

8581/31-407 Art. No. 277860



- Reliable load disconnect switch with easily visible, lockable handle and display of the switch position
- An integrated auxiliary contact for control and signalling purposes, can be optionally enhanced using pluggable Ex e or Ex i auxiliary contacts that are easily retrofittable
- Large temperature range of use
- High mechanical impact and shock resistance
- Perfect protection against penetration of liquids and dusts
- 3D data for download on the website

MY R. STAHL 8581A



The R. STAHL Series 8581/31 sockets for Zone 1/21 in 4- and 5-pole versions have full AC-3 switching capacity up to 125 A. The high degree of protection (IP66) ensures maximum protection against the ingress of dust and water in any application situation. Self-cleaning lamellar contacts provide optimum contact and the plugs can be inserted and removed in the zero position quickly and easily. The load disconnect switch, with a mechanical locking device and a handle that can be locked in the 0 or I position, is an additional safety feature.

Technical Data

Explosion Protection

Area of application	European Union (ATEX) IECEX China (CQST)
Area of application Note	Other country markings available on request
Application range (zones)	1, 2, 21, 22
IECEX gas certificate	IECEX PTB 06.0034
IECEX gas explosion protection	Ex db eb IIC T6 ... T5 Gb
IECEX dust certificate	IECEX PTB 06.0034
IECEX dust explosion protection	II tb IIIC T65 °C ... T85 °C Db
ATEX gas certificate	PTB 01 ATEX 1161
ATEX gas explosion protection	Ex II 2 G Ex db eb IIC T6 ... T5 Gb
ATEX dust certificate	PTB 01 ATEX 1161
ATEX dust explosion protection	Ex II 2 D Ex tb IIIC T65 °C ... T85 °C Db
Certificates	ATEX (PTB), Brazil (ULB), China (CQST), IECEX (PTB), Korea (KGS), Taiwan (ITRI)
Declaration of conformity	ATEX (EUK)

Electrical Data

Type of voltage	Low voltage
AC rated operational voltage	480 ... 500 V AC
Frequency	50 / 60 Hz
Rated operational current	max. 125 A
Rated operational current	125 A
Rated operational current 2	100 A
Electrical service life	> 2x10 ⁴ switching cycles
Mechanical service life	> 2x10 ⁴ switching cycles
Switching capacity main contacts	AC-3: 690 V, 125 A

Installation equipment

125 A wall-mounting socket

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Electrical Data

Auxiliary contacts	2 (1 NO + 1 NC)
Frequency range	50 / 60 Hz

Device Specific Data

Back-up fuse with thermal protection	160 A gG
Back-up fuse without thermal protection	125 A gG

Ambient Conditions

Ambient temperature	-45 °C ... 40 °C -45 °C ... 60 °C				
Ambient temperature	-45 °C to +60 °C				
Ambient temperature	-49 °F to +140 °F				
Operating temperature range	Assignment of temperature class / ambient temperature / rated operational current / rated connection cross-section				
	Temperature class		Rated operational current	Rated connection cross-section	
	T6	T5		Socket	Plug
		≤ +45 °C	125 A	≥ 70 mm²	≥ 50 mm²
	≤ +40 °C	≤ +55 °C	110 A		
	≤ +45 °C	≤ +60 °C	100 A		
		≤ +40 °C	125 A	50 ... 70 mm²	35 mm² Only heat-resistant conductors ≥ 85 °C, e.g. use the NSSHÖU type!
		≤ +45 °C	115 A		
	≤ +40 °C	≤ +55 °C	100 A	50 ... 70 mm²	35 mm²

Mechanical Data

Degree of protection IP (IEC 60529)	IP66
IP degree of protection (IEC 60079)	IP66
Enclosure material	Polyester, Glass fibre reinforced
Silicone-free	No
Multiple conductor connection	2 x 35 mm² to 2 x 50 mm²
Multiple conductor connection AWG	2 x AWG 2 ... 2 x AWG 1/0
Finely stranded connection cross-section	1 x 50 mm² ... 1 x 150 mm²
Finely stranded connection cross-section AWG	1 x AWG 1/0 ... 1 x AWG 300 kcmil
Stranded connection cross-section	1 x 35 mm² ... 1 x 150 mm²
Stranded connection cross-section AWG	1 x AWG 2 ... 1 x AWG 300 kcmil
Detailed number of poles	3 P + PE
Width	270 mm
Width, inches	10.63 in
Height	296 mm
Height in inches	11.65 in
Length	563 mm
Length in inches	22.18 in
Impact strength (IEC 60079)	7 J
Impact strength (IEC 62262)	IK10
Colour code	Black

