

## ADVANCE-GRP System

A

### ■ UNFUSED MECHANICAL INTERLOCKS



### ■ QUALITY MARKS

UL LISTED:  
E238171, E238172



UL CLASSIFIED:  
E238170



In accordance with the National Electrical Code (NEC) a disconnecting means must be located in sight from the motor and the driven machinery location. The disconnection means must be marked "Suitable as Motor Disconnect" in compliance with UL508 (old version) or UL 60947-4-1 (new version) standard.

Advance GRP series includes the disconnect switch listed as "Suitable as Motor Disconnect" and receptacle in a single compact device made in the outstanding impact, heat and fire and chemical resistance GRP material.

The Pre-wired switched and Interlocked Receptacles provides safety and reliability thanks to its double mechanical interlock which prevents making and braking of power under load.

The switch can be turned "ON" only when an IEC compatible plug is completely engaged and the plug cannot be removed until the switch is in the OFF position. Furthermore it prevents dangerous incomplete plug insertion cause of lazy connections.

The non-metallic heavy duty enclosure in GRP material guarantees and extreme impact and mechanical resistance even against misuses and accidental impacts, very frequent in case of surface mounting devices and extraordinary resistance against chemical substances and atmospheric agents.

Its dielectric features increases electric safety and can be connected to the metallic conduit and by the internal pre-wired grounding plate doesn't obstruct the ground continuity.

The robust and ample handle can be padlockable in ON and OFF positions and can be used as a method of compliance with the OSHA Lockout/Tagout regulation. Its ergonomics and dimension allows to be operated even if workers is wearing gloves.

It gives a clear indication of the position of the contacts switch is provided by the high visibility handle along with a led light located on the front of the devices which shows if the receptacle is powered.

Door interlock allows the cover can only be removed only when the switch is in the OFF position. For troubleshooting it is to turn on the switch by means of special tool from authorized personnel.

### ■ REFERENCE STANDARDS

#### EN 60309-1

Plugs, socket outlets and couplers for industrial purposes.  
*Part 1: general requirements.*

#### EN 60309-4

Plugs, socket-outlets and couplers for industrial purposes.  
*Part 4: Switched socket-outlets and connectors with or without interlock.*

#### UL 1682

Plugs, receptacles and cable connectors of the pin and sleeve type.

#### UL 1686

Standard for pin and sleeve configuration.

#### EN 60947-3

Low voltage switchgear and controlgear.  
*Part 3: switches, disconnectors, switch-disconnectors and fuse-combination unit.*

#### UL 508 (NON-FUSED)

Industrial control equipment.

#### UL 60947-4-1

Low voltage switchgear and controlgear.  
*Part 4-1: contactors and motor-starters: Electromechanical contactors and motor-starters.*

### ■ TECHNICAL CHARACTERISTICS

Rated current:	<b>20A-30A-60A</b>
Rated voltage:	<b>100÷600V~</b>
Frequency:	<b>50÷60Hz</b>
Insulating voltage:	<b>500/690V~</b>
Protection degree:	<b>IP66/IP67/IP69 (UL 94 type 3R, 4/4X, 12)</b>
Operating ambient temperature according to the reference standard:	<b>-25°C +40°C</b>
Minimum operating ambient temperature:	<b>-40°C</b>
Max. operating ambient temperature:	<b>+70°C</b>
Self-extinguishing GW test:	<b>960°C</b>
Self-extinguishing UL94:	<b>V0</b>
Material:	<b>Thermosetting</b>
IK degree at 20°C:	<b>IK10 (20J)</b>
Colour:	<b>Grey RAL7037</b>

## ADVANCE-GRP System

### ■ TERMINAL CAPACITY

Wire size range	20/30A	60A
Switch / ground / neutral	16-6 AWG (1.5÷10mm <sup>2</sup> )	6-1 AWG (10÷35mm <sup>2</sup> )
Auxiliary contact	10-18 AWG (1.5÷10mm <sup>2</sup> )	

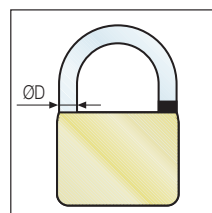
### ■ TERMINAL TORQUE

	20/30A	60A
Switch	0.8 Nm (7 lb•in)	3.6 Nm (32 lb•in)
Ground / neutral	0.8 Nm (7 lb•in)	1.5 Nm (13 lb•in)
Auxiliary contact	0.8 Nm (7 lb•in)	0.8 Nm (7 lb•in)
Pilot	–	0.8 Nm (7 lb•in)

