

Last update: 05-2022

www.climate.emerson.com/en-gb

Ref: TI_ESC_A1_A2L_A3_EN_Rev02

Application Engineering Europe

SOLENOID COILS - ESC SERIES

General information

Different EMERSON products require solenoid coils for operation.

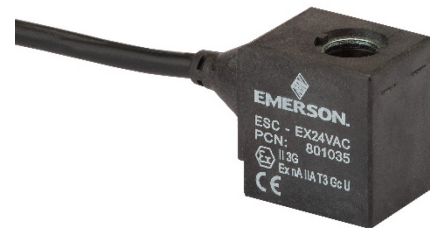
Depending on the application, the location and the desired supply voltage, different coils of ESC Series are currently available.

Features

- Compact hermetic design with a low weight
- Standard coils for AC and DC
- Universal application possible: for valves on liquid, suction, hot gas, oil lines
- Designed for continuous operation
- Reduced power consumption
- Insulated coil windings provide a high shock and vibration resistance
- Short response times
- For valves compatible with various media (ATEX versions for A2L/ A3 refrigerants)
- Simple and quick assembly with screw cap
- All models meet the requirements for CE & UKCA marking; several models with additional UL, EAC, CMIM or ATEX approvals.
- Highest flexibility for your application requirements by ordering coils and associated accessories separately



ESC-24VAC



ESC-EX24VAC




(Ex II 3G Ex nA IIA T3 Gc U)

Technical Data

Supply Voltage variation	±10 %
Vibration resistance	0.7 g 10 ... 200 Hz
Compatibility (valve)	
ESC-...	A1 Refrigerants
ESC-EX...	A2L & A3 Refrigerants
NOTE: See Emerson Selection Guide on next page.	
Ambient Temperature	
ESC-...	-40...+60 °C
ESC-EX...	-10...+50 °C
Protection class (EN 60529)	IP65 (with assembled plug/cable)

Markings	CE	UKCA	EAC	UL	US	Ex
ESC-24/120/230VAC	√	√	√	√	√	
ESC-M24/M230VAC	√	√		√	√	
ESC-24VDC	√	√	√	√		
ESC-W24/W230VAC	√	√	√	√		
ESC-EX24/EX230VAC	√	√				√

ESC Emerson Selection Guide

Coil Type	Expansion Valves		Solenoid Valves							Oil management		
												
	EX2	CX2	100RB 200RB	200RH	200RC	240RA	540RA	110RB-FLR 200RB-FLR	M36	OM3/4	OM5	OM3-020P
ESC-24VAC	(A1)		(A1)	(A1)	(A1)	(A1)	(A1)		(A1)	(A1) (2) (A2L)		(A3) ⁽³⁾
ESC-230VAC	(A1)		(A1)	(A1)		(A1)	(A1)		(A1)	(A1) (2) (A2L)		
ESC-120VAC			(A1)	(A1)		(A1)	(A1)		(A1)			
ESC-24VDC			(A1)			(A1)	(A1)		(A1)			
ESC-W24VAC		(A1)									(A1)	
ESC-W230VAC		(A1)										
ESC-M24VAC		(A1)		(A1) ⁽⁵⁾	(A1) ⁽⁵⁾							
ESC-M230VAC ⁽⁴⁾		(A1) ⁽⁴⁾										
ESC-EX24VAC	(A2L)		(A2L)	(A2L)		(A2L) ⁽¹⁾	(A2L) ⁽¹⁾	(A3)	(A2L) ⁽⁴⁾			
ESC-EX230VAC	(A2L)		(A2L)	(A2L)		(A2L) ⁽¹⁾	(A2L) ⁽¹⁾	(A3)	(A2L) ⁽⁴⁾			

NOTE 1: (1) A2Lnot for types: 240 RA 16 T11, 240 RA20T11/13/17, 540 RA20 T11

NOTE 2: (2) Shall be positioned out of the potentially flammable zone where any leaked refrigerant could flow or stagnate or shall be sufficiently ventilated, so the concentration of any leaked refrigerant never reaches 50% of Lowest Flammable Limit.







