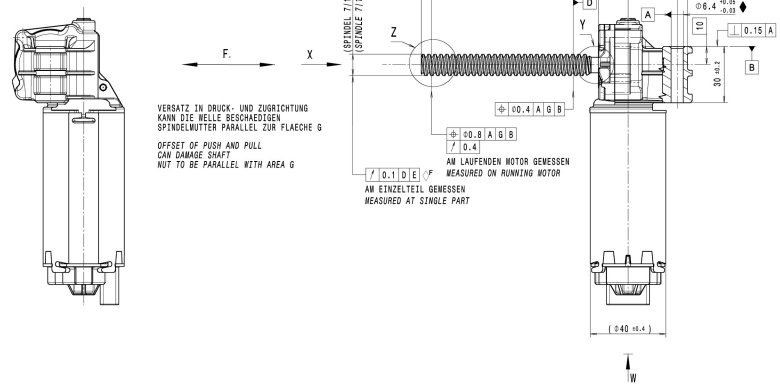
REV. NO.	ZONE	DESCRIPTION		DATE	NAME
50001864		NEUEINFUEHRUNG	INTRODUCTION	2016-10-14	DIETZV

SAMPLING AND RELEASE ACCORDING TO HQ-P-7.3 AND NWA SUPPLIER MANUAL

SPECIAL CHARACTERISTIC	QUANTITY
SRC ▽	1
SC ◆	1
FC ◇	2

TYP/TYPE 7/16-8 STUB ACME RH			MM	INCHES
STEIGUNGSRICHT.	TYPE OF THREAD		RECHTS	RIGHT HAND
GANGZAHL	NUMBER OF STARTS		1	1
KOPFKREIS-Ø	MAJOR DIA	da	11.784 +0.05 -0.1	.460/.466
FUSSKREIS-Ø	MINOR DIA	df	8.888 +0.05 -0.1	.346/.352
TEILKREIS-Ø	PITCH DIA	d	10.312	.406
TEILUNG	AXIAL PITCH	P	3.175	.125
EINGRIFFSWINKEL	PRESSURE ANGLE		20°	20°
STEIGUNGSFEHLER MAX.	PITCH ERROR MAX.		0.01	0.00039
PRUEFMASS UEBER 3 MESSBOLZEN Ø1.681±0.001	PITCH DIA OVER 3 DIA WIRES .0661/.0662	Md	◇F Ø12.7-0.08	.500/.497

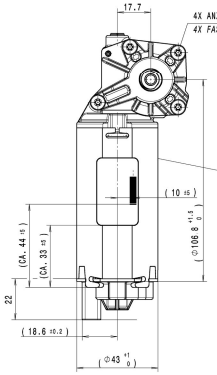


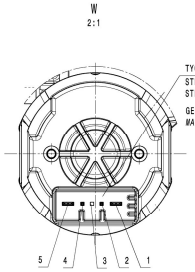
VERSATZ IN DRUCK- UND ZUGRICHTUNG KANN DIE WELLE BESCHAEDIGEN SPINDELMUTTER PARALLEL ZUR FLAECHE G

OFFSET OF PUSH AND PULL CAN DAMAGE SHAFT NUT TO BE PARALLEL WITH AREA G

AM LAUFENDEN MOTOR GEMESSEN
MEASURED ON RUNNING MOTOR

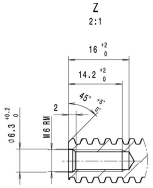
AM EINZELTEIL GEMESSEN
MEASURED AT SINGLE PART

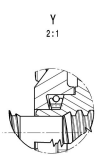


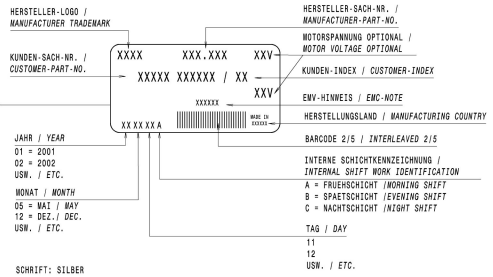


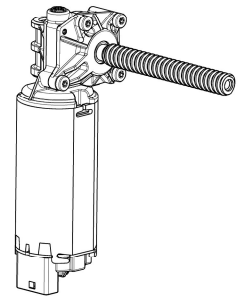
TYCO C-208-15621 (Code 'Z')
STECKKONTAKTE 1 + 5 = *MPQ/CONTACT 1 + 5 = MPQ*
STECKKONTAKTE 2 + 4 = *MQS/CONTACT 2 + 4 = MQS*

