

Technical Data and Dimensional Sheet for



AUMA India Electric Actuators
Flame Proof/ Ex-Proof Applications

SAEx3 - SAEx100
SAREx6 - SAREx100
SACEx3 - SACEx100
SARCEx6 - SARCEx100



Table of Contents
Ex-Proof Actuators - Technical &
Dimensional Data Sheets

Ex-Proof Actuator: Introduction	3
Ex-Proof Actuator: EPAC Version	4-5
Technical Data for OPEN-CLOSE Duty	6-7
Electrical Data for OPEN-CLOSE Duty	8
Technical Data for REGULATING Duty	9
Electrical Data for REGULATING Duty	10-11
Dimension Sheet, Ex-Proof NORM Actuator	12-13
Dimension Sheet, Ex-Proof COMPACT Actuator	14-15
Dimension Sheet, OUTPUT Drives	16

Note: There are various features and options that are available other than what is listed in the catalogue. For special needs, please contact AUMA India.

AUMA India Ex-Proof NORM Actuator



Fig 1: Ex-Proof NORM Actuator (Screw type Terminal)

AUMA India Ex-Proof COMPACT Actuator



Fig 2: Ex-Proof COMPACT Actuator (Screw type Terminal)

AUMA India Ex-Proof NORM Actuator



Fig 3: Ex-Proof NORM Actuator (Plug-in type Terminal)

AUMA India Ex-Proof COMPACT Actuator



Fig 4: Ex-Proof COMPACT Actuator (Plug-in type Terminal)

AUMA India actuators are designed for various service conditions and duty cycles. AUMA India SA actuators for standard version for OPEN-CLOSE duty and SAR actuators for REGULATING/MODULATING duty are well established products of AUMA India. AUMA India offers a wide range of different actuators and valve gearboxes - approved for use in hazardous and potentially explosive areas. In combination with EPAC 3.XMP EPAC actuator control, virtually any valve can be automated in safety-relevant areas even across long distances.

FEATURES OF AUMA INDIA FLAME PROOF / EXPLOSION PROOF ACTUATORS 'Explosion protection, fast data transfer, absolute safety'

The enclosures of Flame Proof/ Explosion Proof actuators are designed to withstand, when the covers are properly secured, an internal explosion of flammable gases or vapour which may occur without suffering damage and without communicating the internal flame to external through the joints of the enclosure. All technical specifications and features of AUMA India Norm & Compact Actuators except that constructional features of enclosure are made to provide Flame Path and withstand the explosion pressure as per the standard. For detailed description, refer AUMA India Actuators Catalogue. Now, AUMA India Ex-Proof actuators will be offered with plug-in solution at terminal side with 50 pin connector for customer connections. This solution can be offered to both norm actuators and actuators with EPAC.

BRIEF DESCRIPTION OF MAIN FEATURES	
Ambient Temperature Range	-20°C to +50°C
Operating Speed Range	4-180 rpm in fine steps of output speed
Enclosure Protection	IP65/ IP67 / IP68 - IS/ IEC 60947

TEST CERTIFICATES

The actuators of various sizes and types have been subjected to Type Tests at Central Institute of Mining & Fuel Research (CIMFR) Dhanbad as per the statutory requirements of IS/ IEC 60079-1. The enclosures have been duly certified by the nodal certifying agencies such as:

1. Bureau of Indian Standards (BIS)
2. The Chief Controller of Explosives (CCOE)

The actuator are approved for use in Zone 1 of Gas Group IIB hazardous area & for the safety protection Ex d IIB T4 : IS/IEC60079: Part1:2007. Following is the list of Test Certificates for Ex-Proof Category:

ACTUATOR MODEL Project number of Temperature rise classification of flame proof actuator (T4 certificates) CNP/4224/2015-16	CIMFR CERTIFICATE		CCOE CERTIFICATE	BIS CERTIFICATE
	FOR SCREW TYPE SOLUTION	FOR 50 PIN PLUG-IN TYPE SOLUTION	BOTH FOR 50 PIN PLUG-IN & SCREW TYPE SOLUTION	
SAEx3/(R)Ex6 - SA(R)Ex15	CIMFR/TC/P/504 Dt: 08.08.2011	CIMFR/TC/S/1399 Dt:11.03.2013	P401357/1-6 Dt:25.07.2017	CM/L - 6169979
SA(R)CEx3 - SA(R)CEx15	CIMFR/TC/P/461 Dt: 29.07.2011	CIMFR/TC/S/1568 Dt:04.03.2013		
SA(R)Ex25 - SA(R)Ex60	CIMFR/TC/P/558 Dt: 18.08.2011	CIMFR/TC/S/1398 Dt:11.03.2013		
SA(R)CEx25 - SA(R)CEx60	CIMFR/TC/7/592 Dt: 26.08.2011	CIMFR/TC/S/116 Dt: 09.05.2013		
SA(R)Ex100	CIMFR/TC/P/517 Dt: 10.08.2011	CIMFR/TC/S/115 Dt: 09.05.2013		
SA(R)CEx100	CIMFR/TC/P/462 Dt: 29.07.2011	CIMFR/TC/S/1566 Dt:04.03.2013		

Ex-Proof Actuators - EPAC Version

AUMA 3.XMP Version

A new range of electric actuators with 16 bit microcontroller for weatherproof and explosion proof applications with SSR.

- Ease of limit and torque setting.
- Selectable torque range (40% to 100% of rated torque).
- Limit range: 1 to 4000 turns
- Programmable relays: Has 4 relays, each can be programmed individually.
- Temperature: -20 to +70 degree.
- Frequency range: 47Hz to 63Hz.

Display/ Diagnostic Status: LCD screen for better visibility of status, operation and parameter setting details.

Supporting Duty Types: We can have ON-OFF Duty, regulating Duty and MODBUS RTU - Two wire field bus communication on a single board.

Actuator:



LCD Screen:

The LCD (16*2) view is split into two lines. The first line shows the Status details; left side-selector switch position and right hand side-actuators status. The second line shows the valve position or the faults/warnings. The details are as shown in below figure.



Modes:

- Programming mode and calibration mode.
- Programming mode - General setting, remote setting and Relay setting.
- Calibration Mode - Limit calibration and Pot calibration.

