class | IP67 | | | | | | |
| Cable length | 0.5 m | | | | | | |



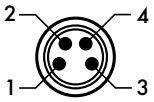



Attention: 5- and 6-pole variant is only allowed for a supply voltage < 60V.

## PIN ASSIGNMENT FOR PLUG NO. 60

| PIN | 1 | 2 | 3 | 4 |
|---|---|---|---|---|
| **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 | | | |
| **Designation** | ESCHA diameter 8mm M8x1 (SSFP4), 4-pole, SSP4 | | | |
| **Protection class** | IP67 | | | |
| **Cable length** | 0.1 m | | | |

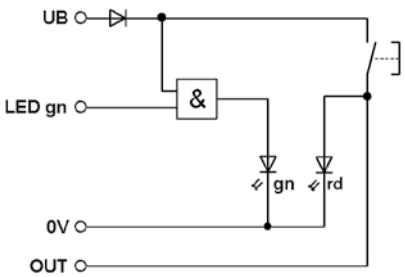
VIEW



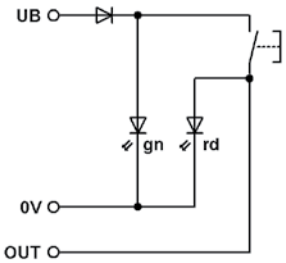

Attention: 6- and 8-pole variant is only allowed for a supply voltage < 60V.

## PNP CONNECTION DIAGRAM

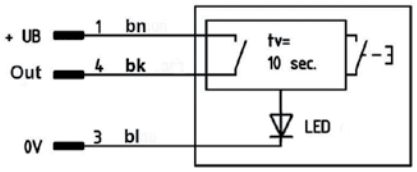
With 4-wire version



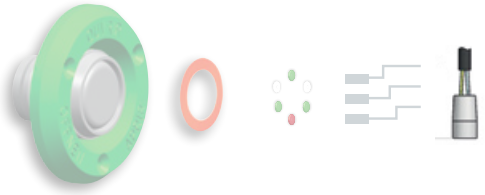

With 3-wire version



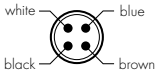
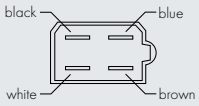
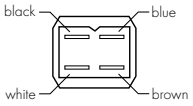
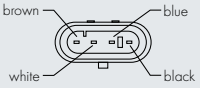
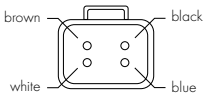

With 3-wire version
as a timer push button




Configuration Status "Plug-In Connection"



## ADDITIONAL CONNECTORS AND TECHNICAL DATA

| PLUG No. | DESCRIPTION | POLES | DESCRIPTION | APPEARANCE | |
|---|---|---|---|---|---|
| 0 | Round male connector<br>Ø 2 mm | 4 | TYCO Electronics/AMP<br>0-0925 0750-0 |  |  |
| 1 | FASTIN-FASTON<br>flat plug<br>6.3 x 0.8 | 4 | TYCO Electronics/AMP<br>180901 |  |  |
| 2 | FASTIN-FASTON<br>flat plug<br>2.8 x 0.8 | 4 | TYCO Electronics/AMP<br>626 057 |  |  |
| 66 | SUPERSEAL connector | 4 | TYCO Electronics/AMP<br>2821061-1 |  |  |
| 71 | Rectangular connector | 4 | DEUTSCH<br>DTM044P-4P |  |  |

## TECHNICAL DATA

| ELECTRICAL DATA | | MECHANICAL DATA | | ENVIRONMENTAL CONDITIONS | |
|---|---|---|---|---|---|
| Nominal voltage | 24 VDC, 36VDC,<br>72 VDC, 110 VDC | Housing material<br>and button surface | UV-stabilized<br>polycarbonate (UL94 V-0) | Operating life | Approx. 7,000,000<br>switching cycles |
| Operating voltage | See rated voltage<br>+/-30% | Adapter plate | V2A, powder-coated | Operating temperature | -40°C to +80°C |
| Nominal current | Max. 50 mA<br>or 200 mA | Mounting ring | Polyoxymethylene | Protection level | Waterproof front of the<br>push button meets IP67,<br>rear meets IP60 |
| Operating current | approx. 10 mA | Button diameter | See the chapter entitled<br>"Designs" | | |
| Switching output | PNP or NPN | Activation force | approx. 7.5 - 9N /<br>travel of about 0.15 mm | | |
| | | Connection options | As described in the<br>chapter entitled<br>"Standard plug-in<br>connectors" | | |

MULTIPROX

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