## Product data sheet

Specifications


> Head for illuminated selector switch， Harmony XB5，dark grey plastic， orange handle，22mm，universal LED， 3 positions，

ZB5AK1553

Important message ：A change in appearance may be noted on the product but does not affect its use in terms of function and safety． This makes it compatible with our Universal LED blocks

Main

| Range of product | Harmony XB5 | － |
| :---: | :---: | :---: |
| Product or component type | Head for illuminated selector switch | 항 |
| Product compatibility | Universal LED | ¢ |
| Device short name | ZB5 | 圱 |
| Bezel material | Dark grey plastic | $\stackrel{\square}{\circ}$ |
| Mounting diameter | 22 mm | 年 |
| Head type | Standard | 先 |
| Sale per indivisible quantity | 1 | － |
| Shape of signaling unit head | Round | $\xrightarrow{\text { ® }}$ |
| Type of operator | To centre spring return | $\stackrel{\rightharpoonup}{\text { b }}$ |
| Operator profile | Orange standard handle | － |
| Operator position information | 3 positions＋／－45 ${ }^{\circ}$ | 旁 |
| Complementary |  |  |
| CAD overall width | 29 mm | 矿 |
| CAD overall height | 29 mm | － |
| CAD overall depth | 43 mm | 年 |
| Net weight | 0.016 kg | $\frac{\stackrel{n}{5}}{\substack{\text { a }}}$ |
| Mechanical durability | 1000000 cycles | － |

Electrical composition code
XALK

M3 for $<4$ contacts using single blocks in front mounting with integral LED
M6 for＜2 contacts using single blocks in front mounting with integral LED and transformer
M10 for＜2 contacts using single blocks in front mounting with integral LED
MF1 for＜2 contacts using single blocks in front mounting with integral LED
MR1 for＜2 contacts using single blocks in rear mounting with integral LED
M4 for＜4 contacts using single and double blocks in front mounting with integral LED
Device presentation
Basic element

## Environment

| Ambient air temperature for <br> storage | $-40 \ldots 70^{\circ} \mathrm{C}$ |
| :--- | :--- |

Ambient air temperature for $\quad-40 \ldots 70^{\circ} \mathrm{C}$ operation

| Overvoltage category | Class II conforming to IEC 60536 |
| :---: | :---: |
| IP degree of protection | IP66 conforming to IEC 60529 <br> IP67 <br> IP69 <br> IP69K |
| NEMA degree of protection | NEMA 13 NEMA 4X |
| Resistance to high pressure washer | 7000000 Pa at $55^{\circ} \mathrm{C}$, distance : 0.1 m |
| IK degree of protection | IK06 conforming to IEC 50102 |
| Standards | EN/IEC 60947-5-5 <br> UL 508 <br> EN/IEC 60947-5-1 <br> EN/IEC 60947-1 <br> JIS C8201-5-1 <br> EN/IEC 60947-5-4 <br> CSA C22.2 No 14 JIS C8201-1 |
| Product certifications | GL <br> CSA <br> LROS (Lloyds register of shipping) <br> BV <br> DNV <br> UL listed |
| Vibration resistance | $5 \mathrm{gn}(\mathrm{f}=2 \ldots .500 \mathrm{~Hz}$ ) conforming to IEC 60068-2-6 |
| Shock resistance | 30 gn (duration $=18 \mathrm{~ms}$ ) for half sine wave acceleration conforming to IEC 60068-2-27 <br> 50 gn (duration $=11 \mathrm{~ms}$ ) for half sine wave acceleration conforming to IEC 60068-2-27 |

Packing Units

| Unit Type of Package 1 | Db |
| :--- | :--- |
| Number of Units in Package 1 | 1 |
| Package 1 Height | 4.5 cm |
| Package 1 Width | 5.2 cm |
| Package 1 Length | 3.3 cm |
| Package 1 Weight | 23.4 g |
| Unit Type of Package 2 | Gyári csomagolás |
| Number of Units in Package 2 | 5 |
| Package 2 Height | 4.5 cm |
| Package 2 Width | 26.5 cm |
| Package 2 Length | 3.3 cm |
| Package 2 Weight | 117 g |
| Unit Type of Package 3 | Doboz |
| Number of Units in Package 3 | 200 |
| Package 3 Height | 30 cm |
| Package 3 Width | 30 cm |
| Package 3 Length | 40 cm |
| Package 3 Weight | 5.188 kg |

## Offer Sustainability

| REACh Regulation | REACh Declaration |
| :--- | :--- |
| REACh free of SVHC | Yes |
| EU RoHS Directive | Pro-active compliance (Product out of EU RoHS legal scope) <br> EU RoHS Declaration |
| Toxic heavy metal free | Yes |
| Mercury free | Yes |
| China RoHS Regulation | China RoHS declaration |
| RoHS exemption information | Yes |
| Environmental Disclosure | Product Environmental Profile |
| Circularity Profile | End of Life Information |
| California proposition 65 | WARNING: This product can expose you to chemicals including: Di-isodecyl phthalate (DIDP), which is <br> known to the State of California to cause birth defects or other reproductive harm. For more information <br> go to www.P65Warnings.ca.gov |

Contractual warranty
Warranty
18 months

Dimensions Drawings

Dimensions


Mounting and Clearance

Panel Cut-out for Pushbuttons, Switches and Pilot Lights (Finished Holes, Ready for Installation)
Connection by Screw Clamp Terminals or Plug-in Connectors or on Printed Circuit Board