General Settings: In this category user can access following settings;

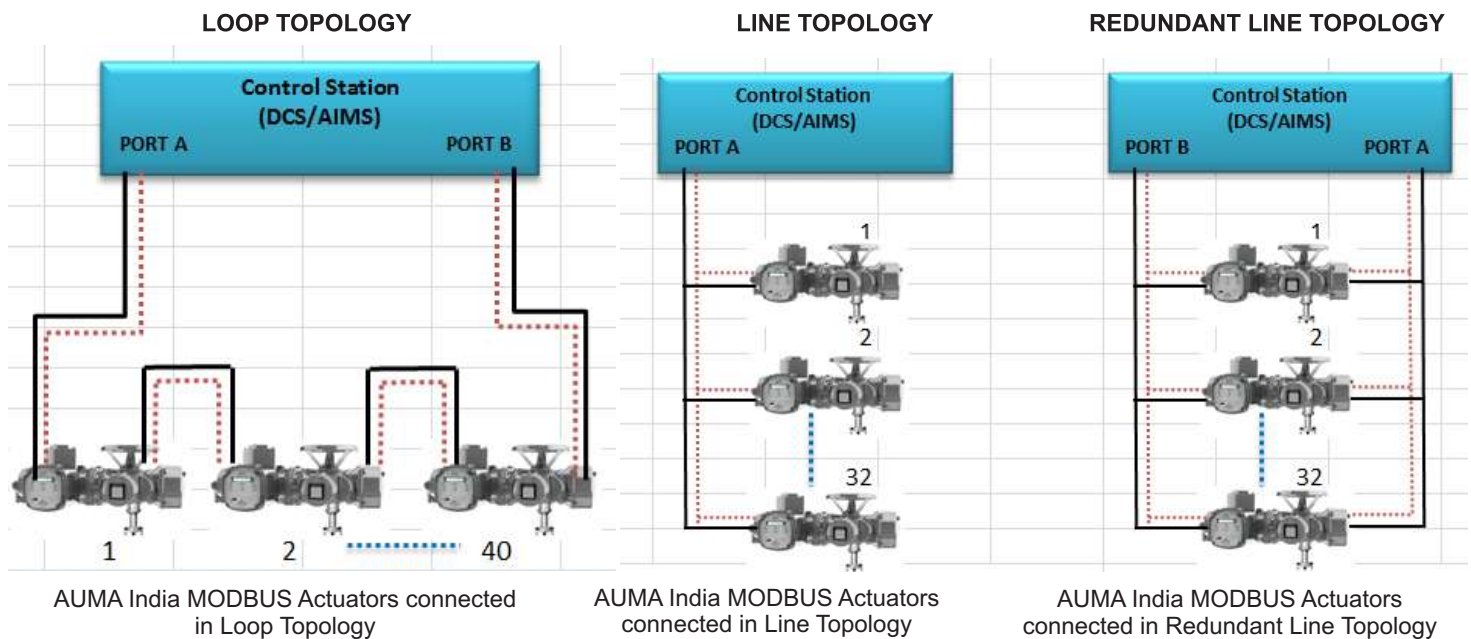
- Inching /non-inching
- Emergency Settings & Inhibit Settings
- Remote selector switch settings & Positioner Settings
- Selection status of the TOLR, SH, MT Jam valve

Remote Settings: it's a factory set, based on customer requirement.

- Remote operations
 1. 2-wire make/break
 2. 2-wire Modbus
 3. 2-wire 4-20mA
 4. 4-wire
- Selection of remote Inching /non-inching, addressing, baud rate, parity selection.

Relay Settings: In this category the user can enable the relay for a trip/ fault annunciation.

Modbus Topologies: 1. Line topology. 2. Loop topology. 3. Redundant line topology



LIMIT Calibration

- Set selector switch position to off mode.
- Press push buttons OPEN and STOP together for approximately 2 to 3 seconds.
- Display shows as Calibration mode

Repeat the process for Close limit Set here select the Limit Close Mode then Limit Close set , In the Limit Close Set mode Press Close key to run actuator to close direction press open key to stop the actuator , press stop key to accept the position.

Note: Please check the M and S values in limit open set mode should be greater than M: 0000 and S: 0000 and values in limit close set mode should be less than the M: 4096 and S: 4096.

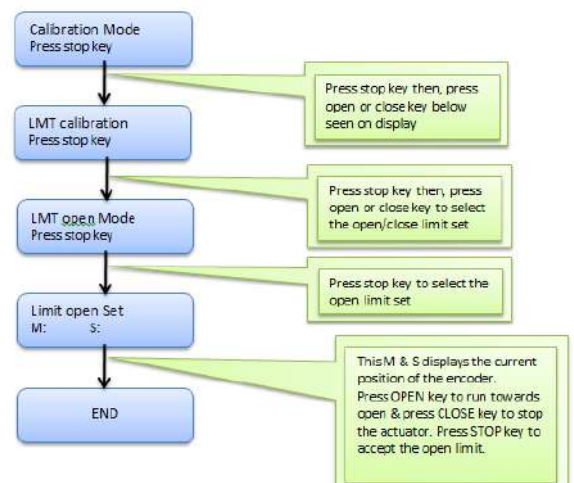


FIG: Calibration mode

Technical Data for OPEN - CLOSE Duty

auma®		Technical Data OPEN-CLOSE Duty						SAEx3 - SAE100					
Model	Output Speed at 50Hz rpm	Torque Range¹⁾ S₂-15min		Running Torque²⁾ S₂-15min Nm	Valve Attachment		Stem Dia. O/P drive Type A Max.mm	Permissible Thrust for Type A Max. kN	Hand Wheel Dia. Std. mm	Hand Wheel Ratio		Weight approx.	
		Min.Nm	Max.Nm		Standard DIN:3210	Option ISO:5210				Std.	With TBG*	Std. kg	With TBG* kg
SAEx 3	11	20	30	11	G 0	F10	26	25	250	1:1	2:1	63	69
	16												
	22												
	32												
	45												
	63												
	90												
	125 ³⁾												
	180 ³⁾												
SAEx 6	4	20	60	21	G 0	F10	26	40	250	1:1	2:1	63	69
	5.6												
	8												
	11												
	16												
	22												
	32												
	45												
	63												
	90												
	125 ³⁾												
180 ³⁾													
SAEx 12	4	50	120	42	G 0	F10	38	60	250	1:1	2:1	63	69
	5.6												
	8												
	11												
	16												
	22												
	32												
	45												
	63												
	90												
	125 ³⁾												
180 ³⁾													
SAEx 15	4	50	150	53	G 0	F10	38	60	250	1:1	2:1	63	69
	5.6												
	8												
	11												
	16												
	22												
	32												
	45												
	63												
SAEx 25	4	100	250	88	G ½	F14	52	120	360	1:1	3:1	92	107
	5.6												
	8												
	11												
	16												
	22												
	32												
	45												
	63												
	90												
	125 ³⁾												
180 ³⁾													
			220										

1) Tripping torque adjustable for both direction

2) Permissible average torque for the whole travel

3) Non Self locking

We reserve the right to alter data according to improvements made. Previous data sheets become invalid with the issue of this data sheet.