GEGENSTECKER TYCO
MATING TERMINAL TYCO 1379217+1379218









PRUEFUNGEN:
STATISCHE FESTIGKEIT DER SPINDEL : F>15KN (BEI 250 NM/MIN) ▽ SRC

TEST ACCORDING:
STATIC STRENGTH OF THE SPINDLE : F>15KN (AT 250 NM/MIN) ▽ SRC

GERAEUSCH:
LUFTSCHALLGERAEUSCHPRUEFUNG: <52dbA

NOISE:
AIRBORNE NOISE TEST: <52dbA

* MAX. AXIALSPIEL DER SPINDEL
* *MAX. AXIAL PLAY OF THE SPINDLE*

KRAFT/ FORCE	NEUER ZUSTAND/ NEW CONDITION	NACH ZUVERLAESSIGKEITSPROBE/ AFTER ENDURANCE TEST
± 5 N	0.00	0.05
± 200 N	0.06	0.3

DARUEBER HINAUS GEHENDE ANFORDERUNGEN HAT DER KUNDE DURCH PRUEFUNGEN IM SYSTEM SICHERZUSTELLEN. HIERFUER UEBERNIMMT NIDEC KEINE HAFTUNG./
ADDITIONAL REQUIREMENTS, WHICH ARE NOT CONTENT OF ABOVE SPECIFICATION, HAVE TO BE SECURED BY THE CUSTOMER. FOR THIS ADDITIONAL REQUIREMENTS NIDEC CAN TAKE NO PRODUCT LIABILITY.

** 100 % PRUEFUNG / *100 % CHECKING*

** ENCODER SPANNUNG (FUNKTION) / *ENCODER-VOLTAGE (FUNCTION)*

** GERAEUSCHPRUEFUNG NACH CMS_406_008
NOISE TEST TO CMS_406_008

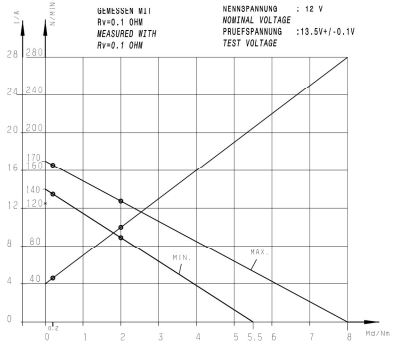
VORLAEUFIGE KENNLINIE / *TEMPORARY CHARACTERISTICS*

** ● MESSPUNKTE KENNLINIE
** ● *MEASURE POINTS GRAPH*

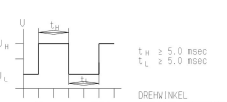
GILT NACH EINER LASTFAHRT/
APPLIES AFTER ONE LOAD TRAVEL

GEMESSEN MIT
Rv=0.1 OHM
MEASURED WITH
Rv=0.1 OHM

NENNSPANNUNG : 12 V
NOMINAL VOLTAGE
PRUEFSPANNUNG :13.5V+/-0.1V
TEST VOLTAGE



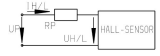
PRO ANKERUMDREHUNG WIRD EINE RECHTECKPERIODE GENERIERT
ONE SQUARE-WAVE PERIOD GENERATED PER ARMATURE REVOLUTION



$t_H \geq 5.0$ msec
$t_L \geq 5.0$ msec

DREHWINKEL
ANGLE OF ROTATION

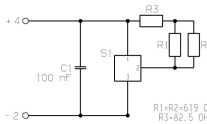
PRUEFSCHALTUNG HALL-SENSOR
TEST CIRCUIT HALL-SENSOR



UP = 13.5V±0.05V
RP = 162 Ohm ±1%
2mA ≤ IH ≤ 8mA
2mA ≤ IL ≤ 30mA
** 0.0V ≤ UL ≤ 5.2V
11.8V ≤ UH ≤ 13.2V