(1) Diameter on finished panel or support
(2) For selector switches and Emergency stop buttons, use of an anti-rotation plate type ZB5AZ902 is recommended.
(3) $\varnothing 22.5 \mathrm{~mm}$ recommended $\left(\varnothing 22.30^{+0.4}\right) / \varnothing 0.89 \mathrm{in}$. recommended ( $\varnothing 0.88 \mathrm{in} .0^{+0.016}$ )

| Connections | a in mm | a in in. | b in mm | b in in. |
| :--- | :--- | :--- | :--- | :--- |
| By screw clamp terminals or plug-in connector | 40 | 1.57 | 30 | 1.18 |
| By Faston connectors | 45 | 1.77 | 32 | 1.26 |
| On printed circuit board | 30 | 1.18 | 30 | 1.18 |

## Detail of Lug Recess


(1) Diameter on finished panel or support
(2) For selector switches and Emergency stop buttons, use of an anti-rotation plate type ZB5AZ902 is recommended.
(3) $\varnothing 22.5 \mathrm{~mm}$ recommended $\left(\varnothing 22.3_{0}{ }^{+0.4}\right) / \varnothing 0.89 \mathrm{in}$. recommended ( $\varnothing 0.88 \mathrm{in} .0^{+0.016}$ )

Mounting and Clearance

Pushbuttons, Switches and Pilot Lights for Printed Circuit Board Connection
Panel Cut-outs (Viewed from Installer's Side)


A: 30 mm min. / $1.18 \mathrm{in} . \mathrm{min}$.
B: 40 mm min. / $1.57 \mathrm{in} . \mathrm{min}$
Printed Circuit Board Cut-outs (Viewed from Electrical Block Side)
Dimensions in mm


A: 30 mm min.
B: 40 mm min.
Dimensions in in.


A: 1.18 in. min.
B: 1.57 in. min.

## General Tolerances of the Panel and Printed Circuit Board

The cumulative tolerance must not exceed $0.3 \mathrm{~mm} / 0.012 \mathrm{in} .: \mathrm{T} 1+\mathrm{T} 2=0.3 \mathrm{~mm}$ max.

## Installation Precautions

- Minimum thickness of circuit board: $1.6 \mathrm{~mm} / 0.06 \mathrm{in}$.
- Cut-out diameter: $22.4 \mathrm{~mm} \pm 0.1$ / $0.88 \mathrm{in} . \pm 0.004$
- Orientation of body/fixing collar ZB5AZ009: $\pm 2^{\circ} 30^{\prime}$ (excluding cut-outs marked $\mathbf{a}$ and b).
- Tightening torque of screws ZBZ006: 0.6 N.m (5.3 Ibf.in) max.
- Allow for one ZB5AZ079 fixing collar/pillar and its fixing screws:
- every $90 \mathrm{~mm} / 3.54 \mathrm{in}$. horizontally $(\mathrm{X})$, and $120 \mathrm{~mm} / 4.72 \mathrm{in}$. vertically ( Y ).
- with each selector switch head (ZB5AD•, ZB5AJ•, ZB5AG•).

The fixing centers marked $\mathbf{a}$ and $\mathbf{b}$ are diagonally opposed and must align with those marked 4 and 5.

(1) Head ZB5AD•
(2) Panel
(2) Nut
(4) Printed circuit board

Mounting of Adapter (Socket) ZBZ01•

- 12 elongated holes for ZBZ006 screw access
- 21 hole $\varnothing 2.4 \mathrm{~mm} \pm 0.05 / 0.09 \mathrm{in} . \pm 0.002$ for centring adapter ZBZ01•
- $38 \times \varnothing 1.2 \mathrm{~mm} / 0.05 \mathrm{in}$. holes
- 41 hole $\varnothing 2.9 \mathrm{~mm} \pm 0.05 / 0.11 \mathrm{in} . \pm 0.002$, for aligning the printed circuit board (with cut-out marked a)
- 51 elongated hole for aligning the printed circuit board (with cut-out marked b)
- 64 holes Ø 2.4 mm / 0.09 in. for clipping in adapter ZBZ01•

Dimensions $\mathrm{An}+18.1$ relate to the $\varnothing 2.4 \mathrm{~mm} \pm 0.05 / 0.09 \mathrm{in} . \pm 0.002$ holes for centring adapter ZBZ01• .

Technical Description

Electrical Composition Corresponding to Code M3


Technical Description

Electrical Composition Corresponding to Code M4


Technical Description

Electrical Composition Corresponding to Codes M6 and P2


Technical Description

Electrical Composition Corresponding to Codes M5, M10, MF1, MR1 and MF2


Technical Description

Legend

Single contact


Double contact


Light block


Possible location

Technical Description

Sequence of Contacts Fitted to 3-position Selector Switch Body
Position $315^{\circ}$


| Push | Position | Top |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | Bottom |  | $\theta$ | $\triangle$ |
|  | Location |  | Left |  | Right |
|  | State |  | 1 |  | 0 |
| Contacts | N/O |  | closed |  | open |
|  | N/C |  | open |  | closed |

## Position $0^{\circ}$



| Push | Position | Top |  | $\square$ |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | Bottom | $\triangle$ | $\theta$ | $\triangle$ |
|  | Location |  | Left |  | Right |
|  | State |  | 0 |  | 0 |
| Contacts | N/O |  | open |  | open |
|  | N/C |  | closed |  | closed |

## Position $45^{\circ}$



| Push | Position | Top |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | Bottom | $\triangle$ |  |  |
|  | Location |  | Left |  | Right |
|  | State |  | 0 |  | 1 |
| Contacts | N/O |  | open |  | closed |
|  | N/C |  | closed |  | open |

Technical Illustration

## Dimensions



ZBE•••••3 ZBV•••••3


ZBE••••••9 ZBV•••••9

|  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
| ZBRV1 |  |  |  |

Recommended replacement(s)