auma®

Technical Data for OPEN - CLOSE Duty

auma®		Technical Data OPEN-CLOSE Duty						SAEx3 - SAEx100					
Model	Output Speed at 50Hz rpm	Torque Range ¹⁾ S ₂ -15Min.		Running Torque ²⁾ S ₂ -15min Nm	Valve Attachment		Stem Dia. O/P drive Type A Max.mm	Permissible Thrust for Type A Max. kN	Hand Wheel Dia. Std. mm	Hand Wheel Ratio		Weight approx.	
		Min.Nm	Max.Nm		Standard DIN:3210	Option ISO:5210				Std.	With TBG*	Std. kg	With TBG* kg
SAEx 30	4	100	300	105	G ½	F 14	52	120	360	1:1	3:1	91	107
	5.6												
	8												
	11												
	16												
	22												
	32												
	45												
	63												
	90												
	125 ³⁾												
180 ³⁾													
SAEx 50	4	200	500	175	G ½	F 14	52	160	640	1:1	3:1	94	111
	5.6												
	8												
	11												
	16												
	22												
	32												
	45												
	63												
	90												
	125 ³⁾												
180 ³⁾													
SAEx 60	4	200	600	210	G ½	F 14	52	160	640	1:1	3:1	94	111
	5.6												
	8												
	11												
	16												
	22												
	32												
	45												
	63												
	90												
	125 ³⁾												
180 ³⁾													
SAEx 100	4	400	1000	350	G 3	F 16	65	190	800	1:1	4:1	153	174
	5.6												
	8												
	11												
	16												
	22												
	32												
	45												
	63												
	90												
	125 ³⁾												
180 ³⁾													

Explosion protection : Group IIA, IIB - IS/ IEC 60079-1
 Enclosure : IP65 / IP67 / IP68 - IS/ IEC 60947
 Temperature class : T4 - IS/ IEC 60079-0

Actuators are rated for short time duty S2 - 15 min, based on 40° C ambient temperature. The nominal Current is based on running torque approximately 35% of max. torque. The max. torque can be utilised for a short time (e.g. to seat or unseat a valve) and the current can rise to max. value, refer corresponding column for current at max. torque in Electrical Data Note : Revolution for Full Stroke (Min./Max.) - 1 - 480 or 1 - 4800; * - Top Bevel Gear Set.

We reserve the right to alter data according to improvements made. Previous data sheets become invalid with the issue of this data sheet.

Electrical Data for OPEN - CLOSE Duty

auma®		Electrical Data OPEN-CLOSE Duty					SAEx3 - SAEEx100			
Model	Output Speed at 50Hz rpm	Torque max. Nm	Three phase Squirrel cage AC Motor 415V, 50 Hz							
			Nominal Output kW	Speed rpm	Size	Nominal Current/ Full Load Current *	Current at Max. Torque ¹⁾	Starting Current A	Power Factor Cos ϕ	Full Load Efficiency (%)
SAEx 3	11	30	0.06	1400	71	0.29	0.30	1.2	0.60	48
	16		0.06	1400	71	0.29	0.38	1.2	0.60	48
	22		0.06	1400	71	0.29	0.50	1.2	0.60	48
	32		0.12	1400	71	0.45	0.62	2.3	0.62	61
	45		0.18	2800	71	0.51	0.84	3.3	0.75	65
	63		0.18	2800	71	0.51	1.16	3.3	0.75	65
	90		0.37	2800	71	0.93	1.62	5.5	0.76	73
	125		0.37	2800	71	0.93	1.40	5.5	0.76	73
	180		0.37	2800	71	0.93	2.05	5.5	0.76	73
SAEx 6	4	60	0.06	1400	71	0.29	0.25	1.2	0.60	48
	5.6		0.06	1400	71	0.29	0.30	1.2	0.60	48
	8		0.06	1400	71	0.29	0.38	1.2	0.60	48
	11		0.12	1400	71	0.45	0.45	2.3	0.62	61
	16		0.12	1400	71	0.45	0.62	2.3	0.62	61
	22		0.12	1400	71	0.45	0.90	2.3	0.62	61
	32		0.18	2800	71	0.51	1.18	3.3	0.75	65
	45		0.37	2800	71	0.93	1.62	5.5	0.76	73
	63		0.37	2800	71	0.93	2.34	5.5	0.76	73
	90	0.55	2800	71	1.5	3.08	9.0	0.71	75	
	125	0.55	2800	71	1.5	2.45	9.0	0.71	75	
	180	0.55	2800	71	1.5	3.52	9.0	0.71	75	
SAEx 12	4	120	0.06	1400	71	0.29	0.38	1.2	0.60	48
	5.6		0.12	1400	71	0.45	0.46	2.3	0.62	61
	8		0.12	1400	71	0.45	0.62	2.3	0.62	61
	11		0.12	1400	71	0.45	0.90	2.3	0.62	61
	16		0.25	1400	71	1.2	1.45	4.6	0.50	60
	22		0.25	1400	71	1.2	1.80	4.6	0.50	60
	32		0.37	2800	71	0.93	2.42	5.5	0.76	73
	45		0.55	2800	71	1.5	3.08	9.0	0.71	75
	63		1.1	2800	71	2.9	4.58	16.0	0.72	75
	90	1.1	2800	71	2.9	6.50	16.0	0.72	75	
	125	1.1	2800	71	2.9	5.10	16.0	0.72	75	
	180	1.1	2800	71	2.9	7.50	16.0	0.72	75	
SAEx 15	4	150	0.06	1400	71	0.29	0.45	1.2	0.60	48
	5.6		0.12	1400	71	0.45	0.55	2.3	0.62	61
	8		0.12	1400	71	0.45	0.83	2.3	0.62	61
	11		0.25	1400	71	1.2	1.36	4.6	0.50	60
	16		0.25	1400	71	1.2	1.66	4.6	0.50	60
	22		0.37	2800	71	0.93	2.0	5.5	0.76	73
	32		0.55	2800	71	1.5	2.75	9.0	0.71	75
	45		1.1	2800	71	2.9	4.26	16.0	0.72	75
	63		1.1	2800	71	2.9	5.67	16.0	0.72	75
	180		1.1	2800	71	2.9	7.50	16.0	0.72	75
SAEx 25	4	250	0.12	1400	71	0.45	0.65	2.3	0.62	61
	5.6		0.25	1400	71	1.2	1.29	4.6	0.50	60
	8		0.25	1400	71	1.2	1.64	4.6	0.50	60
	11		0.55	1400	71	1.75	1.92	7.6	0.66	67
	16		0.55	1400	71	1.75	2.60	7.6	0.66	67
	22		0.55	1400	71	1.75	3.58	7.6	0.66	67
	32		1.1	2800	71	2.9	4.75	16.0	0.72	75
	45		1.1	2800	71	2.9	6.58	16.0	0.72	75
	63		2.2	2800	90	4.1	8.44	35.0	0.88	85
	90	2.2	2800	90	4.1	12.5	35.0	0.88	85	
	125	2.2	2800	90	4.1	8.95	35.0	0.88	85	
	180	2.2	2800	90	4.1	13.6	35.0	0.88	85	

1) Current at max. torque. We recommended to select switch gear and cables suitable for those values.

