ultimate public transport HMI solution

02.09.2005

EAO, the Expert Partner for Human Machine Interfaces and its Series 56 range are names synonymous with public transport for passenger access control. The immediately recognisable Series 56 features a bright front bezel, LED "halo" illumination and a large touch surface which can be supplied with raised symbols and a front bezel with Braille for the partially sighted, immediately focuses attention on a control.



The Series 56 is suitable for new build and refurbishment applications. This self-cleaning, snap-action-switching system features excellent tactile feedback. The low actuation force makes this switch ideally suited for use by disabled users.

The pressel area can be supplied with a wide choice of standard, customised, raised or engraved symbols in multiple languages. For additional impact, a switching unit is available with a choice of red, green or yellow halo LED illuminations. The raised bezel is available in standard yellow or orange, as well as red, blue, green, black and light and dark grey.

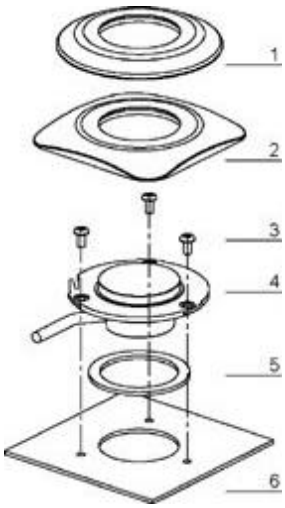
The Series 56 range includes a ‘Secret till Lit’ indicator which remains dark and unlit until activated, whereupon it illuminates a symbol or legends such as “Door Out of Order” or “Engaged”.

EAO’s Series 56 range of single, double-sided pushbuttons and indicators is constructed of tough thermoplastic housing, metal lens and is protected to IP67 protection. The robust design meets the rigorous demands of public use. The range can be glass and screwless mounted, and is suitable for internal and external applications including door controls, toilet controls (door open, lock, flush), emergency help points and egress control.

Assembly Series 56



Range	Technical Data		Assembly		
Indicator, front panel mounting, raised mounting	Single side pushbutton, front panel mounting, raised mounting	Single side pushbutton, glass mounting, raised mounting	Double side pushbutton, glass mounting, raised mounting	Indicator, front panel mounting, flush mounting	Single side pushbutton, front panel mounting, flush mounting



1 Front bezel round
2 Front bezel square
3 Rounded head srew hexagon socket M4 x 8 mm (longer srews available on request)
4 Indicator unit complete
5 Sealing
6 Front panel

Technical Data

Switching unit

Switching system

Switching system

Self-cleaning, double-breaking snap-action switching system
1 Normally Open contact, momentary function

Material

Connection cable

Halogene free Polydefine mixture

Lens

Aluminium anodized or Polybutylenterephthalat (PBT), as per UL94 V0

Front bezel

Zinc matt chromium plated or Polybutylenterephthalat (PBT), as per UL94 V0

Actuator

Polycarbonate (PC), as per UL94 V0

Material of contact

gold-plated silver

Mechanical characteristics

Terminals

Cable 4-poles with plug-in connection 2.8 x 0.8 mm
Flat plug-in housing rectangular, AMP No. 626 057-0
Counterpart to AMP Flat plug-in housing
(not part of delivery)
Receptacle housing AMP No. 626 056-0
Receptacle socket AMP No. 160 655-2
Other version :
Cable 4 poles with plug-in connection 6.3 x 0.8 mm
Flat plug-in housing rectangular, AMP No. 180 901-0
Counterpart to AMP Flat plug-in housing
(not part of delivery)
Receptacle housing AMP No. 180 900-0
Receptacle socket AMP No. 160 860-2

Wire cross-section

0.5 mmquadrat

Fixing screws

Single pushbutton and Indicator for panel mounting raised mounting M4 x 8mm
Double side pushbutton for glass mounting M4 x 25 mm
Single side pushbutton for glass mounting M4 x 20 mm
(for glass >= 5 mm)
Single side pushbutton for glass mounting M4 x 16 (for 4 mm glass)

Tightening torque

Screws Single side pushbutton and Indicator for front panel mounting 80 Ncm ...100 NcmScrews Single side- and Double side pushbutton for glass mounting 50 Ncm

Key (mounting and dismantling)

Hexagon socket wrench size 2.5 mm

Actuating force

6 N ... 12 N

Actuating travel

~0,5 mm

Mechanical lifetime

2 million cycles operation

Electrical characteristics

Illumination

Ready status, 8 LED green, red or yellow
optical switch on status, 2 LED green or red
(3 LED for special versions)
Supply voltage 24 /36 / 48 / 72 / 96 / 110 VDC
Tolerance +25% ... -30%Current consumption <50 mA Illuminating can vary, for production-technical reasons of the LED manufacturers, easily

EMC approved, as per

IEC/EN 61000-4-6
IEC/EN 61000-4-3
IEC/EN 61000-4-4
IEC/EN 61000-4-2
IEC/EN 61000-4-5
CISPR 22, EN 55022

Switch rating

min. 5 VDC, 5 mA
max. 137 VDC/VAC, max. 200 mA

Electric strength

4000 VAC, 50 Hz, 1 min, between all terminals and mounting plate / front element

Environmental conditions

Storage temperature

-45 °C ... +90 °C

Operating temperature

-40 °C ... +80 °C

Front protection

Front side IP 67
Back side IP 65

Climate resistance

Damp heat, cyclic :
6 cycles, +25 °C ... +55 °C / 95 % ... 100 % relative humidity,
as per EN IEC 60068-2-30
Damp heat, state :
56 days, +40 °C / 93 % relative humidity, as per EN IEC 60068-2-78
Rapid change of temperatur :
100 cycles, -40 °C ... +80 °C, as per EN IEC 60068-2-14

Shock resistance

(semi-sinusoidal)
max. 250 m/squadrat, pulse width 11 ms, as per EN IEC 60068-2-27

Vibration resistance

(sinusoidal)
max. 100 m/squadrat at 10 Hz ... 500 Hz, as per EN IEC 60068-2-6

Approvals

Approvals

CE (Declaration of conformity)