### ■ PADLOCK TO BE USED

Choice of padlock for socket knob, fuse door and switchboard door

Rated current (A)	Ø D (mm)
20/30	5
60	6,3



### ■ SWITCH DISCONNECTORS ELECTRICAL DATA ACCORDING TO UL 508

General purpose amp rating			20A	30A	60A	
Max operating voltage			V	600	600	600
Max. horsepower ratings	Three phase	120V	Hp	3	3	5
		240V	Hp	5	7.5	15
		415V	Hp	7.5	10	25
		480V	Hp	10	20	30
		600V	Hp	15	25	40
	Single phase	120	V	2	3	5
		240	V	3	5	10
		480	V	10	15	20
Short circuit ratings with fuse	Fuse RK5 (time delay)		(A) rms	5000	5000	5000
	Fuse class J (fast-acting)		(A) rms	10000	10000	10000
Maximum fuse size			A	40	40	80
Min electrical endurance (with rated current)			ON/OFF cycles	6000	6000	6000

# ADVANCE-GRP System

## A ■ TECHNICAL CHARACTERISTICS 20A-30A-60A VERSIONS

Single-piece waterproof gasket



Dual mechanical interlock to increase safety

Pre-wired grounding plate connects to metal conduit grounding system

Fixing hole

Wide space for easy and comfortable wiring

Neutral terminal

Motor disconnect switch

Threaded metal insert

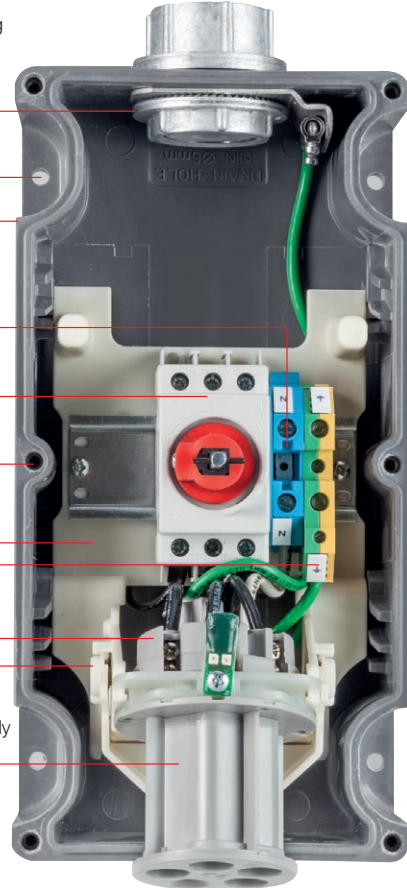
Easily extractable support

Earth terminal

Power indicator led

Possibility for plug-inserted control microswitch assembly

Prewired receptacle accepts all manufacturer's IEC 60309-2 pin and sleeve plugs



# ADVANCE-GRP System

■ TECHNICAL CHARACTERISTICS 20A-30A-60A VERSIONS

**A**



BOTTOM VIEW

Module in high-temperature resistant engineering polymer

(A)	Conduit tub
20/30	1"
60	1 1/4"



Possible entry from bottom side

TOP VIEW



Self-centering punch marks to facilitate drilling

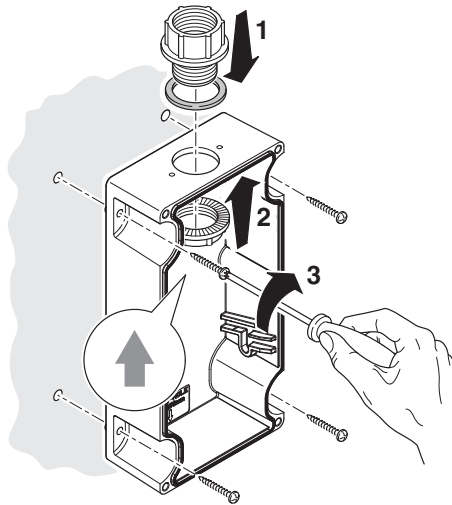
Pre-called cable entries available on request.