We reserve the right to alter data according to improvements made. Previous data sheets become invalid with the issue of this data sheet.

auma®

Electrical Data for OPEN - CLOSE Duty

auma®		Electrical Data OPEN-CLOSE Duty					SAEx3 - SAEEx100			
Model	Output Speed at 50Hz rpm	Torque max. Nm	Three phase Squirrel cage AC Motor 415V, 50 Hz							
			Nominal Output kW	Speed rpm	Size	Nominal Current A	Current at Max. Torque ¹⁾ A	Starting Current A	Power Factor Cos ϕ	Full Load Efficiency (%)
SAEx 30	4	300	0.12	1400	71	0.45	0.82	2.3	0.62	61
	5.6		0.25	1400	71	1.2	1.39	4.6	0.50	60
	8		0.25	1400	71	1.2	1.77	4.6	0.50	60
	11		0.55	1400	71	1.75	2.20	7.6	0.66	67
	16		0.55	1400	71	1.75	3.08	7.6	0.66	67
	22		1.1	1400	90	2.9	3.95	19.0	0.72	75
	32		1.1	2800	71	2.9	5.72	16.0	0.72	75
	45		1.25	2800	90	2.7	8.65	22.0	0.81	79
	63		2.2	2800	90	4.1	10.0	35.0	0.88	85
	90		2.5	2800	90	4.7	15.5	35.0	0.88	84
	125	2.5	2800	90	4.7	11.5	35.0	0.88	84	
	180	4.0	2800	90	9.0	16.5	60.0	0.82	82	
SAEx 50	4	500	0.25	1400	71	1.2	1.48	4.6	0.50	60
	5.6		0.55	1400	71	1.75	1.95	7.6	0.66	67
	8		0.55	1400	71	1.75	2.60	7.6	0.66	67
	11		0.55	1400	71	1.75	3.58	7.6	0.66	67
	16		1.1	1400	90	2.9	4.80	19.0	0.72	75
	22		1.1	1400	90	2.9	6.65	19.0	0.72	75
	32		2.2	2800	90	4.1	8.52	35.0	0.88	85
	45		2.2	2800	90	4.1	12.5	35.0	0.88	85
	63		4.0	2800	90	9.0	17.1	60.0	0.82	82
	90		4.0	2800	90	9.0	26.0	60.0	0.82	82
	125	4.0	2800	90	9.0	18.2	60.0	0.82	82	
	180	4.0	2800	90	9.0	28.5	60.0	0.82	82	
SAEx 60	4	600	0.25	1400	71	1.2	1.67	4.6	0.50	60
	5.6		0.55	1400	71	1.75	2.2	7.6	0.66	67
	8		0.55	1400	71	1.75	3.08	7.6	0.66	67
	11		0.55	1400	71	1.75	5.15	7.6	0.66	67
	16		1.1	1400	90	2.9	5.75	19.0	0.72	75
	22		2.2	1400	90	5.7	7.92	35.0	0.70	77
	32		2.2	2800	90	4.1	10.04	35.0	0.88	85
	45		4.0	2800	90	9.0	15.05	60.0	0.82	82
	63		4.0	2800	90	9.0	21.08	60.0	0.82	82
	90		5.0	2800	112	10.8	31.08	90.0	0.84	88
	125	5.0	2800	112	10.8	22.5	90.0	0.84	88	
	180	5.0	2800	112	10.8	35.5	90.0	0.84	88	
SAEx 100	4	1000	0.55	1400	71	1.75	2.55	7.6	0.66	67
	5.6		0.75	1400	90	1.85	3.85	12.0	0.75	75
	8		0.75	1400	90	1.85	4.65	12.0	0.75	75
	11		1.1	1400	90	2.9	6.65	19.0	0.72	75
	16		2.2	1400	90	5.7	9.06	35.0	0.70	77
	22		2.2	1400	90	5.7	12.5	35.0	0.70	77
	32		4.0	2800	90	9.0	17.5	60.0	0.82	82
	45		4.0	2800	90	9.0	26.0	60.0	0.82	82
	63		7.5	2800	112	15.0	40.0	116.0	0.82	84
	90		7.5	2800	112	15.0	60.0	116.0	0.82	84
	125	7.5	2800	112	15.0	44.6	116.0	0.82	84	
	180	7.5	2800	112	15.0	68.0	116.0	0.82	84	

Permissible voltage variation: $\pm 10\%$, Permissible frequency variation : $\pm 5\%$, Permissible combined variation: 10% if voltage drops below there will be reduction of nominal output.

AUMA motors are provided with 3 thermostiches one in each winding connected in series to protect windings. Our Warranty is void if these thermostiches are not connected in control circuit.

Motor data are approximate. Due to manufacturing tolerances, given values may deviate.

1) Current at max. torque. We recommend to select switch gear and cables suitable for those values.

We reserve the right to alter data according to improvements made. Previous data sheets become invalid with the issue of this data sheet.

auma®

Technical Data for REGULATING Duty

auma®		Technical Data REGULATING Duty							SAREx6 - SAREx100					
Model	Output Speed at 50Hz rpm	Torque Range ¹⁾ S4-25%		Modulating Torque ²⁾ S4-25% Nm	Valve Attachment		Number of starts max. c/h	Stem Dia. O/P drive Type A Max.mm	Permissible Thrust for Type A Max. kN	Hand Wheel Dia. Std. mm	Hand Wheel Ratio		Weight approx.	
		Min.Nm	Max.Nm		Standard DIN:3210	Option ISO:5210					Std.	With TBG*	Std. kg	With TBG* kg
SAREx 6	4	30	60	30	G 0	F 10	1200	26	40	250	1:1	2:1	63	69
	5.6													
	8													
	11													
	16													
	22													
	32													
45														
SAREx 12	4	60	120	60	G 0	F 10	1200	38	60	250	1:1	2:1	63	69
	5.6													
	8													
	11													
	16													
	22													
	32													
45														
SAREx 15	4	60	150	75	G 0	F 10	1200	38	60	250	1:1	2:1	63	69
	5.6													
	8													
	11													
	16													
	22													
	32													
45														
SAREx 25	4	120	250	125	G ½	F 14	1200	52	120	360	1:1	3:1	91	107
	5.6													
	8													
	11													
	16													
	22													
	32													
45														
SAREx 30	4	150	300	150	G ½	F 14	1200	52	120	360	1:1	3:1	91	107
	5.6													
	8													
	11													
	16													
	22													
	32													
45														
SAREx 50	4	250	500	250	G ½	F 14	1200	52	160	640	1:1	3:1	94	111
	5.6													
	8													
	11													
	16													
	22													
	32													
45														
SAREx 60	4	300	600	300	G ½	F 14	1200	52	160	640	1:1	3:1	94	111
	5.6													
	8													
	16													
	22													
	32													
	45													
SAREx 100	4	500	1000	500	G 3	F 16	1200	65	190	800	1:1	4:1	153	174
	5.6													
	8													
	11													
	16													
	22													
	45													

- 1) Tripping torque adjustable for both direction.
2) Permissible average torque for the whole travel.

Explosion protection : Group IIA, IIB - IS/ IEC 60079-1
Enclosure : IP65 / IP67 / IP68 - IS/ IEC 60947
Temperature class : T4 - IS/ IEC 60079-0

Actuators are rated for short time duty S2 - 15 min, based on 40° C ambient temperature. The nominal Current is based on running torque approximately 35% of max. torque. The max. torque can be utilised for a short time (e.g. to seat or unseat a valve) and the current can rise to max. value, refer corresponding column for current at max. torque in Electrical Data.