NOTE 3: (3) Only for use with R290. Installation only in non-flammable environment.

NOTE 4: (4) in progress

NOTE 5: (5) Temperature impacts MOPD and ESC coil use. Please refer to Technical Information of the used device.

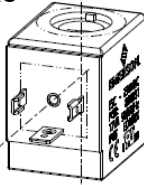
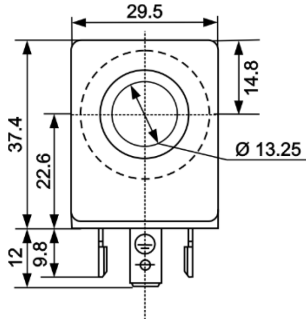
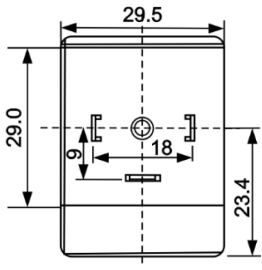
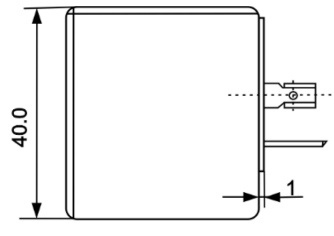
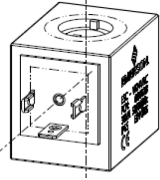
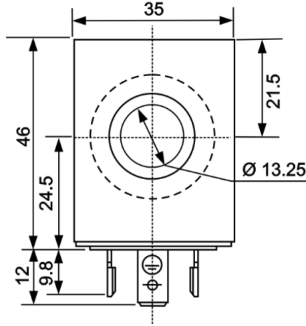
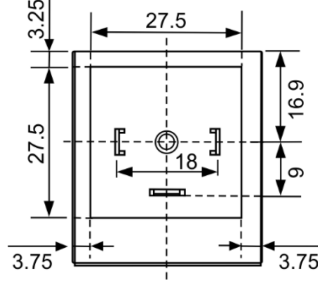
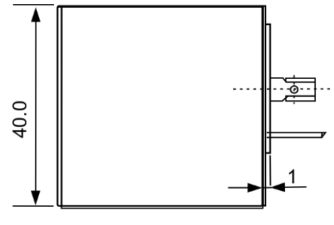
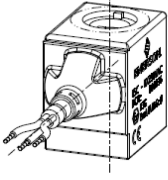
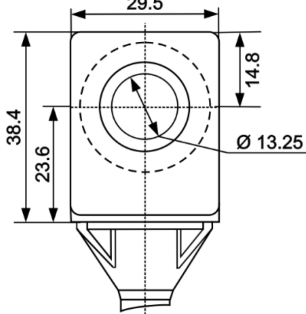
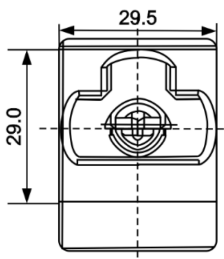
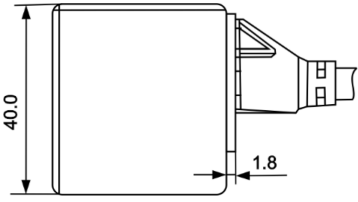
NOTE 6: ESC coil is the successor model of ASC- and ASC3 Coils. Replacement with ASC3-.../ ASC-...always requires the replacement of existing O-rings. Only use O-rings approved for ESC!