# ADVANCE-GRP System

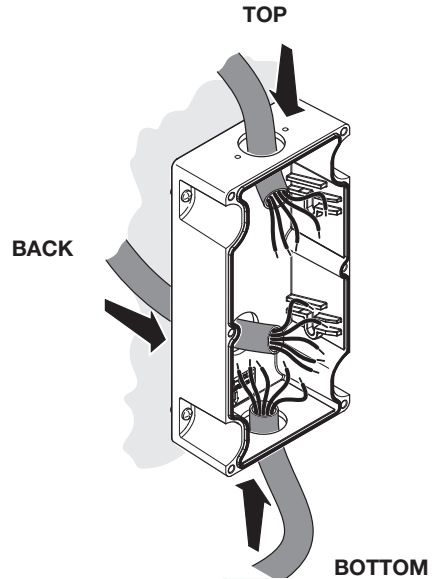
**A**

**■ MOUNTING INSTRUCTION**

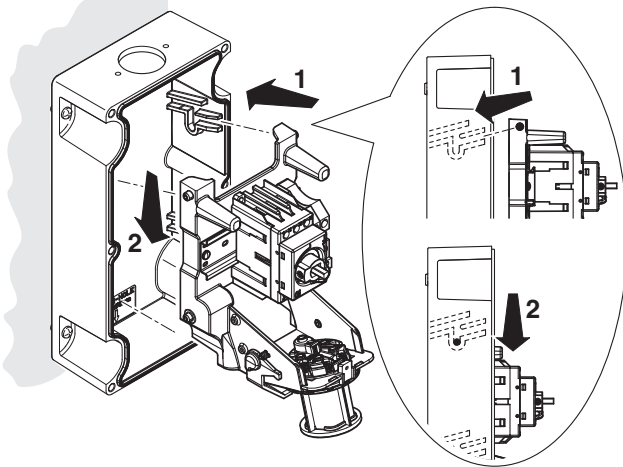
Base wall fixing



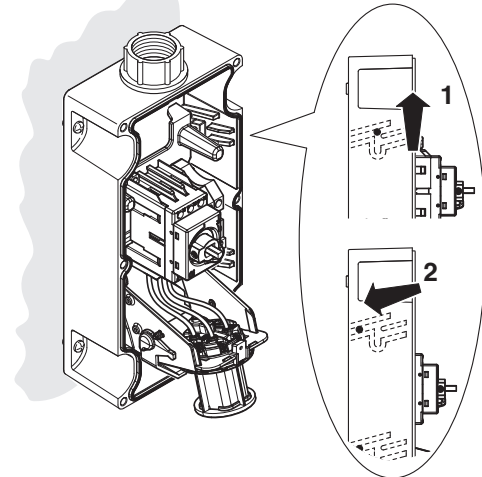
Cable entries



Insert fixing



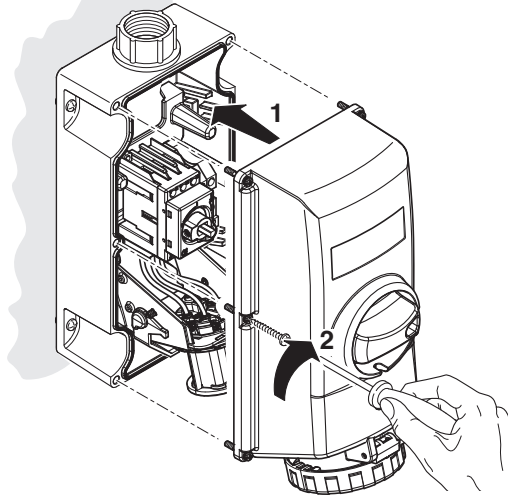
Enclosure closing



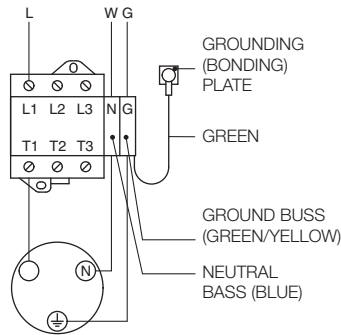
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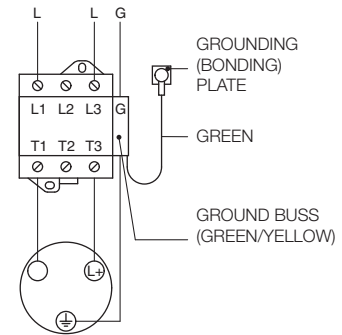
Reinstall  
the cover



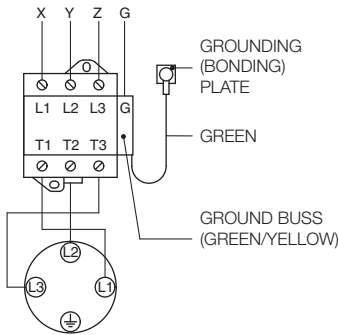
Wiring diagram



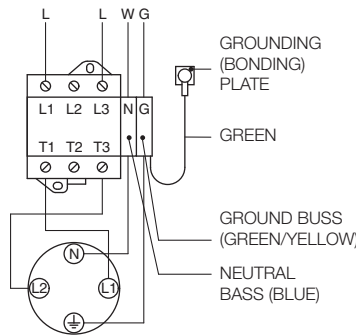
**2 POLES 3 WIRES**  
Single phase



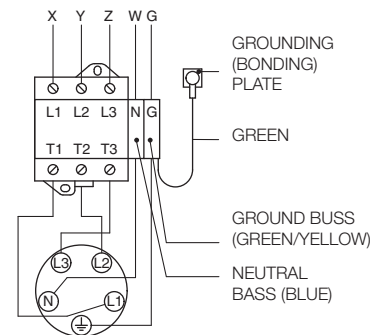
**2 POLES 3 WIRES**  
Single phase (no neutral)



**3 POLES 4 WIRES**  
3 Ø



**3 POLES 4 WIRES**  
Edison system



**4 POLES 5 WIRES**  
3 Ø