We reserve the right to alter data according to improvements made. Previous data sheets become invalid with the issue of this data sheet.

auma®

Electrical Data for REGULATING Duty

auma®		Electrical Data REGULATING Duty					SAREx6 - SAREx100			
Model	Output Speed at 50Hz rpm	Modulating Torque Nm	Three phase Squirrel cage AC Motor 415V, 50 Hz							
			Nominal Output kW	Speed rpm	Size	Nominal Current A	Current at Max. Torque ¹⁾ A	Starting Current A	Power Factor Cos ϕ	Full Load Efficiency (%)
SAREx 6	4	30	0.06	1400	71	0.29	0.25	1.2	0.60	48
	5.6		0.06	1400	71	0.29	0.30	1.2	0.60	48
	8		0.06	1400	71	0.29	0.38	1.2	0.60	48
	11		0.12	1400	71	0.45	0.45	2.3	0.62	61
	16		0.12	1400	71	0.45	0.62	2.3	0.62	61
	22		0.12	1400	71	0.45	0.90	2.3	0.62	61
	32		0.25	1400	71	1.2	1.45	4.6	0.50	60
45	0.25	1400	71	1.2	1.86	4.6	0.50	60		
SAREx 12	4	60	0.06	1400	71	0.29	0.38	1.2	0.60	48
	5.6		0.12	1400	71	0.45	0.46	2.3	0.62	61
	8		0.12	1400	71	0.45	0.62	2.3	0.62	61
	11		0.12	1400	71	0.45	0.90	2.3	0.62	61
	16		0.25	1400	71	1.2	1.45	4.6	0.50	60
	22		0.25	1400	71	1.2	1.80	4.6	0.50	60
	32		0.55	1400	71	1.75	2.52	7.6	0.66	67
45	0.55	1400	71	1.75	3.52	7.6	0.66	67		
SAREx 15	4	75	0.06	1400	71	0.29	0.45	1.2	0.60	48
	5.6		0.12	1400	71	0.45	0.55	2.3	0.62	61
	8		0.12	1400	71	0.45	0.83	2.3	0.62	61
	11		0.25	1400	71	1.2	1.36	4.6	0.50	60
	16		0.25	1400	71	1.2	1.66	4.6	0.50	60
	22		0.55	1400	71	1.75	2.20	7.6	0.66	67
	32		0.55	1400	71	1.75	3.08	7.6	0.66	67
SAREx 25	4	125	0.12	1400	71	0.45	0.65	2.3	0.62	61
	5.6		0.25	1400	71	1.2	1.29	4.6	0.50	60
	8		0.25	1400	71	1.2	1.64	4.6	0.50	60
	11		0.55	1400	71	1.75	1.92	7.6	0.66	67
	16		0.55	1400	71	1.75	2.60	7.6	0.66	67
	22		0.55	1400	71	1.75	3.58	7.6	0.66	67
	32		1.1	1400	90	2.9	4.80	19.0	0.72	75
45	1.1	1400	90	2.9	6.67	19.0	0.72	75		
SAREx 30	4	150	0.12	1400	71	0.45	0.82	2.3	0.62	61
	5.6		0.25	1400	71	1.2	1.39	4.6	0.50	60
	8		0.25	1400	71	1.2	1.77	4.6	0.50	60
	11		0.55	1400	71	1.75	2.20	7.6	0.66	67
	16		0.55	1400	71	1.75	3.08	7.6	0.66	67
	22		1.1	1400	90	2.9	3.95	19.0	0.72	75
	32		1.1	1400	90	2.9	5.75	19.0	0.72	75
45	2.2	1400	90	5.7	8.0	35.0	0.70	77		
SAREx 50	4	250	0.25	1400	71	1.2	1.48	4.6	0.50	50
	5.6		0.55	1400	71	1.75	1.95	7.6	0.66	67
	8		0.55	1400	71	1.75	2.60	7.6	0.66	67
	11		0.55	1400	71	1.75	3.58	7.6	0.66	67
	16		1.1	1400	90	2.9	4.80	19.0	0.72	75
	22		1.1	1400	90	2.9	6.65	19.0	0.72	75
	32		2.2	1400	90	5.7	9.06	35.0	0.70	77
45	2.2	1400	90	5.7	13.4	35.0	0.70	77		
SAREx 60	4	300	0.25	1400	71	1.2	1.67	4.6	0.50	60
	5.6		0.55	1400	71	1.75	2.2	7.6	0.66	67
	8		0.55	1400	71	1.75	3.08	7.6	0.66	67
	16		1.1	1400	90	2.9	5.75	19.0	0.72	75
	22		2.2	1400	90	5.7	7.92	35.0	0.70	77
	32		2.2	1400	90	5.7	11.1	35.0	0.70	77
SAREx 100	4	500	0.55	1400	71	1.75	2.55	7.6	0.66	67
	5.6		0.75	1400	90	1.85	3.85	12.0	0.75	75
	8		0.75	1400	90	1.85	4.65	12.0	0.75	75
	11		1.1	1400	90	2.9	6.65	19.0	0.72	75
	16		2.2	1400	90	5.7	9.06	35.0	0.70	77
	22		2.2	1400	90	5.7	12.5	35.0	0.70	77

Permissible voltage variation: $\pm 10\%$, Permissible frequency variation: $\pm 5\%$, Permissible combined variation: 10% if voltage drops below there will be reduction of nominal output.

AUMA motors are provided with 3 thermostiches one in each winding connected in series to protect windings. Our Warranty is void if these thermostiches are not connected in control circuit.

Motor data are approximate. Due to manufacturing tolerances, given values may deviate.

1) Current at max. torque. We recommend to select switch gear and cables suitable for those values.