BETRIEBSSPANNUNGSBEREICH 6,5V - 16V
OPERATING VOLTAGE RANGE 6,5V - 16V

SCHALTPLAN FUER HALL-SENSOR
CIRCUIT DIAGRAM OF HALL-SENSOR



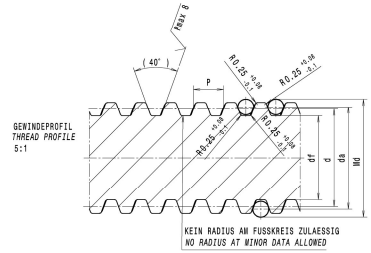
R1+R2=619 OHM
R3=82.5 OHM

STROMAUFNAHME: I ≤ 25 mA
CURRENT CONSUMPTION

TEMPERATURBEREICH: = -40°C BIS +85°C
TEMPERATURE RANGE

VERPOLSICHERHEIT BIS -30V
REVERSE POLARITY PROTECTION UP TO 30V

WERKSTOFF LEITERPLATTE: FR4
MATERIAL PCB: FR4

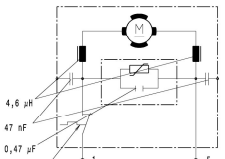


GEWINDEPROFIL
THREAD PROFILE
5:1

KEIN RADIUS AM FUSSKREIS ZULAESSIG
NO RADIUS AT MINOR DATA ALLOWED

SCHLIESSFALTE AM ZAHNKOPF,GEWINDEEIN- UND GEWINDEAUSLAUF ZULAESSIG ALLE ANDEREN MASSE SIND DER TABELLE ZU ENTNEHMEN
CLOSING FOLD ON THE TIP OF A TOOTH AT START THREAD AND END THREAD RUNOUT ALLOWED
ALL OTHER DIMENSIONS TAKE OUT OF THE TABLE

SCHALTBILD MOTOR
CIRCUIT DIAGRAM MOTOR



THERMOSCHUTZ NICHT GEWAEHRLEISTET BEI BETRIEB OBERHALB DER ANGEGEBENEN NENNSPANNUNG
THERMAL PROTECTION IS NOT WARRANTED IN USAGE OVER SPECIFIED NOMINAL VOLTAGE

DREHRICHTUNG IN X-RICHTUNG GESEHEN **
*DIRECTION OF ROTATION, LOOKING IN DIRECTION X ***

	1	5
CCW	-	+
CW	+	-

i= 29:1

KONFORM EU-RICHTLINIE 2000/53/EG UND ANHANG II DER RICHTLINIE IN AKTUELLER FASSUNG (BLEIFREI, USW.)
CONFORM TO EU-DIRECTIVE 2000/53/EC AND ANNEX II TO DIRECTIVE IN MOST RECENT VERSION (LEAD-FREE, ETC.)

KONFORM EU-RICHTLINIE 2002/95/EG (ROHS) (BLEIFREI, USW.)
CONFORM TO EU-DIRECTIVE 2002/95/EC (ROHS) (LEAD-FREE, ETC.)

Rmax. 8

LIMIT DIMENSIONS FOR NOMINAL SIZE RANGES IN mm	...6	>6...30	>30...120	>120...400	>400...1600
TOLERANCES FOR NOMINAL SIZE RANGES IN mm ±	0,1	0,2	0,3	0,5	0,8
LIMIT DIM. FOR NOMINAL SIZE RANGES IN DEGREE/ MINUTE (SHORTER ANGLE SIDE)	...10	>10...50	>50...100	>100	
TOLERANCES FOR NOMINAL SIZE RANGES ±	1°	30'	20'	10'	

SURFACE FINISH ACC. TO SMF 00.051 — WORK FOR SURFACE FINISH

SURFACE TEXTURE ACC. TO DIN EN ISO 1302 — EDGES ACC. TO ISO 13715

GEOMETRICAL PRODUCT SPECIFICATIONS (GPS) SIZE ISO 14405 Ⓔ — GEOM. TOLERANCING ACC. TO DIN EN ISO 1101

STOCK MATERIAL

CUSTOMER REFERENCE NO.

MATERIAL SPECIFICATION ACC. TO SMF 18.XXX — WORK FOR MATERIAL SPECIFICATION

MATERIAL NO.	OLD SPAIN MATERIAL NO.	REFERENCE NO.
406-008-99-99		4E 4606 A 2HR

ALL DIMENSIONS IN mm

SCALE 1:1

RELEASE-LEVEL RELEASED

TITLE: **MOTOR GMPG**
GEAR-MOTOR GMPG

ARTICLE NO. 0225

DT	DOCUMENT NO.	VERSION	SHEET	OF	FORMAT
A	10000025685	00	1	1	A0

	DATE	NAME
DRAWN	14.04.2010	DIETZV
CHECKED	10.11.2010	BRUNOR
RELEASED	10.11.2010	SOMMERHALTER

NIDEC MOTORS & ACTUATORS GERMANY / POLAND / SPAIN

SUB. FOR

GEWICHT: ca. 710g
WEIGHT: ca. 710g

ITEM	MATERIAL NUMBER	QUANT.	TITLE	DOCUMENT NO.

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