Selection Table - Coils and Cable Assembly for ESC Series

Coils						
Type	Part No.	Supply Voltage	Power Input	Description	Temperature range	Illustration
ESC-24VAC	801033 801033M*	24 VAC ±10 % 50(60) Hz	17 VA, 8 W	IP65 with plug/cable assembly acc. EN 60529 test conditions	-40...+60 °C	
ESC-230VAC	801031 801031M*	230 VAC ±10 % 50(60) Hz	17 VA, 8 W			
ESC-120VAC	801032 801032M*	120 VAC ±10 % 50(60) Hz	17 VA, 8 W			
ESC-24VDC	801030 801030M*	24 VDC	17 W			
ESC-M24VAC	801304	24VAC ±10 % 50(60) Hz	25 VA, 16 W			
ESC-M230VAC	**	230 VAC ±10 % 50(60) Hz	25 VA, 16 W			
ESC3-W24VAC	801028 801028M*	24 VAC ±10 % 50(60) Hz	38 VA, 18 W			
ESC3-W24VAC	801029 801029M*	230 VAC ±10 % 50(60) Hz	38 VA, 18 W			
ESC-EX24VAC	801035	24 VAC ±10 % 50 Hz	17 VA, 8 W			
ESC-EX230VAC	801036	230 VAC ±10 % 50 Hz	17 VA, 8 W	 II 3G Ex nA IIA T3 Gc U		
Cable Assembly for ESC Coils						
Type	Part No.	Description	Cable length	Temperature range	Illustration	
ASC-N15	804570 804570M*	Connector Cable Assembly to Relay, loose wires 3 x 0.75 mm ² (valve use)	1.5 m	-50...+80 °C (valid for stationary use)		
ASC-N30	804571 804571M*		3.0 m			
ASC-N60	804572		6.0 m			
OM3-P30	805141	Connector Cable Assembly to Power supply and Coil,, loose wires (Oil management use)	3.0 m	-50...+80 °C (valid for stationary use)		
OM3-P60	805142		6.0 m			
OM3-P100	805146		10 m			
OM-230V-3	805163	Connector Cable Assembly to power supply, loose wires (Oil management use)	3.0 m	-20...+50 °C (valid for stationary use)		
OM-230V-6	805164		6.0 m			
Others						
Type	Part No.	Description	Illustration			
Plug PG9	801012	Plug acc. EN175301 with cable gland				
Plug PG11	801013	Plug acc. EN175301 with cable gland				
ESC-K01	801034	Screw cap (incl. cap, 2x O-ring & fixing retainer)				


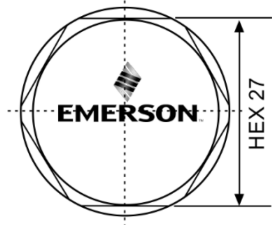
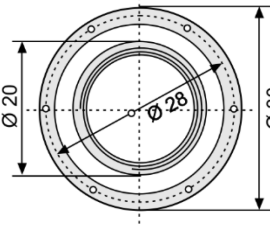
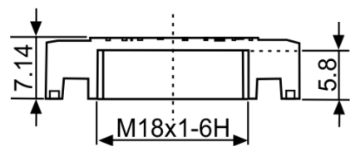

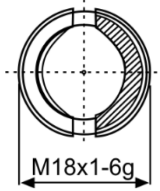
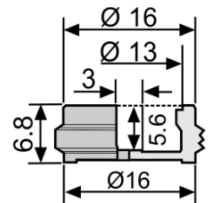
NOTE: *) M = Multipack = 20 pcs. Coils are delivered with retainer kit. Please order cable assemblies separately
 **) coming soon.

Dimensions ESC Coils (mm)

Type	top	front	side
ESC-24VAC ESC-230VAC ESC-120VAC ESC-M24VAC ESC-M230VAC* 			
ESC-W24VAC ESC-W230VAC ESC-24VDC 			
ESC-EX24VAC ESC-EX230VAC 			

NOTE: *) coming soon

Dimensions (mm) ESC Coils Screw Cap (mm)

Type	top	below	side
ESC Coil Screw Cap 			
ESC Coil Screw cap fixing adapter 			

DISCLAIMER

- The contents of this publication are presented for informational purposes only and are not to be construed as warranties or guarantees, express or implied, regarding the products or services described herein or their use or applicability.
- Emerson Climate Technologies GmbH and/or its affiliates (collectively "Emerson"), as applicable, reserve the right to modify the design or specifications of such products at any time without notice.
- Emerson does not assume responsibility for the selection, use or maintenance of any product. Responsibility for proper selection, use and maintenance of any Emerson product remains solely with the purchaser or end user.
- Emerson does not assume responsibility for possible typographic errors contained in this publication.