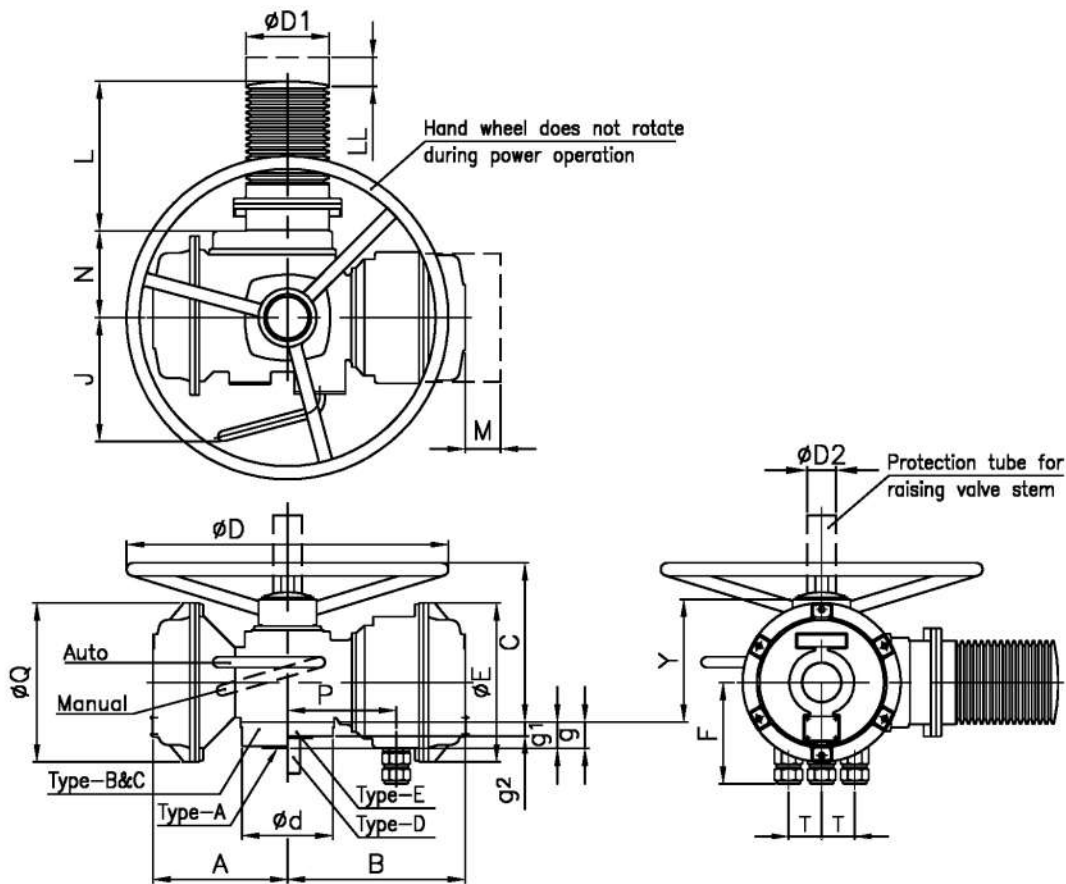
We reserve the right to alter data according to improvements made. Previous data sheets become invalid with the issue of this data sheet.

Dimension Sheet, Ex-Proof NORM Actuator

Explosion proof norm actuator

(With Screw Type Customer Terminals)

SAEx3 – SAE100
SAREx6 – SAREx100



Dimensions	SAEx3 & SAE6 SAREx6	SAEx12 & SAE15 SAREx12 & SAREx15	SAEx25 & SAE30 SAREx25 & SAREx30	SAEx50 & SAE60 SAREx50 & SAREx60	SAEx100 SAREx100
A	226	226	260	260	287
B	318	318	343	343	369
C	240	240	293	293	376
ØD	250	250	360	640	800
ØD1	110 – 125	110 – 125	110 – 160	125 – 160	125 – 200
ØD2	42 x 3.3	60 x 3.7	76 x 3.7	76 x 3.7	89 x 4.1
ØE	305	305	305	305	305
F	185	185	185	185	185
J	185	185	225	225	240
L max.	223	223	300	325	331
LL min.	35	35	45	45	60
M min.	140	140	140	140	140
N	110	110	170	170	206
P	187	187	212	212	238
ØQ	215	215	305	305	305
R (Cable Gland Thread)	2 Nos M32x1.5 1 No. M25x1.5	2 Nos M32x1.5 1 No. M25x1.5	2 Nos M32x1.5 1 No. M25x1.5	2 Nos M32x1.5 1 No. M25x1.5	2 Nos M32x1.5 1 No. M25x1.5
T	58	58	58	58	58
Y	208	208	256	256	276
Ød	125	125	175	175	210
g (TYPE- A)	35 / 73	37 / 67	51 / 95	51 / 95	69 / 119
g1 (TYPE- B & C)	50	50	65	65	80
g2 (TYPE- D & E)	15	15	22	22	30
DIN 3210 Designation	G0	G0	G½	G½	G3

We reserve the right to alter data, dimensions and weights according to improvement made.
Figures and diagrams are not binding.

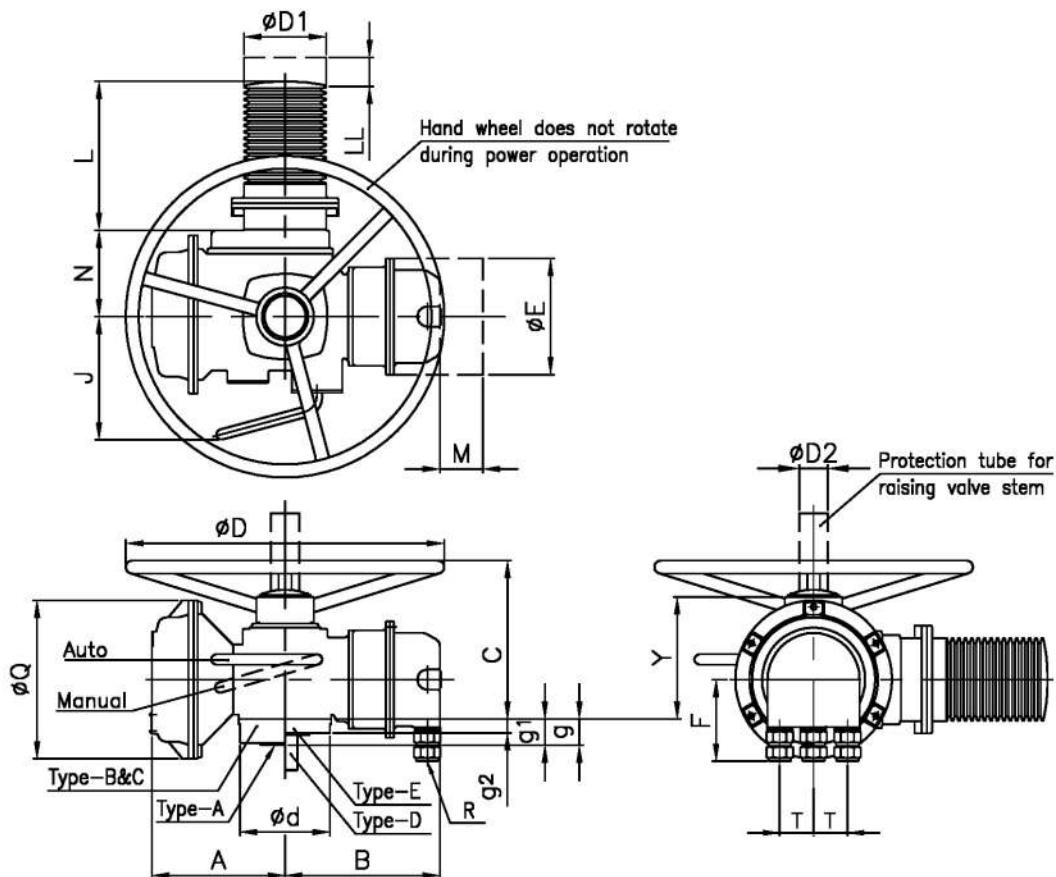
(all dimensions are in mm)

auma®

Explosion proof norm actuator

(With Plug in Type Customer Terminals)