Installation equipment

125 A wall-mounting socket

STAHL**8581/31-407 Art. No. 277860****Mechanical Data**

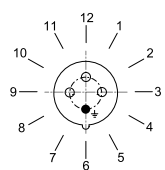
Coding (clock hour position)	7
Lockable in	in 0- and I-position
Series	SolConeX
Weight	19.2 kg
Weight	42.34 lb

Mounting / Installation

Connection	Screw terminal
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Components

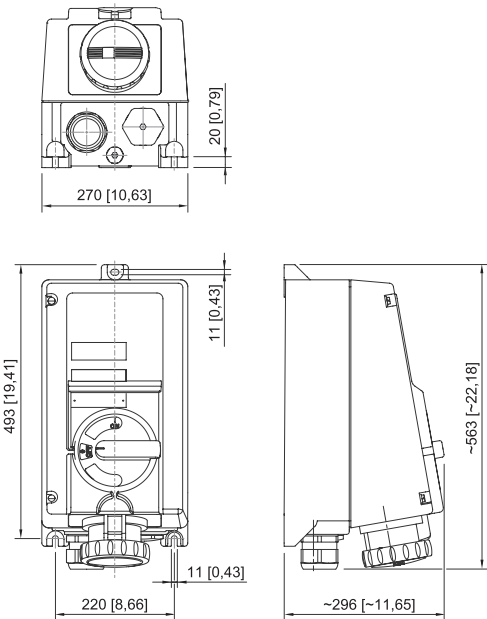
Cable entry note	Entry 1: Bottom left Entry 2: Bottom right
Entry 1 model	8161/7-M63-4828-LT
Entry 1 type	Polyamide cable gland
Entry 1	M63 x 1.5
Entry 1 clamping range	28 – 48 mm
Entry 1 clamping range, inch	1.1 – 1.89 in
Metal entry possible 1	No
Entry 2 model	8290/3-M63
Entry 2 type	Polyamide stopping plug
Entry 2	M63 x 1.5
Metal entry possible 2	No
Entry 3 model	8290/3-M25
Entry 3 type	Polyamide stopping plug
Entry 3	M25
Metal entry possible 3	No

Technical Drawings – Subject to Alterations

Position of clock hour position
Example: 6 h position

Dimensional Drawings (All Dimensions in mm [inches]) – Subject to Alterations

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Wall-mounting socket

Accessories

Auxiliary contact		Art. No.
	2 NC (8080/1-3) 250 V AC/DC Max. 6 A 1.5 to 2.5 mm², solid/finely stranded The switching function of the auxiliary contact depends on the installation slot used. Left and right: Synchronising	168356
	1 NC + 1 NO (8080/1-1) 250 V AC/DC Max. 6 A 1.5 to 2.5 mm², solid/finely stranded The switching function of the auxiliary contact depends on the installation slot used. Left: Delayed (ON), leading (OFF) Right: Synchronising	168351
	2 NO (8080/1-4) 250 V AC/DC Max. 6 A 1.5 to 2.5 mm², solid/finely stranded The switching function of the auxiliary contact depends on the installation slot used. Left and right: Synchronising	168353
Ex i cover		Art. No.
	Ex i cover for auxiliary contacts for use in Ex i electrical circuits	168855

Installation equipment

125 A wall-mounting socket

STAHL**8581/31-407 Art. No. 277860****Plastic cable gland****Art. No.**

8161/7-M25-1707, Ex e
Plastic, M25 x 1.5, cable outer diameter 7 to 17 mm
Lot size 50 pieces

239157

8161/7-M63-4828, Ex e
Plastic, M63 x 1.5, cable outer diameter 28 to 48 mm
Lot size 1 pieces

239161

Plug**Art. No.**

8581/12-407 4-pole plug, 480 to 500 V AC, 50/60 Hz, 125 A

277865

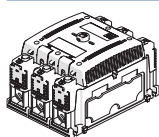
Stopping plug**Art. No.**

8290/3-M25
Plastic, M25 x 1.5
Lot size 1 piece

143524

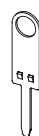
8290/3-M63
Plastic, M63 x 1.5
Lot size 1 piece

143548

Switch insert**Art. No.**

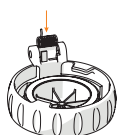
8549/1-31L load and motor switch

168776

Spare Parts**Auxiliary contact key****Art. No.**

For removing installed auxiliary contacts

201909

Repair set for Series 8581 sockets**Art. No.**

Repair set 8581 hinged cover, black

275511

We reserve the right to make alterations to the technical data, dimensions, weights, designs and products available without notice. The illustrations cannot be considered binding.