SAEx3 – SAEx100
SAREx6 – SAREx100



Dimensions	SAEx3 & SAEx6 SAREx6	SAEx12 & SAEx15 SAREx12 & SAREx15	SAEx25 & SAEx30 SAREx25 & SAREx30	SAEx50 & SAEx60 SAREx50 & SAREx60	SAEx100 SAREx100
A	226	226	260	260	287
B	280	280	306	306	332
C	240	240	293	293	376
ϕD	250	250	360	640	800
$\phi D1$	110 – 125	110 – 125	110 – 160	125 – 160	125 – 200
$\phi D2$	42 x 3.3	60 x 3.7	76 x 3.7	76 x 3.7	89 x 4.1
ϕE	230	230	230	230	230
F	185	185	185	185	185
J	185	185	225	225	240
L max.	223	223	300	325	331
LL min.	35	35	45	45	60
M min.	140	140	140	140	140
N	110	110	170	170	206
P	187	187	212	212	238
ϕQ	215	215	305	305	305
R (Cable Gland Thread)	2 Nos M32x1.5 1 No. M25x1.5	2 Nos M32x1.5 1 No. M25x1.5	2 Nos M32x1.5 1 No. M25x1.5	2 Nos M32x1.5 1 No. M25x1.5	2 Nos M32x1.5 1 No. M25x1.5
T	58	58	58	58	58
Y	208	208	256	256	276
ϕd	125	125	175	175	210
g (TYPE- A)	35 / 73	37 / 67	51 / 95	51 / 95	69 / 119
g1 (TYPE- B & C)	50	50	65	65	80
g2 (TYPE- D & E)	15	15	22	22	30
DIN 3210 Designation	G0	G0	G½	G½	G3

We reserve the right to alter data, dimensions and weights according to improvement made.
Figures and diagrams are not binding.

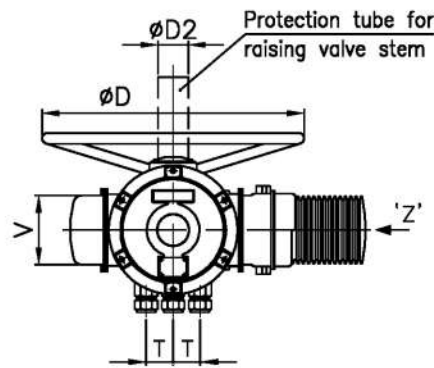
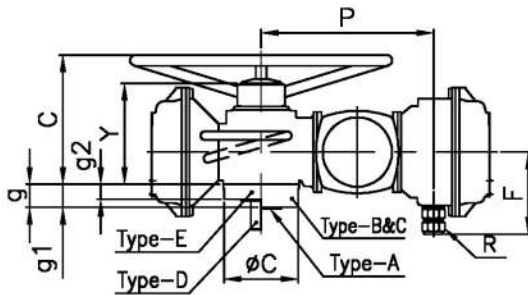
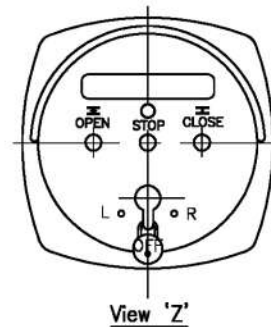
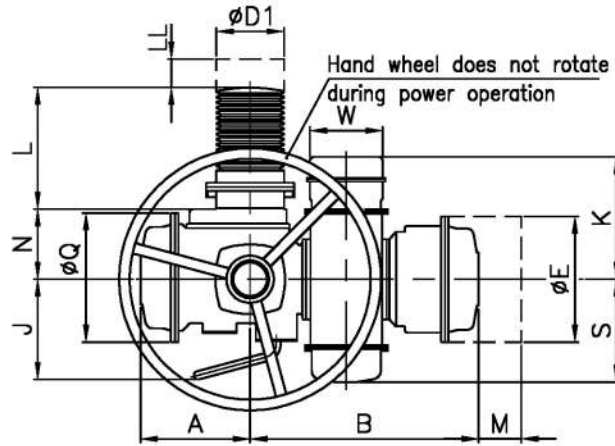
(all dimensions are in mm)

auma®

Dimension Sheet, Ex-Proof COMPACT Actuator

Explosion proof compact actuator (With Screw Type Customer Terminals)

SACEx3 – SACEx100
SARCEx6 – SARCEx100



Dimensions	SACEx3 & SACEx6 SARCEx6	SACEx12 & SACEx15 SARCEx12 & SARCEx15	SACEx25 & SACEx30 SARCEx25 & SARCEx30	SACEx50 & SACEx60 SARCEx50 & SARCEx60	SACEx100 SARCEx100
A	226	226	260	260	287
B	550	550	535	535	561
C	240	240	293	293	376
ØD	250	250	360	640	800
ØD1	110 – 125	110 – 125	110 – 160	125 – 160	125 – 200
ØD2	42 x 3.3	60 x 3.7	76 x 3.7	76 x 3.7	89 x 4.1
ØE	305	305	305	305	305
F	185	185	185	185	185
J	185	185	225	225	240
K	348	348	348	348	348
L max.	223	223	300	325	331
LL min.	35	35	45	45	60
M min.	140	140	140	140	140
N	110	110	122	122	206
P	380	380	404	404	430
ØQ	215	215	305	305	305
R (Cable Gland Thread)	2 Nos M32x1.5 1 No. M25x1.5	2 Nos M32x1.5 1 No. M25x1.5	2 Nos M32x1.5 1 No. M25x1.5	2 Nos M32x1.5 1 No. M25x1.5	2 Nos M32x1.5 1 No. M25x1.5
S	227	227	227	227	227
T	58	58	58	58	58
V	185	185	185	185	185
W	185	185	185	185	185
Y	208	208	256	256	276
Ød	125	125	175	175	210
g (TYPE- A)	35 / 73	37 / 67	51 / 95	51 / 95	69 / 119
g1 (TYPE- B & C)	50	50	65	65	80
g2 (TYPE- D & E)	15	15	22	22	30
DIN 3210 Designation	G0	G0	G½	G½	G3

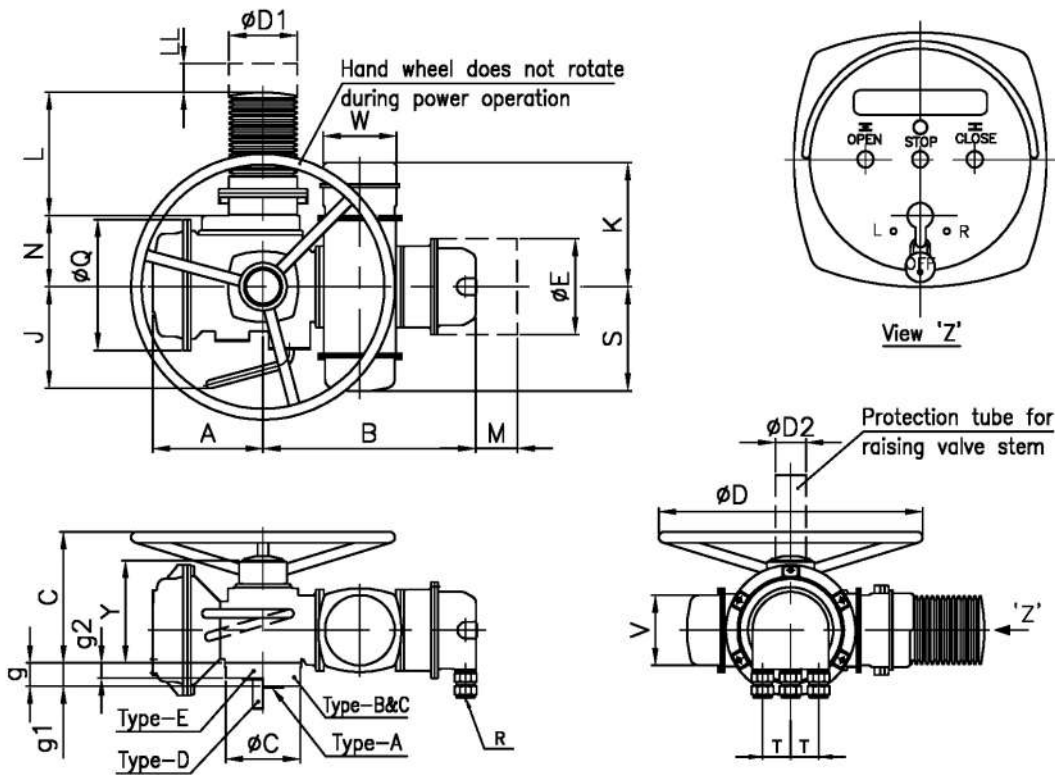
We reserve the right to alter data, dimensions and weights according to improvement made.
Figures and diagrams are not binding.

(all dimensions are in mm)

auma®

Explosion proof compact actuator (With Plug in Type Customer Terminals)

SACEx3 – SACEx100
SARCEx6 – SARCEx100



Dimensions	SACEx3 & SACEx6 SARCEx6	SACEx12 & SACEx15 SARCEx12 & SARCEx15	SACEx25 & SACEx30 SARCEx25 & SARCEx30	SACEx50 & SACEx60 SARCEx50 & SARCEx60	SACEx100 SARCEx100
A	226	226	260	260	287
B	548	548	498	498	524
C	240	240	293	293	376
ϕD	250	250	360	640	800
$\phi D1$	110 – 125	110 – 125	110 – 160	125 – 160	125 – 200
$\phi D2$	42 x 3.3	60 x 3.7	76 x 3.7	76 x 3.7	89 x 4.1
ϕE	230	230	230	230	230
F	185	185	185	185	185
J	185	185	225	225	240
K	348	348	348	348	348
L max.	223	223	300	325	331
LL min.	35	35	45	45	60
M min.	140	140	140	140	140
N	110	110	122	122	206
ϕQ	215	215	305	305	305
R (Cable Gland Thread)	2 Nos M32x1.5 1 No. M25x1.5	2 Nos M32x1.5 1 No. M25x1.5	2 Nos M32x1.5 1 No. M25x1.5	2 Nos M32x1.5 1 No. M25x1.5	2 Nos M32x1.5 1 No. M25x1.5
S	227	227	227	227	227
T	58	58	58	58	58
V	185	185	185	185	185
W	185	185	185	185	185
Y	208	208	256	256	276
ϕd	125	125	175	175	210
g (TYPE- A)	35 / 73	37 / 67	51 / 95	51 / 95	69 / 119
g1 (TYPE- B & C)	50	50	65	65	80
g2 (TYPE- D & E)	15	15	22	22	30
DIN 3210 Designation	G0	G0	G½	G½	G3

We reserve the right to alter data, dimensions and weights according to improvement made.
Figures and diagrams are not binding.

(all dimensions are in mm)

auma®

Output drives according to DIN 3210

SA(C)Ex3 – SA(C)Ex100
SAR(C)Ex6 – SAR(C)Ex100

TYPE-A	Stem nut		Dimensions (in mm)		SA(C)Ex3/SA(C)Ex6	SAR(C)Ex6	SA(C)Ex12/SA(C)Ex15	SAR(C)Ex12/SAR(C)Ex15	SA(C)Ex25/SA(C)Ex30	SAR(C)Ex25/SAR(C)Ex30	SA(C)Ex50/SA(C)Ex60	SAR(C)Ex50/SAR(C)Ex60	SA(C)Ex100/SAR(C)Ex100	
			DIN 3210	G0	G0	G 1/2	G 1/2	G3						
F max. kN	25/40	40	60	120	160	190								
ϕd_1	125	125	175	175	210									
ϕd_2 f8	60	60	100	100	130									
ϕd_3	M 10	M 10	M 16	M 16	M 20									
ϕd_4	28	40	55	55	70									
ϕd_5 max.	26	38	52	52	65									
g	35	73	37	67	51	95	51	95	69	119				
h1	3	3	4	4	5									
h2	15	15	22	22	30									
ϕk	102	102	140	140	165									
L1	1	1	2	2	3									
L2	30	67	37	67	51	120	51	95	70	120				
Z	4	4	4	4	4									
Weight kg	1.7	3.9	2	4.2	6	12	6	12	12	28				
TYPE-B	Plug sleeve		b1 JS9	12	12	18	18	22						
ϕd_4	28	40	55	55	70									
ϕd_5	26	38	52	52	65									
ϕd_6 H8	42	42	60	60	80									
g1	50	50	65	65	80									
h1	3	3	4	4	4									
L3	45	45	65	65	80									
t1	45.3	45.3	64.4	64.4	85.4									
Weight kg	1.7	2	6	6	12									
TYPE-C	Dog coupling		b2 H11	14	14	20	20	24						
ϕd_4	28	40	55	55	70									
ϕd_5 DIN:3210	28	28	38	38	47									
ϕd_5 max.	26	38	52	52	65									
ϕd_7	50	50	75	75	100									
g1	50	50	65	65	80									
h1	3	3	4	4	4									
h3	10	10	12	12	15									
Weight kg	1.7	2	6	6	12									
TYPE-D	Stub shaft		b3 h9	6	6	8	8	12						
ϕd_8 g6	20	20	30	30	40									
ϕg_2	15	15	22	22	30									
L4	50	50	70	70	90									
L5	55	55	76	76	96									
t2	22.5	22.5	33	33	43									
Weight kg	1	1.5	3.5	3.5	6									
TYPE-E	Bore with keyway		b4 JS9	6	6	8	8	12						
ϕd_9 H8 DIN3210	20	20	30	30	40									
ϕd_9 max.	20	32	45	45	60									
g2	15	15	22	22	30									
h1	3	3	4	4	4									
L6	55	56	77	77	100									
t3	22.8	22.8	33.3	33.3	43.3									
Weight kg	1	1.5	3.5	3.5	6									